



# Contents



|   |              |
|---|--------------|
| <b>Warranty Information, Performance Assurance, and Application Limitation</b> .....  | Inside Cover |
| <b>A Guide for using SUN Catalogues</b> .....   | iii          |
| <b>The SUN Code System for Ordering</b> .....   | viii         |
| <i>A step-by-step explanation for using SUN's Code System to price and order cartridges, bodies and valve assembly packages. A detailed list of SUN's Model Codes for cartridges is on page xi.</i> |              |
| <b>SUN Product Overview</b> .....   | xii          |
| SUN Cartridge .....   | xii          |
| Standard or Custom Circuit Design .....   | xiii         |
| Line Mount Bodies .....   | xiii         |
| Sandwich and Subplate Mount Bodies .....  | xiii         |
| Valve Assemblies .....  | xiii         |
| Direct Motor Mount Bodies .....   | xiii         |
| Custom Valvepaks .....  | xiii         |

|   |     |
|---|-----|
| <b>Technical Information about SUN Products</b> .....                 | xiv |
| SUN Cartridges .....  | xiv |
| Filtration .....  | xiv |
| Pressure and Flow Ratings – Performance Data ..                       | xiv |
| Line and Sandwich Mount Bodies, Material and Port Specification ..... | xv  |
| Sandwich and Subplate Interfaces .....                                | xv  |
| Testing .....   | xv  |
| Cartridge Service Instructions .....                                  | xv  |
| Service Kits .....  | xv  |
| Trouble Shooting .....  | xv  |
| <b>Cartridge Control Options</b> .....                                | xvi |
| General Purpose Controls .....  | xvi |
| Special Purpose Controls .....  | xvi |
| Counterbalance Valves .....   | xvi |

---

## Section 12: Sandwich Bodies .....

---

|  |        |
|--|--------|
| <b>Sandwich Body Technical Tips</b> .....  | 12.002 |
| ISO/CETOP Interface Patterns .....   | 12.002 |
| Mounting of ISO 03 Sandwiches .....  | 12.002 |
| Rotation Example of ISO 03 Sandwiches ..   | 12.002 |
| Assembly of ISO 03 Sandwiches .....  | 12.003 |
| Mounting of ISO 05 Sandwich Bodies .....   | 12.003 |
| Mounting of ISO 05 X, Y Sandwich Bodies ..   | 12.004 |
| <i>European and U.S. Seal Kits</i>   |        |
| Studkits for ISO 03 and ISO 05   |        |
| Sandwich Bodies .....  | 12.004 |
| ISO 03 Studkits (Metric and Inch Standards)  | 12.004 |
| ISO 05 Studkits (Metric and Inch Standards)  | 12.005 |
| Studrod Length Determination Chart .....   | 12.005 |
| <b>Sandwich Body Locator</b> .....   | 12.007 |
| <i>This handy Locator lists all catalogued and some non-catalogued Sandwich Bodies and Subplates. Included are ISO/CETOP Interface Patterns, Function Descriptions and Function Symbols, with Cavities, Typical Cartridges used with each specific body and a stacking height for quick ordering. Also listed beneath each cartridge/body is a page number for location of more detailed information on each body.</i> |        |
| <b>Sandwich Body Data Pages</b> .....  | 12.025 |
| <b>ISO 03 Sandwich Bodies</b> .....  | 12.025 |
| Relief Valves .....  | 12.025 |
| Sequence Valves .....  | 12.035 |
| Reducing Valves .....  | 12.037 |
| Reducing/Relieving Valves .....  | 12.043 |
| Counterbalance Valves .....  | 12.048 |
| Pilot Operated Check Valves .....  | 12.054 |
| Flow Control Valves .....  | 12.058 |
| Check Valves .....   | 12.066 |
| Circuit Savers .....   | 12.073 |
| Subplates .....  | 12.080 |
| Bar Manifolds .....  | 12.087 |
| Bar Manifold Mounting Brackets .....   | 12.087 |
| Cover Plates .....   | 12.090 |

|  |        |
|--|--------|
| <b>ISO 05 Sandwich Bodies</b> .....      | 12.093 |
| Relief Valves .....                      | 12.093 |
| Sequence Valves .....                    | 12.105 |
| Reducing Valves .....                    | 12.107 |
| Reducing/Relieving Valves .....          | 12.114 |
| Counterbalance Valves .....              | 12.122 |
| Pilot Operated Check Valves .....        | 12.129 |
| Flow Control Valves .....                | 12.134 |
| Check Valves .....                       | 12.143 |
| Circuit Savers .....                     | 12.150 |
| Subplates .....                          | 12.161 |
| Bar Manifolds .....                      | 12.168 |
| <b>ISO 05 x, y Sandwich Bodies</b> ..... | 12.173 |
| Relief Valves .....                      | 12.173 |
| Sequence Valves .....                    | 12.182 |
| Reducing Valves .....                    | 12.184 |
| Reducing/Relieving Valves .....          | 12.189 |
| Counterbalance Valves .....              | 12.196 |
| Pilot Operated Check Valves .....        | 12.203 |
| Flow Control Valves .....                | 12.208 |
| Check Valves .....                       | 12.219 |
| Circuit Savers .....                     | 12.228 |
| Subplates .....                          | 12.234 |
| Bar Manifolds .....                      | 12.235 |
| Cover Plates .....                       | 12.241 |
| <b>ISO 07 Sandwich Bodies</b> .....      | 12.245 |
| Relief Valves .....                      | 12.245 |
| Sequence Valves .....                    | 12.254 |
| Reducing Valves .....                    | 12.257 |
| Reducing/Relieving Valves .....          | 12.264 |
| Counterbalance Valves .....              | 12.269 |
| Pilot Operated Check Valves .....        | 12.275 |
| Flow Control Valves .....                | 12.280 |
| Check Valves .....                       | 12.288 |
| Circuit Savers .....                     | 12.296 |
| Subplates .....                          | 12.302 |

Continued ►



## Section 12: Sandwich Bodies (Continued)

|   |        |                                   |        |
|---|--------|-----------------------------------|--------|
| <b>Sandwich Body Data Pages (Continued)</b> |        | Reducing/Relieving Valves .....   | 12.323 |
| <b>ISO 07 Sandwich Bodies</b>               |        | Counterbalance Valves .....       | 12.329 |
| Bar Manifolds .....                         | 12.303 | Pilot Operated Check Valves ..... | 12.335 |
| <b>ISO 08 Sandwich Bodies</b> .....         |        | Flow Control Valves .....         | 12.340 |
| Relief Valves .....                         | 12.305 | Check Valves .....                | 12.351 |
| Sequence Valves .....                       | 12.314 | Circuit Savers .....              | 12.360 |
| Reducing Valves .....                       | 12.317 | Subplates .....                   | 12.366 |
|   |        | Bar Manifolds .....               | 12.368 |

## Section 14: General Information ..... 14.02

|   |       |  |       |
|---|-------|--|-------|
| <b>Direct Motor Mount Bodies List</b> ..... | 14.02 | <b>Solenoid Valve Interfaces</b> .....                 | 14.13 |
| <i>Danfoss, Eaton and Staffa Bodies</i>     |       | <i>List of Manufacturers and Model Codes</i>           |       |
| <b>Cartridge Cavities and Cavity Tools</b>  |       | <i>with ISO/CETOP Interface drawings</i>               |       |
|   |       | <i>and measurements.</i>                               |       |
|   |       | <b>Cartridge Control Kits</b> .....                    | 14.14 |
|   |       | <i>List of Service Kit Numbers, Use, Description,</i>  |       |
|   |       | <i>and Instructional Notes</i>                         |       |
|   |       | <b>Orifice Pressure Drop Data</b> .....                | 14.15 |
|   |       | <b>Coil Information</b> .....                          | 14.16 |
|   |       | <i>Current List of optional electrical connections</i> |       |
|   |       | <i>for SUN's solenoid operated valve assemblies.</i>   |       |

Visit [www.sunhydraulics.com](http://www.sunhydraulics.com) for current Tooling information.

Specifications, descriptions and illustrative material contained herein were as accurate as known at the time this publication was approved for printing.

SUN Hydraulics Limited reserves the right to discontinue models at any time, or change prices, specifications or designs without notice or incurring obligation.

This catalogue is published by SUN Hydraulics Corporation, 1500 West University Parkway, Sarasota, FL 34243 USA.

All rights reserved. This book, or any part thereof, may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or information storage and retrieval systems, for any purpose without the express written permission of SUN Hydraulics Corporation.

© 1994 SUN Hydraulics Corporation  
Sarasota, FL 34243 USA  
Printed in the United States of America  
Catalogue # 999-906-101



## The Sandwich Catalogue

SUN offers the broadest and most comprehensive range of sandwich products in the ISO 03 to ISO 08 interface sizes of any manufacturer. All sandwiches are available in a choice of materials; aluminium for 210 bar operation and SG iron for 350 bar operation. Many sandwich products are also available in both standard and high capacity versions.

The SUN Hydraulics Sandwich Catalogue contains more than 300 pages of ISO 03, 05, 07, and 08 sandwich bodies, side-ported and rear-ported subplates, and one- to five-station bar manifolds. Sandwiches are available with single cavities, dual cavities, and multiple cavity variants to make unique circuit elements for mounting under standard directional control valves.

Products are catalogued by ISO/CETOP interface pattern and function, with ISO 03 bodies appearing first, followed by ISO 05, ISO 05 with x and y ports (European and U.S.), ISO 07, and ISO 08 bodies. Within each ISO interface pattern, products are catalogued by function.

Because SUN's ISO 03 sandwich bodies are designed for multi-functional use, you will see the same three letter model code appear in different functional areas. To achieve multi-functional usage, SUN ISO 03 sandwiches do not conform to the ISO standard stacking height. See page 12.003 in the Technical Tip Section for a more detailed explanation of ISO 03 sandwiches.

## Technical Tips

The Technical Tip section, starting on page 12.003, provides detailed information on SUN sandwich products. The material presented in this section explains how to order and orient SUN sandwiches in a stack, and when and how to order seal plates. There is also information for ordering studkits for ISO 03 and 05 sandwiches.

## Sandwich Locator (See Figure 1)

The Sandwich Body Locator on pages 12.007 through 12.024 is the easiest way to locate a specific sandwich product in this catalogue. The Locator groups products by function and presents the sandwich model code and stacking height, cavity configuration, and page number for every sandwich, subplate, and bar manifold in this catalogue. Most sandwich model codes are preceded by a typical cartridge model code to present a full valve assembly.

On the left side of each locator page is a pictorial description of a sandwich stack. The P, T, A, and B ports (with appropriate symbols) at the bottom of the page are connected with simulated lines to a directional valve (no centre configuration shown) at the top of the page. The functional schematic renderings shown between the directional valve and P, T, A, and B ports realistically describe how a specific sandwich will function in a stack.

Once a function is selected, available sandwich bodies are listed across the page under the five different ISO/CETOP interface patterns. Simply note the model code for the sandwich you have selected and turn to the referenced page to see detailed information on that product.

Figure 1 Sandwich Locator

**ISO/CETOP SANDWICH BODY LOCATOR**  
**ALUMINIUM AND SG IRON**  
*All pages listed below refer to SUN's Sandwich Body Catalogue.*

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridge. In the sixth position of the full model code, the customer must specify the pressure range.

**Five different ISO Interface Patterns**

**Function Description**

**Function Symbol**

**Locator Tab**

**Sequence Valves**

**Stacking Height**

**Cavity Configuration**

**Cartridge Model Code**

**Sandwich Body Model Code**

**Page Location of Body in Sandwich Catalogue**

| Function                    | ISO 03/CETOP 3                          | ISO 05/CETOP 5                          | ISO 05/CETOP 5 with X and Y             | ISO 07/CETOP 7                          | ISO 08/CETOP 8                          |
|-----------------------------|---|---|---|---|---|
| In To P                     | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.035 | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.035 | 7-2A<br>ESFC-LN-EBUM 445<br>Pg. 12.162  | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.254 | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.314 |
| In To A<br>Reverse FF Check | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.035 | 7-2A<br>ESFC-LN-EBUM 445<br>Pg. 12.162  | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.254 | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.314 | 7-17A<br>ESFC-LN-EBUM 445<br>Pg. 12.315 |

Figure 2 Sandwich Data Page

**ISO 08 SANDWICH BODIES**

Aluminium rated to 210 bar and SG Iron rated to 350 bar.  
See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page viii.

**FUNCTION**

Metric Out T

**Function Symbol**

**Function Description**

**Flow Control Valves**

Ø -114.0 -rings (4) -121.0 -rings

T-100 Cavity Locating Shoulder Depth 1.5

**Metric 1st Angle Projection Symbol**

**Sandwich Body Model Code**

| ALUMINIUM |            | SG IRON   |            |
|-----------|------------|-----------|------------|
| Mod. Code | Und. P/Max | Mod. Code | Und. P/Max |
| IBU       |            | IBU/S     |            |

---

**FUNCTION**

Metric Out T (High Capacity)

**Cartridge Function Symbol**

**Flow Control Valves**

Ø -114.0 -rings (4) -121.0 -rings

T-100 Cavity Locating Shoulder Depth 0.8

**Cartridge Table showing Typical Cartridges used with Bodies on this page**

| ALUMINIUM |            | SG IRON   |            |
|-----------|------------|-----------|------------|
| Mod. Code | Und. P/Max | Mod. Code | Und. P/Max |
| IBU       |            | IBU/S     |            |

**08 FLOW CONTROL**

| TYPICAL NEEDLE VALVE CARTRIDGE |   |        |   |
|--------------------------------|---|--------|---|
| Symbol                         | Description   | Symbol | Description   |
|                                | Fully Adjustable Needle Valve<br><b>NE% Page 513</b>  |        | Fixed Orifice, Pressure-Compensated Flow Control<br><b>FX% Page 521</b>                                 |
|                                | Fully Adjustable Needle Valve with Reverse Free Flow Check<br><b>NC% Page 517</b>           |        | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check<br><b>FC% Page 523</b>    |
|                                | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow<br><b>ND% Page 519</b> |        | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check<br><b>FD% Page 525</b> |

**Page Location of Cartridge in Cartridge Catalogue**

UV Standard Body Catalogue ISBN 978-0-12-350123-8 12.350

## ►►► Sandwich Data Pages (See Figure 2)

Each sandwich data page presents information in a similar fashion. The function symbol(s) shown on the left part of the page replicate the same description found in the Locator, including the text description. To the right of the symbols, a complete physical description of the sandwich body is presented, including the cavity location and locating shoulder depth. (When the locating shoulder depth is subtracted from the maximum control extension dimension on a cartridge, you are able to calculate the stick-out length for the cartridge.) Convenient tabs on the outer margin of each page denote the ISO interface size and sandwich function for quick reference.

Under the physical sandwich description is a chart providing the sandwich model codes for both aluminium and SG iron versions, and port types and sizes if there are ports in the body. ISO standard interface dimensions can be found on page 14.13 of the catalogue.

At the bottom of most sandwich data pages is a box titled "Typical Cartridges used with Bodies shown above". This box contains cartridge model codes, cartridge function symbols and descriptive text for cartridges used with the sandwiches on a specific page. The key to matching cartridges to sandwich bodies is the SUN cavity. Anytime the cavity configuration of a cartridge matches the cavity configuration of a body, you are guaranteed a physical fit.

Most sandwich data pages show two sandwich bodies with identical cavities. However, sometimes the two bodies will have different cavities, especially in the case where a standard and high capacity sandwich body are shown on

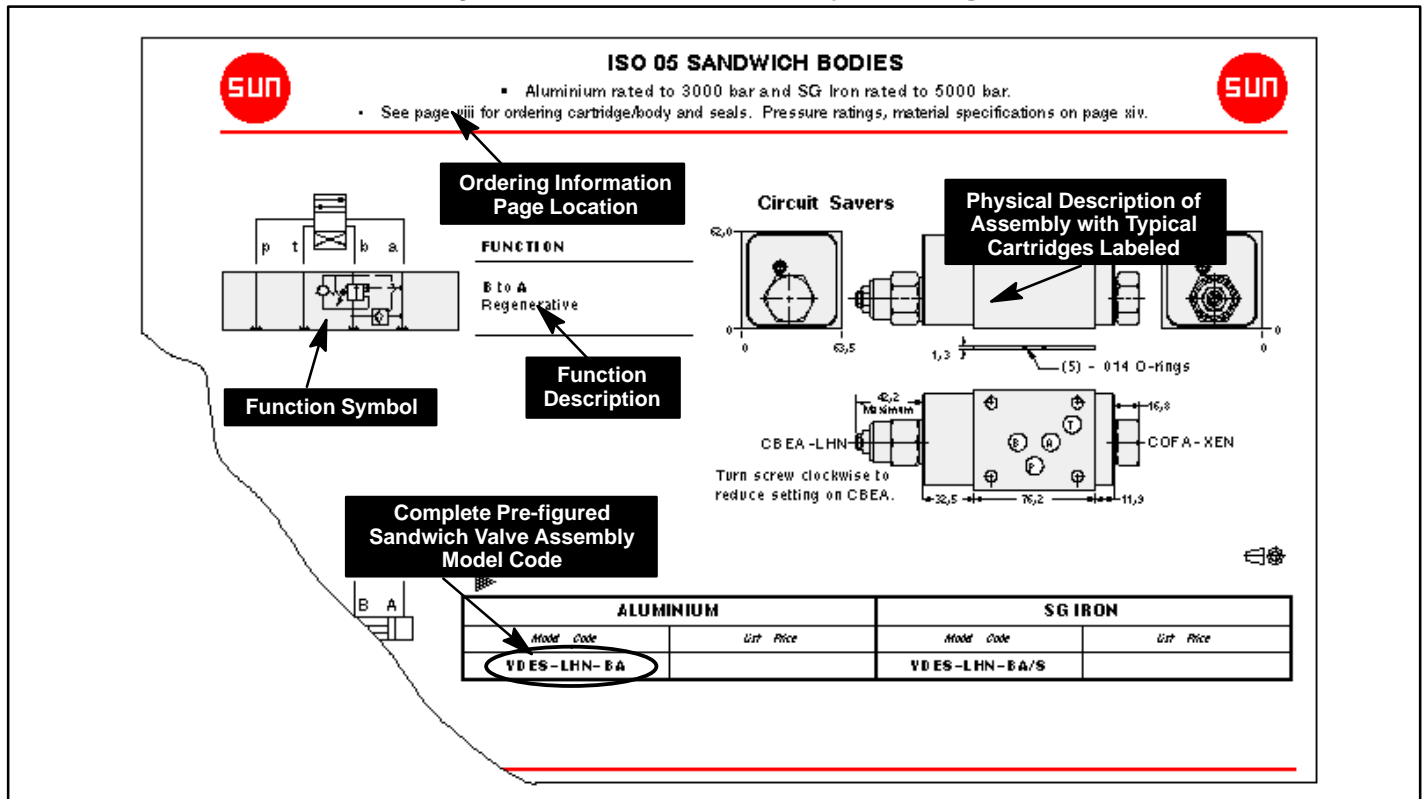
the same page. (To achieve a high capacity sandwich version, SUN often uses the next size larger cartridge.) On these pages, cartridge model codes are shown with an asterisk in the third position. To complete the model code, select the cartridge model that has the identical cavity as the sandwich being used.

## SUN Sandwich Valve Assemblies (See Figure 3)

Some sandwich bodies are offered as complete, pre-configured valve assemblies. Sandwich Valve Assemblies typically include at least two different cartridges in the assembly and are designated by a nine-position model code. These product data pages do not include a listing of typical cartridges used as they are complete circuit elements. The cartridges used in the assembly are described with complete model codes in the physical description of the assembly. If you need to change a control or adjustment range on cartridges, please contact your SUN distributor *before* making the change.

Some sandwich valve assemblies include a solenoid valve. The model codes listed on these pages are incomplete, with an \* in the eighth position of the model code. To complete the model code, the solenoid connector/voltage option must be selected from page 14.16 at the back of the catalogue or page 50 of SUN's Price List. Once the appropriate option is selected, insert the option code in place of the \* and add the option price to the assembly List Price. Please note that all solenoid operated valve assemblies are limited to 210 bar operation.

Figure 3 Sandwich Assembly Data Page





## General Information Section

All SUN catalogues contain a general information section for customer reference. This section includes:

- A charted listing, by function, of direct motor mount bodies for Danfoss, Eaton, and Staffa motors.
- Cavity drawings for all SUN cavities in the catalogue with model codes for cavity tooling.
- ISO standard interface dimensions with selected directional valve manufacturers' model codes.

- A listing of field service kits for SUN cartridges.
- Orifice size pressure drop curves to be used when applying flow controls.
- A listing of solenoid connector and voltage options.
- A complete model code alphabetical index for all products in all SUN catalogues. The model code index is organized by Cartridge, Cartridge Accessories, Body (Line Mount and Sandwich), Parts, and Valve Assembly Packages.

Figure 4 (Top to bottom) SUN Cavity Drawing page, ISO/CETOP standard interface page and solenoid connector and voltage options page.

**CARTRIDGE CAVITIES AND CAVITY TOOLS**  
See Sun Price List for Tooling Prices.

---

### 3 Port SUN Cavity Series 1, T-11A

\*\*ΔM20 x 1.5-6H Thread

#### Socket Wrench Clearance Diameter

Socket Clearance: 31.75 0 mm.\*  
 Recommended Maximum L.S. Depth without Socket Clearance: 23.82.  
 Minimum Centreline-to-Edge Distance: 15.09.  
 Minimum Centreline-to-Centreline Distance: 26.97.

#### Sockets

Deep thin wall hex sockets are the preferred tools to use when installing SUN cartridges are readily available from Snap-On Tools Corporation. (See Chart)

#### Dimension Tolerances

(unless otherwise specified)

±0.05[A]\*\*

---

**SOLENOID VALVE INTERFACES**

---

#### ISO 03/NFPA D03

**Valve Models**

|                 |                           |
|-----------------|---------------------------|
| Continental     | VSSM, ED03M               |
| Delta           | Series 4000               |
| Denison         | A-3D01, D2D02-35          |
| Double A        | Q* -3                     |
| Parker Hannifin | D1VW                      |
| Racine          | FD4                       |
| Rexroth         | WE6, 4WRA6                |
| Rivett          | 65** -03                  |
| Rucker/Yuken    | DSGR-01, DG4V, SSG01, NG6 |

#### ISO 05/NFPA D05

**Valve Models**

|                 |                      |
|-----------------|----------------------|
| Continental     | VS12M, ED05M         |
| Denison         | DID04, 3D02, A-D2D04 |
| Double A        | Q* -5                |
| Parker Hannifin | D3W                  |
| Racine          | FD4                  |
| Rexroth         | WE8, WE10            |
| Rivett          | 65** -02             |
| Rucker/Yuken    | DSG-03               |
| Vickers         | DG4S4                |
| Nachi           | SSG03, E10, E20      |
| Racine-Bosch    | NG10                 |

---

#### Electrical Connections for Solenoid Operated

Below is a listing of current optional electrical connections for solenoid operated valve assemblies in the catalog which utilize the Waterman solenoid. The solenoid operated valve assemblies incorporate the Waterman solenoid, current operating pressures are limited.

The letter codes listed below are required to complete the model code and pricing of all SUN solenoid operated valve assemblies. (See Model Code Explanation in the front of this catalogue.)

#### ISO 05/D05 with X and Y European

**Valve Models**

---

#### WIRE LEADS

18 Gage  
0,6 metres Long

J - 12 V DC-24" Leads  
K - 24 V DC-24" Leads

#### CONDUIT

1/2" NPTF

18 Gage  
0,6 metres Long

N - 115 V 50/60hz-Conduit  
O - 230 V 50/60hz-Conduit

#### ISO/DIN

DIN 43650  
Plug Face

S - 12 V DC ISO/DIN  
T - 24 V DC ISO/DIN  
M - 115 V 50/60hz ISO/DIN  
N - 230 V 50/60hz ISO/DIN

UK Sandwich Body Catalogue 12/94 #999-906-101  
CD #999-901-105 Rev. 01-JAN-95

vi



---

# ***Sandwich Body Technical Tips and Locator***



---

Click Here for  
**MOUNTING and ASSEMBLY of SANDWICH BODIES**  
Technical Tips

See [Product](#) > [Technical Information](#) > [Technical Tips for Sun Products](#)





---

Click Here for  
**MOUNTING and ASSEMBLY of SANDWICH BODIES**  
Technical Tips

See [Product](#) > [Technical Information](#) > [Technical Tips for Sun Products](#)



Click Here for  
**MOUNTING and ASSEMBLY of SANDWICH BODIES**  
Technical Tips

See [Product](#) > [Technical Information](#) > [Technical Tips for Sun Products](#)



---

Click Here for  
**MOUNTING and ASSEMBLY of SANDWICH BODIES**  
Technical Tips

See [Product](#) > [Technical Information](#) > [Technical Tips for Sun Products](#)

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| Function                           | p t b a | ISO 03/CETOP 3  | ISO 05/CETOP 5  | ISO 05/CETOP 5 with X and Y                                      | ISO 07/CETOP 7  | ISO 08/CETOP 8  |
|------------------------------------|---------|---|---|--|---|---|
| <b>Relief Valves</b>               |         |   |   |  |   |   |
|                                    |         | Cartridge Body Stack Height   | Cartridge Body Stack Height                                       | Cartridge Body Stack Height                                      | Cartridge Body Stack Height                                       | Cartridge Body Stack Height   |
| <b>P to T</b>                      |         |   | T-10A<br>RPEC-L*N-CBE/M 49,3<br>RPEC-L*N-CBE/T 49,3<br>Pg. 12.093 |  | T-3A<br>RPGC-L*N-CKP/M 49,8<br>RPGC-L*N-CKP/T 49,8<br>Pg. 12.245  | T-3A<br>RPGC-L*N-CDP/M 49,3<br>RPGC-L*N-CDP/T 49,3<br>Pg. 12.305    |
| <b>P to T (High Capacity)</b>      |         | T-10A<br>RPEC-L*N-FBP/M 44,5<br>RPEC-L*N-FBP/T 44,5<br>Pg. 12.025   | † T-3A<br>RPGC-L*N-CBP 49,3<br>RPGC-L*N-CBP/S 49,3<br>Pg. 12.093  | T-3A<br>RPGC-L*N-CJP/M 50,5<br>RPGC-L*N-CJP/T 50,5<br>Pg. 12.173 |   | T-16A<br>RPIC-L*N-CDO/M 87,4<br>RPIC-L*N-CDO/T 87,4<br>Pg. 12.305   |
| <b>P to T Externally Vented</b>    |         | † T-11A<br>RVCA-L*N-EBC/M 44,5<br>RVCA-L*N-EBC/T 44,5<br>Pg. 12.026 | T-2A<br>RVEA-L*N-BBC/M 62,0<br>RVEA-L*N-BBC/T 62,0<br>Pg. 12.094  | T-2A<br>RVEA-L*N-BJC/M 63,2<br>RVEA-L*N-BJC/T 63,2<br>Pg. 12.174 | T-17A<br>RVGA-L*N-CKQ/M 69,6<br>RVGA-L*N-CKQ/T 69,6<br>Pg. 12.246 | † T-17A<br>RVGA-L*N-HBV/M 87,4<br>RVGA-L*N-HBV/T 87,4<br>Pg. 12.306 |
| <b>P to T N.O. Solenoid Vented</b> |         | † YRCA-LAN-*A 44,5<br>YRCA-LAN-*A/S* 44,5<br>Pg. 12.027             | † YREO-LAN-*A 62,0<br>YREO-LAN-*A/S 62,0<br>Pg. 12.095            |  | YRFI-LAN-*B/M 69,6<br>YRFI-LAN-*B/T 69,6<br>Pg. 12.247            | YRHI-LAN-*A/M 87,4<br>YRHI-LAN-*A/T 87,4<br>Pg. 12.307              |
| <b>P to T N.C. Solenoid Vented</b> |         | † YRCP-LAN-*A 44,5<br>YRCP-LAN-*A/S 44,5<br>Pg. 12.027              | † YREP-LAN-*A 62,0<br>YREP-LAN-*A/S 62,0<br>Pg. 12.095            |  | YRFJ-LAN-*B/M 69,6<br>YRFJ-LAN-*B/T 69,6<br>Pg. 12.247            | YRHJ-LAN-*A/M 87,4<br>YRHJ-LAN-*A/T 87,4<br>Pg. 12.307              |
| <b>Out of T</b>                    |         |   |   |  | † T-16A<br>RPIC-L*N-DKT 69,6<br>RPIC-L*N-DKT/S 69,6<br>Pg. 12.248 | † T-16A<br>RPIC-L*N-IBT 87,4<br>RPIC-L*N-IBT/S 87,4<br>Pg. 12.308   |
| <b>Out of T (High Capacity)</b>    |         | T-10A<br>RPEC-L*N-FBT/M 44,5<br>RPEC-L*N-FBT/T 44,5<br>Pg. 12.028   | † T-3A<br>RPGC-L*N-CBT 49,3<br>RPGC-L*N-CBT/S 49,3<br>Pg. 12.096  |  | † T-18A<br>RPKC-L*N-DKV 88,6<br>RPKC-L*N-DKV/S 88,6<br>Pg. 12.248 | † T-18A<br>RPKC-L*N-IBV 87,4<br>RPKC-L*N-IBV/S 87,4<br>Pg. 12.308   |
| <b>A to T</b>                      |         |   | T-10A<br>RPEC-L*N-CBF/M 49,3<br>RPEC-L*N-CBF/T 49,3<br>Pg. 12.097 |  | T-3A<br>RPGC-L*N-CKA/M 49,8<br>RPGC-L*N-CKA/T 49,8<br>Pg. 12.249  | T-3A<br>RPGC-L*N-CDA/M 49,3<br>RPGC-L*N-CDA/T 49,3<br>Pg. 12.309    |
| <b>A to T (High Capacity)</b>      |         | T-10A<br>RPEC-L*N-FBA/M 44,5<br>RPEC-L*N-FBA/T 44,5<br>Pg. 12.029   | † T-3A<br>RPGC-L*N-CBA 49,3<br>RPGC-L*N-CBA/S 49,3<br>Pg. 12.097  | T-3A<br>RPGC-L*N-CJA/M 50,5<br>RPGC-L*N-CJA/T 50,5<br>Pg. 12.175 |   | T-16A<br>RPIC-L*N-CDC/M 87,4<br>RPIC-L*N-CDC/T 87,4<br>Pg. 12.309   |
| <b>A to T FF Check T to B</b>      |         | † T-10A<br>RPEC-L*N-FB2 44,5<br>RPEC-L*N-FB2/S 44,5<br>Pg. 12.030   | † T-3A<br>RPGC-L*N-CB2 49,3<br>RPGC-L*N-CB2/S 49,3<br>Pg. 12.098  | † T-3A<br>RPGC-L*N-CJ2 63,2<br>RPGC-L*N-CJ2/S 63,2<br>Pg. 12.176 | † T-3A<br>RPGC-L*N-CKJ 49,8<br>RPGC-L*N-CKJ/S 49,8<br>Pg. 12.250  |   |
| <b>A to B</b>                      |         |   | T-10A<br>RPEC-L*N-CBH/M 37,8<br>RPEC-L*N-CBH/T 37,8<br>Pg. 12.099 |  |   |   |
| <b>A to B (High Capacity)</b>      |         | T-10A<br>RPEC-L*N-FBC/M 44,5<br>RPEC-L*N-FBC/T 44,5<br>Pg. 12.031   | † T-3A<br>RPGC-L*N-CBC 37,1<br>RPGC-L*N-CBC/S 37,1<br>Pg. 12.099  | T-3A<br>RPGC-L*N-CJC/M 50,5<br>RPGC-L*N-CJC/T 50,5<br>Pg. 12.177 |   |   |
| <b>A to T Externally Vented</b>    |         | † T-11A<br>RVCA-L*N-EBI/M 44,5<br>RVCA-L*N-EBI/T 44,5<br>Pg. 12.032 | T-2A<br>RVEA-L*N-BBD/M 62,0<br>RVEA-L*N-BBD/T 62,0<br>Pg. 12.100  |  |   | † T-17A<br>RVGA-L*N-HBE/M 87,4<br>RVGA-L*N-HBE/T 87,4<br>Pg. 12.310 |
| <b>A to T N.O. Solenoid Vented</b> |         |   | † YREU-LAN-*A 63,2<br>YREU-LAN-*A/S 63,2<br>Pg. 12.101            |  |   |   |
| <b>A to T N.C. Solenoid Vented</b> |         |   | † YRET-LAN-*A 63,2<br>YRET-LAN-*A/S 63,2<br>Pg. 12.101            |  |   |   |

Continued on next page.



\*\*Seal plate must be ordered separately. European and U.S. X and Y available.

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.

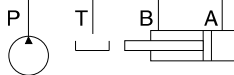
# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|   | p | t | b | a |  |                     |   |  |  |  |
|---|---|---|---|---|--|---------------------|---|--|--|--|
| <i>Function</i>   |   |   |   |   | ISO 03/CETOP 3   | ISO 05/CETOP 5      | ISO 05/CETOP 5<br>with X and Y  | ISO 07/CETOP 7   | ISO 08/CETOP 8   |  |
| <b>Relief Valves (Continued)</b>                            |   |   |   |   |  |                     |   |  |  |  |
|   |   |   |   |   | <i>Cartridge Body</i>  | <i>Stack Height</i> | <i>Cartridge Body</i>   | <i>Stack Height</i>  | <i>Cartridge Body</i>  | <i>Stack Height</i>  |
| <b>A and B to T</b>   |   |   |   |   |  |                     | † T-10A<br>RPEC-L*N-CBD 36,6<br>RPEC-L*N-CBD/S 36,6<br><i>Pg. 12.102</i>  |  |  |  |
| <b>A and B to T</b><br>(High Capacity)                      |   |   |   |   | † T-10A<br>RPEC-L*N-FBX 44,5<br>RPEC-L*N-FBX/S 44,5<br><i>Pg. 12.033</i>   |                     | † T-3A<br>RPGC-L*N-CBX 36,6<br>RPGC-L*N-CBX/S 36,6<br><i>Pg. 12.102</i>   | † T-3A<br>RPGC-L*N-CJX 37,8<br>RPGC-L*N-CJX/S 37,8<br><i>Pg. 12.178</i>  | † T-3A<br>RPGC-L*N-CKX 69,6<br>RPGC-L*N-CKX/S 69,6<br><i>Pg. 12.251</i>  | † T-16A<br>RPIC-L*N-CDZ 87,4<br>RPIC-L*N-CDZ/S 87,4<br><i>Pg. 12.311</i> |
| <b>A to B and B to A</b><br>(Cross-Port)                    |   |   |   |   |  |                     | † T-10A<br>RPEC-L*N-CBI 62,0<br>RPEC-L*N-CBI/S 62,0<br><i>Pg. 12.103</i>  | † T-10A<br>RPEC-L*N-CJY 63,2<br>RPEC-L*N-CJY/S 63,2<br><i>Pg. 12.179</i> | † T-10A<br>RPEC-L*N-CKY 49,8<br>RPEC-L*N-CKY/S 49,8<br><i>Pg. 12.252</i> | † T-3A<br>RPGC-L*N-CDY 49,3<br>RPGC-L*N-CDY/S 49,3<br><i>Pg. 12.312</i>  |
| <b>A to B and B to A</b><br>(High Capacity)<br>(Cross-Port) |   |   |   |   | † T-10A<br>RPEC-L*N-FBY 44,5<br>RPEC-L*N-FBY/S 44,5<br><i>Pg. 12.034</i>   |                     | † T-3A<br>RPGC-L*N-CBY 62,0<br>RPGC-L*N-CBY/S 62,0<br><i>Pg. 12.103</i>   |  |  | † T-16A<br>RPIC-L*N-CDW 87,4<br>RPIC-L*N-CDW/S 87,4<br><i>Pg. 12.312</i> |
| <b>B to T</b>   |   |   |   |   |  |                     | T-10A<br>RPEC-L*N-CBG/M 49,3<br>RPEC-L*N-CBG/T 49,3<br><i>Pg. 12.104</i>  | T-3A<br>RPGC-L*N-CKB/M 49,8<br>RPGC-L*N-CKB/T 49,8<br><i>Pg. 12.253</i>  | T-3A<br>RPGC-L*N-CDB/M 49,3<br>RPGC-L*N-CDB/T 49,3<br><i>Pg. 12.313</i>  |  |
| <b>B to T</b><br>(High Capacity)                            |   |   |   |   | T-10A<br>RPEC-L*N-FBA/M 44,5<br>RPEC-L*N-FBA/T 44,5<br><i>Pg. 12.029</i>   |                     | † T-3A<br>RPGC-L*N-CBB 49,3<br>RPGC-L*N-CBB/S 49,3<br><i>Pg. 12.104</i>   | T-3A<br>RPGC-L*N-CJB/M 50,5<br>RPGC-L*N-CJB/T 50,5<br><i>Pg. 12.180</i>  |  | T-16A<br>RPIC-L*N-CDD/M 87,4<br>RPIC-L*N-CDD/T 87,4<br><i>Pg. 12.313</i> |
| <b>B to T</b><br>(FF Check to T to A)                       |   |   |   |   | † T-10A<br>RPEC-L*N-FB2 44,5<br>RPEC-L*N-FB2/S 44,5<br><i>Pg. 12.030</i>   |                     |   |  |  |  |
| <b>B to A</b>   |   |   |   |   |  |                     | T-10A<br>RPEC-L*N-CBH/M 37,8<br>RPEC-L*N-CBH/T 37,8<br><i>Pg. 12.099</i>  |  |  |  |
| <b>B to A</b><br>(High Capacity)                            |   |   |   |   | T-10A<br>RPEC-L*N-FBC/M 44,5<br>RPEC-L*N-FBC/T 44,5<br><i>Pg. 12.031</i>   |                     | † T-3A<br>RPGC-L*N-CBC 37,1<br>RPGC-L*N-CBC/S 37,1<br><i>Pg. 12.099</i>   | T-3A<br>RPGC-L*N-CJC/M 50,5<br>RPGC-L*N-CJC/T 50,5<br><i>Pg. 12.177</i>  |  |  |
| <b>B to T</b><br>Externally Vented                          |   |   |   |   | † T-11A<br>RVCA-L*N-EBI/M 44,5<br>RVCA-L*N-EBI/T 44,5<br><i>Pg. 12.032</i> |                     | † T-2A<br>RVEA-L*N-BBE/M 62,0<br>RVEA-L*N-BBE/T 62,0<br><i>Pg. 12.100</i> |  |  | T-17A<br>RVGA-L*N-HBF/M 87,4<br>RVGA-L*N-HBF/T 87,4<br><i>Pg. 12.310</i> |
| <b>B to T</b><br>N.O. Solenoid Vented                       |   |   |   |   |  |                     | † YREU-LAN-*A 63,2<br>YREU-LAN-*A/S 63,2<br><i>Pg. 12.101</i>             |  |  |  |
| <b>B to T</b><br>N.C. Solenoid Vented                       |   |   |   |   |  |                     | † YRET-LAN-*A 63,2<br>YRET-LAN-*A/S 63,2<br><i>Pg. 12.101</i>             |  |  |  |



**\*\*Seal plate must be ordered separately. European and U.S. X and Y available.**

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON

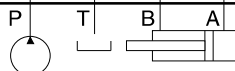


All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| Function                                | p t b a   | ISO 03/CETOP 3  | ISO 05/CETOP 5   | ISO 05/CETOP 5 with X and Y   | ISO 07/CETOP 7  | ISO 08/CETOP 8 |
|---|---|---|--|---|---|----------------|
| <b>Sequence Valves</b>                  |   |   |  |   |   |                |
|   | Cartridge Body  | Stack Height  | Cartridge Body   | Stack Height  | Cartridge Body  | Stack Height   |
| In to P                                 | T-11A<br>RSDC-L*N-EBW/M 44,5<br>RSDC-L*N-EBW/T 44,5<br>Pg. 12.035   | T-2A<br>RSFC-L*N-BB/M 62,0<br>RSFC-L*N-BB/W/T 62,0<br>Pg. 12.105        | T-2A<br>RSFC-L*N-BJW/M 63,2<br>RSFC-L*N-BJW/T 63,2<br>Pg. 12.182   | T-17A<br>RSHC-L*N-BKW/M 69,6<br>RSHC-L*N-BKW/T 69,6<br>Pg. 12.254   | T-17A<br>RSHC-L*N-HBW/M 87,4<br>RSHC-L*N-HBW/T 87,4<br>Pg. 12.314       |                |
| In to A<br>Reverse FF Check             | † T-11A<br>RSDC-L*N-EB4 44,5<br>RSDC-L*N-EB4/S 44,5<br>Pg. 12.036   | † T-2A<br>RSFC-L*N-BB4 63,2<br>RSFC-L*N-BB4/S 63,2<br>Pg. 12.106        | † T-2A<br>RSFC-L*N-BJ4 63,2<br>RSFC-L*N-BJ4/S 63,2<br>Pg. 12.183   | † T-17A<br>RSHC-L*N-BK6 69,6<br>RSHC-L*N-BK4/S 69,6<br>Pg. 12.255   | † T-17A<br>RSHC-L*N-HB4/T 87,4<br>RSHC-L*N-HB4/T 87,4<br>Pg. 12.315     |                |
| Out of A<br>Reverse FF Check            | † T-11A<br>RSDC-L*N-EB5 44,5<br>RSDC-L*N-EB5/S 44,5<br>Pg. 12.036   | † T-2A<br>RSFC-L*N-BB5 63,2<br>RSFC-L*N-BB5/S 63,2<br>Pg. 12.106        | † T-2A<br>RSFC-L*N-BJ5 63,2<br>RSFC-L*N-BJ5/S 63,2<br>Pg. 12.183   | † T-17A<br>RSHC-L*N-BK6/S 69,6<br>RSHC-L*N-BK6/S 69,6<br>Pg. 12.255 | † T-17A<br>RSHC-L*N-HB6/T 87,4<br>RSHC-L*N-HB6/T 87,4<br>Pg. 12.315     |                |
| In to B<br>Reverse FF Check             | † T-11A<br>RSDC-L*N-EB5/S 44,5<br>RSDC-L*N-EB4/S 44,5<br>Pg. 12.036 | † T-2A<br>RSFC-L*N-BB5/S 63,2<br>RSFC-L*N-BB4/S 63,2<br>Pg. 12.106      | † T-2A<br>RSFC-L*N-BJ5/S 63,2<br>RSFC-L*N-BJ4/S 63,2<br>Pg. 12.183 | † T-17A<br>RSHC-L*N-BK5/S 69,6<br>RSHC-L*N-BK7/S 69,6<br>Pg. 12.256 | † T-17A<br>RSHC-L*N-HB5/T 87,4<br>RSHC-L*N-HB7/T 87,4<br>Pg. 12.316     |                |
| Out of B<br>Reverse FF Check            | † T-11A<br>RSDC-L*N-EB4/S 44,5<br>RSDC-L*N-EB4/S 44,5<br>Pg. 12.036 | † T-2A<br>RSFC-L*N-BB4/S 63,2<br>RSFC-L*N-BB4/S 63,2<br>Pg. 12.106      | † T-2A<br>RSFC-L*N-BJ4/S 63,2<br>RSFC-L*N-BJ4/S 63,2<br>Pg. 12.183 | † T-17A<br>RSHC-L*N-BK7/S 69,6<br>RSHC-L*N-BK7/S 69,6<br>Pg. 12.256 | † T-17A<br>RSHC-L*N-HB7/M 87,4<br>RSHC-L*N-HB7/T 87,4<br>Pg. 12.316     |                |
| <b>Reducing Valves</b>                  |   |   |  |   |   |                |
|   | Cartridge Body  | Stack Height  | Cartridge Body   | Stack Height  | Cartridge Body  | Stack Height   |
| On P<br>Drained to T                    | T-11A<br>PBDB-L*N-EBP/M 44,5<br>PBDB-L*N-EBP/T 44,5<br>Pg. 12.037   | T-2A<br>PBFB-L*N-BBP/M 62,0<br>PBFB-L*N-BBP/T 62,0<br>Pg. 12.107        | T-2A<br>PBFB-L*N-BJP/M 63,2<br>PBFB-L*N-BJP/T 63,2<br>Pg. 12.184   | T-17A<br>PBHB-L*N-BKP/M 69,6<br>PBHB-L*N-BKP/T 69,6<br>Pg. 12.257   | T-17A<br>PBHB-L*N-HBP/M 87,4<br>PBHB-L*N-HBP/T 87,4<br>Pg. 12.317       |                |
| On P<br>Drained to T<br>(High Capacity) |   | T-17A<br>PBHB-L*N-WCC/M 100,0<br>PBHB-L*N-WCC/T 100,0<br>NOT CATALOGUED |  |   | T-19A<br>PBJB-L*N-HBO/M 87,4<br>PBJB-L*N-HBO/T 87,4<br>Pg. 12.317       |                |
| On P<br>Drained Externally              | † T-11A<br>PBDB-L*N-EBQ/M 44,5<br>PBDB-L*N-EBQ/T 44,5<br>Pg. 12.038 | T-2A<br>PBFB-L*N-BBQ/M 63,2<br>PBFB-L*N-BBQ/T 63,2<br>Pg. 12.108        |  | T-17A<br>PBHB-L*N-BKQ/M 69,6<br>PBHB-L*N-BKQ/T 69,6<br>Pg. 12.258   | T-19A<br>PBJB-L*N-HBQ/M 87,4<br>PBJB-L*N-HBQ/T 87,4<br>Pg. 12.318       |                |
| On A<br>Drained to B                    | T-11A<br>PBDB-L*N-EBA/M 44,5<br>PBDB-L*N-EBA/T 44,5<br>Pg. 12.039   | T-2A<br>PBFB-L*N-BBA/M 49,3<br>PBFB-L*N-BBA/T 49,3<br>Pg. 12.109        | T-2A<br>PBFB-L*N-BJA/M 63,2<br>PBFB-L*N-BJA/T 63,2<br>Pg. 12.185   | T-17A<br>PBHB-L*N-BKA 69,6<br>PBHB-L*N-BKA/S 69,6<br>Pg. 12.259     | † T-17A<br>PBHB-L*N-HBL 87,4<br>PBHB-L*N-HBL/S 87,4<br>Pg. 12.319       |                |
| On A<br>Drained to B<br>(High Capacity) |   |   |  |   | † T-19A<br>PBJB-L*N-HBA 87,4<br>PBJB-L*N-HBA/S 87,4<br>Pg. 12.319       |                |
| On A<br>Drained Externally              | † T-11A<br>PBDB-L*N-EBD/M 44,5<br>PBDB-L*N-EBD/T 44,5<br>Pg. 12.040 | † T-2A<br>PBFB-L*N-BBF/M 63,2<br>PBFB-L*N-BBF/T 63,2<br>Pg. 12.110      |  | † T-17A<br>PBHB-L*N-BKC/M 69,6<br>PBHB-L*N-BKC/T 69,6<br>Pg. 12.260 | † T-17A<br>PBHB-L*N-HBG/M 87,4<br>PBHB-L*N-HBG/T 87,4<br>NOT CATALOGUED |                |
| On A Drain to T<br>Reverse FF Check     | † T-11A<br>PBDB-L*N-EB2 44,5<br>PBDB-L*N-EB2/S 44,5<br>Pg. 12.041   | † T-2A<br>PBFB-L*N-BB2 63,2<br>PBFB-L*N-BB2/S 63,2<br>Pg. 12.111        | † T-2A<br>PBFB-L*N-BJ2 63,2<br>PBFB-L*N-BJ2/S 63,2<br>Pg. 12.186   | † T-17A<br>PBHB-L*N-BK2 69,6<br>PBHB-L*N-BK2/S 69,6<br>Pg. 12.261   | † T-17A<br>PBHB-L*N-HBK/M 87,4<br>PBHB-L*N-HBK/T 87,4<br>Pg. 12.320     |                |
| On B<br>Drained to A                    | T-11A<br>PBDB-L*N-EBA/M 44,5<br>PBDB-L*N-EBA/T 44,5<br>Pg. 12.039   | T-2A<br>PBFB-L*N-BBB/M 49,3<br>PBFB-L*N-BBB/T 49,3<br>Pg. 12.112        | T-2A<br>PBFB-L*N-BJB/M 63,2<br>PBFB-L*N-BJB/T 63,2<br>Pg. 12.187   | † T-17A<br>PBHB-L*N-BKB 69,6<br>PBHB-L*N-BKB/S 69,6<br>Pg. 12.262   | † T-17A<br>PBHB-L*N-HBM 87,4<br>PBHB-L*N-HBM/S 87,4<br>Pg. 12.321       |                |
| On B<br>Drained to A<br>(High Capacity) |   |   |  |   | † T-19A<br>PBJB-L*N-HBB 87,4<br>PBJB-L*N-HBB/S 87,4<br>Pg. 12.321       |                |

Continued on next page.



\*\*Seal plate must be ordered separately. European and U.S. X and Y available.

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|  | p | t | b | a |   |  |  |   |   |
|--|---|---|---|---|---|--|--|---|---|
| Function   |   |   |   |   | ISO 03/CETOP 3  | ISO 05/CETOP 5   | ISO 05/CETOP 5<br>with X and Y                                       | ISO 07/CETOP 7  | ISO 08/CETOP 8  |
| <b>Reducing Valves (Continued)</b>                       |   |   |   |   |   |  |  |   |   |
|  | p | t | b | a | Cartridge Body<br>Stack Height  | Cartridge Body<br>Stack Height                                       | Cartridge Body<br>Stack Height                                       | Cartridge Body<br>Stack Height                                    | Cartridge Body<br>Stack Height                                    |
| On B<br>Drained Externally                               |   |   |   |   | T-11A<br>PBDB-L*N-EBD/M 44,5<br>PBDB-L*N-EBD/T 44,5<br>Pg. 12.040     | T-2A<br>PBFB-L*N-BBG/M 63,2<br>PBFB-L*N-BBG/T 63,2<br>Pg. 12.110     |  |   |   |
| On B Drain to T<br>Reverse FF Check                      |   |   |   |   | † T-11A<br>PBDB-L*N-EB3 44,5<br>PBDB-L*N-EB3/S 44,5<br>Pg. 12.041     | † T-2A<br>PBFB-L*N-BB3 63,2<br>PBFB-L*N-BB3/S 63,2<br>Pg. 12.111     | † T-2A<br>PBFB-L*N-BJ3 63,2<br>PBFB-L*N-BJ3/S 63,2<br>Pg. 12.186     | † T-17A<br>PBHB-L*N-BKJ 69,6<br>PBHB-L*N-BKJ/S 69,6<br>Pg. 12.261 | T-17A<br>PBHB-L*N-HBJ/M 87,4<br>PBHB-L*N-HBJ/T 87,4<br>Pg. 12.320 |
| On A and B<br>Drains to<br>Opposite Port                 |   |   |   |   | † T-11A<br>PBDB-L*N-EBY 44,5<br>PBDB-L*N-EBY/S 44,5<br>Pg. 12.042     | † T-2A<br>PBFB-L*N-BBY 49,3<br>PBFB-L*N-BBY/S 49,3<br>Pg. 12.113     | † T-2A<br>PBFB-L*N-BJY 63,2<br>PBFB-L*N-BJY/S 63,2<br>Pg. 12.188     | † T-17A<br>PBHB-L*N-BKY 69,6<br>PBHB-L*N-BKY/S 69,6<br>Pg. 12.263 | † T-17A<br>PBHB-L*N-HBN 87,4<br>PBHB-L*N-HBN/S 87,4<br>Pg. 12.322 |
| On A and B<br>Drains to Opposite<br>Port (High Capacity) |   |   |   |   |   |  |  |   | † T-19A<br>PBJB-L*N-HBY 87,4<br>PBJB-L*N-HBY/S 87,4<br>Pg. 12.322 |
| On A and B<br>Drains to T<br>Reverse FF Check            |   |   |   |   | † T-11A<br>PBDB-L*N-EB9 63,2<br>PBDB-L*N-EB9/S 63,2<br>NOT CATALOGUED | † T-2A<br>PBFB-L*N-BB9 75,9<br>PBFB-L*N-BB9/S 75,9<br>NOT CATALOGUED | † T-2A<br>PBFB-L*N-BJ9 75,9<br>PBFB-L*N-BJ9/S 75,9<br>NOT CATALOGUED |   |   |
| <b>Reducing/Relieving Valves</b>                         |   |   |   |   |   |  |  |   |   |
|  | p | t | b | a | Cartridge Body<br>Stack Height  | Cartridge Body<br>Stack Height                                       | Cartridge Body<br>Stack Height                                       | Cartridge Body<br>Stack Height                                    | Cartridge Body<br>Stack Height                                    |
| On P Tank to T<br>Drained to T                           |   |   |   |   | T-11A<br>PPDB-L*N-EBP/M 44,5<br>PPDB-L*N-EBP/T 44,5<br>Pg. 12.043     | T-2A<br>PPFB-L*N-BBP/M 62,0<br>PPFB-L*N-BBP/T 62,0<br>Pg. 12.114     | T-2A<br>PPFB-L*N-BJP/M 63,2<br>PPFB-L*N-BJP/T 63,2<br>Pg. 12.189     | T-17A<br>PPHB-L*N-BKP/M 69,6<br>PPHB-L*N-BKP/T 69,6<br>Pg. 12.264 | T-17A<br>PPHB-L*N-HBP/M 87,4<br>PPHB-L*N-HBP/T 87,4<br>Pg. 12.323 |
| On P Tank to T<br>Drained to T<br>(High Capacity)        |   |   |   |   |   | T-17A<br>PPHB-L*N-WCC/M 100,0<br>PPHB-L*N-WCC/T 100,0<br>Pg. 12.114  |  |   | T-19A<br>PPJB-L*N-HBO/M 87,4<br>PPJB-L*N-HBO/T 87,4<br>Pg. 12.323 |
| On P Tank to T<br>Vented Externally                      |   |   |   |   | † T-21A<br>PVDB-L*N-MBP/M 44,5<br>PVDB-L*N-MBP/T 44,5<br>Pg. 12.044   | T-22A<br>PVFB-L*N-NBP/M 63,2<br>PVFB-L*N-NBP/T 63,2<br>Pg. 12.115    | T-22A<br>PVFB-L*N-NJP/M 63,2<br>PVFB-L*N-NJP/T 63,2<br>Pg. 12.190    |   | T-23A<br>PVHB-L*N-NBP/M 87,4<br>PVHB-L*N-NBP/T 87,4<br>Pg. 12.324 |
| On P Tank to T<br>Drained Externally                     |   |   |   |   | † T-21A<br>PVDA-L*N-MBP/M 44,5<br>PVDA-L*N-MBP/T 44,5<br>Pg. 12.044   | T-22A<br>PVFA-L*N-NBP/M 63,2<br>PVFA-L*N-NBP/T 63,2<br>Pg. 12.115    | T-22A<br>PVFA-L*N-NJP/M 63,2<br>PVFA-L*N-NJP/T 63,2<br>Pg. 12.190    |   | T-23A<br>PVHA-L*N-NBP/M 87,4<br>PVHA-L*N-NBP/T 87,4<br>Pg. 12.324 |
| On P Tank to T<br>N.O. Solenoid<br>on Drain              |   |   |   |   | † YPCG-LAN-*A 44,5<br>YPCG-LAN-*A/S 44,5<br>NOT CATALOGUED            | † YPDG-LAN-*A 63,2<br>YPDG-LAN-*A/S 63,2<br>Pg. 12.116               |  |   |   |
| On P Tank to T<br>N.C. Solenoid<br>on Drain              |   |   |   |   | † YPCH-LAN-*A 44,5<br>YPCH-LAN-*A/S 44,5<br>NOT CATALOGUED            | † YPDH-LAN-*A 63,2<br>YPDH-LAN-*A/S 63,2<br>Pg. 12.116               |  |   |   |
| On A Tank to B<br>Drained to B                           |   |   |   |   | T-11A<br>PPDB-L*N-EBA/M 44,5<br>PPDB-L*N-EBA/T 44,5<br>Pg. 12.045     | T-2A<br>PPFB-L*N-BBA/M 49,3<br>PPFB-L*N-BBA/T 49,3<br>Pg. 12.117     | T-2A<br>PPFB-L*N-BJA/M 63,2<br>PPFB-L*N-BJA/T 63,2<br>Pg. 12.191     | † T-17A<br>PPHB-L*N-BKA 69,6<br>PPHB-L*N-BKA/S 69,6<br>Pg. 12.265 | † T-17A<br>PPHB-L*N-HBL 87,4<br>PPHB-L*N-HBL/S 87,4<br>Pg. 12.325 |
| On A Tank to B<br>Drained to B<br>(High Capacity)        |   |   |   |   |   |  |  |   | † T-19A<br>PPJB-L*N-HBA 87,4<br>PPJB-L*N-HBA/S 87,4<br>Pg. 12.325 |
| On A Tank to T<br>Drained to T<br>Reverse FF Check       |   |   |   |   | † T-11A<br>PPDB-L*N-EB2 44,5<br>PPDB-L*N-EB2/S 44,5<br>Pg. 12.046     | † T-2A<br>PPFB-L*N-BB2 63,2<br>PPFB-L*N-BB2/S 63,2<br>Pg. 12.118     | † T-2A<br>PPFB-L*N-BJ2 63,2<br>PPFB-L*N-BJ2/S 63,2<br>Pg. 12.192     | † T-17A<br>PPHB-L*N-BK2 69,6<br>PPHB-L*N-BK2/S 69,6<br>Pg. 12.266 | T-17A<br>PPHB-L*N-HBK/M 87,4<br>PPHB-L*N-HBK/T 87,4<br>Pg. 12.326 |

Continued on next page.

\*\*Seal plate must be ordered separately. European and U.S. X and Y available.

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|          |         |                |                |                             |                |                |
|----------|---------|----------------|----------------|-----------------------------|----------------|----------------|
|          |         |                |                |                             |                |                |
| Function | p t b a | ISO 03/CETOP 3 | ISO 05/CETOP 5 | ISO 05/CETOP 5 with X and Y | ISO 07/CETOP 7 | ISO 08/CETOP 8 |

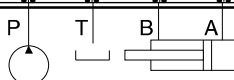
## Reducing/Relieving Valves (Continued)

|   |  | Cartridge Body  | Stack Height | Cartridge Body   | Stack Height | Cartridge Body   | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height |
|---|--|---|--------------|--|--------------|--|--------------|---|--------------|---|--------------|
| On A tank to T<br>Vented Externally<br>Reverse FF Check               |  | † T-21A<br>PVDB-L*N-MB2/M 62.0<br>PVDB-L*N-MB2/T 62.0<br>NOT CATALOGUED | 62.0         | † T-22A<br>PVFB-L*N-NB2/M 75.9<br>PVFB-L*N-NB2/T 75.9<br>Pg. 12.119  | 75.9         | † T-22A<br>PVFB-L*N-NJ2/M 75.9<br>PVFB-L*N-NJ2/T 75.9<br>Pg. 12.193  | 75.9         |   |              |   |              |
| On A tank to T<br>Drained Externally<br>Reverse FF Check              |  | † T-21A<br>PVDA-L*N-MB2/M 62.0<br>PVDA-L*N-MB2/T 62.0<br>NOT CATALOGUED | 62.0         | † T-22A<br>PVFA-L*N-NB2/M 75.9<br>PVFA-L*N-NB2/T 75.9<br>Pg. 12.119  | 75.9         | † T-22A<br>PVFA-L*N-NJ2/M 75.9<br>PVFA-L*N-NJ2/T 75.9<br>Pg. 12.193  | 75.9         |   |              |   |              |
| On B Tank to A<br>Drained to A  |  | T-11A<br>PPDB-L*N-EBA/M 44.5<br>PPDB-L*N-EBA/T 44.5<br>Pg. 12.045       | 44.5         | T-2A<br>PPFB-L*N-BB3/M 49.3<br>PPFB-L*N-BB3/T 49.3<br>Pg. 12.120     | 49.3         | T-2A<br>PPFB-L*N-BJ3/M 63.2<br>PPFB-L*N-BJ3/T 63.2<br>Pg. 12.194     | 63.2         | † T-17A<br>PPHB-L*N-BKB 69.6<br>PPHB-L*N-BKB/S 69.6<br>Pg. 12.267 | 69.6         | † T-17A<br>PPHB-L*N-HBM 87.4<br>PPHB-L*N-HBM/S 87.4<br>Pg. 12.327   | 87.4         |
| On B Tank to A<br>Drained to A<br>(High Capacity)                     |  |   |              |  |              |  |              |   |              | † T-19A<br>PPJB-L*N-HBB 87.4<br>PPJB-L*N-HBB/S 87.4<br>Pg. 12.327   | 87.4         |
| On B Tank to T<br>Drained to T<br>Reverse FF Check                    |  | † T-11A<br>PPDB-L*N-EB3 44.5<br>PPDB-L*N-EB3/S 44.5<br>Pg. 12.046       | 44.5         | † T-2A<br>PPFB-L*N-BB3 63.2<br>PPFB-L*N-BB3/S 63.2<br>Pg. 12.118     | 63.2         | † T-2A<br>PPFB-L*N-BJ3 63.2<br>PPFB-L*N-BJ3/S 63.2<br>Pg. 12.192     | 63.2         | † T-17A<br>PPHB-L*N-BKJ 69.6<br>PPHB-L*N-BKJ/S 69.6<br>Pg. 12.266 | 69.6         | † T-17A<br>PPHB-L*N-HBJ/M 87.4<br>PPHB-L*N-HBJ/T 87.4<br>Pg. 12.326 | 87.4         |
| On B Tank to T<br>Vented Externally<br>Reverse FF Check               |  | † T-21A<br>PVDB-L*N-MB3/M 62.0<br>PVDB-L*N-MB3/T 62.0<br>NOT CATALOGUED | 62.0         | † T-22A<br>PVFB-L*N-NB3/M 75.9<br>PVFB-L*N-NB3/T 75.9<br>Pg. 12.119  | 75.9         | † T-22A<br>PVFB-L*N-NJ3/M 75.9<br>PVFB-L*N-NJ3/T 75.9<br>Pg. 12.193  | 75.9         |   |              |   |              |
| On B Tank to T<br>Drained Externally<br>Reverse FF Check              |  | † T-21A<br>PVDA-L*N-MB3/M 62.0<br>PVDA-L*N-MB3/T 62.0<br>NOT CATALOGUED | 62.0         | † T-22A<br>PVFA-L*N-NB3/M 75.9<br>PVFA-L*N-NB3/T 75.9<br>Pg. 12.119  | 75.9         | † T-22A<br>PVFA-L*N-NJ3/M 75.9<br>PVFA-L*N-NJ3/T 75.9<br>Pg. 12.193  | 75.9         |   |              |   |              |
| On A and B<br>Tanks and Drains to<br>Opposite Port                    |  | † T-11A<br>PPDB-L*N-EBY 44.5<br>PPDB-L*N-EBY/S 44.5<br>Pg. 12.047       | 44.5         | † T-2A<br>PPFB-L*N-BBY 49.3<br>PPFB-L*N-BBY/S 49.3<br>Pg. 12.121     | 49.3         | † T-2A<br>PPFB-L*N-BJY 63.2<br>PPFB-L*N-BJY/S 63.2<br>Pg. 12.195     | 63.2         | † T-17A<br>PPHB-L*N-BKY 69.6<br>PPHB-L*N-BKY/S 69.6<br>Pg. 12.268 | 69.6         | † T-17A<br>PPHB-L*N-HBN 87.4<br>PPHB-L*N-HBN/S 87.4<br>Pg. 12.328   | 87.4         |
| On A and B<br>Tanks and Drains to<br>Opposite Port<br>(High Capacity) |  |   |              |  |              |  |              |   |              | † T-19A<br>PPJB-L*N-HBY 87.4<br>PPJB-L*N-HBY/S 87.4<br>Pg. 12.328   | 87.4         |
| On A and B<br>Tanks and Drains to T<br>Reverse FF Check               |  | † T-11A<br>PPDB-L*N-EB9 63.2<br>PPDB-L*N-EB9/S 63.2<br>NOT CATALOGUED   | 63.2         | † T-2A<br>PPFB-L*N-BB9 75.9<br>PPFB-L*N-BB9/S 75.9<br>NOT CATALOGUED | 75.9         | † T-2A<br>PPFB-L*N-BJ9 75.9<br>PPFB-L*N-BJ9/S 75.9<br>NOT CATALOGUED | 75.9         |   |              |   |              |

## Counterbalance Valves

|   |  | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height |
|---|--|---|--------------|---|--------------|---|--------------|---|--------------|---|--------------|
| On A Pilot<br>from B                    |  | T-11A<br>CBCA-LHN-EBA/M 44.5<br>CBCA-LHN-EBA/T 44.5<br>Pg. 12.048 | 44.5         | T-2A<br>CBEA-LHN-BBA/M 49.3<br>CBEA-LHN-BBA/T 49.3<br>Pg. 12.122  | 49.3         | T-2A<br>CBEA-LHN-BJA/M 63.2<br>CBEA-LHN-BJA/T 63.2<br>Pg. 12.196  | 63.2         | † T-17A<br>CBGA-LHN-BKA 69.6<br>CBGA-LHN-BKA/S 69.6<br>Pg. 12.269 | 69.6         | † T-17A<br>CBGA-LHN-HBL 87.4<br>CBGA-LHN-HBL/S 87.4<br>Pg. 12.329 | 87.4         |
| On A Pilot<br>from B<br>(High Capacity) |  |   |              |   |              |   |              |   |              | † T-19A<br>CBIA-LHN-HBA 87.4<br>CBIA-LHN-HBA/S 87.4<br>Pg. 12.329 | 87.4         |
| On A Pilot<br>from B<br>Vent to T       |  | † T-21A<br>CWCA-LHN-MBA 44.5<br>CWCA-LHN-MBA/S 44.5<br>Pg. 12.049 | 44.5         | † T-22A<br>CWEA-LHN-NBA 63.2<br>CWEA-LHN-NBA/S 63.2<br>Pg. 12.123 | 63.2         | † T-22A<br>CWEA-LHN-NJA 63.2<br>CWEA-LHN-NJA/S 63.2<br>Pg. 12.197 | 63.2         | † T-23A<br>CWGA-LHN-NKA 89.4<br>CWGA-LHN-NKA/S 89.4<br>Pg. 12.270 | 89.4         | † T-23A<br>CWGA-LHN-PBA 87.4<br>CWGA-LHN-PBA/S 87.4<br>Pg. 12.330 | 87.4         |
| On A<br>No Pilot Assist                 |  | † T-10A<br>RDDA-L*N-FB4 44.5<br>RDDA-L*N-FB4/S 44.5<br>Pg. 12.050 | 44.5         | † T-3A<br>RDFA-L*N-CB4 63.2<br>RDFA-L*N-CB4/S 63.2<br>Pg. 12.124  | 63.2         | † T-3A<br>RDFA-L*N-CJ4 63.2<br>RDFA-L*N-CJ4/S 63.2<br>Pg. 12.198  | 63.2         | † T-16A<br>RDHA-L*N-CK4 69.6<br>RDHA-L*N-CK4/S 69.6<br>Pg. 12.271 | 69.6         | † T-16A<br>RDHA-L*N-CD4 87.4<br>RDHA-L*N-CD4/S 87.4<br>Pg. 12.331 | 87.4         |

Continued on next page.



**\*\*Seal plate must be ordered separately. European and U.S. X and Y available.**

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.



# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|          |   |   |   |   |                |                |                             |                |                |
|----------|---|---|---|---|----------------|----------------|-----------------------------|----------------|----------------|
|          |   |   |   |   |                |                |                             |                |                |
| Function | p | t | b | a | ISO 03/CETOP 3 | ISO 05/CETOP 5 | ISO 05/CETOP 5 with X and Y | ISO 07/CETOP 7 | ISO 08/CETOP 8 |

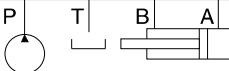
## Counterbalance Valves (Continued)

|  | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height |
|--|---|--------------|---|--------------|---|--------------|---|--------------|---|--------------|
|  |   |              |   |              |   |              |   |              |   |              |
| On B Pilot from A                        | T-11A<br>CBCA-LHN-EBAM 44,5<br>CBCA-LHN-EBAT 44,5<br>Pg. 12.048   |              | T-2A<br>CBEA-LHN-BBB/M 49,3<br>CBEA-LHN-BBB/T 49,3<br>Pg. 12.125  |              | T-2A<br>CBEA-LHN-BJB/M 63,2<br>CBEA-LHN-BJB/T 63,2<br>Pg. 12.199  |              | T-17A<br>CBGA-LHN-BKB 69,6<br>CBGA-LHN-BKB/S 69,6<br>Pg. 12.272   |              | T-17A<br>CBGA-LHN-HBM 87,4<br>CBGA-LHN-HBM/S 87,4<br>Pg. 12.332   |              |
| On B Pilot from A (High Capacity)        |   |              |   |              |   |              |   |              | T-19A<br>CBIA-LHN-HBB 87,4<br>CBIA-LHN-HBB/S 87,4<br>Pg. 12.332   |              |
| On B Pilot from A Vent to T              | † T-21A<br>CWCA-LHN-MBB 44,5<br>CWCA-LHN-MBB/S 44,5<br>Pg. 12.049 |              | † T-22A<br>CWEA-LHN-NBB 63,2<br>CWEA-LHN-NBB/S 63,2<br>Pg. 12.123 |              | † T-22A<br>CWEA-LHN-NJB 63,2<br>CWEA-LHN-NJB/S 63,2<br>Pg. 12.197 |              | † T-23A<br>CWGA-LHN-NKB 89,4<br>CWGA-LHN-NKB/S 89,4<br>Pg. 12.270 |              | † T-23A<br>CWGA-LHN-PBB 87,4<br>CWGA-LHN-PBB/S 87,4<br>Pg. 12.330 |              |
| On B No pilot assist                     | † T-10A<br>RDDA-L*N-FB4 44,5<br>RDDA-L*N-FB4/S 44,5<br>Pg. 12.050 |              | † T-3A<br>RDFA-L*N-CB5 63,2<br>RDFA-L*N-CB5/S 63,2<br>Pg. 12.124  |              | † T-3A<br>RDFA-L*N-CJ5 63,2<br>RDFA-L*N-CJ5/S 63,2<br>Pg. 12.198  |              | † T-16A<br>RDHA-L*N-CK5 89,4<br>RDHA-L*N-CK5/S 89,4<br>Pg. 12.271 |              |   |              |
| On A and B Cross-Piloted                 | † T-11A<br>CBCA-LHN-EBY 44,5<br>CBCA-LHN-EBY/S 44,5<br>Pg. 12.051 |              | † T-2A<br>CBEA-LHN-BBY 49,3<br>CBEA-LHN-BBY/S 49,3<br>Pg. 12.126  |              | † T-2A<br>CBEA-LHN-BJY 63,2<br>CBEA-LHN-BJY/S 63,2<br>Pg. 12.200  |              | † T-17A<br>CBGA-LHN-BKY 69,6<br>CBGA-LHN-BKY/S 69,6<br>Pg. 12.273 |              | † T-17A<br>CBGA-LHN-HBN 87,4<br>CBGA-LHN-HBN/S 87,4<br>Pg. 12.333 |              |
| On A and B Cross-Piloted (High Capacity) |   |              |   |              |   |              |   |              | † T-19A<br>CBIA-LHN-HBY 87,4<br>CBIA-LHN-HBY/S 87,4<br>Pg. 12.333 |              |
| On A and B Cross-Piloted Vents to T      | † T-21A<br>CWCA-LHN-MBY 44,5<br>CWCA-LHN-MBY/S 44,5<br>Pg. 12.052 |              | † T-22A<br>CWEA-LHN-NBY 63,2<br>CWEA-LHN-NBY/S 63,2<br>Pg. 12.127 |              | † T-22A<br>CWEA-LHN-NJY 63,2<br>CWEA-LHN-NJY/S 63,2<br>Pg. 12.201 |              | † T-23A<br>CWGA-LHN-NKY 89,4<br>CWGA-LHN-NKY/S 89,4<br>Pg. 12.274 |              | † T-23A<br>CWGA-LHN-PBY 87,4<br>CWGA-LHN-PBY/S 87,4<br>Pg. 12.334 |              |
| Cushion Lock Circuit On A and B          | † T-11A<br>CBCA-LHN-EB8 63,2<br>CBCA-LHN-EB8/S 63,2<br>Pg. 12.053 |              | † T-2A<br>CBEA-LHN-BB8 75,9<br>CBEA-LHN-BB8/S 75,9<br>Pg. 12.128  |              | † T-2A<br>CBEA-LHN-BJ8 75,9<br>CBEA-LHN-BJ8/S 75,9<br>Pg. 12.202  |              |   |              |   |              |

## Pilot Operated Check Valves

|                                   | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height | Cartridge Body  | Stack Height |
|-----------------------------------|---|--------------|---|--------------|---|--------------|---|--------------|---|--------------|
|                                   |   |              |   |              |   |              |   |              |   |              |
| On A Pilot from B                 | T-11A<br>CKCB-XCN-EBAM 44,5<br>CKCB-XCN-EBAT 44,5<br>Pg. 12.054   |              | T-2A<br>CKEB-XCN-BBAM 49,3<br>CKEB-XCN-BBAT 49,3<br>Pg. 12.129    |              | T-2A<br>CKEB-XCN-BJAM 63,2<br>CKEB-XCN-BJAT 63,2<br>Pg. 12.203    |              | † T-17A<br>CKGB-XCN-BKA 69,6<br>CKGB-XCN-BKA/S 69,6<br>Pg. 12.275 |              | † T-17A<br>CKGB-XCN-HBL 87,4<br>CKGB-XCN-HBL/S 87,4<br>Pg. 12.335 |              |
| On A Pilot from B (High Capacity) |   |              |   |              |   |              |   |              | † T-19A<br>CKIB-XCN-HBA 87,4<br>CKIB-XCN-HBA/S 87,4<br>Pg. 12.335 |              |
| On A Pilot from B Vent to T       | † T-21A<br>CVCV-XCN-MBA 44,5<br>CVCV-XCN-MBA/S 44,5<br>Pg. 12.055 |              | † T-22A<br>CVEV-XCN-NBA 63,2<br>CVEV-XCN-NBA/S 63,2<br>Pg. 12.130 |              | † T-22A<br>CVEV-XCN-NJA 63,2<br>CVEV-XCN-NJA/S 63,2<br>Pg. 12.204 |              | † T-23A<br>CVGV-XCN-NKA 89,4<br>CVGV-XCN-NKA/S 89,4<br>Pg. 12.276 |              | † T-23A<br>CVGV-XCN-PBA 87,4<br>CVGV-XCN-PBA/S 87,4<br>Pg. 12.336 |              |
| On B Pilot from A                 | T-11A<br>CKCB-XCN-EBAM 44,5<br>CKCB-XCN-EBAT 44,5<br>Pg. 12.054   |              | T-2A<br>CKEB-XCN-BBB/M 49,3<br>CKEB-XCN-BBB/T 49,3<br>Pg. 12.131  |              | T-2A<br>CKEB-XCN-BJB/M 63,2<br>CKEB-XCN-BJB/T 63,2<br>Pg. 12.205  |              | † T-17A<br>CKGB-XCN-BKB 69,6<br>CKGB-XCN-BKB/S 69,6<br>Pg. 12.277 |              | † T-17A<br>CKGB-XCN-HBM 87,4<br>CKGB-XCN-HBM/S 87,4<br>Pg. 12.337 |              |
| On B Pilot from A (High Capacity) |   |              |   |              |   |              |   |              | † T-19A<br>CKIB-XCN-HBB 87,4<br>CKIB-XCN-HBB/S 87,4<br>Pg. 12.337 |              |

Continued on next page.



**\*\*Seal plate must be ordered separately. European and U.S. X and Y available.**

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



*All pages listed below refer to SUN's Sandwich Body Catalogue.*

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| Function                                       | p | t | b | a | ISO 03/CETOP 3  | ISO 05/CETOP 5  | ISO 05/CETOP 5<br>with X and Y                                    | ISO 07/CETOP 7  | ISO 08/CETOP 8  |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|
| <b>Pilot Operated Check Valves (Continued)</b> |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   | Cartridge Body  | Stack Height  | Cartridge Body  | Stack Height  | Cartridge Body  | Stack Height  |   |
| On B<br>Pilot from A<br>Vent to T              |   |   |   |   | † T-21A<br>CVCV-XCN-MBB 44,5<br>CVCV-XCN-MBB/S 44,5<br>Pg. 12.055   |   | † T-22A<br>CVEV-XCN-NBB 63,2<br>CVEV-XCN-NBB/S 63,2<br>Pg. 12.130 |   | † T-22A<br>CVEV-XCN-NJB 63,2<br>CVEV-XCN-NJB/S 63,2<br>Pg. 12.204 | † T-23A<br>CVGV-XCN-NKB 89,4<br>CVGV-XCN-NKB/S 89,4<br>Pg. 12.276   | † T-23A<br>CVGV-XCN-PBB 87,4<br>CVGV-XCN-PBB/S 87,4<br>Pg. 12.336 |
| On A and B<br>Cross-Piloted                    |   |   |   |   | † T-11A<br>CKCB-XCN-EBY 44,5<br>CKCB-XCN-EBY/S 44,5<br>Pg. 12.056   |   | † T-2A<br>CKEB-XCN-BBY 49,3<br>CKEB-XCN-BBY/S 49,3<br>Pg. 12.132  |   | † T-2A<br>CKEB-XCN-BJY 63,2<br>CKEB-XCN-BJY/S 63,2<br>Pg. 12.206  | † T-17A<br>CKGB-XCN-BKY 69,6<br>CKGB-XCN-BKY/S 69,6<br>Pg. 12.278   | † T-17A<br>CKGB-XCN-HBN 87,4<br>CKGB-XCN-HBN/S 87,4<br>Pg. 12.338 |
| On A and B<br>Cross-Piloted<br>(High Capacity) |   |   |   |   |   |   |   |   |   |   | † T-19A<br>CKIB-XCN-HBY 87,4<br>CKIB-XCN-HBY/S 87,4<br>Pg. 12.338 |
| On A and B<br>Cross-Piloted<br>Vents to T      |   |   |   |   | † T-21A<br>CVCV-XCN-MBY 44,5<br>CVCV-XCN-MBY/S 44,5<br>Pg. 12.057   | † T-22A<br>CVEV-XCN-NBY 63,2<br>CVEV-XCN-NBY/S 63,2<br>Pg. 12.133 | † T-22A<br>CVEV-XCN-NJY 63,2<br>CVEV-XCN-NJY/S 63,2<br>Pg. 12.207 | † T-23A<br>CVGV-XCN-NKY 89,4<br>CVGV-XCN-NKY/S 89,4<br>Pg. 12.279 | † T-23A<br>CVGV-XCN-PBY 87,4<br>CVGV-XCN-PBY/S 87,4<br>Pg. 12.339 |   |   |
| <b>Flow Control Valves</b>                     |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   | Cartridge Body  | Stack Height  | Cartridge Body  | Stack Height  | Cartridge Body  | Stack Height  |   |
| Meter-In P                                     |   |   |   |   | † T-13A<br>NFCC-LCN-GBP 44,5<br>NFCC-LCN-GBP/S 44,5<br>Pg. 12.058   |   | † T-5A<br>NFDC-LAN-DBP 62,0<br>NFDC-LAN-DBP/S 62,0<br>Pg. 12.134  |   | † T-5A<br>NFDC-LAN-DJP 62,0<br>NFDC-LAN-DJP/S 62,0<br>Pg. 12.208  | † T-16A<br>NFEC-LCN-DKP 69,6<br>NFEC-LCN-DKP/S 69,6<br>Pg. 12.280   | † T-16A<br>NFEC-LCN-IBP 87,4<br>NFEC-LCN-IBP/S 87,4<br>Pg. 12.340 |
| Meter-In P<br>(High Capacity)                  |   |   |   |   | † T-5A<br>NFDC-LAN-GBO 44,5<br>NFDC-LAN-GBO/S 44,5<br>Pg. 12.058    |   |   | † T-16A<br>NFEC-LCN-DJO 63,2<br>NFEC-LCN-DJO/S 63,2<br>Pg. 12.208 | † T-18A<br>NFFC-LGN-DKO 89,4<br>NFFC-LGN-DKO/S 89,4<br>Pg. 12.280 | † T-18A<br>NFFC-LGN-IBO 87,4<br>NFFC-LGN-IBO/S 87,4<br>Pg. 12.340   |   |
| Bleed-Off<br>P to T                            |   |   |   |   | † T-13A<br>NCCB-LCN-GBQ/M 44,5<br>NCCB-LCN-GBQ/T 44,5<br>Pg. 12.059 | † T-5A<br>NCEB-LCN-DBQ 49,3<br>NCEB-LCN-DBQ/S 49,3<br>Pg. 12.135  |   |   |   | † T-16A<br>NCFB-LCN-CDOM 87,4<br>NCFB-LCN-CDO/T 87,4<br>Pg. 12.341  |   |
| Priority Flow<br>on P                          |   |   |   |   | † T-11A<br>FRCA-LAN-WBN 44,5<br>FRCA-LAN-WBN/S 44,5<br>Pg. 12.060   |   |   | † T-2A<br>FRDA-LAN-DJN 63,2<br>FRDA-LAN-DJN/S 63,2<br>Pg. 12.209  |   |   |   |
| Meter-In A                                     |   |   |   |   | † T-13A<br>NCCB-LCN-GBA 44,5<br>NCCB-LCN-GBA/S 44,5<br>Pg. 12.061   | † T-5A<br>NCEB-LCN-DBB 50,5<br>NCEB-LCN-DBB/S 50,5<br>Pg. 12.136  | † T-5A<br>NCEB-LCN-DJB 63,2<br>NCEB-LCN-DJB/S 63,2<br>Pg. 12.210  | † T-16A<br>NCFB-LCN-DKC 69,6<br>NCFB-LCN-DKC/S 69,6<br>Pg. 12.281 | † T-16A<br>NCFB-LCN-IBC 87,4<br>NCFB-LCN-IBC/S 87,4<br>Pg. 12.342 |   |   |
| Meter-In A<br>(High Capacity)                  |   |   |   |   | † T-5A<br>NCEB-LCN-GBD 44,5<br>NCEB-LCN-GBD/S 44,5<br>Pg. 12.061    |   | † T-16A<br>NCFB-LCN-DJC 63,2<br>NCFB-LCN-DJC/S 63,2<br>Pg. 12.210 | † T-18A<br>NCGB-LCN-DKG 89,4<br>NCGB-LCN-DKG/S 89,4<br>Pg. 12.281 | † T-18A<br>NCGB-LCN-IBG 87,4<br>NCGB-LCN-IBG/S 87,4<br>Pg. 12.342 |   |   |
| Meter-Out A                                    |   |   |   |   | † T-13A<br>NCCB-LCN-GBA 44,5<br>NCCB-LCN-GBA/S 44,5<br>Pg. 12.061   | † T-5A<br>NCEB-LCN-DBA 50,5<br>NCEB-LCN-DBA/S 50,5<br>Pg. 12.137  | † T-5A<br>NCEB-LCN-DJA 63,2<br>NCEB-LCN-DJA/S 63,2<br>Pg. 12.211  | † T-16A<br>NCFB-LCN-DKA 69,6<br>NCFB-LCN-DKA/S 69,6<br>Pg. 12.282 | † T-16A<br>NCFB-LCN-IBA 87,4<br>NCFB-LCN-IBA/S 87,4<br>Pg. 12.343 |   |   |
| Meter-Out A<br>(High Capacity)                 |   |   |   |   | † T-5A<br>NCEB-LCN-GBD 44,5<br>NCEB-LCN-GBD/S 44,5<br>Pg. 12.061    |   | † T-16A<br>NCFB-LCN-DJD 63,2<br>NCFB-LCN-DJD/S 63,2<br>Pg. 12.211 | † T-18A<br>NCGB-LCN-DKE 89,4<br>NCGB-LCN-DKE/S 89,4<br>Pg. 12.282 | † T-18A<br>NCGB-LCN-IBE 87,4<br>NCGB-LCN-IBE/S 87,4<br>Pg. 12.343 |   |   |
| Bleed-Off<br>A to T                            |   |   |   |   | † T-13A<br>NCCB-LCN-GBW 44,5<br>NCCB-LCN-GBW/S 44,5<br>Pg. 12.062   | † T-5A<br>NCEB-LCN-DBC 37,8<br>NCEB-LCN-DBC/S 37,8<br>Pg. 12.138  |   |   |   | † T-16A<br>NCFB-LCN-CDC/M 87,4<br>NCFB-LCN-CDC/T 87,4<br>Pg. 12.344 |   |
| Bleed-Off<br>A to T<br>(High Capacity)         |   |   |   |   | † T-5A<br>NCEB-LCN-GBE 44,5<br>NCEB-LCN-GBE/S 44,5<br>Pg. 12.062    |   |   |   |   |   |   |

Continued on next page.

\*\*Seal plate must be ordered separately. European and U.S. X and Y available.

† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON

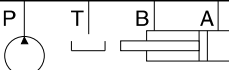


All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|   | p | t | b | a |   |   |   |   |   |  |                |              |                |              |
|---|---|---|---|---|---|---|---|---|---|--|----------------|--------------|----------------|--------------|
| Function  |   |   |   |   | ISO 03/CETOP 3  | ISO 05/CETOP 5  | ISO 05/CETOP 5<br>with X and Y                                    | ISO 07/CETOP 7  | ISO 08/CETOP 8  |  |                |              |                |              |
| <b>Flow Control Valves (Continued)</b>                  |   |   |   |   |   |   |   |   |   |  |                |              |                |              |
|   |   |   |   |   | Cartridge Body  | Stack Height  | Cartridge Body  | Stack Height  | Cartridge Body  | Stack Height   | Cartridge Body | Stack Height | Cartridge Body | Stack Height |
| Priority Flow On A, Bypass to T<br>Reverse FF Check<br> |   |   |   |   |   |   | † T-2A<br>FRDA-XAN-WHY 63,2<br>FRDA-XAN-WHY/S63,2<br>Pg. 12.213   |   |   |  |                |              |                |              |
| Meter-In B<br>  |   |   |   |   | † T-13A<br>NCCB-LCN-GBA 44,5<br>NCCB-LCN-GBA/S 44,5<br>Pg. 12.061 | † T-5A<br>NCEB-LCN-DBA 50,5<br>NCEB-LCN-DBA/S 50,5<br>Pg. 12.137  | † T-5A<br>NCEB-LCN-DJA 63,2<br>NCEB-LCN-DJA/S 63,2<br>Pg. 12.211  | † T-16A<br>NCFB-LCN-DKD 69,6<br>NCFB-LCN-DKD/S 69,6<br>Pg. 12.283 | † T-16A<br>NCFB-LCN-IBD 87,4<br>NCFB-LCN-IBD/S 87,4<br>Pg. 12.345 |  |                |              |                |              |
| Meter-In B (High Capacity)<br>                          |   |   |   |   | † T-5A<br>NCEB-LCN-GBD 44,5<br>NCEB-LCN-GBD/S 44,5<br>Pg. 12.061  |   | † T-16A<br>NCFB-LCN-DJE 63,2<br>NCFB-LCN-DJE/S 63,2<br>Pg. 12.212 | † T-18A<br>NCGB-LCN-DKI 89,4<br>NCGB-LCN-DKI/S 89,4<br>Pg. 12.283 | † T-18A<br>NCGB-LCN-IBH 87,4<br>NCGB-LCN-IBH/S 87,4<br>Pg. 12.345 |  |                |              |                |              |
| Meter-Out B<br>   |   |   |   |   | † T-13A<br>NCCB-LCN-GBA 44,5<br>NCCB-LCN-GBA/S 44,5<br>Pg. 12.061 | † T-5A<br>NCEB-LCN-DBB 50,5<br>NCEB-LCN-DBB/S 50,5<br>Pg. 12.136  | † T-5A<br>NCEB-LCN-DJB 63,2<br>NCEB-LCN-DJB/S 63,2<br>Pg. 12.210  | † T-16A<br>NCFB-LCN-DKB 69,6<br>NCFB-LCN-DKB/S 69,6<br>Pg. 12.284 | † T-16A<br>NCFB-LCN-IBB 87,4<br>NCFB-LCN-IBB/S 87,4<br>Pg. 12.346 |  |                |              |                |              |
| Meter-Out B (High Capacity)<br>                         |   |   |   |   | † T-5A<br>NCEB-LCN-GBD 44,5<br>NCEB-LCN-GBD/S 44,5<br>Pg. 12.061  |   | † T-16A<br>NCFB-LCN-DJF 63,2<br>NCFB-LCN-DJF/S 63,2<br>Pg. 12.212 | † T-18A<br>NCGB-LCN-DKF 89,4<br>NCGB-LCN-DKF/S 89,4<br>Pg. 12.284 | † T-18A<br>NCGB-LCN-IBF 87,4<br>NCGB-LCN-IBF/S 87,4<br>Pg. 12.346 |  |                |              |                |              |
| Bleed-Off B to T<br>                                    |   |   |   |   | † T-13A<br>NCCB-LCN-GBW 44,5<br>NCCB-LCN-GBW/S 44,5<br>Pg. 12.062 | † T-5A<br>NCEB-LCN-DBC 37,8<br>NCEB-LCN-DBC/S 37,8<br>Pg. 12.138  |   |   |   | † T-16A<br>NCFB-LCN-CDD/M87,4<br>NCFB-LCN-CDD/T 87,4<br>Pg. 12.347 |                |              |                |              |
| Bleed-Off B to T (High Capacity)<br>                    |   |   |   |   | † T-5A<br>NCEB-LCN-GBE 44,5<br>NCEB-LCN-GBE/S 44,5<br>Pg. 12.062  |   |   |   |   |  |                |              |                |              |
| Priority Flow On B, Bypass to T<br>Reverse FF Check<br> |   |   |   |   |   |   | † T-2A<br>FRDA-XAN-WHZ 63,2<br>FRDA-XAN-WHZ/S63,2<br>Pg. 12.213   |   |   |  |                |              |                |              |
| Meter-In A and B<br>                                    |   |   |   |   | † T-13A<br>NCCB-LCN-GBY 44,5<br>NCCB-LCN-GBY/S 44,5<br>Pg. 12.063 | † T-5A<br>NCEB-LCN-DBY 50,5<br>NCEB-LCN-DBY/S 50,5<br>Pg. 12.139  | † T-5A<br>NCEB-LCN-DJY 63,2<br>NCEB-LCN-DJY/S 63,2<br>Pg. 12.214  | † T-16A<br>NCFB-LCN-DKZ 69,6<br>NCFB-LCN-DKZ/S 69,6<br>Pg. 12.285 | † T-16A<br>NCFB-LCN-IBX 87,4<br>NCFB-LCN-IBX/S 87,4<br>Pg. 12.348 |  |                |              |                |              |
| Meter-In A and B (High Capacity)<br>                    |   |   |   |   | † T-5A<br>NCEB-LCN-GBZ 44,5<br>NCEB-LCN-GBZ/S 44,5<br>Pg. 12.063  |   | † T-16A<br>NCFB-LCN-DJZ 75,9<br>NCFB-LCN-DJZ/S 75,9<br>Pg. 12.214 | † T-18A<br>NCGB-LCN-DKU 89,4<br>NCGB-LCN-DKU/S 89,4<br>Pg. 12.285 | † T-18A<br>NCGB-LCN-IBZ 87,4<br>NCGB-LCN-IBZ/S 87,4<br>Pg. 12.348 |  |                |              |                |              |
| Meter-Out A and B<br>                                   |   |   |   |   | † T-13A<br>NCCB-LCN-GBY 44,5<br>NCCB-LCN-GBY/S 44,5<br>Pg. 12.063 | † T-5A<br>NCEB-LCN-DBY 50,5<br>NCEB-LCN-DBY/S 50,5<br>Pg. 12.139  | † T-5A<br>NCEB-LCN-DJY 63,2<br>NCEB-LCN-DJY/S 63,2<br>Pg. 12.214  | † T-16A<br>NCFB-LCN-DKY 69,6<br>NCFB-LCN-DKY/S 69,6<br>Pg. 12.286 | † T-16A<br>NCFB-LCN-IBW 87,4<br>NCFB-LCN-IBW/S 87,4<br>Pg. 12.349 |  |                |              |                |              |
| Meter-Out A and B (High Capacity)<br>                   |   |   |   |   | † T-5A<br>NCEB-LCN-GBZ 44,5<br>NCEB-LCN-GBZ/S 44,5<br>Pg. 12.063  |   | † T-16A<br>NCFB-LCN-DJZ 75,9<br>NCFB-LCN-DJZ/S 75,9<br>Pg. 12.214 | † T-18A<br>NCGB-LCN-DKW 89,4<br>NCGB-LCN-DKW/S 89,4<br>Pg. 12.286 | † T-18A<br>NCGB-LCN-IBY 87,4<br>NCGB-LCN-IBY/S 87,4<br>Pg. 12.349 |  |                |              |                |              |
| Bleed-Off A and B to T<br>                              |   |   |   |   | † T-13A<br>NCCB-LCN-GBX 44,5<br>NCCB-LCN-GBX/S 44,5<br>Pg. 12.064 | † T-5A<br>NCEB-LCN-DBX 36,6<br>NCEB-LCN-DBX/S 36,6<br>Pg. 12.140  | † T-5A<br>NCEB-LCN-DJX 37,8<br>NCEB-LCN-DJX/S 37,8<br>Pg. 12.215  |   |   |  |                |              |                |              |
| Bleed-Off A and B to T (High Capacity)<br>              |   |   |   |   | † T-5A<br>NCEB-LCN-GBF 44,5<br>NCEB-LCN-GBF/S 44,5<br>Pg. 12.064  |   |   |   |   |  |                |              |                |              |
| Bleed-Off A to B and B to A<br>                         |   |   |   |   | † T-13A<br>NFCC-LCN-GBS 31,5<br>NFCC-LCN-GBS/S 31,5<br>Pg. 12.065 | † T-13A<br>NFCC-LCN-DBS 31,5<br>NFCC-LCN-DBS/S 31,5<br>Pg. 12.141 | † T-13A<br>NFCC-LCN-DJS 31,5<br>NFCC-LCN-DJS/S 31,5<br>Pg. 12.216 |   |   |  |                |              |                |              |

Continued on next page.



\*\*Seal plate must be ordered separately. European and U.S. X and Y available.

† These bodies do not have a gauge port.

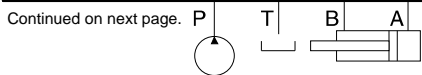
# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|  | p | t | b | a | ISO 03/CETOP 3  | ISO 05/CETOP 5  | ISO 05/CETOP 5<br>with X and Y  | ISO 07/CETOP 7  | ISO 08/CETOP 8  |
|--|---|---|---|---|---|---|---|---|---|
| <b>Flow Control Valves (Continued)</b>               |   |   |   |   |   |   |   |   |   |
| Meter-Out T  |   |   |   |   | † T-13A<br>NCCB-LCN-GBP 44,5<br>NCCB-LCN-GBP/S 44,5<br>Pg. 12.058   | † T-5A<br>NCEB-LCN-DBT 49,3<br>NCEB-LCN-DBT/S 49,3<br>Pg. 12.142      | † T-5A<br>NCEB-LCN-DJT 63,2<br>NCEB-LCN-DJT/S 63,2<br>Pg. 12.217      | † T-16A<br>NCFB-LCN-DKT 69,6<br>NCFB-LCN-DKT/S 69,6<br>Pg. 12.287     | † T-16A<br>NCFB-LCN-IBT 87,4<br>NCFB-LCN-IBT/S 87,4<br>Pg. 12.350     |
| Meter-Out T<br>(High Capacity)                       |   |   |   |   | † T-5A<br>NCEB-LCN-GBO 44,5<br>NCEB-LCN-GBO/S 44,5<br>Pg. 12.058    |   |   | † T-18A<br>NCEB-LCN-DKV 89,4<br>NCEB-LCN-DKV/S 89,4<br>Pg. 12.287     | † T-18A<br>NCEB-LCN-IBV 87,4<br>NCEB-LCN-IBV/S 87,4<br>Pg. 12.350     |
| <b>Check Valves – use only CX*A check valves</b>     |   |   |   |   |   |   |   |   |   |
| On P   |   |   |   |   | † T-13A<br>CXDA-XCN-GDP 44,5<br>CXDA-XCN-GDP/S 44,5<br>Pg. 12.066   | † T-5A<br>CXFA-XCN-DBP 62,0<br>CXFA-XCN-DBP/S 62,0<br>Pg. 12.143      | † T-5A<br>CXFA-XCN-DJP 63,2<br>CXFA-XCN-DJP/S 63,2<br>Pg. 12.219      | † T-16A<br>CXHA-XCN-DKP 69,6<br>CXHA-XCN-DKP/S 69,6<br>Pg. 12.288     | † T-16A<br>CXHA-XCN-IBP 87,4<br>CXHA-XCN-IBP/S 87,4<br>Pg. 12.351     |
| On P<br>(High Capacity)                              |   |   |   |   | † T-5A<br>CXFA-XCN-GDO 44,5<br>CXFA-XCN-GDO/S 44,5<br>Pg. 12.066    |   | † T-16A<br>CXHA-XCN-DJO 63,2<br>CXHA-XCN-DJO/S 63,2<br>Pg. 12.219     |   | † T-18A<br>CXJA-XCN-IBO 87,4<br>CXJA-XCN-IBO/S 87,4<br>Pg. 12.351     |
| T to P   |   |   |   |   | † T-13A<br>CXDA-XAN-GDQ/M 44,5<br>CXDA-XAN-GDQ/T 44,5<br>Pg. 12.067 |   |   |   |   |
| On A<br>Free Flow Out<br>of Valve                    |   |   |   |   | † T-13A<br>CXDA-XCN-GDA 44,5<br>CXDA-XCN-GDA/S 44,5<br>Pg. 12.068   | † T-5A<br>CXFA-XCN-DBK 50,5<br>CXFA-XCN-DBK/S 50,5<br>Pg. 12.144      | † T-5A<br>CXFA-XCN-DJK 63,2<br>CXFA-XCN-DJK/S 63,2<br>Pg. 12.220      | † T-16A<br>CXHA-XCN-DKC 69,6<br>CXHA-XCN-DKC/S 69,6<br>Pg. 12.289     | † T-16A<br>CXHA-XCN-IBC 87,4<br>CXHA-XCN-IBC/S 87,4<br>Pg. 12.352     |
| On A<br>Free Flow Out<br>of Valve<br>(High Capacity) |   |   |   |   | † T-5A<br>CXFA-XCN-GDD 44,5<br>CXFA-XCN-GDD/S 44,5<br>Pg. 12.068    |   | † T-16A<br>CXHA-XCN-DJC 63,2<br>CXHA-XCN-DJC/S 63,2<br>Pg. 12.220     | † T-18A<br>CXJA-XCN-DKG 89,4<br>CXJA-XCN-DKG/S 89,4<br>Pg. 12.289     | † T-18A<br>CXJA-XCN-IBG 87,4<br>CXJA-XCN-IBG/S 87,4<br>Pg. 12.352     |
| On A<br>Free Flow Into Valve                         |   |   |   |   | † T-13A<br>CXDA-XCN-GDA 44,5<br>CXDA-XCN-GDA/S 44,5<br>Pg. 12.068   | † T-5A<br>CXFA-XCN-DBJ 50,5<br>CXFA-XCN-DBJ/S 50,5<br>Pg. 12.145      | † T-5A<br>CXFA-XCN-DJJ 63,2<br>CXFA-XCN-DJJ/S 63,2<br>Pg. 12.221      | † T-16A<br>CXHA-XCN-DKA 69,6<br>CXHA-XCN-DKA/S 69,6<br>Pg. 12.290     | † T-16A<br>CXHA-XCN-IBA 87,4<br>CXHA-XCN-IBA/S 87,4<br>Pg. 12.353     |
| On A<br>Free Flow Into Valve<br>(High Capacity)      |   |   |   |   | † T-5A<br>CXFA-XCN-GDD 44,5<br>CXFA-XCN-GDD/S 44,5<br>Pg. 12.068    |   | † T-16A<br>CXHA-XCN-DJD 63,2<br>CXHA-XCN-DJD/S 63,2<br>Pg. 12.221     | † T-18A<br>CXJA-XCN-DKE 89,4<br>CXJA-XCN-DKE/S 89,4<br>Pg. 12.290     | † T-18A<br>CXJA-XCN-IBE 87,4<br>CXJA-XCN-IBE/S 87,4<br>Pg. 12.353     |
| T to A   |   |   |   |   | † T-13A<br>CXDA-XAN-GDW 44,5<br>CXDA-XAN-GDW/S 44,5<br>Pg. 12.069   |   |   |   |   |
| T to A<br>(High Capacity)                            |   |   |   |   | † T-5A<br>CXFA-XAN-GDE 44,5<br>CXFA-XAN-GDE/S 44,5<br>Pg. 12.069    | † T-16A<br>CXHA-XAN-DBM 75,9<br>CXHA-XAN-DBM/S 75,9<br>NOT CATALOGUED | † T-16A<br>CXHA-XAN-DJM 75,9<br>CXHA-XAN-DJM/S 75,9<br>NOT CATALOGUED | † T-18A<br>CXJA-XAN-DKM 89,4<br>CXJA-XAN-DKM/S 89,4<br>NOT CATALOGUED | † T-18A<br>CXJA-XAN-IBM 87,4<br>CXJA-XAN-IBM/S 87,4<br>NOT CATALOGUED |
| A to B   |   |   |   |   | † T-13A<br>CXDA-XAN-GBS 44,5<br>CXDA-XAN-GBS/S 44,5<br>Pg. 12.070   | † T-13A<br>CXDA-XAN-DBS 31,5<br>CXDA-XAN-DBS/S 31,5<br>Pg. 12.146     | † T-13A<br>CXDA-XAN-DJS 31,5<br>CXDA-XAN-DJS/S 31,5<br>Pg. 12.222     |   |   |
| On B<br>Free Flow Out<br>of Valve                    |   |   |   |   | † T-13A<br>CXDA-XCN-GDA 44,5<br>CXDA-XCN-GDA/S 44,5<br>Pg. 12.068   | † T-5A<br>CXFA-XCN-DBJ 50,5<br>CXFA-XCN-DBJ/S 50,5<br>Pg. 12.145      | † T-5A<br>CXFA-XCN-DJJ 63,2<br>CXFA-XCN-DJJ/S 63,2<br>Pg. 12.221      | † T-16A<br>CXHA-XCN-DKD 69,6<br>CXHA-XCN-DKD/S 69,6<br>Pg. 12.291     | † T-16A<br>CXHA-XCN-IBD 87,4<br>CXHA-XCN-IBD/S 87,4<br>Pg. 12.354     |
| On B<br>Free Flow Out<br>of Valve<br>(High Capacity) |   |   |   |   | † T-5A<br>CXFA-XCN-GDD 44,5<br>CXFA-XCN-GDD/S 44,5<br>Pg. 12.068    |   | † T-16A<br>CXHA-XCN-DJE 63,2<br>CXHA-XCN-DJE/S 63,2<br>Pg. 12.223     | † T-18A<br>CXJA-XCN-DKI 89,4<br>CXJA-XCN-DKI/S 89,4<br>Pg. 12.291     | † T-18A<br>CXJA-XCN-IBH 87,4<br>CXJA-XCN-IBH/S 87,4<br>Pg. 12.354     |



\*\*Seal plate must be ordered separately. European and U.S. X and Y available.  
† These bodies do not have a gauge port.

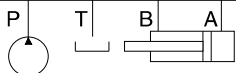
# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| Function   | p | t | b | a | ISO 03/CETOP 3  | ISO 05/CETOP 5  | ISO 05/CETOP 5 with X and Y   | ISO 07/CETOP 7  | ISO 08/CETOP 8  |
|--|---|---|---|---|---|---|---|---|---|
| <b>Check Valves – use CX*A check valves (Continued)</b>        |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   | Cartridge Body Stack Height                                     | Cartridge Body Stack Height   | Cartridge Body Stack Height   | Cartridge Body Stack Height   | Cartridge Body Stack Height   |
| <b>On B</b><br>Free Flow Into Valve                            |   |   |   |   | T-13A<br>CXDA-XCN-GDA 44,5<br>CXDA-XCN-GDA/S 44,5<br>Pg. 12.068 | T-5A<br>CXFA-XCN-DBK 50,5<br>CXFA-XCN-DBK/S 50,5<br>Pg. 12.144      | T-5A<br>CXFA-XCN-DJK 63,2<br>CXFA-XCN-DJK/S 63,2<br>Pg. 12.220      | T-16A<br>CXHA-XCN-DBK 69,6<br>CXHA-XCN-DBK/S 69,6<br>Pg. 12.292     | T-16A<br>CXHA-XCN-IBB 87,4<br>CXHA-XCN-IBB/S 87,4<br>Pg. 12.355     |
| <b>On B</b><br>Free Flow Into Valve<br>(High Capacity)         |   |   |   |   | T-5A<br>CXFA-XCN-GDD 44,5<br>CXFA-XCN-GDD/S 44,5<br>Pg. 12.068  |   | T-16A<br>CXHA-XCN-DJF 63,2<br>CXHA-XCN-DJF/S 63,2<br>Pg. 12.223     | T-18A<br>CXJA-XCN-DFK 89,4<br>CXJA-XCN-DFK/S 89,4<br>Pg. 12.292     | T-18A<br>CXJA-XCN-IBF 87,4<br>CXJA-XCN-IBF/S 87,4<br>Pg. 12.355     |
| <b>T to B</b>  |   |   |   |   | T-13A<br>CXDA-XAN-GDW 44,5<br>CXDA-XAN-GDW/S 44,5<br>Pg. 12.069 |   |   |   |   |
| <b>T to B</b><br>(High Capacity)                               |   |   |   |   | T-5A<br>CXFA-XAN-GDE 44,5<br>CXFA-XAN-GDE/S 44,5<br>Pg. 12.069  | T-16A<br>CXHA-XAN-DBM 75,9<br>CXHA-XAN-DBM/S 75,9<br>NOT CATALOGUED | T-16A<br>CXHA-XAN-DJM 75,9<br>CXHA-XAN-DJM/S 75,9<br>NOT CATALOGUED | T-18A<br>CXJA-XAN-DKN 89,4<br>CXJA-XAN-DKN/S 89,4<br>NOT CATALOGUED | T-18A<br>CXJA-XAN-IBN 87,4<br>CXJA-XAN-IBN/S 87,4<br>NOT CATALOGUED |
| <b>B to A</b>  |   |   |   |   | T-13A<br>CXDA-XAN-GBS 44,5<br>CXDA-XAN-GBS/S 44,5<br>Pg. 12.070 | T-13A<br>CXDA-XAN-DBS 31,5<br>CXDA-XAN-DBS/S 31,5<br>Pg. 12.146     | T-13A<br>CXDA-XAN-DJS 31,5<br>CXDA-XAN-DJS/S 31,5<br>Pg. 12.222     |   |   |
| <b>B to P</b><br>(For Regenerative Circuits)                   |   |   |   |   | T-13A<br>YDCK-XCN-AA 68,6<br>YDCK-XCN-AA/S 68,6<br>Pg. 12.070   |   |   |   |   |
| <b>On A and B</b><br>Free Flow Out of Valve                    |   |   |   |   | T-13A<br>CXDA-XCN-GDY 44,5<br>CXDA-XCN-GDY/S 44,5<br>Pg. 12.071 | T-5A<br>CXFA-XCN-DBL 50,5<br>CXFA-XCN-DBL/S 50,5<br>Pg. 12.147      | T-5A<br>CXFA-XCN-DJL 63,2<br>CXFA-XCN-DJL/S 63,2<br>Pg. 12.224      | T-16A<br>CXHA-XCN-DKZ 69,6<br>CXHA-XCN-DKZ/S 69,6<br>Pg. 12.293     | T-16A<br>CXHA-XCN-IBX 87,4<br>CXHA-XCN-IBX/S 87,4<br>Pg. 12.356     |
| <b>On A and B</b><br>Free Flow Out of Valve<br>(High Capacity) |   |   |   |   | T-5A<br>CXFA-XCN-GDZ 44,5<br>CXFA-XCN-GDZ/S 44,5<br>Pg. 12.071  |   | T-16A<br>CXHA-XCN-DJZ 75,9<br>CXHA-XCN-DJZ/S 75,9<br>Pg. 12.224     | T-18A<br>CXJA-XCN-DKU 89,4<br>CXJA-XCN-DKU/S 89,4<br>Pg. 12.293     | T-18A<br>CXJA-XCN-IBZ 87,4<br>CXJA-XCN-IBZ/S 87,4<br>Pg. 12.356     |
| <b>On A and B</b><br>Free Flow Into Valve                      |   |   |   |   | T-13A<br>CXDA-XCN-GDY 44,5<br>CXDA-XCN-GDY/S 44,5<br>Pg. 12.071 | T-5A<br>CXFA-XCN-DBL 50,5<br>CXFA-XCN-DBL/S 50,5<br>Pg. 12.147      | T-5A<br>CXFA-XCN-DJL 63,2<br>CXFA-XCN-DJL/S 63,2<br>Pg. 12.224      | T-16A<br>CXHA-XCN-DKY 69,6<br>CXHA-XCN-DKY/S 69,6<br>Pg. 12.294     | T-16A<br>CXHA-XCN-IBW 87,4<br>CXHA-XCN-IBW/S 87,4<br>Pg. 12.357     |
| <b>On A and B</b><br>Free Flow Into Valve<br>(High Capacity)   |   |   |   |   | T-5A<br>CXFA-XCN-GDZ 44,5<br>CXFA-XCN-GDZ/S 44,5<br>Pg. 12.071  |   | T-16A<br>CXHA-XCN-DJZ 75,9<br>CXHA-XCN-DJZ/S 75,9<br>Pg. 12.224     | T-18A<br>CXJA-XCN-DKW 89,4<br>CXJA-XCN-DKW/S 89,4<br>Pg. 12.294     | T-18A<br>CXJA-XCN-IBY 87,4<br>CXJA-XCN-IBY/S 87,4<br>Pg. 12.357     |
| <b>T to A and B</b>  |   |   |   |   | T-13A<br>CXDA-XAN-GDX 44,5<br>CXDA-XAN-GDX/S 44,5<br>Pg. 12.072 | T-5A<br>CXFA-XAN-DBW 63,2<br>CXFA-XAN-DBW/S 63,2<br>Pg. 12.148      | T-5A<br>CXFA-XAN-DJW 63,2<br>CXFA-XAN-DJW/S 63,2<br>Pg. 12.225      | T-5A<br>CXFA-XAN-DKX 49,8<br>CXFA-XAN-DKX/S 49,8<br>NOT CATALOGUED  | T-5A<br>CXFA-XAN-CDX 49,3<br>CXFA-XAN-CDX/S 49,3<br>Pg. 12.358      |
| <b>T to A and B</b><br>(High Capacity)                         |   |   |   |   | T-5A<br>CXFA-XAN-GDF 44,5<br>CXFA-XAN-GDF/S 44,5<br>Pg. 12.072  | T-16A<br>CXHA-XAN-DBR 75,9<br>CXHA-XAN-DBR/S 75,9<br>NOT CATALOGUED | T-16A<br>CXHA-XAN-DJR 75,9<br>CXHA-XAN-DJR/S 75,9<br>NOT CATALOGUED | T-18A<br>CXJA-XAN-DKR 89,4<br>CXJA-XAN-DKR/S 89,4<br>NOT CATALOGUED | T-16A<br>CXHA-XAN-CDV 87,4<br>CXHA-XAN-CDV/S 87,4<br>Pg. 12.358     |
| <b>On T</b>  |   |   |   |   | T-13A<br>CXDA-XCN-GDP 44,5<br>CXDA-XCN-GDP/S 44,5<br>Pg. 12.066 | T-5A<br>CXFA-XCN-DBT 49,3<br>CXFA-XCN-DBT/S 49,3<br>Pg. 12.149      | T-5A<br>CXFA-XCN-DJT 63,2<br>CXFA-XCN-DJT/S 63,2<br>Pg. 12.226      | T-16A<br>CXHA-XCN-DKT 69,6<br>CXHA-XCN-DKT/S 69,6<br>Pg. 12.295     | T-16A<br>CXHA-XCN-IBT 87,4<br>CXHA-XCN-IBT/S 87,4<br>Pg. 12.359     |
| <b>On T</b><br>(High Capacity)                                 |   |   |   |   | T-5A<br>CXFA-XCN-GDO 44,5<br>CXFA-XCN-GDO/S 44,5<br>Pg. 12.066  |   |   |   | T-18A<br>CXJA-XCN-IBV 87,4<br>CXJA-XCN-IBV/S 87,4<br>Pg. 12.359     |



\*\*Seal plate must be ordered separately. European and U.S. X and Y available.  
All bodies on this page do not have a gage port.

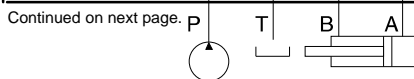
# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| Function                                       |  | ISO 03/CETOP 3   | ISO 05/CETOP 5  | ISO 05/CETOP 5 with X and Y                                     | ISO 07/CETOP 7  | ISO 08/CETOP 8  |
|--|--|--|---|---|---|---|
| <b>Circuit Savers</b>                          |  |  |   |   |   |   |
|  |  | Cartridge Body Stack Height  | Cartridge Body Stack Height                                     | Cartridge Body Stack Height                                     | Cartridge Body Stack Height                                     | Cartridge Body Stack Height                                     |
| Air-Bleed and Start-Up                         |  | T-3A<br>NQEB-XAN-FBOM 44,5<br>NQEB-XAN-FBOT 44,5<br>NOT CATALOGUED | T-3A<br>NQEB-XAN-CBP 49,3<br>NQEB-XAN-CBP/S 49,3<br>Pg. 12.150  | T-3A<br>NQEB-XAN-CJPM 50,5<br>NQEB-XAN-CJPT 50,5<br>Pg. 12.228  | T-3A<br>NQEB-XAN-CKPM 49,8<br>NQEB-XAN-CKPT 49,8<br>Pg. 12.296  | T-3A<br>NQEB-XAN-CDPM 49,3<br>NQEB-XAN-CDPT 49,3<br>Pg. 12.360  |
| Pilot Choke                                    |  | T-3A<br>YNAA-LDN-AA 44,5<br>YNAA-LDN-AA/S 44,5<br>Pg. 12.073       | T-3A<br>YNAB-LDN-BA 28,2<br>YNAB-LDN-BA/S 28,2<br>Pg. 12.151    |   |   |   |
| Shuttle A and B Output External                |  | T-13A<br>CSAA-BXN-GBS 31,5<br>CSAA-BXN-GBS/S 31,5<br>Pg. 12.074    | T-13A<br>CSAA-BXN-DBS 31,5<br>CSAA-BXN-DBS/S 31,5<br>Pg. 12.152 | T-13A<br>CSAA-BXN-DJS 31,5<br>CSAA-BXN-DJS/S 31,5<br>Pg. 12.229 | T-13A<br>CSAA-BXN-DKS 30,0<br>CSAA-BXN-DKS/S 30,0<br>Pg. 12.297 | T-13A<br>CSAA-BXN-IBS 36,6<br>CSAA-BXN-IBS/S 36,6<br>Pg. 12.361 |
| Checks from A and B Output to Y Port           |  |  |   | T-11A<br>CDAB-XBN-BJS 30,2<br>CDAB-XBN-BJS/S 30,2<br>Pg. 12.229 | T-11A<br>CDAB-XBN-BKS 30,0<br>CDAB-XBN-BKS/S 30,0<br>Pg. 12.297 | T-11A<br>CDAB-XBN-HBS 36,6<br>CDAB-XBN-HBS/S 36,6<br>Pg. 12.361 |
| Checks from A and B Adapter to ISO 05 W/Y Port |  | T-11A<br>CDAB-XBN-EBS 36,6<br>CDAB-XBN-EBS/S 36,6<br>Pg. 12.074    | T-11A<br>CDAB-XBN-BJS 30,2<br>CDAB-XBN-BJS/S 30,2<br>Pg. 12.152 |   |   |   |
| Pressure Compensator (Restrictive)             |  | T-3A<br>YFCG-XHN-AA 44,5<br>YFCG-XHN-AA/S 44,5<br>Pg. 12.075       | T-3A<br>YFEJ-XHN-BA 63,2<br>YFEJ-XHN-BA/S 63,2<br>Pg. 12.153    | T-3A<br>YFEK-XHN-BB 63,2<br>YFEK-XHN-BB/S 63,2<br>Pg. 12.230    | T-3A<br>YFFE-XHN-AB 69,6<br>YFFE-XHN-AB/S 69,6<br>Pg. 12.298    | T-3A<br>YFIA-XHN-CA 87,4<br>YFIA-XHN-CA/S 87,4<br>Pg. 12.362    |
| Pressure Compensator (Restrictive) W/LS Port   |  | T-3A<br>YFCJ-XHN-AA/M 64,8<br>YFCJ-XHN-AA/T 64,8<br>Pg. 12.076     | T-3A<br>YFEP-XHN-BB/M 63,2<br>YFEP-XHN-BB/T 63,2<br>Pg. 12.153  | T-3A<br>YFEQ-XHN-BB/M 63,2<br>YFEQ-XHN-BB/T 63,2<br>Pg. 12.230  | T-3A<br>YFFF-XHN-AB/M 69,6<br>YFFF-XHN-AB/T 69,6<br>Pg. 12.298  | T-3A<br>YFIB-XHN-CA/M 87,4<br>YFIB-XHN-CA/T 87,4<br>Pg. 12.362  |
| Pressure Compensator (Bypass)                  |  | T-3A<br>YFCK-XHN-AA 64,8<br>YFCK-XHN-AA/S 64,8<br>Pg. 12.075       | T-3A<br>YFEV-XHN-BA 63,2<br>YFEV-XHN-BA/S 63,2<br>Pg. 12.153    | T-3A<br>YFEW-XHN-BB 63,2<br>YFEW-XHN-BB/S 63,2<br>Pg. 12.230    | T-3A<br>YFFG-XHN-AB 67,6<br>YFFG-XHN-AB/S 67,6<br>Pg. 12.298    | T-3A<br>YFIC-XHN-CA 87,4<br>YFIC-XHN-CA/S 87,4<br>Pg. 12.362    |
| Flow Divider and/or Combiner on A              |  | T-31A<br>FSCA-XAN-MBJ/M 63,2<br>FSCA-XAN-MBJ/T 63,2<br>Pg. 12.075  |   |   |   |   |
| Flow Divider and/or Combiner on B              |  | T-31A<br>FSCA-XAN-MBJ/M 63,2<br>FSCA-XAN-MBJ/T 63,2<br>Pg. 12.076  |   |   |   |   |
| B to A Regenerative                            |  | T-3A<br>YDCA-LHN-AA 44,5<br>YDCA-LHN-AA/S 44,5<br>Pg. 12.077       | T-3A<br>YDES-LHN-BA 63,2<br>YDES-LHN-BA/S 63,2<br>Pg. 12.154    | T-3A<br>YDEL-LHN-BB 63,2<br>YDEL-LHN-BB/S 63,2<br>Pg. 12.231    | T-3A<br>YDFG-LHN-AB 69,6<br>YDFG-LHN-AB/S 69,6<br>Pg. 12.299    | T-3A<br>YDFF-LHN-CA 87,4<br>YDFF-LHN-CA/S 87,4<br>Pg. 12.363    |
| B to A Regenerative (High Capacity)            |  |  |   |   |   | T-3A<br>YDGF-LHN-CA 87,4<br>YDGF-LHN-CA/S 87,4<br>Pg. 12.363    |
| B to A Regenerative (Full Time)                |  | T-3A<br>YDCF-XCN-AA 46,0<br>YDCF-XCN-AA/S 46,0<br>Pg. 12.078       | T-3A<br>YDET-XCN-BA 63,2<br>YDET-XCN-BA/S 63,2<br>Pg. 12.155    |   | T-3A<br>YDFH-XCN-AB 69,6<br>YDFH-XCN-AB/S 69,6<br>Pg. 12.300    | T-3A<br>YDGH-XCN-CA 87,4<br>YDGH-XCN-CA/S 87,4<br>Pg. 12.364    |



\*\*Seal plate must be ordered separately. European and U.S. X and Y available.  
† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON

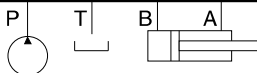


All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| Function  | p | t | b | a | ISO 03/CETOP 3                             | ISO 05/CETOP 5 | ISO 05/CETOP 5 with X and Y                | ISO 07/CETOP 7 | ISO 08/CETOP 8 |              |  |              |  |              |
|---|---|---|---|---|--|----------------|--|----------------|----------------|--------------|--|--------------|--|--------------|
| <b>Circuit Savers (Continued)</b>                             |   |   |   |   |  |                |  |                |                |              |  |              |  |              |
|   |   |   |   |   | Cartridge Body                             | Stack Height   | Cartridge Body                             | Stack Height   | Cartridge Body | Stack Height | Cartridge Body                             | Stack Height | Cartridge Body                             | Stack Height |
| <b>A to B Regenerative</b>                                    |   |   |   |   | YDCA-LHN-AA<br>YDCA-LHN-AA/S<br>Pg. 12.077 | 44,5<br>44,5   | YDER-LHN-BA<br>YDER-LHN-BA/S<br>Pg. 12.156 | 63,2<br>63,2   |                |              | YDFE-LHN-AB<br>YDFE-LHN-AB/S<br>Pg. 12.301 | 63,2<br>63,2 | YDFJ-LHN-CA<br>YDFJ-LHN-CA/S<br>Pg. 12.365 | 87,4<br>87,4 |
| <b>A to B Regenerative (High Capacity)</b>                    |   |   |   |   |  |                |  |                |                |              |  |              | YDGE-LHN-CA<br>YDGE-LHN-CA/S<br>Pg. 12.365 | 87,4<br>87,4 |
| <b>A to B Regenerative (Full Time)</b>                        |   |   |   |   | YDCF-XCN-AA<br>YDCF-XCN-AA/S<br>Pg. 12.078 | 46,0<br>46,0   | YDEV-XCN-BA<br>YDEV-XCN-BA/S<br>Pg. 12.155 | 63,2<br>63,2   |                |              | YDFI-XCN-AB<br>YDFI-XCN-AB/S<br>Pg. 12.300 | 69,6<br>69,6 | YDGI-XCN-CA<br>YDGI-XCN-CA/S<br>Pg. 12.364 | 87,4<br>87,4 |
| <b>P and A Tap in Manifold</b>                                |   |   |   |   | ZVC<br>ZVC/S<br>Pg. 12.079                 | 25,1<br>25,1   | ZVE<br>ZVE/S<br>Pg. 12.157                 | 25,1<br>25,1   |                |              |  |              |  |              |
| <b>P and B Tap in Manifold</b>                                |   |   |   |   | ZVC<br>ZVC/S<br>Pg. 12.079                 | 25,1<br>25,1   | ZVE<br>ZVE/S<br>Pg. 12.157                 | 25,1<br>25,1   |                |              |  |              |  |              |
| <b>P, T, A and B Tap in Manifold</b>                          |   |   |   |   |  |                | ZKM<br>ZKM/S<br>Pg. 12.157                 | 25,1<br>25,1   |                |              |  |              | WKF<br>WKF/S<br>NOT CATALOGUED             | 25,4<br>25,4 |
| <b>A and B Tap in Manifold</b>                                |   |   |   |   | ZVB<br>ZVB/S<br>Pg. 12.079                 | 25,1<br>25,1   | ZVD<br>ZVD/S<br>Pg. 12.158                 | 23,9<br>23,9   |                |              |  |              |  |              |
| <b>Swap Block Swaps A and B</b>                               |   |   |   |   | ZKX<br>ZKX/S<br>Pg. 12.079                 | 25,1<br>25,1   | ZTB<br>ZTB/S<br>Pg. 12.158                 | 36,6<br>36,6   |                |              |  |              |  |              |
| <b>Adapter to Next Smaller Valve Pattern</b>                  |   |   |   |   |  |                | ZVT<br>ZVT/S<br>Pg. 12.159                 | 36,6<br>36,6   |                |              |  |              |  |              |
| <b>ISO 05 to ISO 05 with Dual Tank Ports</b>                  |   |   |   |   |  |                | ZXC<br>ZXC/S<br>Pg. 12.159                 | 23,9<br>23,9   |                |              |  |              |  |              |
| <b>ISO 05 to ISO 05 with X and Y Access to X and Y (Amer)</b> |   |   |   |   |  |                | ZSV/M<br>ZSV/T<br>Pg. 12.160               | 23,9<br>23,9   |                |              |  |              |  |              |
| <b>ISO 05 to ISO 05 with X and Y Access to X and Y (Euro)</b> |   |   |   |   |  |                | ZST/M<br>ZST/T<br>Pg. 12.160               | 23,9<br>23,9   |                |              |  |              |  |              |
| <b>ISO 05 with X and Y Amer to Euro</b>                       |   |   |   |   |  |                | ZSX<br>ZSX/S<br>Pg. 12.232                 | 25,1<br>25,1   |                |              |  |              |  |              |
| <b>ISO 05 with X and Y Euro to Amer</b>                       |   |   |   |   |  |                | ZSW<br>ZSW/S<br>Pg. 12.232                 | 25,1<br>25,1   |                |              |  |              |  |              |
| <b>Bosch L Port to ISO 05 X Port (European)</b>               |   |   |   |   |  |                | ZJA<br>ZJA/S<br>Pg. 12.233                 | 24,1<br>24,1   |                |              |  |              |  |              |

Continued on next page.



**\*\*Seal plate must be ordered separately. European and U.S. X and Y available.**  
All bodies on this page do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



*All pages listed below refer to SUN's Sandwich Body Catalogue.*

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|          |                  |                |                |                                |                |                |
|----------|------------------|----------------|----------------|--------------------------------|----------------|----------------|
|          |                  |                |                |                                |                |                |
| Function | p    t    b    a | ISO 03/CETOP 3 | ISO 05/CETOP 5 | ISO 05/CETOP 5<br>with X and Y | ISO 07/CETOP 7 | ISO 08/CETOP 8 |

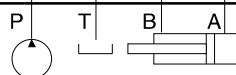
## Circuit Savers (Continued)

|  |  |                |              |                |              |                            |              |                |              |
|--|--|----------------|--------------|----------------|--------------|----------------------------|--------------|----------------|--------------|
|  |  | Cartridge Body | Stack Height | Cartridge Body | Stack Height | Cartridge Body             | Stack Height | Cartridge Body | Stack Height |
| ISO 05 X Port (European) to Bosch L Port |  |                |              |                |              | ZJB<br>ZJB/S<br>Pg. 12.233 | 24,1<br>24,1 |                |              |
|  |  |                |              |                |              |                            |              |                |              |

## Cover Plates

*Counterbored for socket head cap screws. Clamp height and engagement in subplate determines cap screw length.*

|                           |  | Cartridge Body             | Clamp Height | Cartridge Body | Clamp Height | Cartridge Body             | Clamp Height | Cartridge Body | Clamp Height | Cartridge Body | Clamp Height |
|---------------------------|--|----------------------------|--------------|----------------|--------------|----------------------------|--------------|----------------|--------------|----------------|--------------|
| All Ports Blocked         |  | ZJR<br>ZJR/S<br>Pg. 12.090 | 12,7<br>12,7 |                |              | ZJP<br>ZJP/S<br>Pg. 12.241 | 9,7<br>9,7   |                |              |                |              |
| P to A and B to T         |  | ZJS<br>ZJS/S<br>Pg. 12.090 | 12,7<br>12,7 |                |              | ZJM<br>ZJM/S<br>Pg. 12.241 | 9,7<br>9,7   |                |              |                |              |
| P to B and A to T         |  | ZJT<br>ZJT/S<br>Pg. 12.090 | 12,7<br>12,7 |                |              | ZJJ<br>ZJJ/S<br>Pg. 12.241 | 9,7<br>9,7   |                |              |                |              |
| P to T<br>A and B blocked |  | ZJV<br>ZJV/S<br>Pg. 12.091 | 12,7<br>12,7 |                |              | ZJN<br>ZJN/S<br>Pg. 12.242 | 9,7<br>9,7   |                |              |                |              |
| A to B<br>P and T blocked |  | ZJW<br>ZJW/S<br>Pg. 12.091 | 12,7<br>12,7 |                |              | ZJL<br>ZJL/S<br>Pg. 12.242 | 9,7<br>9,7   |                |              |                |              |
| P to B<br>A and T blocked |  | ZWE<br>ZWE/S<br>Pg. 12.091 | 12,7<br>12,7 |                |              | ZJK<br>ZJK/S<br>Pg. 12.242 | 9,7<br>9,7   |                |              |                |              |
| P to A and B<br>T blocked |  | WJG<br>WJG/S<br>Pg. 12.092 | 12,7<br>12,7 |                |              |                            |              |                |              |                |              |
|                           |  |                            |              |                |              |                            |              |                |              |                |              |
|                           |  |                            |              |                |              |                            |              |                |              |                |              |
|                           |  |                            |              |                |              |                            |              |                |              |                |              |
|                           |  |                            |              |                |              |                            |              |                |              |                |              |



**\*\*Seal plate must be ordered separately. European and U.S. X and Y available.**



# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| Function  | ISO 03/CETOP 3  | ISO 05/CETOP 5  | ISO 05/CETOP 5 with X and Y                                     | ISO 07/CETOP 7   | ISO 08/CETOP 8  |
|---|---|---|---|--|---|
| <b>Side Ported Subplates</b>                        |   |   |   |  |   |
|   | Cartridge Body Overall Height                                   | Cartridge Body Overall Height                                   | Cartridge Body Overall Height                                   | Cartridge Body Overall Height                                  | Cartridge Body Overall Height                                   |
| Relief P to T                                       | T-10A<br>RPEC-L*N-FSU 50,8<br>RPEC-L*N-FSU/S 50,8<br>Pg. 12.080 | T-10A<br>RPEC-L*N-FSV 49,3<br>RPEC-L*N-FSV/S 49,3<br>Pg. 12.161 | T-10A<br>RPEC-L*N-ZHV 62,0<br>RPEC-L*N-ZHV/S 62,0<br>Pg. 12.234 | T-3A<br>RPGC-L*N-ZLZ 49,3<br>RPGC-L*N-ZLZ/S 49,3<br>Pg. 12.302 | T-3A<br>RPGC-L*N-CSX 49,3<br>RPGC-L*N-CSX/S 49,3<br>Pg. 12.366  |
| Relief P to T<br>Check on P                         | T-10A<br>YRCC-L*N-BU 50,8<br>YRCC-L*N-BU/S 50,8<br>Pg. 12.081   | T-10A<br>YREJ-L*N-BV 49,3<br>YREJ-L*N-BV/S 49,3<br>Pg. 12.162   |   |  |   |
| Air-Bleed<br>and Start-Up                           |   | T-3A<br>NQEB-XAN-CSV 49,3<br>NQEB-XAN-CSV/S 49,3<br>Pg. 12.163  |   | T-3A<br>NQEB-XAN-ZLZ 49,3<br>NQEB-XAN-ZLZ/S 49,3<br>Pg. 12.302 | T-3A<br>NQEB-XAN-CSX 49,3<br>NQEB-XAN-CSX/S 49,3<br>Pg. 12.366  |
| Reducing on P                                       | T-11A<br>PBDB-L*N-ESU 50,8<br>PBDB-L*N-ESU/S 50,8<br>Pg. 12.083 | T-2A<br>PBFB-L*N-BSV 49,3<br>PBFB-L*N-BSV/S 49,3<br>Pg. 12.164  |   |  | T-17A<br>PBHB-L*N-HSX 87,4<br>PBHB-L*N-HSX/S 87,4<br>Pg. 12.367 |
| Reducing/<br>Relieving on P                         | T-11A<br>PPDB-L*N-ESU 50,8<br>PPDB-L*N-ESU/S 50,8<br>Pg. 12.083 | T-2A<br>PBFB-L*N-BSV 49,3<br>PBFB-L*N-BSV/S 49,3<br>Pg. 12.164  |   |  | T-17A<br>PPHB-L*N-HSX 87,4<br>PPHB-L*N-HSX/S 87,4<br>Pg. 12.367 |
| Bypass<br>Compensator<br>for Proportional<br>Valves | T-11A<br>YFCL-XHN-BU 50,8<br>YFCL-XHN-BU/S 50,8<br>Pg. 12.084   | T-2A<br>YFES-XHN-BV 50,8<br>YFES-XHN-BV/S 50,8<br>Pg. 12.165    |   |  |   |
| Relief P to T<br>and Bypass<br>Flow Regulator       | T-11A<br>YFCS-L*N-BU 50,8<br>YFCS-L*N-BU/S 50,8<br>Pg. 12.085   | T-2A<br>YFED-LCN-BV 50,8<br>YFED-LCN-BV/S 50,8<br>Pg. 12.166    |   |  |   |
| Relief P to T<br>Regenerative<br>B to A             | T-11A<br>YDCG-LAN-BV 63,5<br>YDCG-LAN-BV/S 63,5<br>Pg. 12.086   | T-2A<br>YDEM-LAN-BW 74,7<br>YDEM-LAN-BW/S 74,7<br>Pg. 12.167    |   |  |   |
| <b>Rear Ported Subplates</b>                        |   |   |   |  |   |
|   | Cartridge Body Overall Height                                   | Cartridge Body Overall Height                                   | Cartridge Body Overall Height                                   | Cartridge Body Overall Height                                  | Cartridge Body Overall Height                                   |
| Relief P to T                                       | T-10A<br>RPEC-L*N-FRU 50,8<br>RPEC-L*N-FRU/S 50,8<br>Pg. 12.080 | T-10A<br>RPEC-L*N-FRV 53,8<br>RPEC-L*N-FRV/S 53,8<br>Pg. 12.161 |   |  | T-3A<br>RPGC-L*N-CRX 49,3<br>RPGC-L*N-CRX/S 49,3<br>Pg. 12.366  |
| Relief P to T<br>Check on P                         | T-10A<br>YRCB-LAN-BU 50,8<br>YRCB-LAN-BU/S 50,8<br>Pg. 12.081   | T-10A<br>YREQ-LAN-BV 49,3<br>YREQ-LAN-BV/S 49,3<br>Pg. 12.162   |   |  |   |

Continued on next page.

**\*\*Seal plate must be ordered separately. European and U.S. X and Y available.**

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

| <i>Function</i>  | ISO 03/CETOP 3  | ISO 05/CETOP 5        | ISO 05/CETOP 5<br>with X and Y                                    | ISO 07/CETOP 7        | ISO 08/CETOP 8        |                       |  |   |  |                       |
|--|---|-----------------------|---|-----------------------|-----------------------|-----------------------|--|---|--|-----------------------|
| <b>Rear Ported Subplates (Continued)</b>                 |   |                       |   |                       |                       |                       |  |   |  |                       |
|  | <i>Cartridge Body</i>   | <i>Overall Height</i> | <i>Cartridge Body</i>   | <i>Overall Height</i> | <i>Cartridge Body</i> | <i>Overall Height</i> | <i>Cartridge Body</i>  | <i>Overall Height</i>   | <i>Cartridge Body</i>  | <i>Overall Height</i> |
| Air-Bleed and Start-Up<br>                               |   |                       | T-3A<br>NQEB-XAN-CRV 49,3<br>NQEB-XAN-CRV/S 49,3<br>Pg. 12.163    |                       |                       |                       | † T-3A<br>NQEB-XAN-CRX 49,3<br>NQEB-XAN-CRX/S 49,3<br>Pg. 12.366     |   |  |                       |
| Reducing on P<br>  | T-11A<br>PBDB-L*N-ERU 50,8<br>PBDB-L*N-ERU/S 50,8<br>Pg. 12.083   |                       | T-2A<br>PFB-L*N-BRV 49,3<br>PFB-L*N-BRV/S 49,3<br>Pg. 12.164      |                       |                       |                       | T-17A<br>PBHB-L*N-HRX 87,4<br>PBHB-L*N-HRX/S 87,4<br>Pg. 12.367      |   |  |                       |
| Reducing/Relieving on P<br><br>P T B A                   | T-11A<br>PPDB-L*N-ERU 50,8<br>PPDB-L*N-ERU/S 50,8<br>Pg. 12.083   |                       | T-2A<br>PFB-L*N-BRV 49,3<br>PFB-L*N-BRV/S 49,3<br>Pg. 12.164      |                       |                       |                       | T-17A<br>PPHB-L*N-HRX 87,4<br>PPHB-L*N-HRX/S 87,4<br>Pg. 12.367      |   |  |                       |
| <b>Side Ported Subplates with Gasket Mount Tank Port</b> |   |                       |   |                       |                       |                       |  |   |  |                       |
|  | <i>Cartridge Body</i>   | <i>Overall Height</i> | <i>Cartridge Body</i>   | <i>Overall Height</i> | <i>Cartridge Body</i> | <i>Overall Height</i> | <i>Cartridge Body</i>  | <i>Overall Height</i>   | <i>Cartridge Body</i>  | <i>Overall Height</i> |
| Relief P to T<br>  | † T-10A<br>RPEC-L*N-FTU 50,8<br>RPEC-L*N-FTU/S 50,8<br>Pg. 12.080 |                       | † T-10A<br>RPEC-L*N-FTV 49,3<br>RPEC-L*N-FTV/S 49,3<br>Pg. 12.161 |                       |                       |                       | † T-3A<br>RPGC-L*N-VTG 62,0<br>RPGC-L*N-VTG/S 62,0<br>NOT CATALOGUED |   | † T-3A<br>RPGC-L*N-CTS 49,3<br>RPGC-L*N-CTS/S 49,3<br>Pg. 12.366 |                       |
| Air-Bleed and Start-Up<br>                               | T-3A<br>NQEB-XAN-CTU 50,8<br>NQEB-XAN-CTU/S 50,8<br>Pg. 12.082    |                       | † T-3A<br>NQEB-XAN-CTV 49,3<br>NQEB-XAN-CTV/S 49,3<br>Pg. 12.163  |                       |                       |                       | † T-3A<br>NQEB-XAN-VTG 62,0<br>NQEB-XAN-VTG/S 62,0<br>NOT CATALOGUED |   | † T-3A<br>NQEB-XAN-CTS 49,3<br>NQEB-XAN-CTS/S 49,3<br>Pg. 12.366 |                       |
| Reducing on P<br>  | T-11A<br>PBDB-L*N-ETU 50,8<br>PBDB-L*N-ETU/S 50,8<br>Pg. 12.083   |                       | T-2A<br>PFB-L*N-BTV 49,3<br>PFB-L*N-BTV/S 49,3<br>Pg. 12.164      |                       |                       |                       |  | T-17A<br>PBHB-L*N-HTX 87,4<br>PBHB-L*N-HTX/S 87,4<br>Pg. 12.367 |  |                       |
| Reducing/Relieving on P<br>                              | T-11A<br>PPDB-L*N-ETU 50,8<br>PPDB-L*N-ETU/S 50,8<br>Pg. 12.083   |                       | T-2A<br>PFB-L*N-BTV 49,3<br>PFB-L*N-BTV/S 49,3<br>Pg. 12.164      |                       |                       |                       |  | T-17A<br>PPHB-L*N-HTX 87,4<br>PPHB-L*N-HTX/S 87,4<br>Pg. 12.367 |  |                       |
|  |   |                       |   |                       |                       |                       |  |   |  |                       |
|  |   |                       |   |                       |                       |                       |  |   |  |                       |
|  |   |                       |   |                       |                       |                       |  |   |  |                       |

**\*\*Seal plate must be ordered separately. European and U.S. X and Y available.**

\* Incomplete model number. See catalogue page for order information.

† These bodies do not have a gauge port.

# ISO/CETOP SANDWICH BODY LOCATOR ALUMINIUM AND SG IRON



All pages listed below refer to SUN's Sandwich Body Catalogue.

Full model codes are shown with typical cartridges. Other types of cartridges with identical cavity configuration can be used in place of typical cartridges shown. If a \* is present in the sixth position of the full model code, the customer must specify the pressure range.

|          |   |   |   |   |                |                |                               |                |                |             |
|----------|---|---|---|---|----------------|----------------|-------------------------------|----------------|----------------|-------------|
|          |   |   |   |   |                |                |                               |                |                |             |
| Function | p | t | b | a | ISO 03/CETOP 3 | ISO 05/CETOP 5 | ISO 05/CETOP 5<br>with Y Port | ISO 07/CETOP 7 | ISO 08/CETOP 8 |             |
|          |   |   |   |   |                |                | U.S. Version                  | CETOP Version  | with Y Port    | with Y Port |

## Bar Manifolds

|                   | Model        | Price | Model        | Price | Model        | Price | Model        | Price | Model        | Price | Model        | Price |              |
|-------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|
| One Station<br>   | VPA<br>VPA/S |       | VNA<br>VNA/S |       | VNW<br>VNW/S |       | VMR<br>VMR/S |       | VRT<br>VRT/S |       | VLJ<br>VLJ/S |       | VLX<br>VLX/S |
|                   | Pg. 12.087   |       | Pg. 12.168   |       | Pg. 12.168   |       | Pg. 12.235   |       | Pg. 12.235   |       | Pg. 12.303   |       | Pg. 12.368   |
| Two Station<br>   | VPB<br>VPB/S |       | VNB<br>VNB/S |       | VNX<br>VNX/S |       | VMT<br>VMT/S |       | VRV<br>VRV/S |       | VLK<br>VLK/S |       | VLY<br>VLY/S |
|                   | Pg. 12.088   |       | Pg. 12.169   |       | Pg. 12.169   |       | Pg. 12.236   |       | Pg. 12.236   |       | Pg. 12.304   |       | Pg. 12.369   |
| Three Station<br> | VPC<br>VPC/S |       | VNC<br>VNC/S |       | VNY<br>VNY/S |       | VMN<br>VMN/S |       | VRW<br>VRW/S |       | VLL<br>VLL/S |       | VLZ<br>VLZ/S |
|                   | Pg. 12.088   |       | Pg. 12.170   |       | Pg. 12.170   |       | Pg. 12.239   |       | Pg. 12.237   |       | Pg. 12.304   |       | Pg. 12.369   |
| Four Station<br>  | VPD<br>VPD/S |       | VND<br>VND/S |       | VNZ<br>VNZ/S |       | VMX<br>VMX/S |       | VRX<br>VRX/S |       |              |       |              |
|                   | Pg. 12.089   |       | Pg. 12.171   |       | Pg. 12.171   |       | Pg. 12.238   |       | Pg. 12.238   |       |              |       |              |
| Five Station<br>  | VPE<br>VPE/S |       | VNE<br>VNE/S |       | VMA<br>VNMAS |       | VMY<br>VMY/S |       | VRY<br>VRY/S |       |              |       |              |
|                   | Pg. 12.089   |       | Pg. 12.172   |       | Pg. 12.172   |       | Pg. 12.239   |       | Pg. 12.239   |       |              |       |              |
|                   |              |       |              |       |              |       |              |       |              |       |              |       |              |
|                   |              |       |              |       |              |       |              |       |              |       |              |       |              |
|                   |              |       |              |       |              |       |              |       |              |       |              |       |              |
|                   |              |       |              |       |              |       |              |       |              |       |              |       |              |

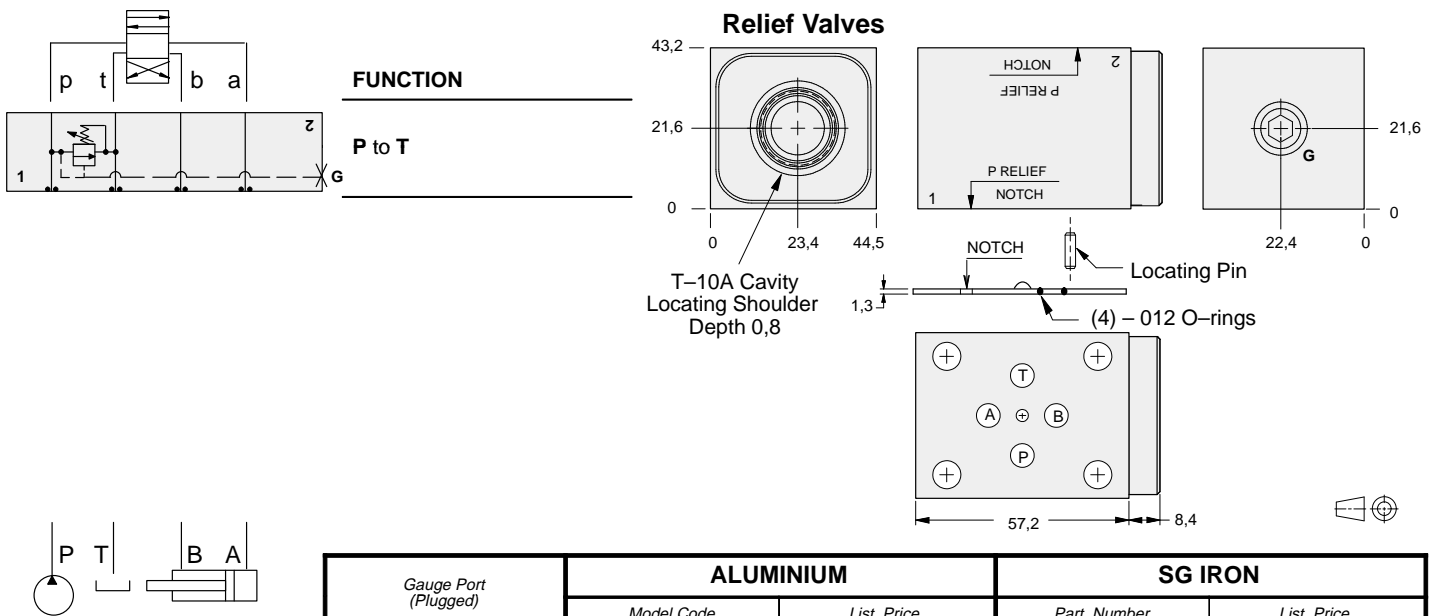
12



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



| Gauge Port (Plugged) | ALUMINIUM    |            | SG IRON      |            |
|----------------------|--------------|------------|--------------|------------|
|                      | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF             | <b>FBP</b>   |            | <b>FBP/S</b> |            |
| .25 BSPP             | <b>FBP/M</b> |            | <b>FBP/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |   |
|---|---|--|---|
|   | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve |
|   | RPEC Page 1.06                              |  | RQEB Page 1.12                          |
|   | Pilot Operated, Rapid Response Relief Valve |  |   |
|   | RPEE Page 1.08                              |  |   |
|   | Direct Acting Relief Valve                  |  |   |
|   | RDDA Page 1.10                              |  |   |
| OTHER VALVES:                                   |   |  |   |

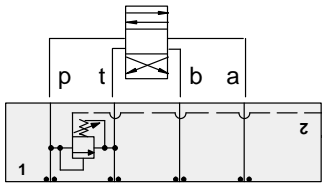


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

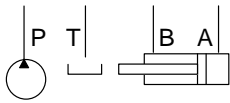
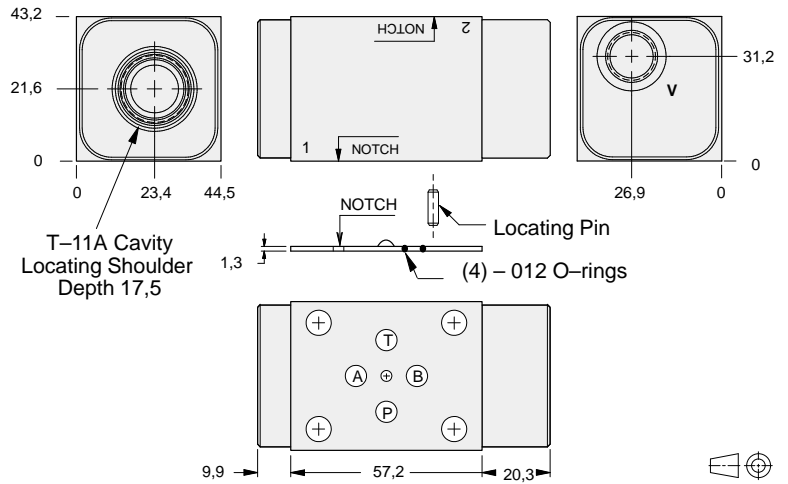
03 RELIEF



### FUNCTION

**P to T**  
Externally Vented

### Relief Valves



| Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-----------|--------------|------------|--------------|------------|
|           | Model Code   | List Price | Model Code   | List Price |
| SAE-6     | <b>EBC</b>   |            | <b>EBC/S</b> |            |
| .25 BSPP  | <b>EBC/M</b> |            | <b>EBC/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

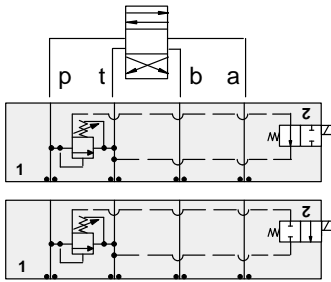
|                      |   |  |  |
|----------------------|---|--|--|
|                      | <i>Pilot Operated Vented Relief Valve</i> |  |  |
|                      | <b>RVCA Page 1.18</b>                     |  |  |
|                      |   |  |  |
|                      |   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

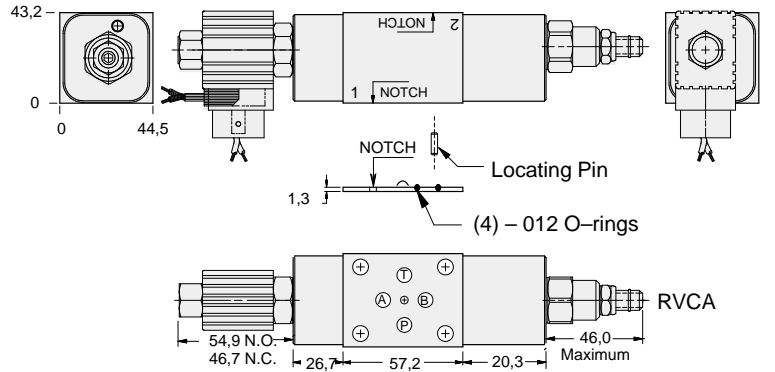


### FUNCTION

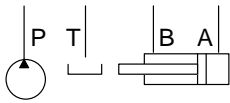
**P to T**  
N.O. Solenoid  
Vented \*

**P to T**  
N.C. Solenoid  
Vented \*

### Relief Valves



Operating pressure is limited to 210 bar.



| Solenoid Type | ALUMINIUM   |            | SG IRON       |            |
|---------------|-------------|------------|---------------|------------|
|               | Model Code  | List Price | Model Code    | List Price |
| N.O.          | YRCO-LAN-*A |            | YRCO-LAN-*A/S |            |
| N.C.          | YRCP-LAN-*A |            | YRCP-LAN-*A/S |            |

\* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.

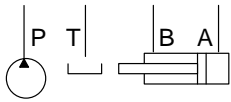
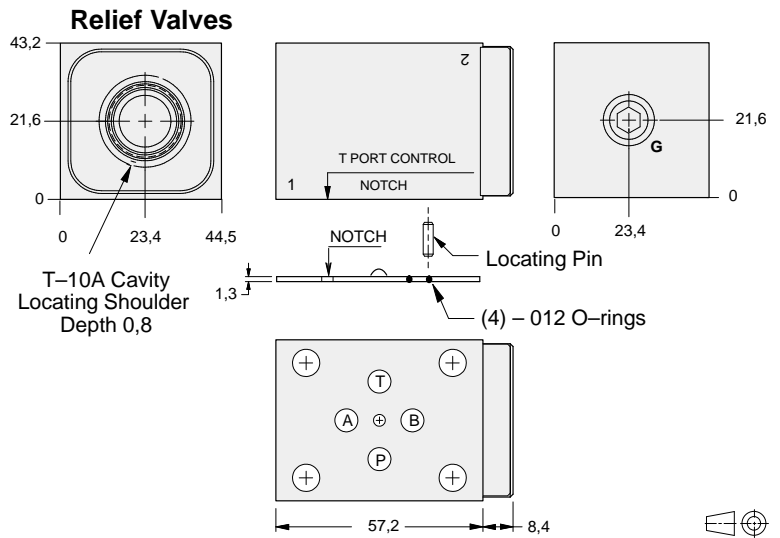
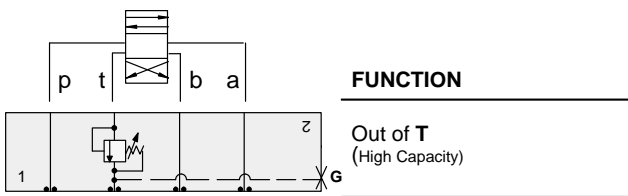


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 RELIEF



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>FBT</b>   |            | <b>FBT/S</b> |            |
| .25 BSPP                | <b>FBT/M</b> |            | <b>FBT/T</b> |            |

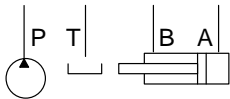
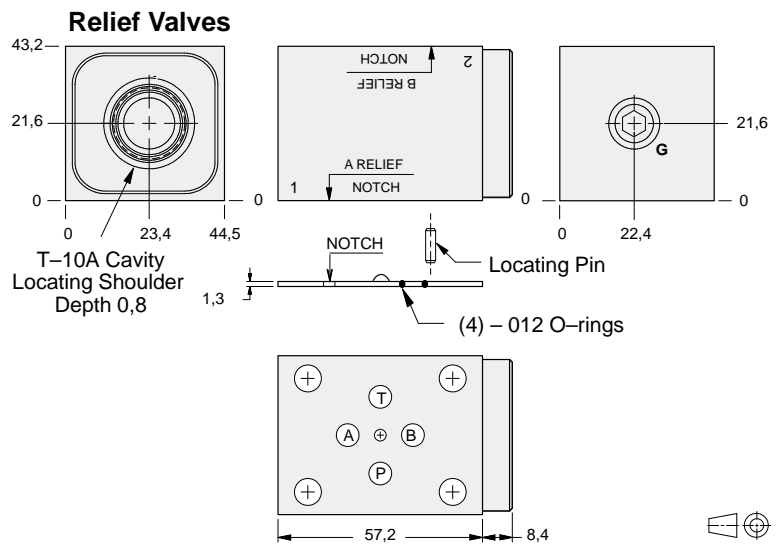
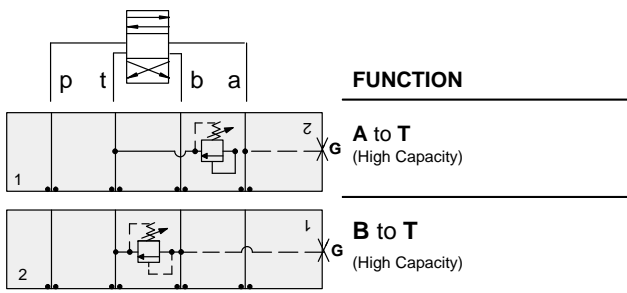
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |   |
|---|---|--|---|
|   | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve |
|   | RPEC Page 1.06                              |  | RQEB Page 1.12                          |
|   | Pilot Operated, Rapid Response Relief Valve |  |   |
|   | RPEE Page 1.08                              |  |   |
|   | Direct Acting Relief Valve                  |  |   |
|   | RDDA Page 1.10                              |  |   |
| OTHER VALVES:                                   |   |  |   |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>FBA</b>   |            | <b>FBA/S</b> |            |
| .25 BSPP                | <b>FBA/M</b> |            | <b>FBA/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |   |
|---|---|--|---|
|   | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve |
|   | RPEC Page 1.06                              |  | RQEB Page 1.12                          |
|   | Pilot Operated, Rapid Response Relief Valve |  |   |
|   | RPEE Page 1.08                              |  |   |
|   | Direct Acting Relief Valve                  |  |   |
|   | RDDA Page 1.10                              |  |   |
| OTHER VALVES:                                   |   |  |   |



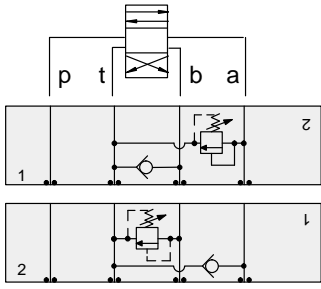


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 RELIEF

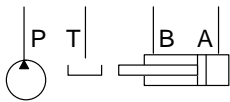
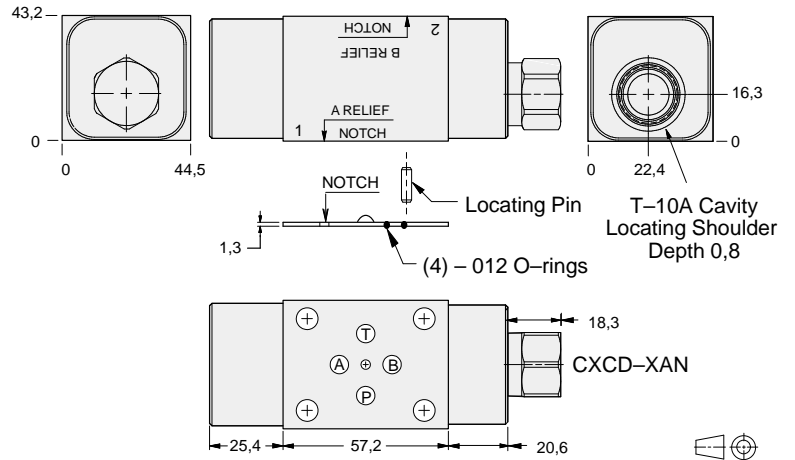


### FUNCTION

**A to T**  
FF Check T to B

**B to T**  
FF Check to T to A

### Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>FB2</b> |            | <b>FB2/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

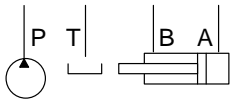
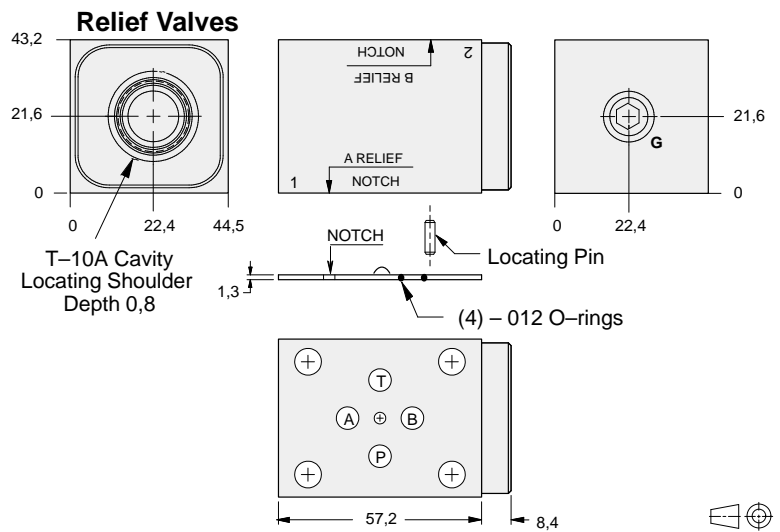
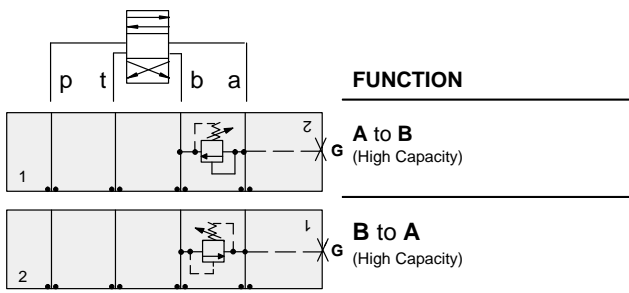
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i> |
|                      | <b>RPEC Page 1.06</b>                              |  | <b>RQEB Page 1.12</b>                          |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  |  |
|                      | <b>RPEE Page 1.08</b>                              |  |  |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDDA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>FBC</b>   |            | <b>FBC/S</b> |            |
| .25 BSPP                | <b>FBC/M</b> |            | <b>FBC/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i> |
|   | <b>RPEC Page 1.06</b>                              |  | <b>RQEB Page 1.12</b>                          |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i> |  |  |
|   | <b>RPEE Page 1.08</b>                              |  |  |
|   | <i>Direct Acting Relief Valve</i>                  |  |  |
|   | <b>RDDA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

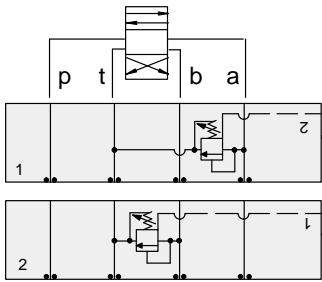


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 RELIEF

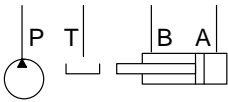
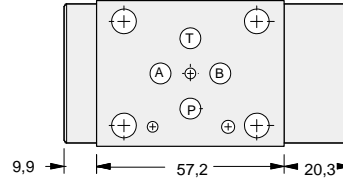
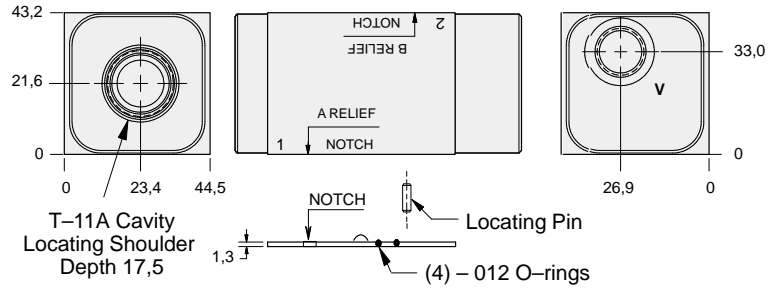


### FUNCTION

**A to T**  
Externally Vented

**B to T**  
Externally Vented

### Relief Valves



| Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-----------|--------------|------------|--------------|------------|
|           | Model Code   | List Price | Model Code   | List Price |
| SAE-6     | <b>EBI</b>   |            | <b>EBI/S</b> |            |
| .25 BSPP  | <b>EBI/M</b> |            | <b>EBI/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

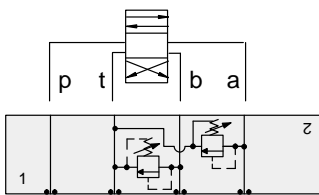
|                      |   |  |  |
|----------------------|---|--|--|
|                      | <i>Pilot Operated Vented Relief Valve</i> |  |  |
|                      | <b>RVCA Page 1.18</b>                     |  |  |
|                      |   |  |  |
|                      |   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 03 SANDWICH BODIES



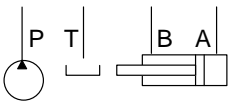
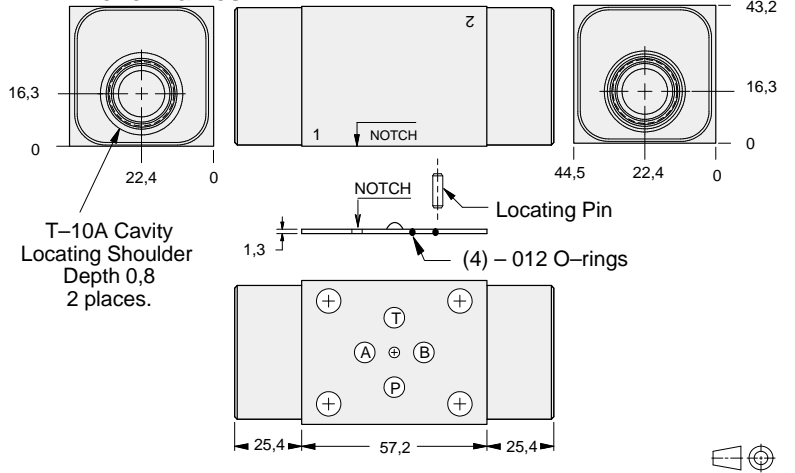
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**A and B to T**  
(High Capacity)

### Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>FBX</b> |            | <b>FBX/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i> |
|                      | <b>RPEC Page 1.06</b>                              |  | <b>RQEB Page 1.12</b>                          |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  |  |
|                      | <b>RPEE Page 1.08</b>                              |  |  |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDDA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

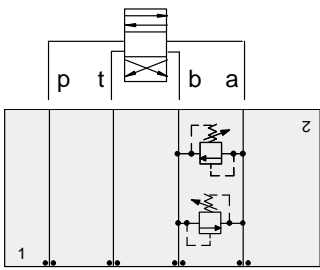


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

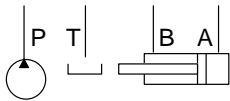
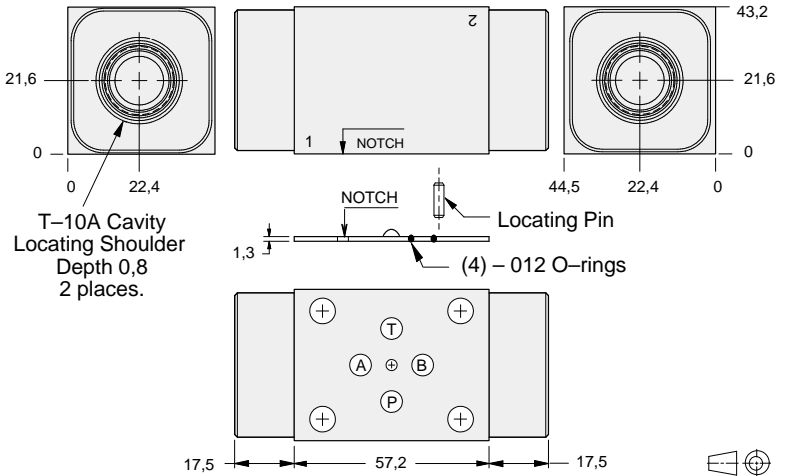
03 RELIEF



### FUNCTION

**A to B and B to A**  
(High Capacity)  
(Cross Port)

### Relief Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| FBY        |            | FBY/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

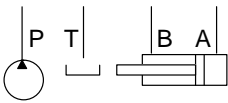
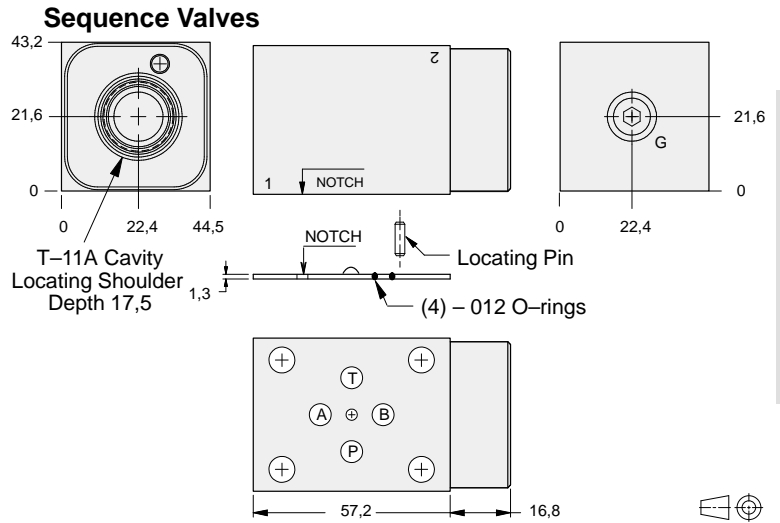
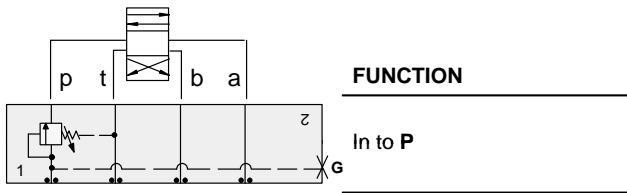
|               |   |  |   |
|---------------|---|--|---|
|               | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve |
|               | RPEC Page 1.06                              |  | RQEB Page 1.12                          |
|               | Pilot Operated, Rapid Response Relief Valve |  |   |
|               | RPEE Page 1.08                              |  |   |
|               | Direct Acting Relief Valve                  |  |   |
|               | RDDA Page 1.10                              |  |   |
| OTHER VALVES: |   |  |   |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>EBW</b>   |            | <b>EBW/S</b> |            |
| .25 BSPP                | <b>EBW/M</b> |            | <b>EBW/T</b> |            |

03 SEQUENCE

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Sequence Valve</i>                             |  |  |
|   | <b>RSDC Page 2.06</b>  |  |  |
|   | <i>Pilot Operated "Kick-Down" Sequence Valve</i>                 |  |  |
|   | <b>SQDB Page 2.08</b>  |  |  |
|   | <i>Direct Acting Sequence Valve with Reverse Free Flow Check</i> |  |  |
|   | <b>SCCA Page 2.12</b>  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



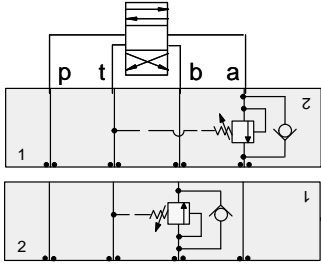
# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 SEQUENCE

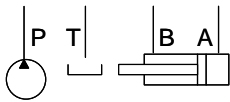
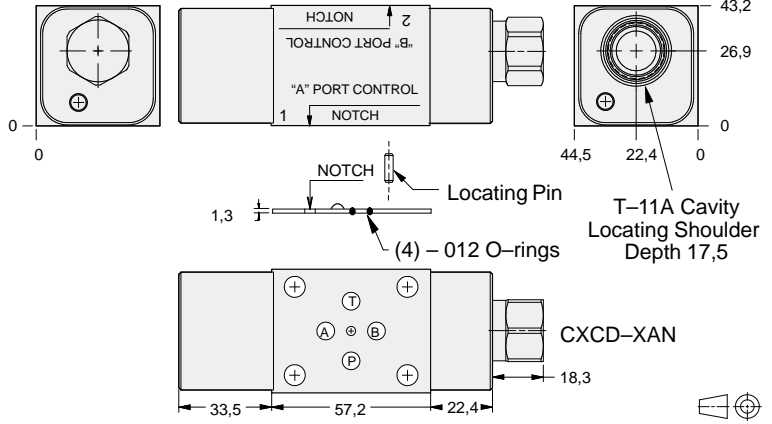
## Sequence Valves



### FUNCTION

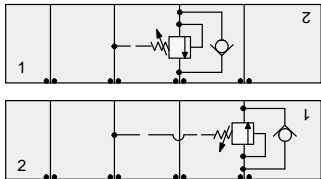
**In to A**  
Reverse FF Check

**Out of B**  
Reverse FF Check



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>EB4</b> |            | <b>EB4/S</b> |            |

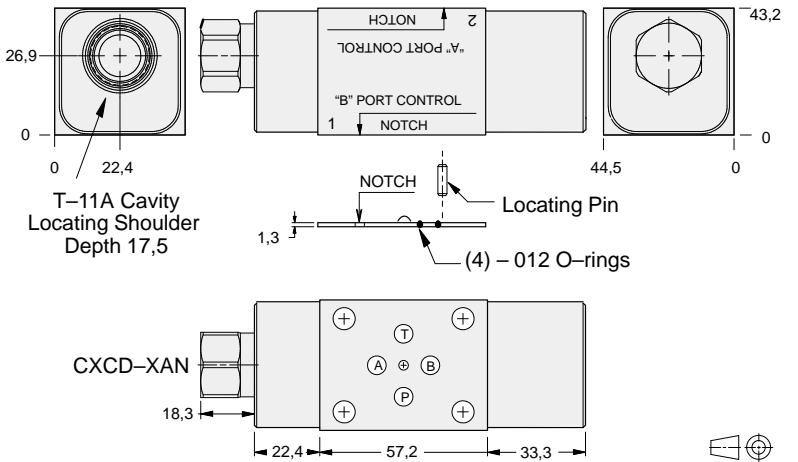
## Sequence Valves



### FUNCTION

**In to B**  
Reverse FF Check

**Out of A**  
Reverse FF Check



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>EB5</b> |            | <b>EB5/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

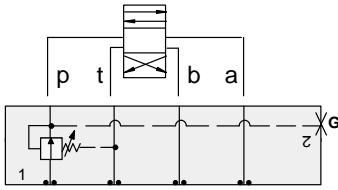
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Sequence Valve             |  |  |
|                      | RSDC Page 2.06                            |  |  |
|                      | Pilot Operated "Kick-Down" Sequence Valve |  |  |
|                      | SQDB Page 2.08                            |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 03 SANDWICH BODIES



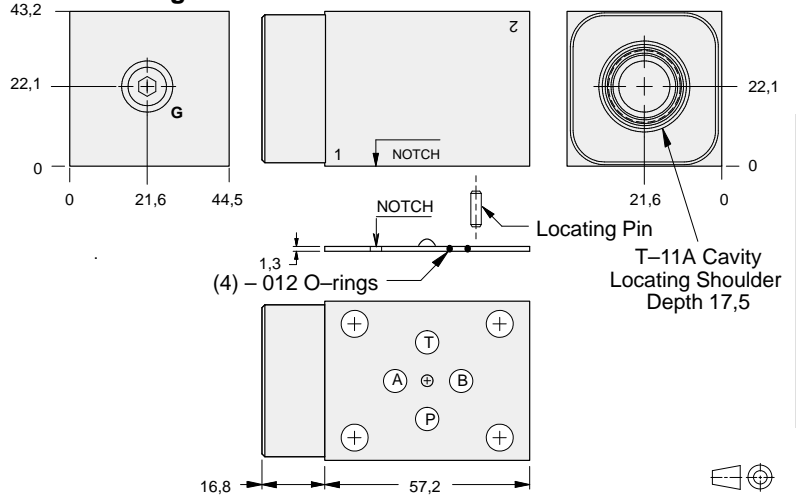
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



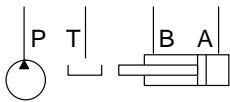
### FUNCTION

On P  
Drained to T

### Reducing Valves



03 REDUCING



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>EBP</b>   |            | <b>EBP/S</b> |            |
| .25 BSPP                | <b>EBP/M</b> |            | <b>EBP/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |  |
|---|-------------------------------|--|--|
|   | Pilot Operated Reducing Valve |  |  |
|   | PBDB Page 3.06                |  |  |
|   |                               |  |  |
|   |                               |  |  |
| OTHER VALVES:                                   |                               |  |  |



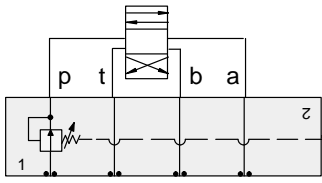


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

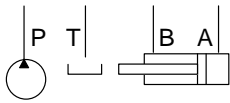
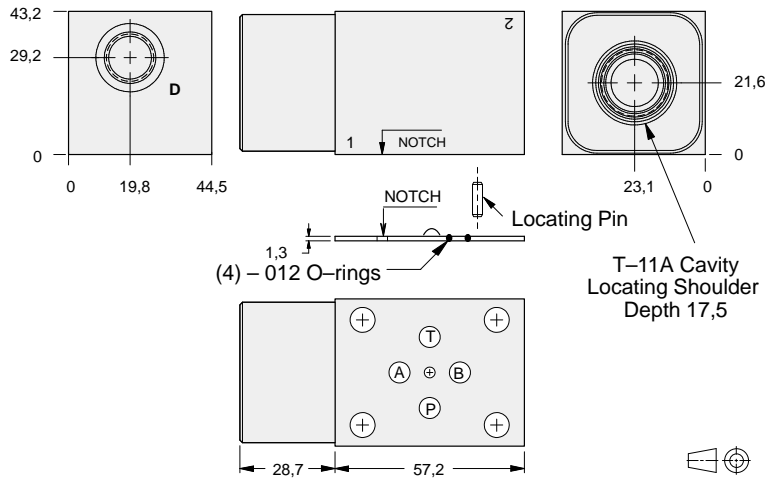
03 REDUCING



### FUNCTION

On P  
Drained Externally

### Reducing Valves



| Drain Port | ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|------------|
|            | Model Code | List Price | Model Code | List Price |
| SAE-6      | EBQ        |            | EBQ/S      |            |
| .25 BSPP   | EBQ/M      |            | EBQ/T      |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

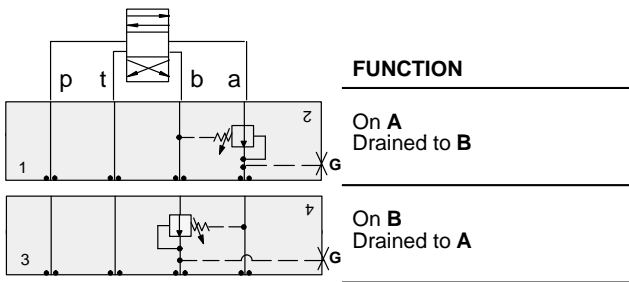
| Cartridge Diagram | Cartridge Name                | Reference      | Other Columns |
|-------------------|-------------------------------|----------------|---------------|
|                   | Pilot Operated Reducing Valve | PBDB Page 3.06 |               |
|                   |                               |                |               |
|                   |                               |                |               |
|                   |                               |                |               |
| OTHER VALVES:     |                               |                |               |



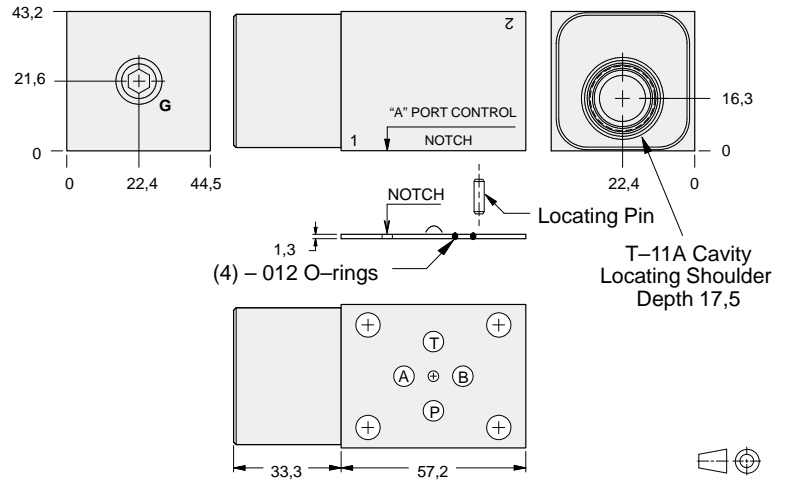
# ISO 03 SANDWICH BODIES



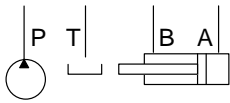
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



03 REDUCING



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>EBA</b>   |            | <b>EBA/S</b> |            |
| .25 BSPP                | <b>EBA/M</b> |            | <b>EBA/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                                      |  |  |
|---|--------------------------------------|--|--|
|   | <i>Pilot Operated Reducing Valve</i> |  |  |
|   | <b>PBDB Page 3.06</b>                |  |  |
|   |                                      |  |  |
|   |                                      |  |  |
| <b>OTHER VALVES:</b>                            |                                      |  |  |

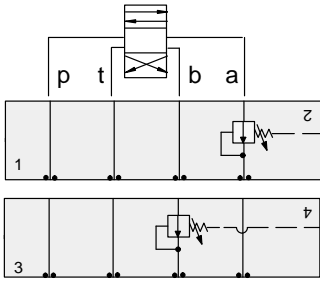


# ISO 03 SANDWICH BODIES



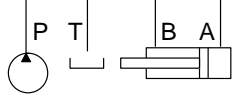
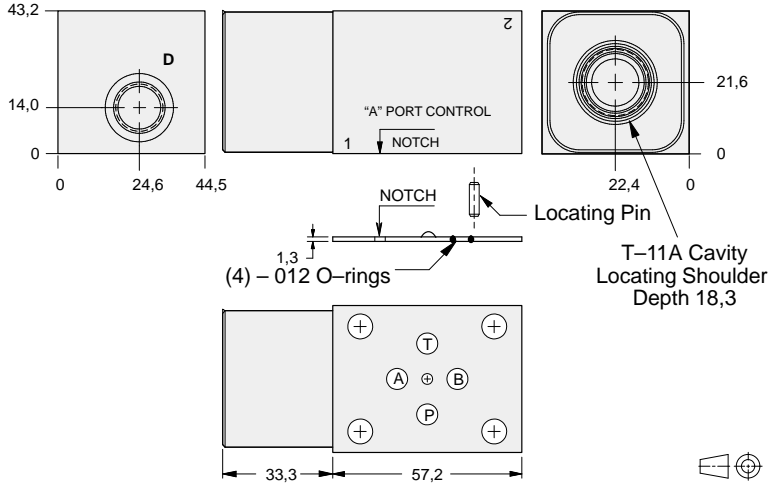
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 REDUCING



| FUNCTION |                    |
|----------|--------------------|
| On A     | Drained Externally |
| On B     | Drained Externally |

## Reducing Valves



| Drain Port | ALUMINIUM    |            | SG IRON      |            |
|------------|--------------|------------|--------------|------------|
|            | Model Code   | List Price | Model Code   | List Price |
| SAE-6      | <b>EBD</b>   |            | <b>EBD/S</b> |            |
| .25 BSPP   | <b>EBD/M</b> |            | <b>EBD/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                               |  |  |
|---------------|-------------------------------|--|--|
|               | Pilot Operated Reducing Valve |  |  |
|               | PBDB Page 3.06                |  |  |
|               |                               |  |  |
|               |                               |  |  |
| OTHER VALVES: |                               |  |  |

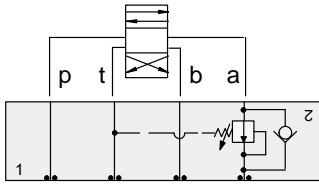


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

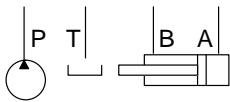
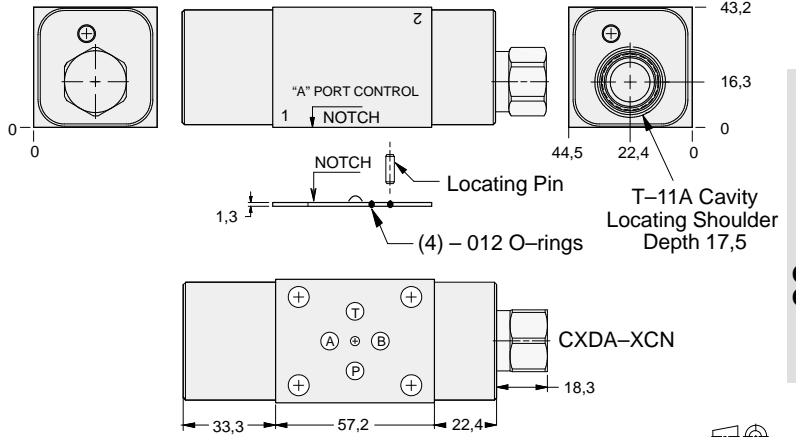
03 REDUCING



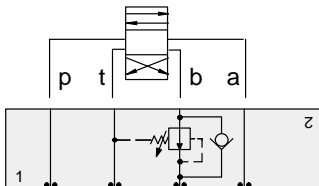
### FUNCTION

On A Drain to T  
Reverse FF Check

### Reducing Valves



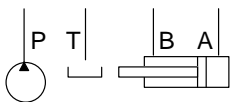
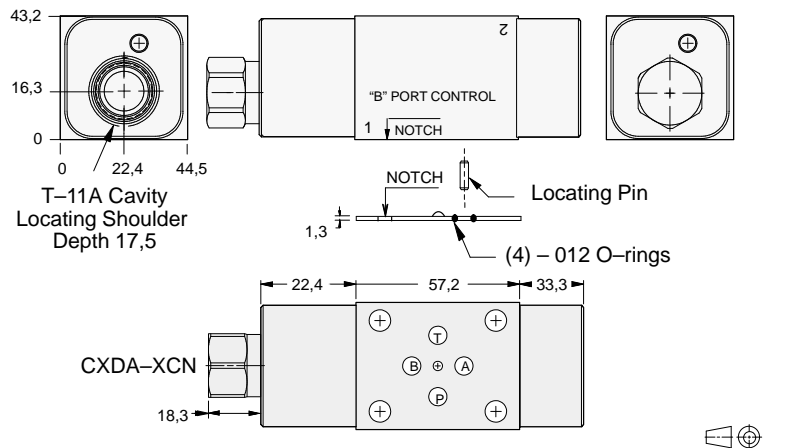
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| EB2        |            | EB2/S      |            |



### FUNCTION

On B Drain to T  
Reverse FF Check

### Reducing Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| EB3        |            | EB3/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                               |  |  |
|---------------|-------------------------------|--|--|
|               | Pilot Operated Reducing Valve |  |  |
|               | PBDB Page 3.06                |  |  |
|               |                               |  |  |
|               |                               |  |  |
| OTHER VALVES: |                               |  |  |

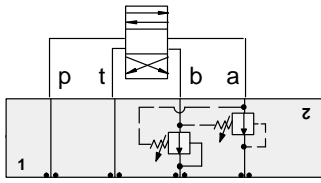


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

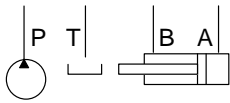
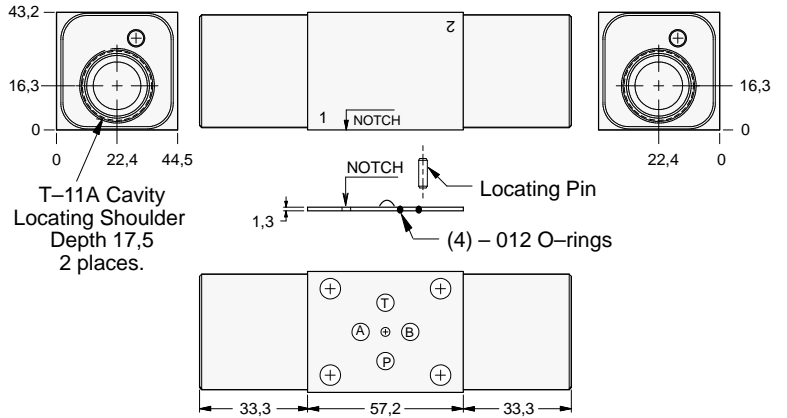
03 REDUCING



### FUNCTION

On A and B  
Drains to Opposite Port

### Reducing Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| EBY        |            | EBY/S      |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

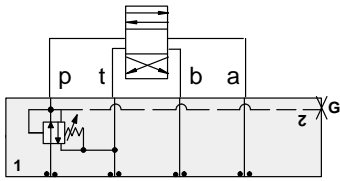
|               |                               |  |  |
|---------------|-------------------------------|--|--|
|               | Pilot Operated Reducing Valve |  |  |
|               | PBDB Page 3.06                |  |  |
|               |                               |  |  |
|               |                               |  |  |
| OTHER VALVES: |                               |  |  |



# ISO 03 SANDWICH BODIES



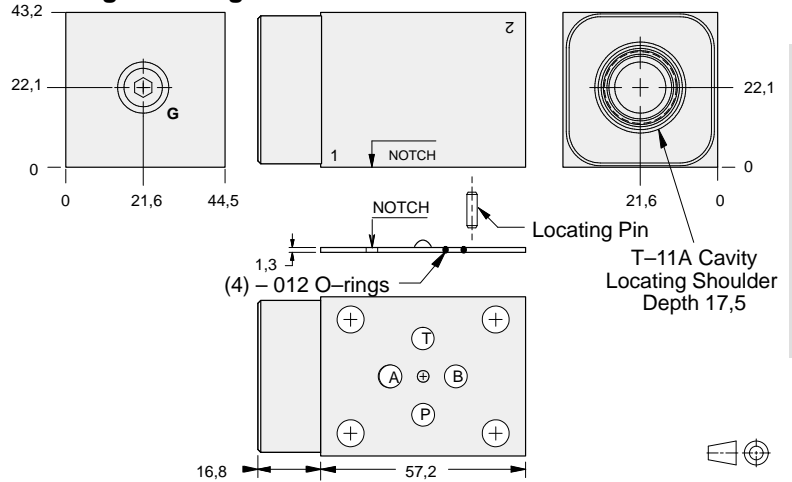
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



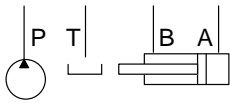
### FUNCTION

On P Tank to T  
Drained to T

### Reducing/Relieving Valves



03 REDUCING/RELIEVING



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>EBP</b>   |            | <b>EBP/S</b> |            |
| .25 BSPP                | <b>EBP/M</b> |            | <b>EBP/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | PPDB Page 3.10                                 |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

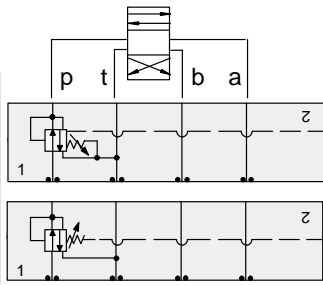


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 REDUCING/RELIEVING

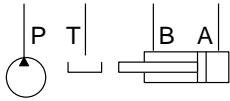
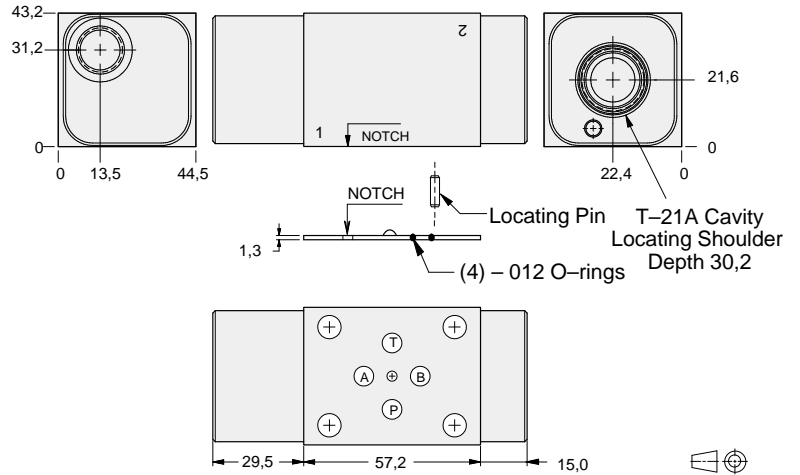


### FUNCTION

On P Tank to T  
Vented Externally

On P Tank to T  
Drained Externally

### Reducing/Relieving Valves



| External Port | ALUMINIUM    |            | SG IRON      |            |
|---------------|--------------|------------|--------------|------------|
|               | Model Code   | List Price | Model Code   | List Price |
| SAE-6         | <b>MBP</b>   |            | <b>MBP/S</b> |            |
| .25 BSPP      | <b>MBP/M</b> |            | <b>MBP/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

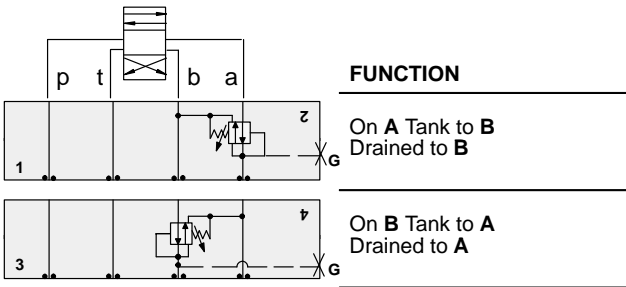
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing/Relieving Valve with Drain Port |  |  |
|                      | <b>PVDA Page 3.14</b>                                   |  |  |
|                      | Pilot Operated Reducing/Relieving Valve with Vent Port  |  |  |
|                      | <b>PVDB Page 3.16</b>                                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



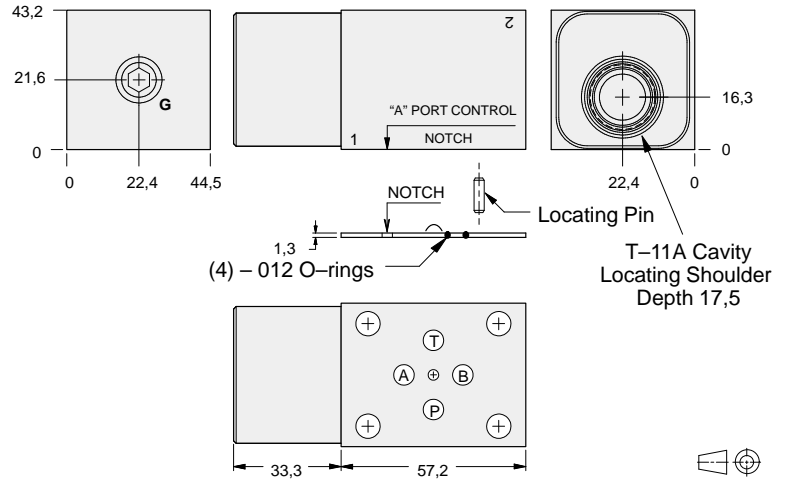
# ISO 03 SANDWICH BODIES



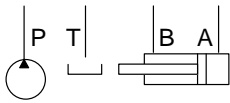
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing/Relieving Valves



03 REDUCING/RELIEVING



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>EBA</b>   |            | <b>EBA/S</b> |            |
| .25 BSPP                | <b>EBA/M</b> |            | <b>EBA/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PPBD Page 3.10</b>                          |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



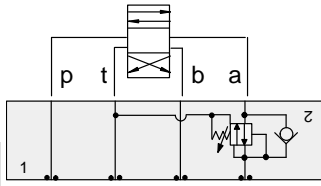


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

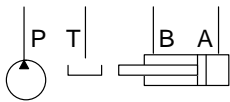
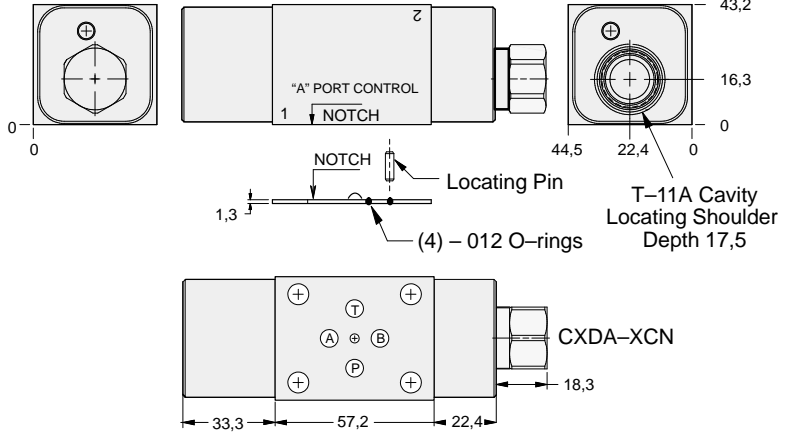
03 REDUCING/RELIEVING



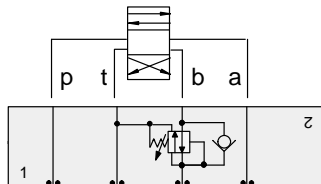
### FUNCTION

On A Tank to T  
Drained to T  
Reverse FF Check

### Reducing/Relieving Valves



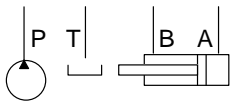
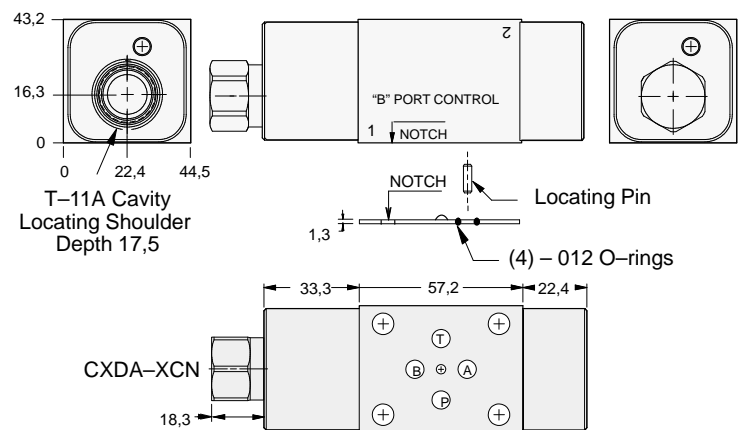
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>EB2</b> |            | <b>EB2/S</b> |            |



### FUNCTION

On B Tank to T  
Drained to T  
Reverse FF Check

### Reducing/Relieving Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>EB3</b> |            | <b>EB3/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

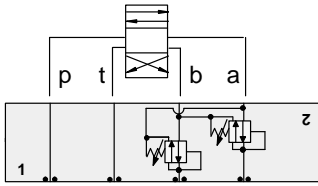
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing/Relieving Valve |  |  |
|                      | PPDB Page 3.10                          |  |  |
|                      |   |  |  |
|                      |   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 03 SANDWICH BODIES



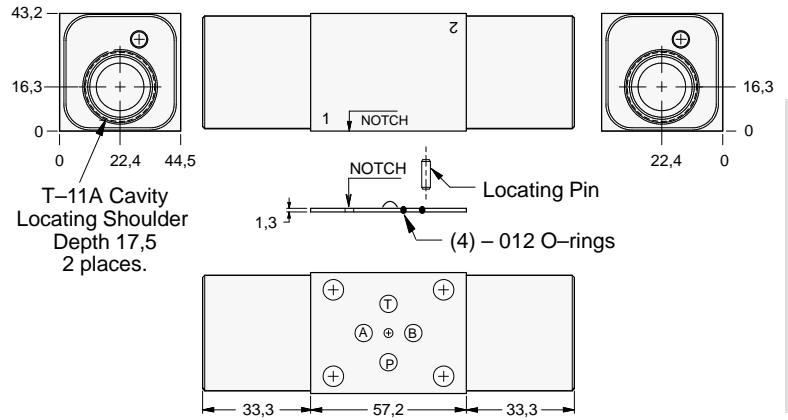
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



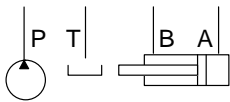
### FUNCTION

On **A** and **B**  
Tanks and Drains to  
Opposite Port

### Reducing/Relieving Valves



03 REDUCING/RELIEVING



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>EBY</b> |            | <b>EBY/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PPDB Page 3.10</b>                          |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

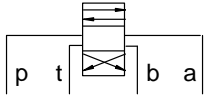


# ISO 03 SANDWICH BODIES

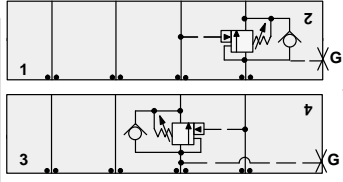


- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 COUNTERBALANCE



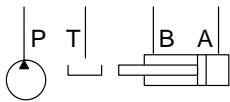
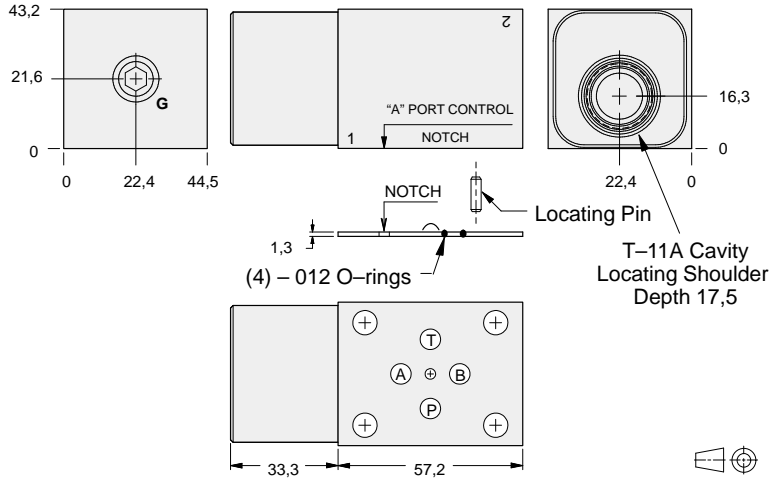
### FUNCTION



On A Pilot from B

On B Pilot from A

### Counterbalance Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>EBA</b>   |            | <b>EBA/S</b> |            |
| .25 BSPP                | <b>EBA/M</b> |            | <b>EBA/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

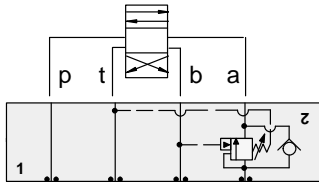
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|                      | <b>CBCA</b> Page 4.10                   |  |  |
|                      | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|                      | <b>CBCG</b> Page 4.12                   |  |  |
|                      | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|                      | <b>CBCH</b> Page 4.14                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 03 SANDWICH BODIES



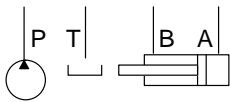
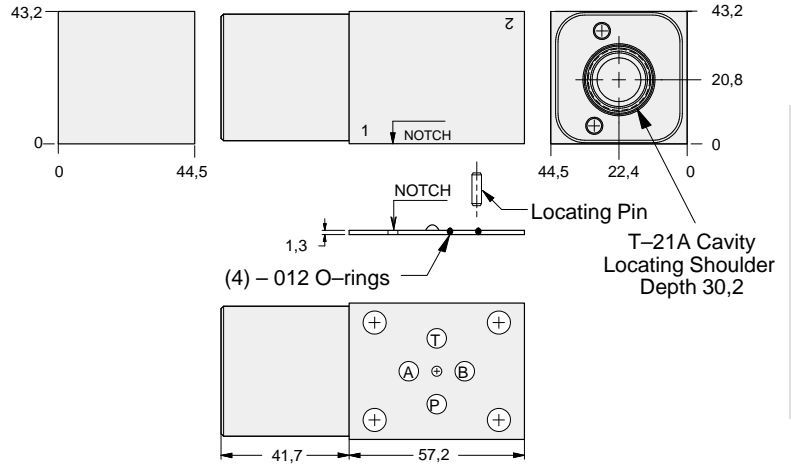
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



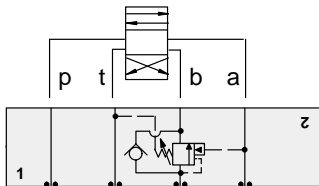
### FUNCTION

On A Pilot from B  
Vent to T

### Counterbalance Valves



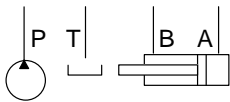
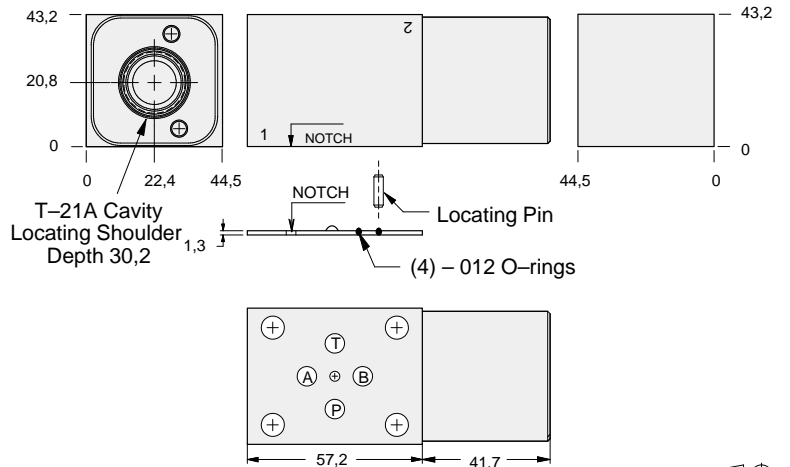
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>MBA</b> |            | <b>MBA/S</b> |            |



### FUNCTION

On B Pilot from A  
Vent to T

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>MBB</b> |            | <b>MBB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|                      | <b>CWCA Page 4.18</b>                        |  |  |
|                      | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|                      | <b>CWCG Page 4.20</b>                        |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

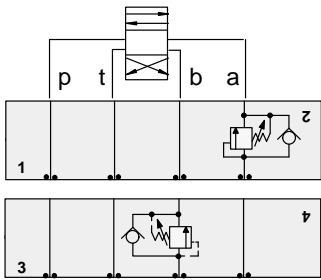


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 COUNTERBALANCE

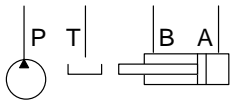
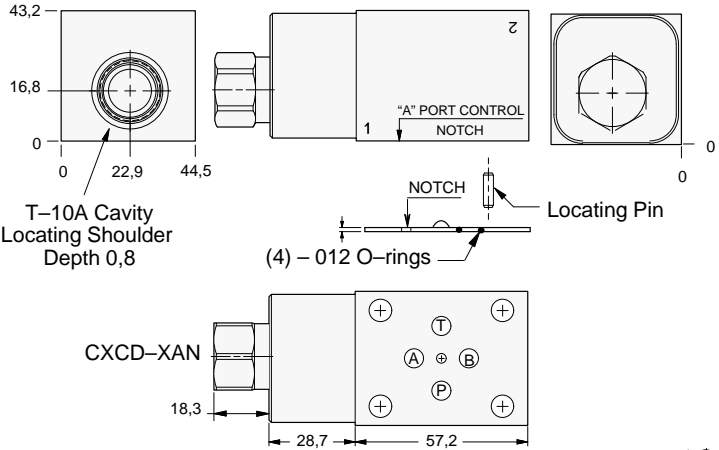


### FUNCTION

**On A**  
No pilot assist

**On B**  
No pilot assist

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>FB4</b> |            | <b>FB4/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

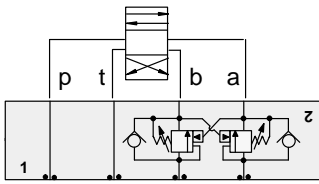
|                      |                            |  |  |
|----------------------|----------------------------|--|--|
|                      | Direct Acting Relief Valve |  |  |
|                      | RDDA Page 1.10             |  |  |
|                      |                            |  |  |
|                      |                            |  |  |
| <b>OTHER VALVES:</b> |                            |  |  |



# ISO 03 SANDWICH BODIES



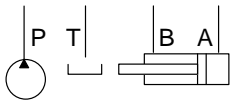
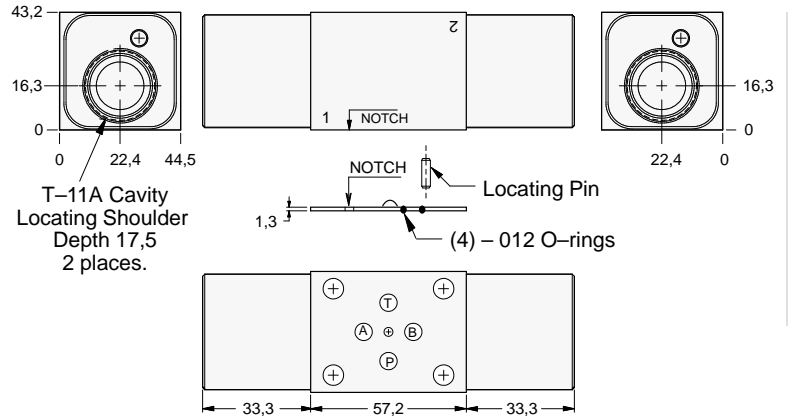
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Cross-Piloted

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| EBY        |            | EBY/S      |            |

03 COUNTERBALANCE

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | CBCA Page 4.10                          |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | CBCG Page 4.12                          |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | CBCH Page 4.14                          |  |  |
| OTHER VALVES:                                   |   |  |  |

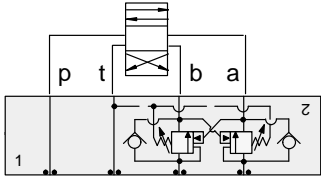


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

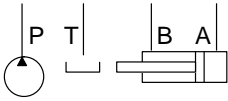
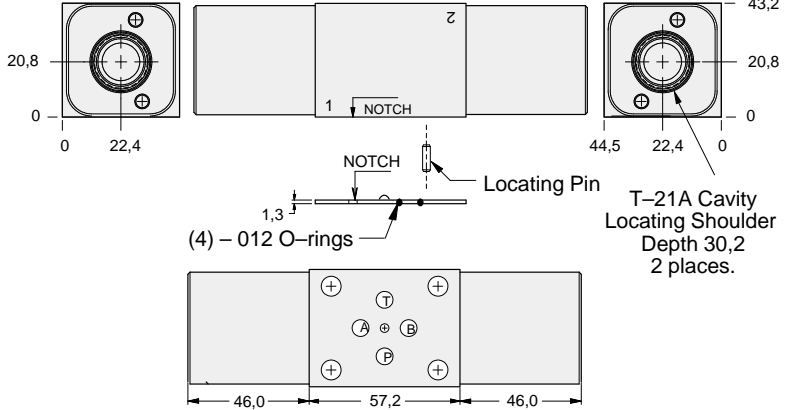
03 COUNTERBALANCE



### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**

### Counterbalance Valves



| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>MBY</b>        |                   | <b>MBY/S</b>      |                   |

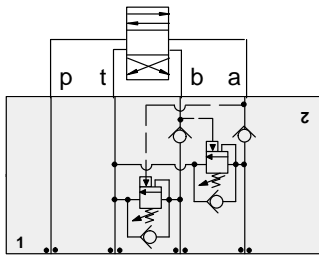
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|   | <b>CWCA Page 4.18</b>                        |  |  |
|   | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|   | <b>CWCG Page 4.20</b>                        |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 03 SANDWICH BODIES



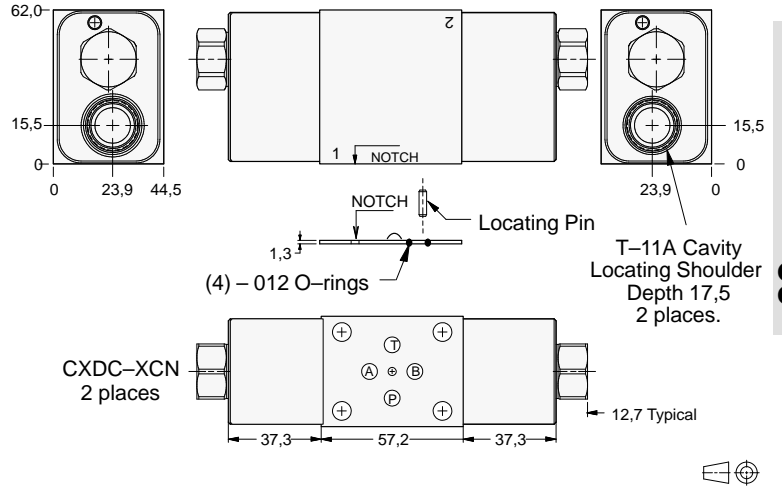
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



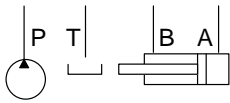
### FUNCTION

Cushion Lock  
Circuit  
On A and B

### Counterbalance Valves



03 COUNTERBALANCE



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>EB8</b> |            | <b>EB8/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | <b>CBCA</b> Page 4.10                   |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | <b>CBCG</b> Page 4.12                   |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | <b>CBCH</b> Page 4.14                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



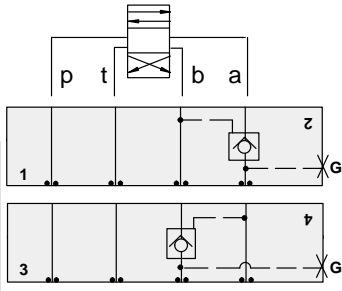


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 P.O. CHECK

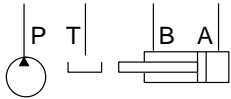
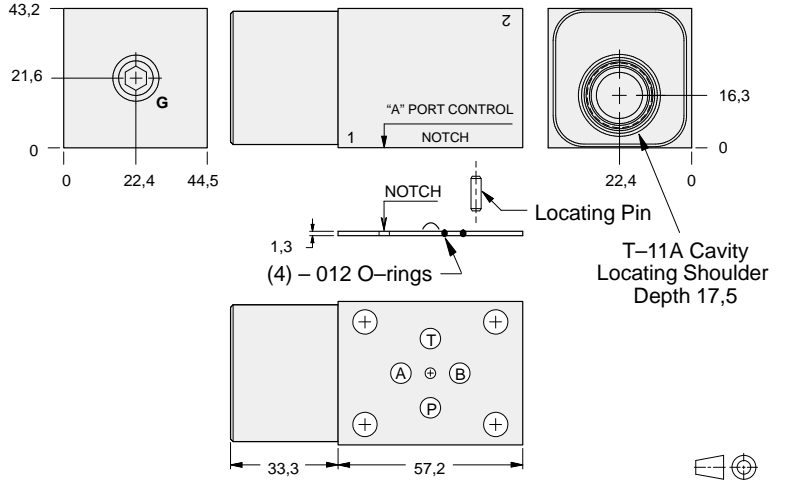


### FUNCTION

On A  
Pilot from B

On B  
Pilot from A

### Pilot Operated Check Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>EBA</b>   |            | <b>EBA/S</b> |            |
| .25 BSPP                | <b>EBA/M</b> |            | <b>EBA/T</b> |            |

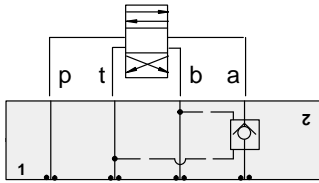
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|   | CKCB Page 4.16                             |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



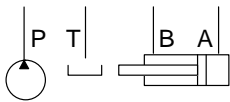
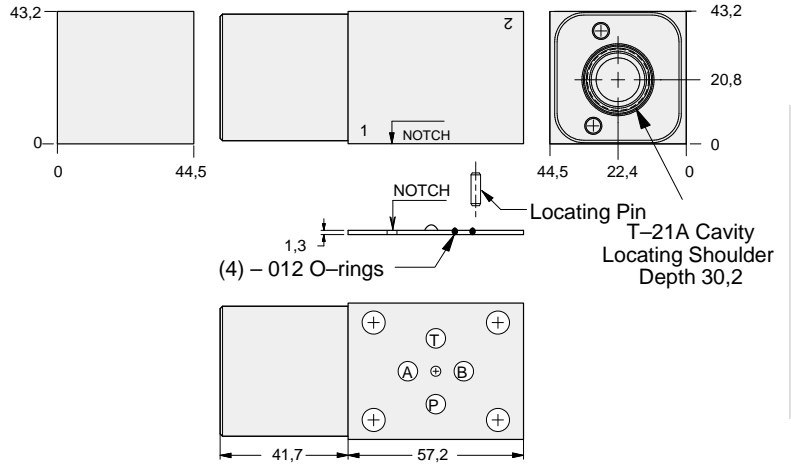
**FUNCTION**

---

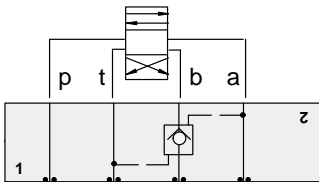
On **A**  
Pilot from **B**  
Vent to **T**

---

## Pilot Operated Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>MBA</b> |            | <b>MBA/S</b> |            |



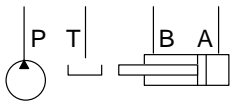
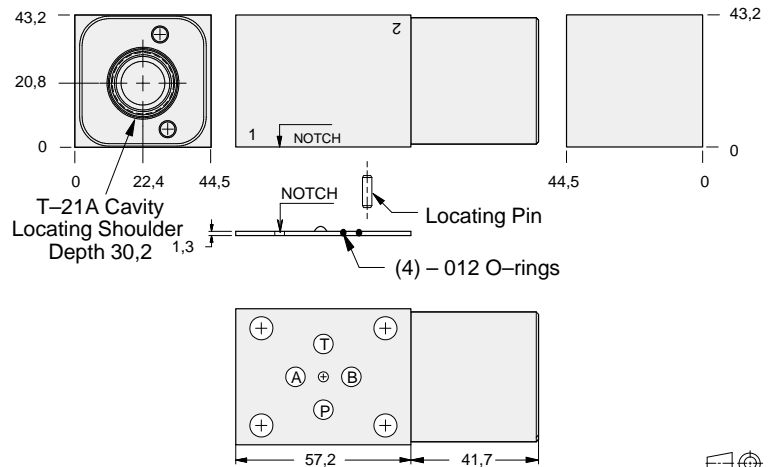
**FUNCTION**

---

On **B**  
Pilot from **A**  
Vent to **T**

---

## Pilot Operated Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>MBB</b> |            | <b>MBB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

| Cartridge Diagram    | Description   | Material | Part Number |
|----------------------|---|----------|-------------|
|                      | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio<br><b>CVCV Page 4.22</b> |          |             |
|                      |   |          |             |
|                      |   |          |             |
| <b>OTHER VALVES:</b> |   |          |             |



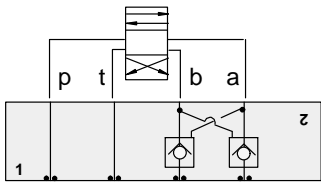
# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

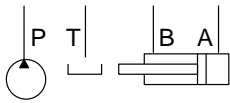
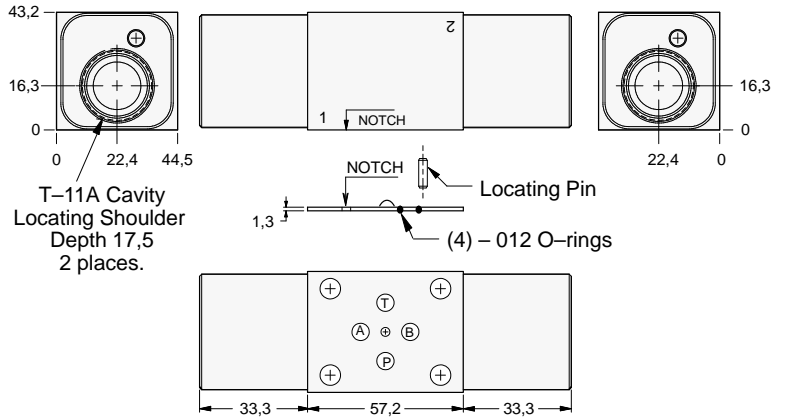
03 P.O. CHECK

## Pilot Operated Check Valves



### FUNCTION

On A and B  
Cross-Piloted



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| EBY        |            | EBY/S      |            |

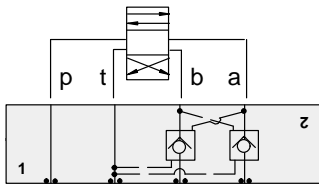
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|   | CKCB Page 4.16                             |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 03 SANDWICH BODIES



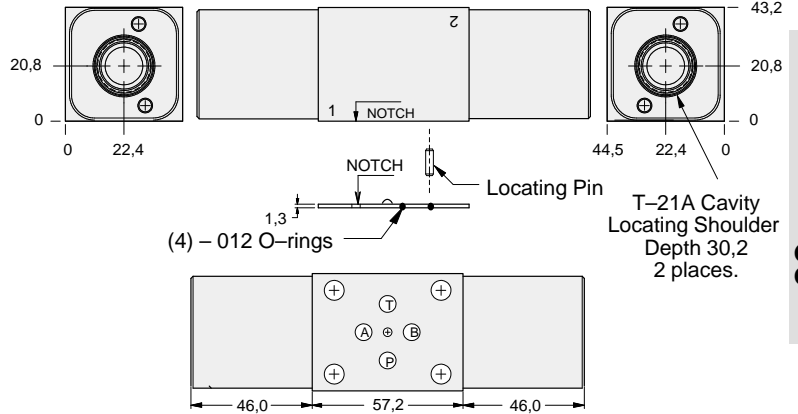
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



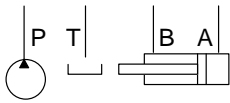
### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**

### Pilot Operated Check Valves



03 P.O. CHECK



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>MBY</b> |            | <b>MBY/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|   | <b>CVCV Page 4.22</b>                                |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

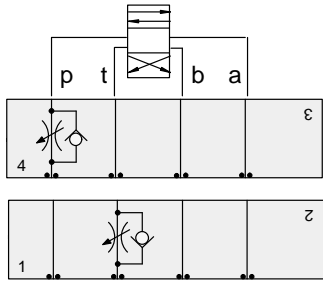


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 FLOW CONTROL

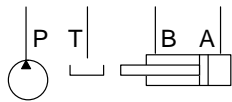
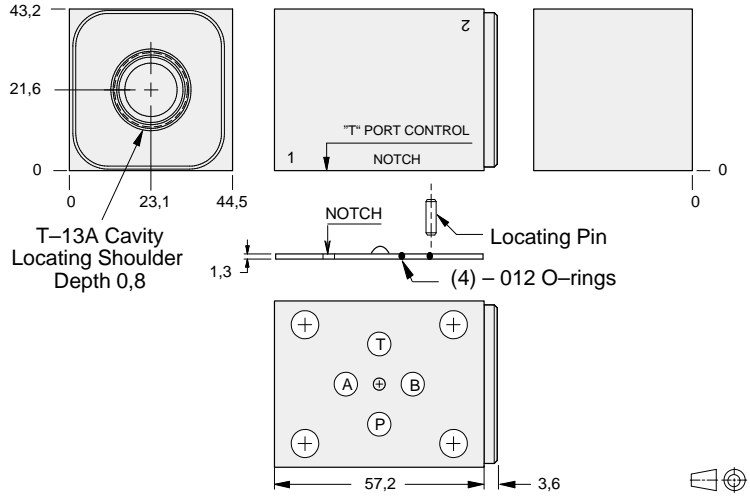


### FUNCTION

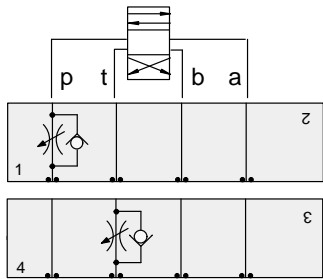
Meter-In P

Meter-Out T

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBP</b> |            | <b>GBP/S</b> |            |

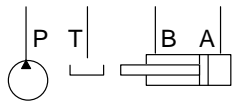
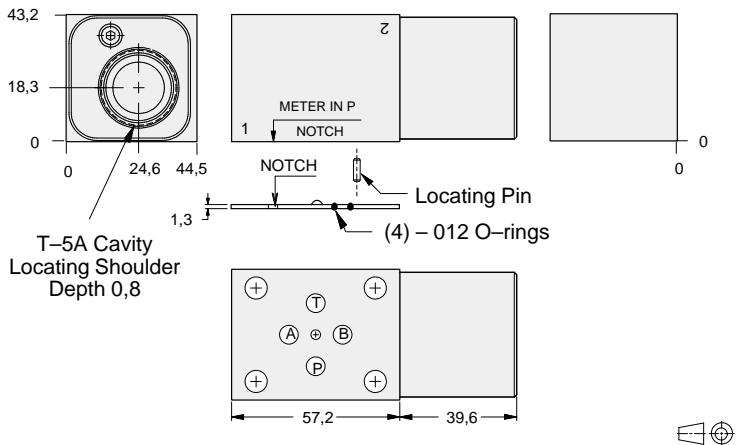


### FUNCTION

Meter-In P  
(High Capacity)

Meter-Out T  
(High Capacity)

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GBO</b> |            | <b>GBO/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

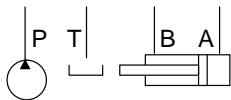
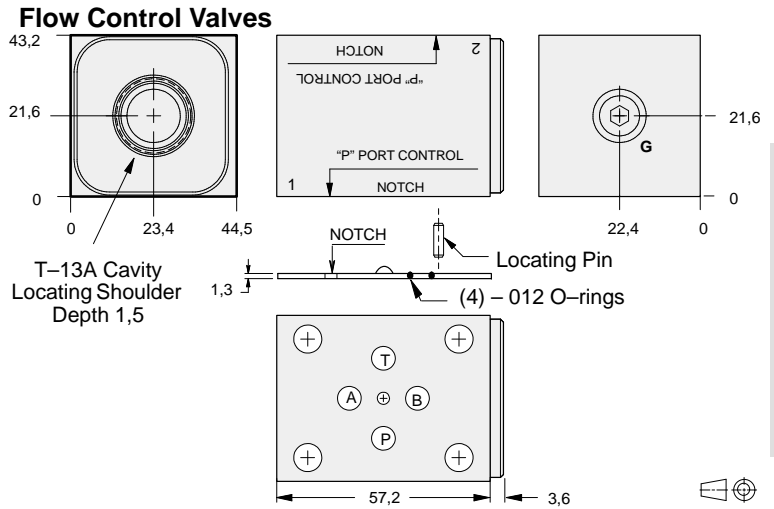
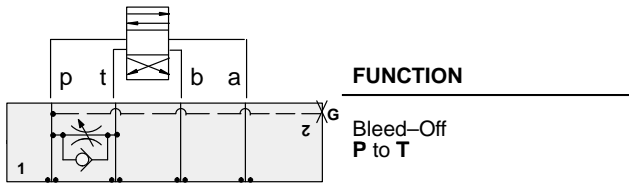
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve                    |  |  |
|               | NF*C Page 5.12                                   |  |  |
|               | Fixed Orifice, Pressure-Compensated Flow Control |  |  |
|               | FX*A Page 5.20                                   |  |  |
| OTHER VALVES: |  |  |  |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>GBQ</b>   |            | <b>GBQ/S</b> |            |
| .25 BSPP                | <b>GBQ/M</b> |            | <b>GBQ/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|   | NFCC Page 5.12   |  | FXCA Page 5.20   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|   | NCCB Page 5.16   |  | FCCB Page 5.22   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|   | NCCC Page 5.18   |  | FDBA Page 5.24   |
| OTHER VALVES:                                   | CNCC   |  |  |

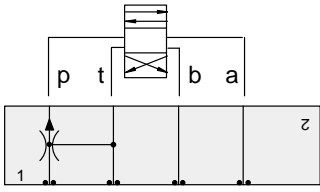


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

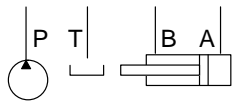
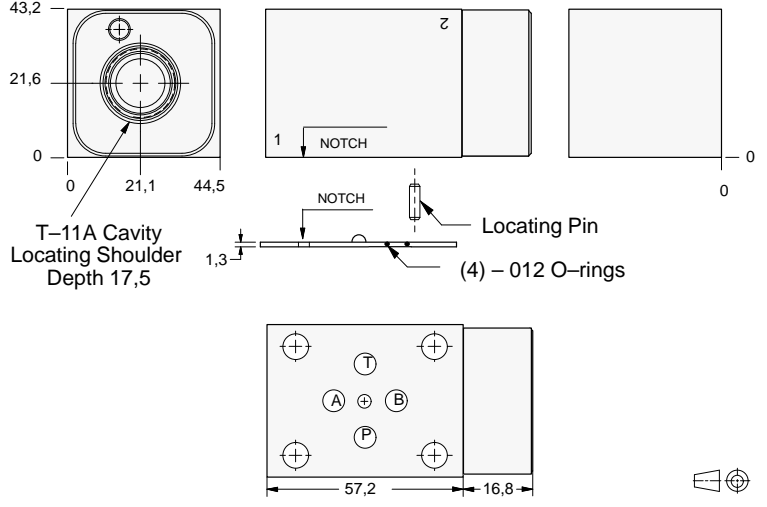
03 FLOW CONTROL



### FUNCTION

Priority Flow on P

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>WBN</b> |            | <b>WBN/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

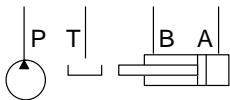
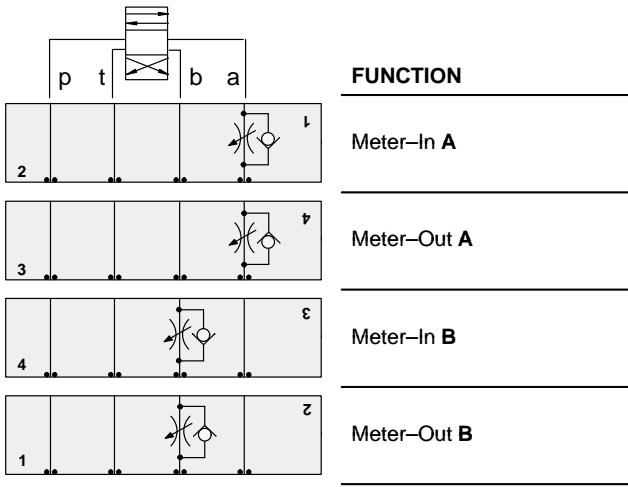
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Priority Flow Control, Bypass/Restrictive, Fixed Orifice |  |  |
|                      | FRCA Page 6.02   |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 03 SANDWICH BODIES

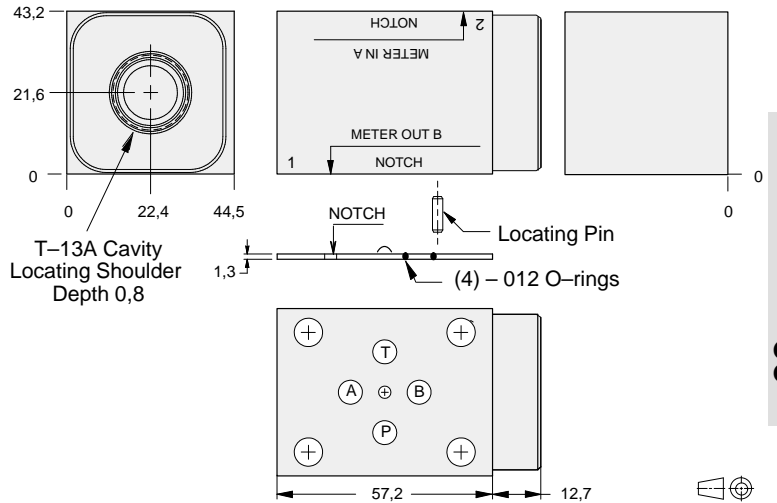


- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

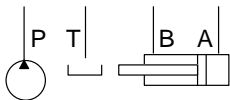
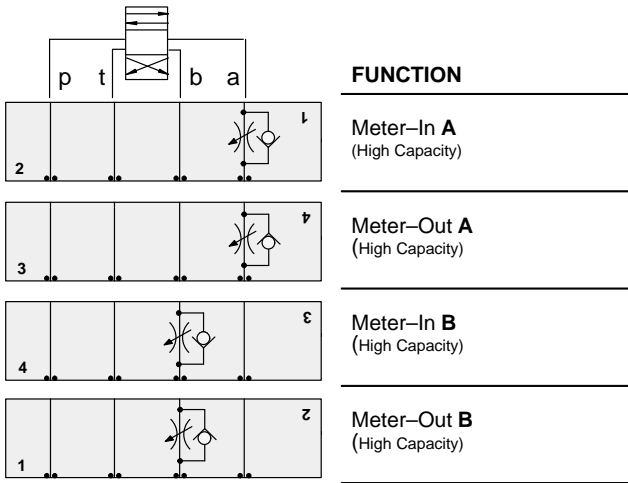


| FUNCTION |             |
|----------|-------------|
| 2        | Meter-In A  |
| 3        | Meter-Out A |
| 4        | Meter-In B  |
| 1        | Meter-Out B |

## Flow Control Valves

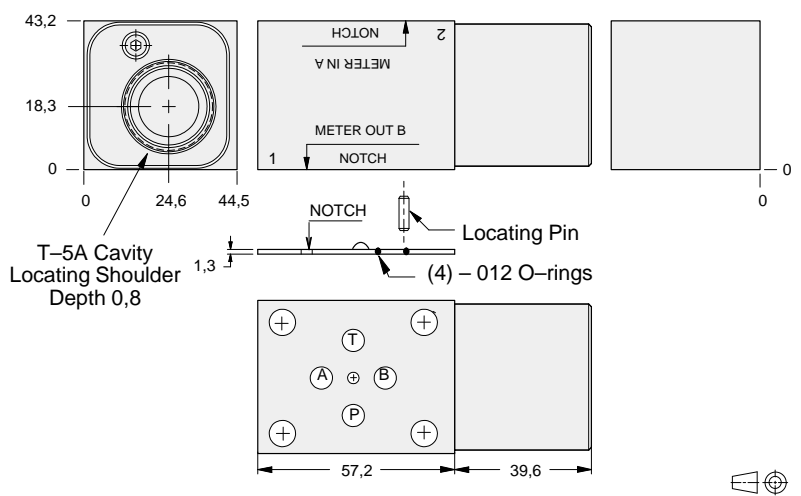


| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBA</b> |            | <b>GBA/S</b> |            |



| FUNCTION |                                |
|----------|--------------------------------|
| 2        | Meter-In A<br>(High Capacity)  |
| 3        | Meter-Out A<br>(High Capacity) |
| 4        | Meter-In B<br>(High Capacity)  |
| 1        | Meter-Out B<br>(High Capacity) |

## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GBD</b> |            | <b>GBD/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.12   |  | FX*A Page 5.20   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.16   |  | FC*B Page 5.22   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.18   |  | FDBA, FDCB Page 5.24   |
| OTHER VALVES: | CN*C   |  |  |



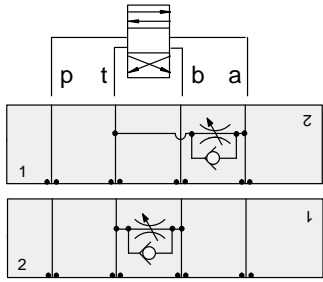


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

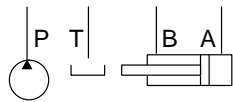
03 FLOW CONTROL



### FUNCTION

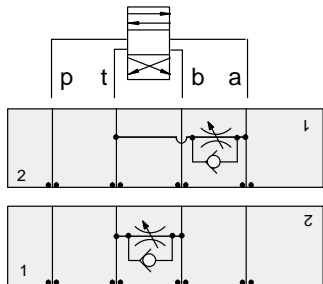
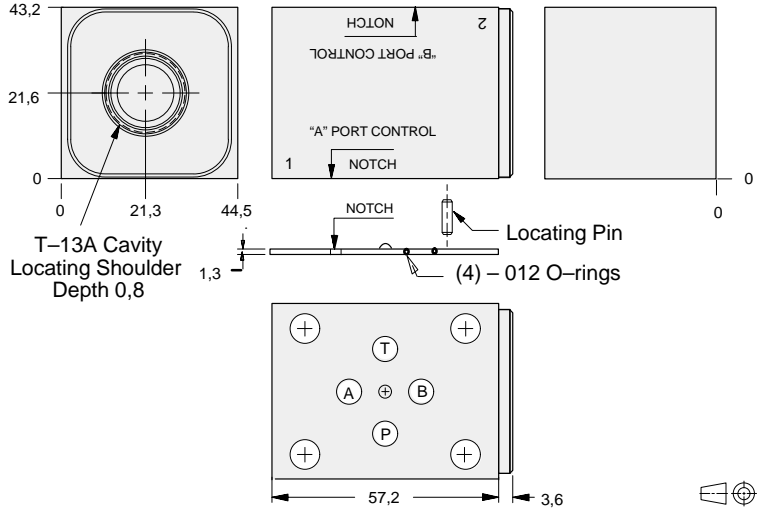
Bleed-Off A to T

Bleed-Off B to T



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBW</b> |            | <b>GBW/S</b> |            |

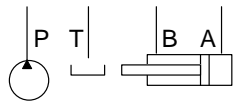
### Flow Control Valves



### FUNCTION

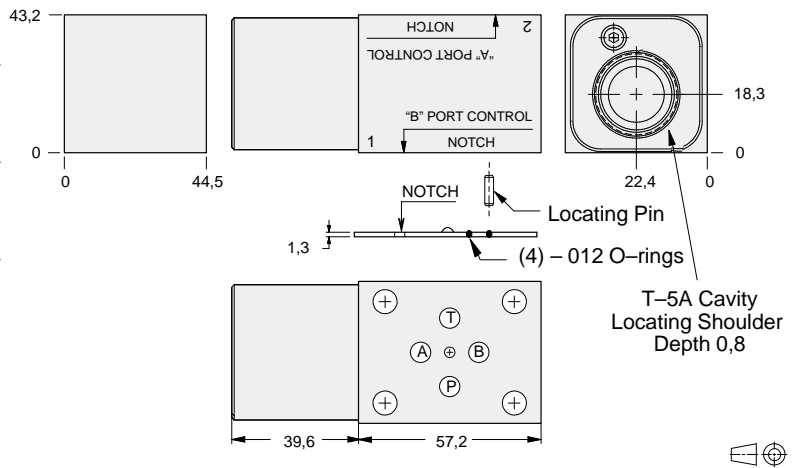
Bleed-Off A to T (High Capacity)

Bleed-Off B to T (High Capacity)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GBE</b> |            | <b>GBE/S</b> |            |

### Flow Control Valves



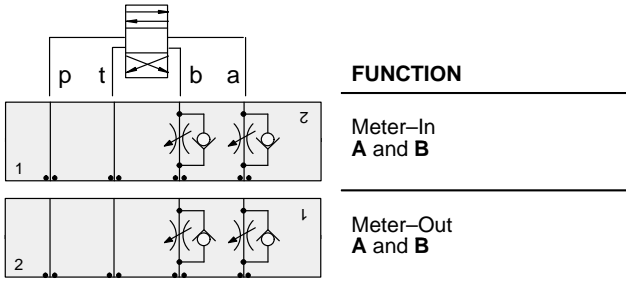
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|   | NF*C Page 5.12   |  | FX*A Page 5.20   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|   | NC*B Page 5.16   |  | FC*B Page 5.22   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|   | NC*C Page 5.18   |  | FDBA, FDCB Page 5.24   |
| OTHER VALVES: CNCC, CNEC                        |  |  |  |



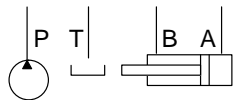
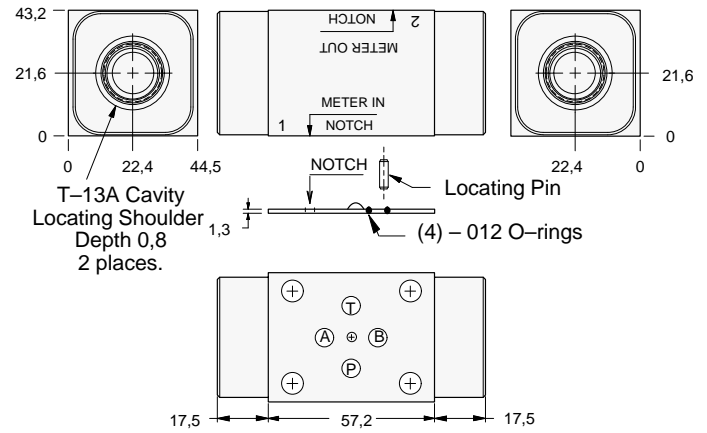
# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

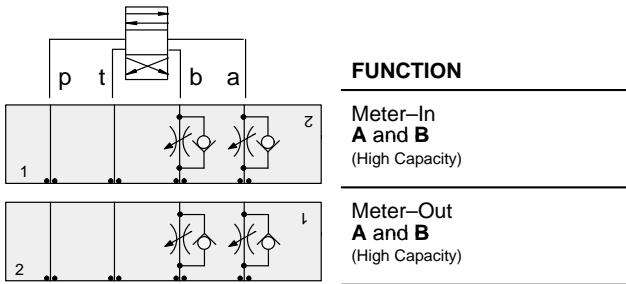


## Flow Control Valves

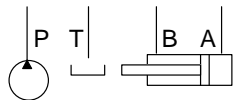
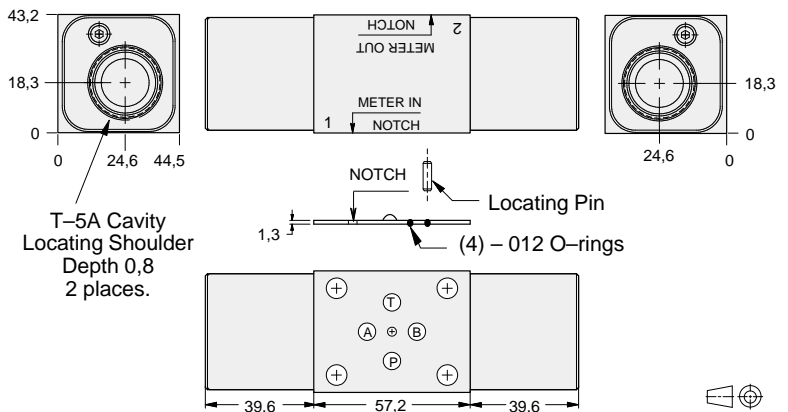


| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBY</b> |            | <b>GBY/S</b> |            |

03 FLOW CONTROL



## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GBZ</b> |            | <b>GBZ/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|   | <b>NF*C Page 5.12</b>  |  | <b>FX*A Page 5.20</b>  |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|   | <b>NC*B Page 5.16</b>  |  | <b>FC*B Page 5.22</b>  |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|   | <b>NC*C Page 5.18</b>  |  | <b>FDBA, FDCB Page 5.24</b>  |
| <b>OTHER VALVES:</b>                            | <b>CNCC, CNEC</b>  |  |  |

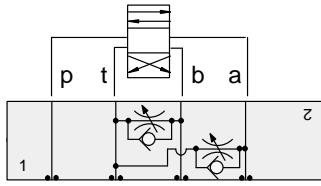


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

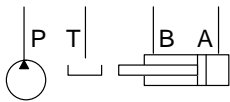
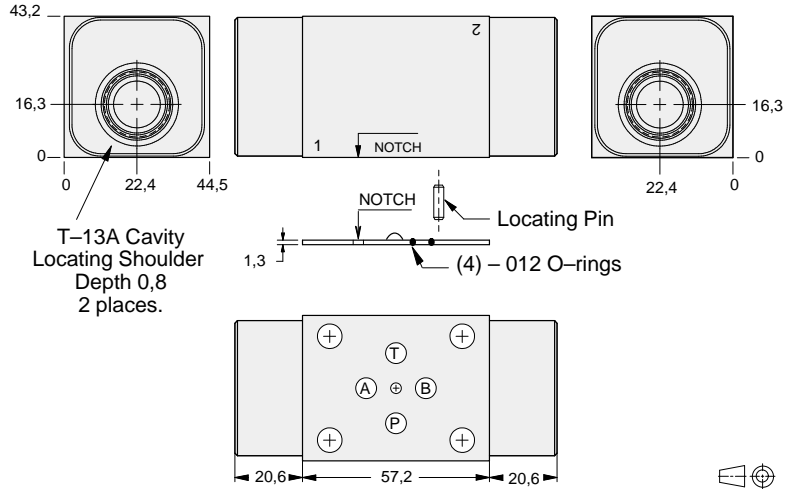
03 FLOW CONTROL



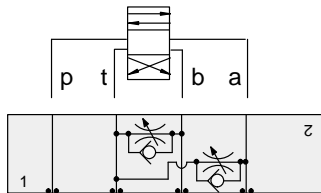
### FUNCTION

Bleed-Off  
A and B to T

### Flow Control Valves



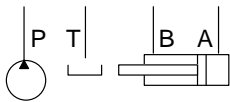
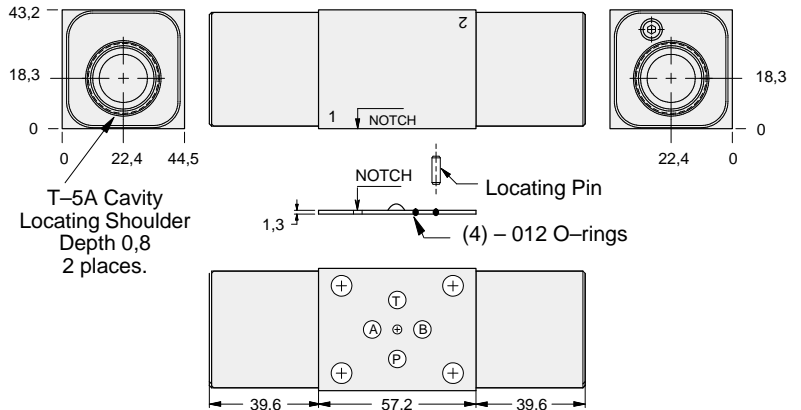
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBX</b> |            | <b>GBX/S</b> |            |



### FUNCTION

Bleed-Off  
A and B to T  
(High Capacity)

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GBF</b> |            | <b>GBF/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

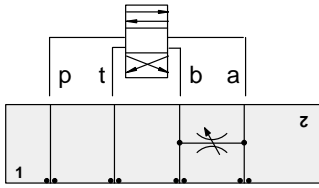
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|                      | <b>NF*C Page 5.12</b>  |  | <b>FX*A Page 5.20</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|                      | <b>NC*B Page 5.15</b>  |  | <b>FC*B Page 5.22</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|                      | <b>NC*C Page 5.18</b>  |  | <b>FDBA, FDCB Page 5.24</b>  |
| <b>OTHER VALVES:</b> | <b>CNCC, CNEC</b>  |  |  |



# ISO 03 SANDWICH BODIES



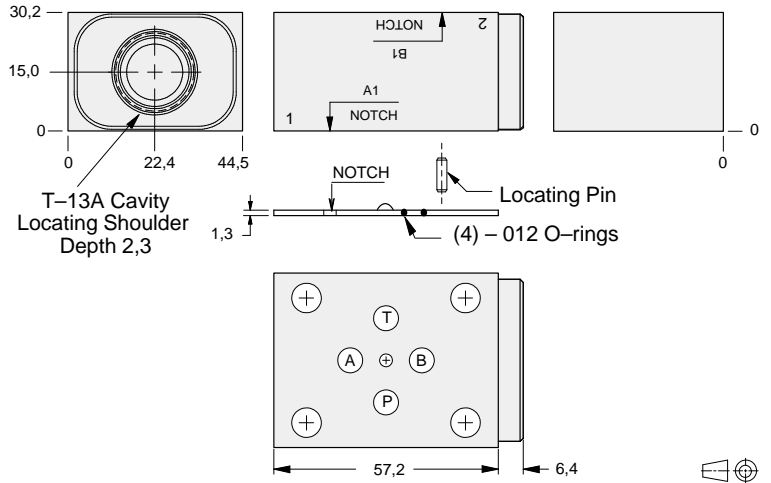
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



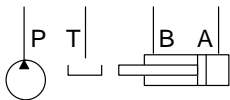
### FUNCTION

Bleed-Off  
A to B and  
B to A

### Flow Control Valves



03 FLOW CONTROL



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBS</b> |            | <b>GBS/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |  |
|---|-------------------------------|--|--|
|   | Fully Adjustable Needle Valve |  |  |
|   | NFCC Page 5.12                |  |  |
|   |                               |  |  |
|   |                               |  |  |
| OTHER VALVES:                                   |                               |  |  |

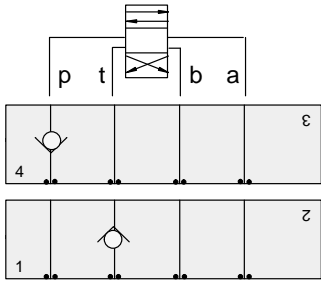


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CHECK

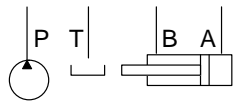
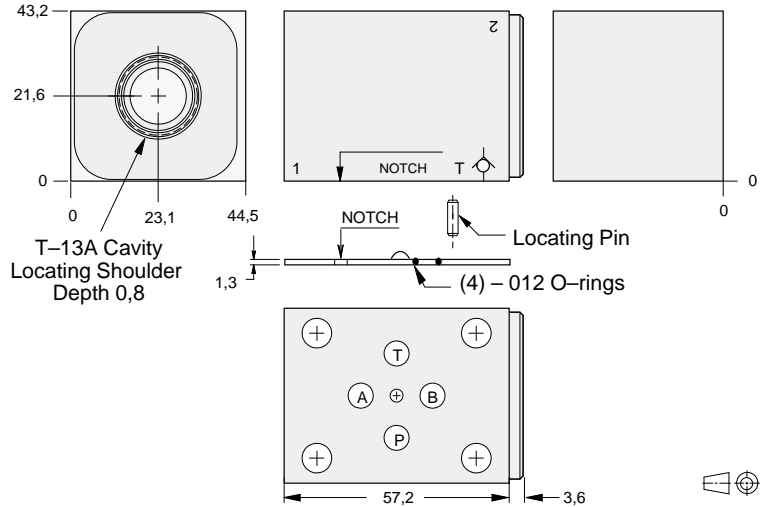


### FUNCTION

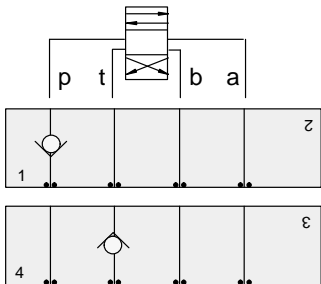
On P

On T

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GDP</b> |            | <b>GDP/S</b> |            |

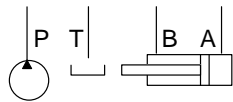
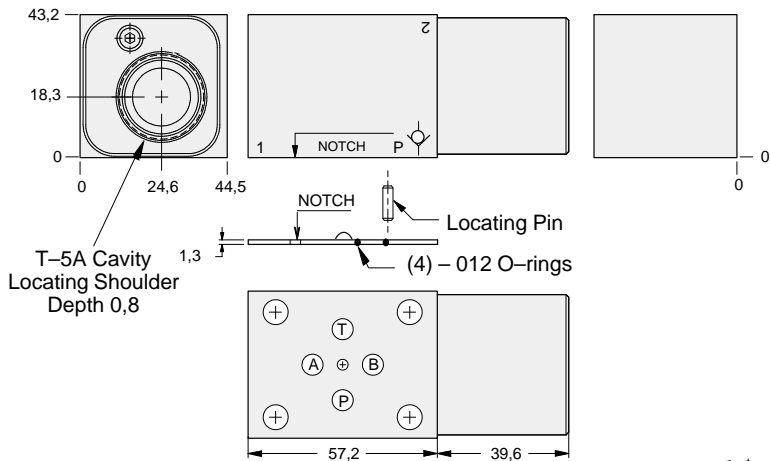


### FUNCTION

On P  
(High Capacity)

On T  
(High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GDO</b> |            | <b>GDO/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

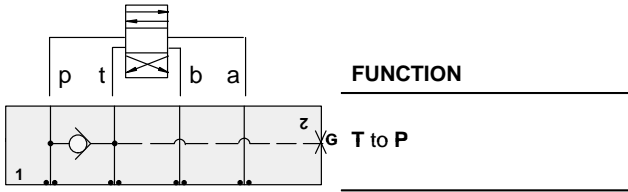
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXDA Page 5.08 (use with GDP)</b>                      |  |  |
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXFA Page 5.08 (use with GDO)</b>                      |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



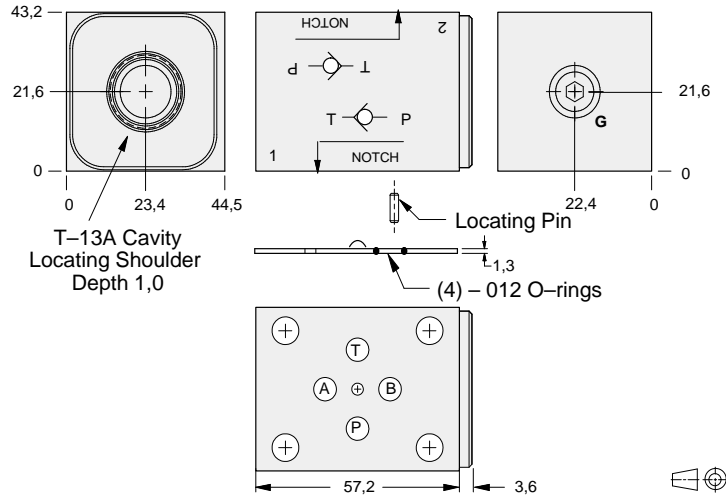
# ISO 03 SANDWICH BODIES



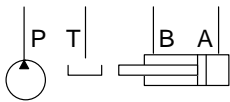
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### Check Valves



03 CHECK



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>GDQ</b>   |            | <b>GDQ/S</b> |            |
| .25 BSPP                | <b>GDQ/M</b> |            | <b>GDQ/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | <b>CXDA Page 5.08</b>                                     |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |

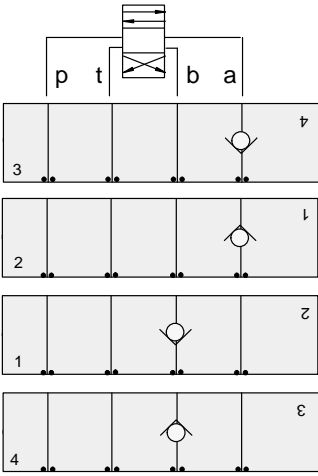


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CHECK



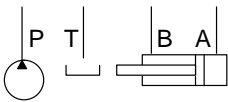
### FUNCTION

**On A**  
Free Flow Into Valve

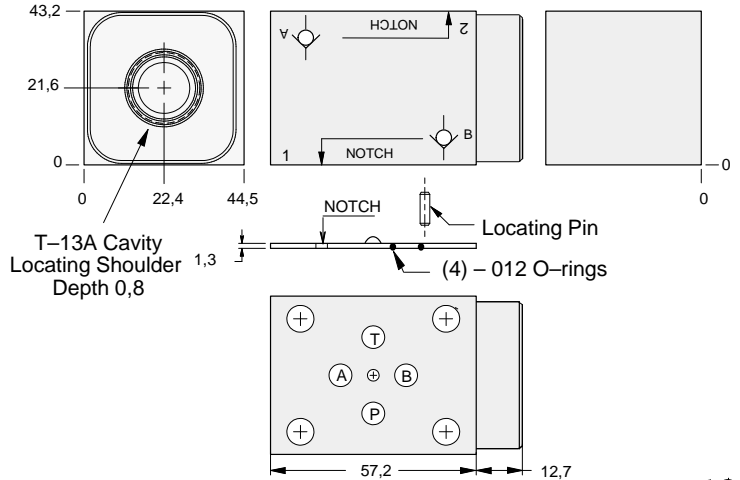
**On A**  
Free Flow Out of Valve

**On B**  
Free Flow Into Valve

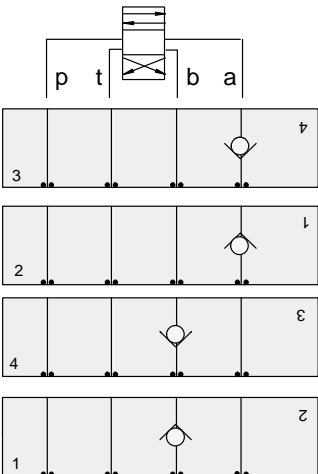
**On B**  
Free Flow Out of Valve



### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GDA</b> |            | <b>GDA/S</b> |            |



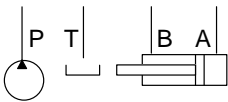
### FUNCTION

**On A**  
Free Flow Into Valve  
(High Capacity)

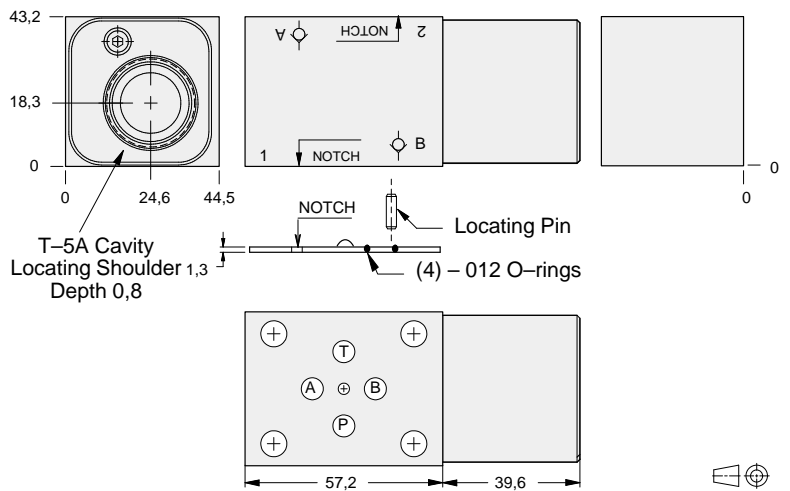
**On A**  
Free Flow Out of Valve  
(High Capacity)

**On B**  
Free Flow Into Valve  
(High Capacity)

**On B**  
Free Flow Out of Valve  
(High Capacity)



### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GDD</b> |            | <b>GDD/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

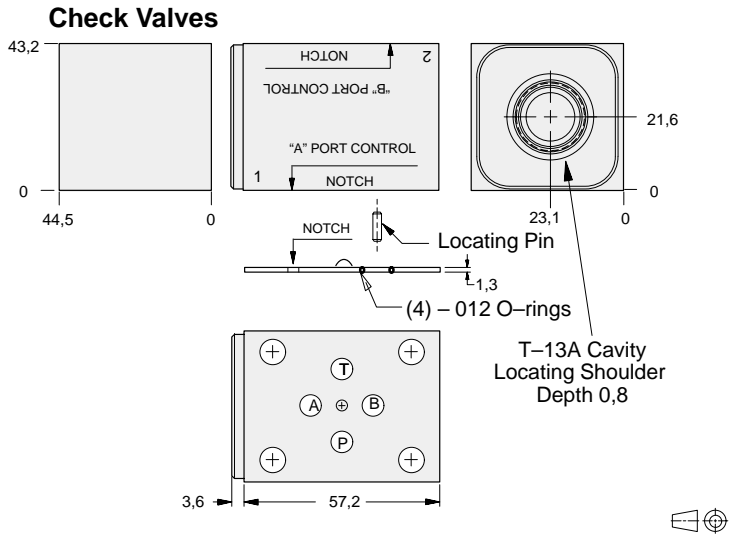
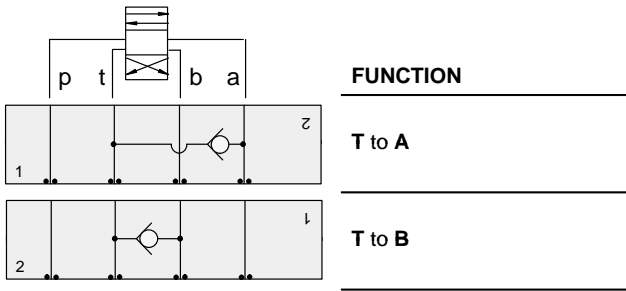
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXDA</b> Page 5.08 (use with GDA)                      |  |  |
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXFA</b> Page 5.08 (use with GDD)                      |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



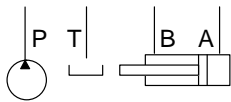
# ISO 03 SANDWICH BODIES



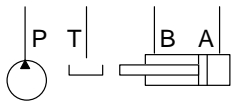
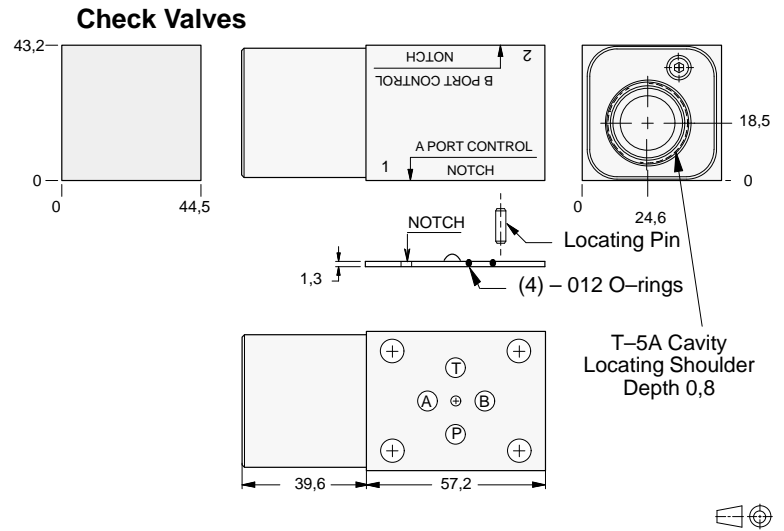
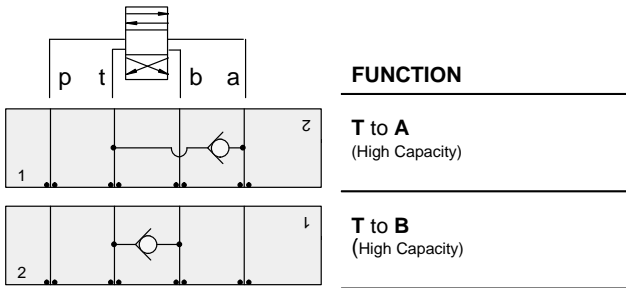
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



03 CHECK



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GDW</b> |            | <b>GDW/S</b> |            |



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GDE</b> |            | <b>GDE/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CXDA Page 5.08 (use with GDW)</b>                   |  |  |
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CXFA Page 5.08 (use with GDE)</b>                   |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



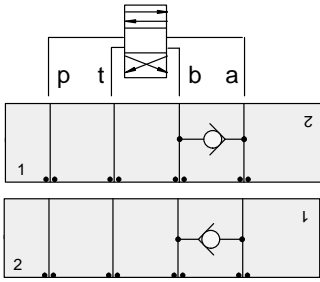


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CHECK



**FUNCTION**

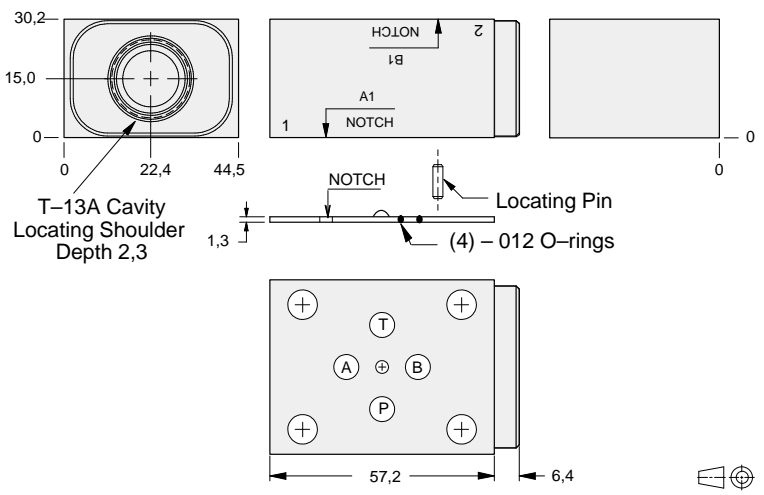
---

**A to B**

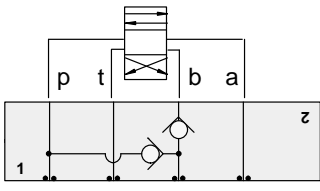
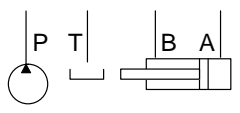
---

**B to A**

## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBS</b> |            | <b>GBS/S</b> |            |

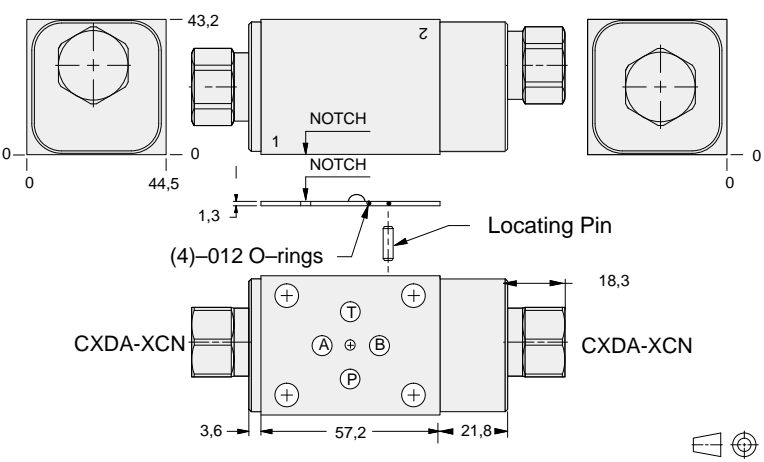


**FUNCTION**

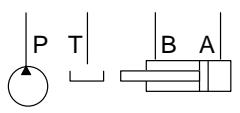
---

**B to P**  
(For Regenerative Circuits)

## Check Valves



| ALUMINIUM          |            | SG IRON              |            |
|--------------------|------------|----------------------|------------|
| Model Code         | List Price | Part Number          | List Price |
| <b>YDCK-XCN-AA</b> |            | <b>YDCK-XCN-AA/S</b> |            |



### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

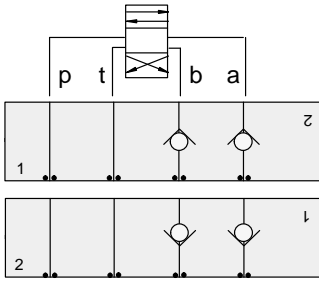
| Cartridge Symbol     | Description  | Material | Part Number |
|----------------------|--|----------|-------------|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |          |             |
|                      | <b>CXDA</b> Page 5.08                                  |          |             |
|                      |  |          |             |
|                      |  |          |             |
| <b>OTHER VALVES:</b> |  |          |             |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



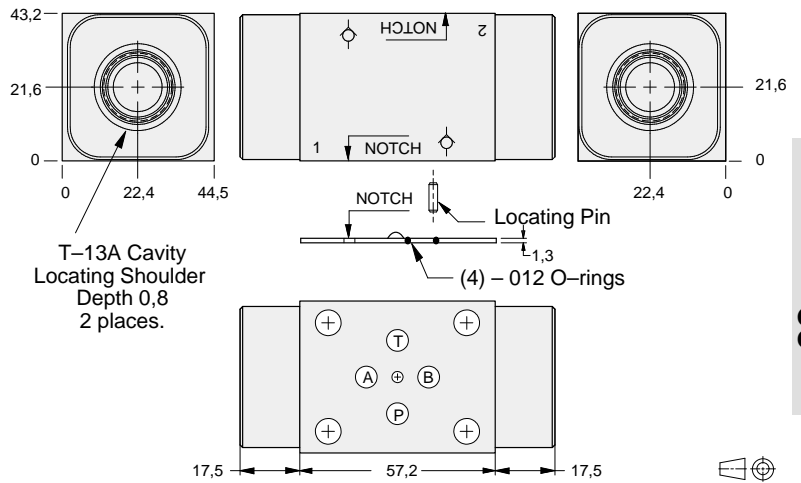
**FUNCTION**

On **A** and **B**  
Free Flow **Out** of Valve

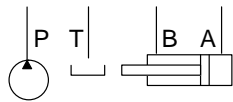
---

On **A** and **B**  
Free Flow **Into** Valve

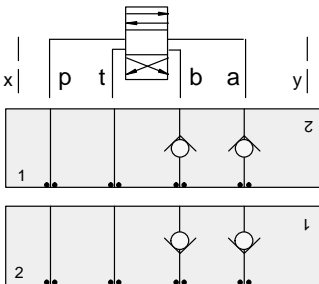
## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GDY</b> |            | <b>GDY/S</b> |            |



03 CHECK



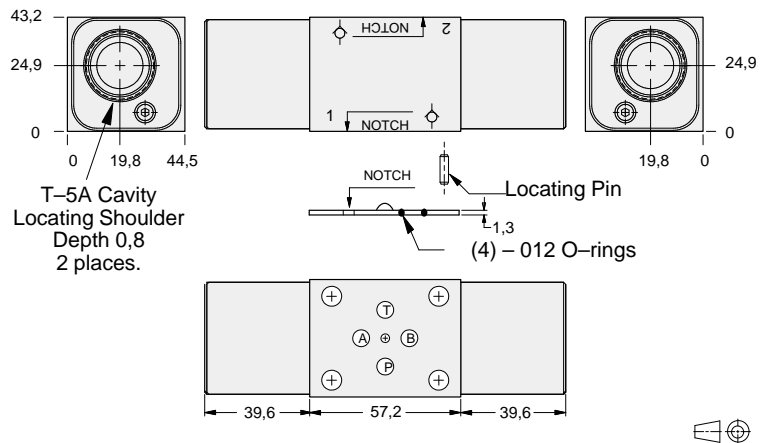
**FUNCTION**

On **A** and **B**  
Free Flow **Out**  
of Valve (High Capacity)

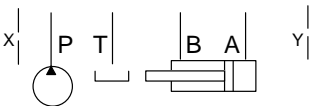
---

On **A** and **B**  
Free Flow **Into** Valve  
(High Capacity)

## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GDZ</b> |            | <b>GDZ/S</b> |            |



| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CXDA</b> Page 5.08 (use with GDY)                   |  |  |
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CXFA</b> Page 5.08 (use with GDZ)                   |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

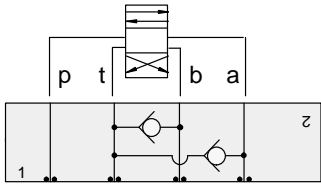


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

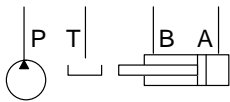
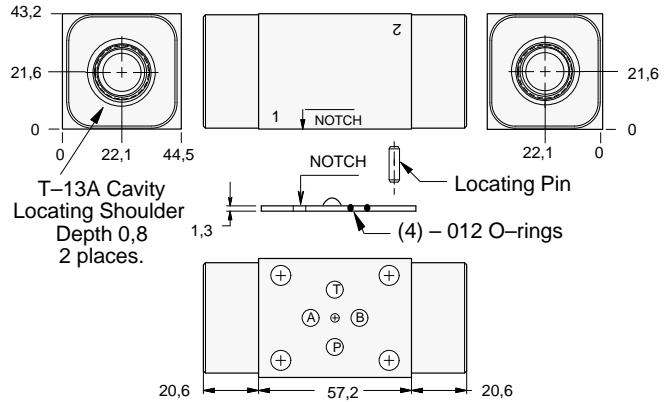
03 CHECK



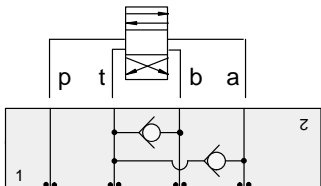
### FUNCTION

T to A and B

### Check Valves



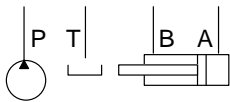
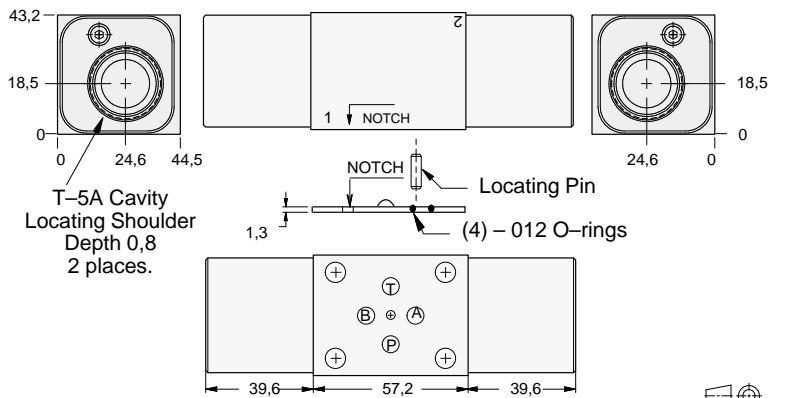
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GDX</b> |            | <b>GDX/S</b> |            |



### FUNCTION

T to A and B  
(High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>GDF</b> |            | <b>GDF/S</b> |            |

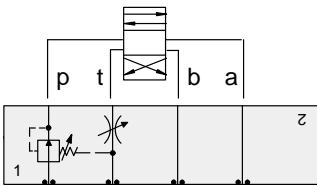
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | <b>CXDA Page 5.08 (use with GDX)</b>                      |  |  |
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | <b>CXFA Page 5.08 (use with GDF)</b>                      |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 03 SANDWICH BODIES



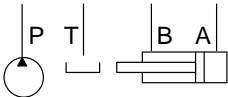
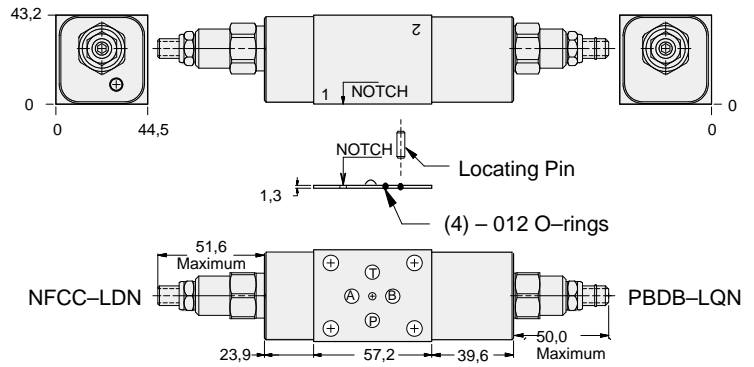
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

Pilot Choke

### Circuit Savers



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YNAA-LDN-AA |            | YNAA-LDN-AA/S |            |

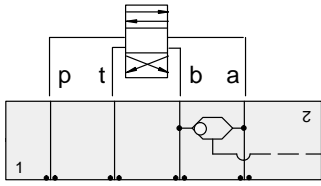


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

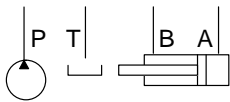
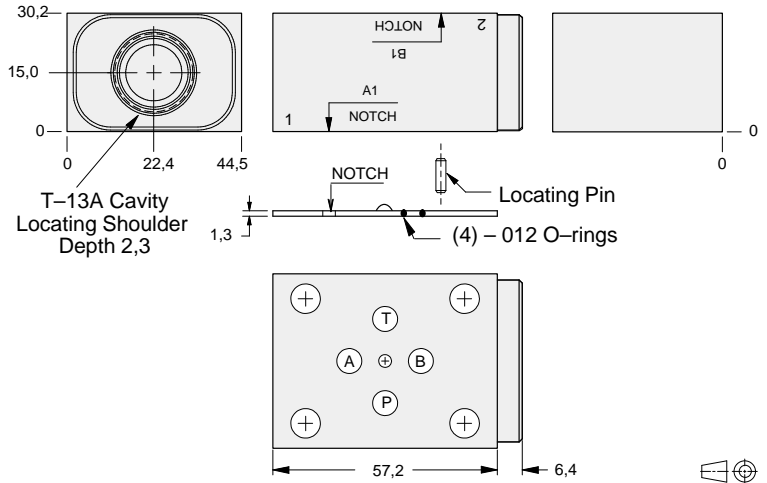
03 CIRCUIT SAVER



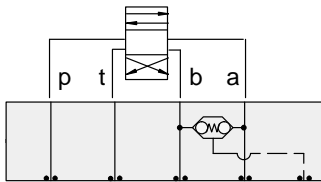
### FUNCTION

Shuttle  
A and B  
Output External

### Circuit Savers



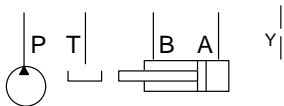
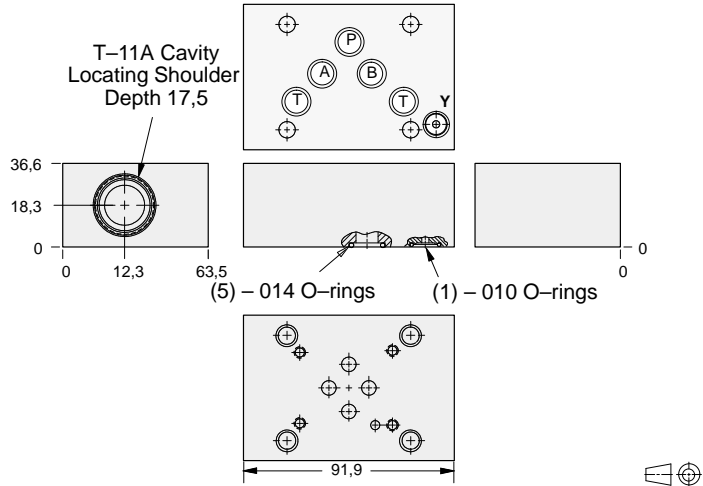
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>GBS</b> |            | <b>GBS/S</b> |            |



### FUNCTION

Checks from  
A and B-Adapter  
to ISO 05 w/Y Port

### Circuit Savers



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>EBS</b> |            | <b>EBS/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

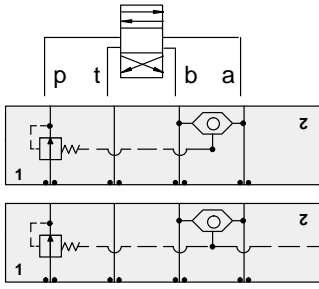
|                      |   |  |  |
|----------------------|---|--|--|
|                      | 2 Port Shuttle Valve, Signal External             |  |  |
|                      | <b>CSAA Page 10.09 (use with GBS)</b>             |  |  |
|                      | 3 Port Back-to-Back Check Valve, Signal at Port 3 |  |  |
|                      | <b>CDAB Page 10.10 (use with EBS)</b>             |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

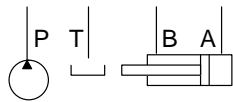
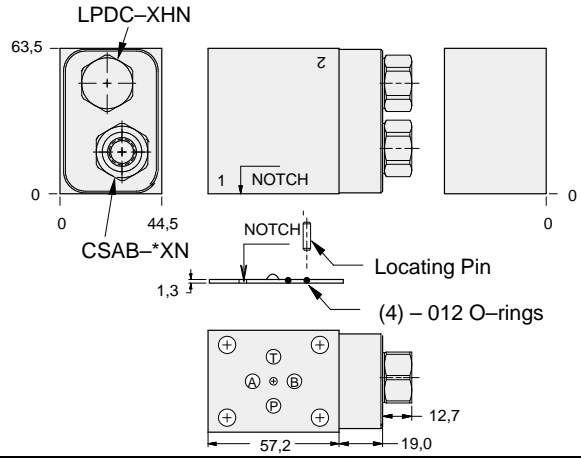


### FUNCTION

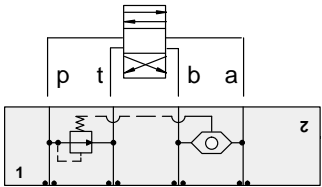
Pressure Compensator (Restrictive)

Pressure Compensator (Restrictive) w/Load-Sensing Port

### Circuit Savers



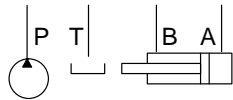
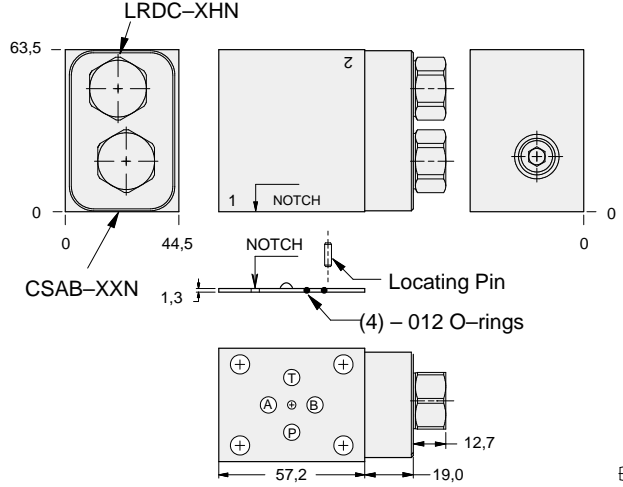
| Shuttle Cartridge | External Shuttle Port | ALUMINIUM     |            | SG IRON       |            |
|-------------------|-----------------------|---------------|------------|---------------|------------|
|                   |                       | Model Code    | List Price | Model Code    | List Price |
| CSAB-XXN          | None                  | YFCG-XHN-AA   |            | YFCG-XHN-AA/S |            |
| CSAB-AXN          | SAE-4                 | YFCJ-XHN-AA   |            | YFCJ-XHN-AA/S |            |
| CSAB-BXN          | .250 BSPP             | YFCJ-XHN-AA/M |            | YFCJ-XHN-AA/T |            |



### FUNCTION

Pressure Compensator (Bypass)

### Circuit Savers



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YFCG-XHN-AA |            | YFCG-XHN-AA/S |            |

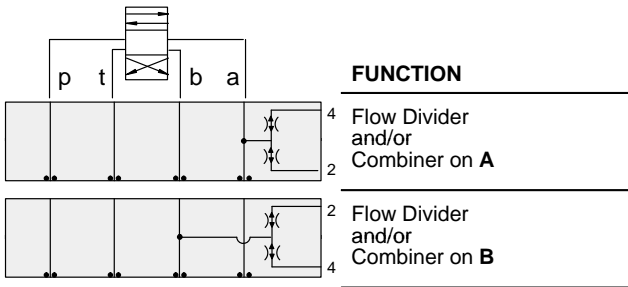


# ISO 03 SANDWICH BODIES

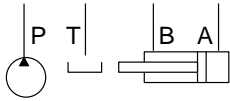
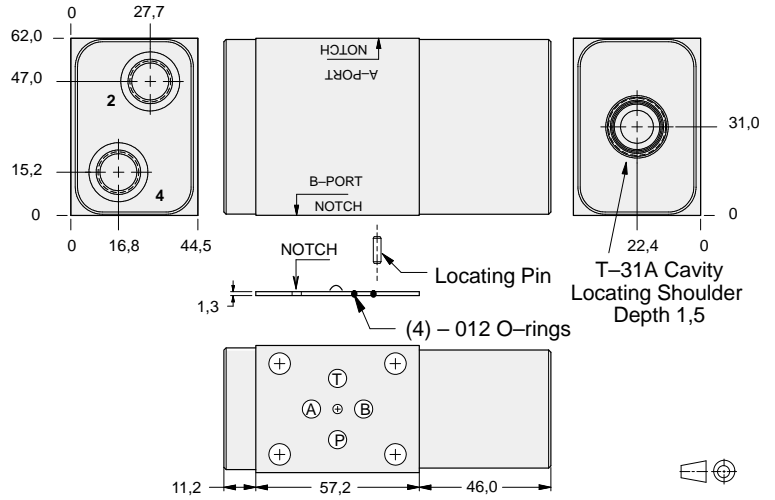


- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CIRCUIT SAVER



## Circuit Savers



| Ports<br>2,4 | ALUMINIUM    |            | SG IRON      |            |
|--------------|--------------|------------|--------------|------------|
|              | Model Code   | List Price | Model Code   | List Price |
| SAE-6        | <b>MBJ</b>   |            | <b>MBJ/S</b> |            |
| .25 BSPP     | <b>MBJ/M</b> |            | <b>MBJ/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

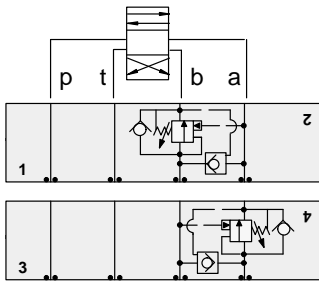
|                      |                                     |  |                                     |
|----------------------|-------------------------------------|--|-------------------------------------|
|                      | Flow Divider                        |  | High Capacity Flow Divider/Combiner |
|                      | <b>FSBD, FSCD Page 7.08</b>         |  | <b>FSCH Page 7.14</b>               |
|                      | Flow Divider/Combiner               |  |                                     |
|                      | <b>FSBA, FSCA Page 7.10</b>         |  |                                     |
|                      | Synchronizing Flow Divider/Combiner |  |                                     |
|                      | <b>FSBS, FSCS Page 7.12</b>         |  |                                     |
| <b>OTHER VALVES:</b> |                                     |  |                                     |



# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

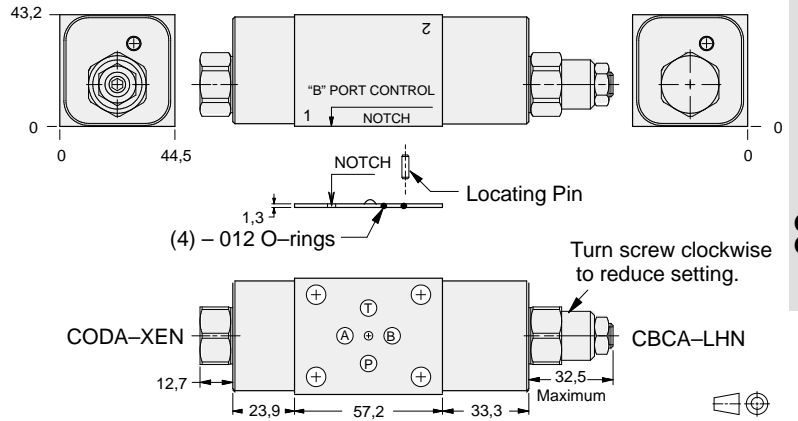


### FUNCTION

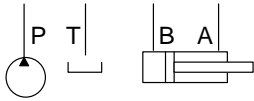
**B to A**  
Regenerative

**A to B**  
Regenerative

### Circuit Savers



03 CIRCUIT SAVER



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDCA-LHN-AA |            | YDCA-LHN-AA/S |            |



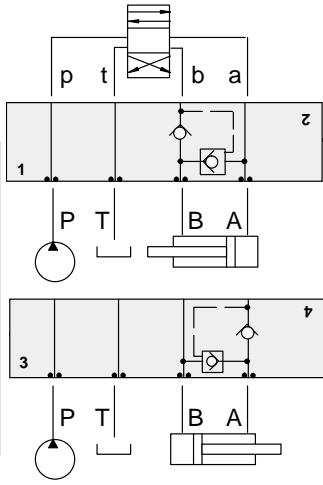


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 CIRCUIT SAVER



**FUNCTION**

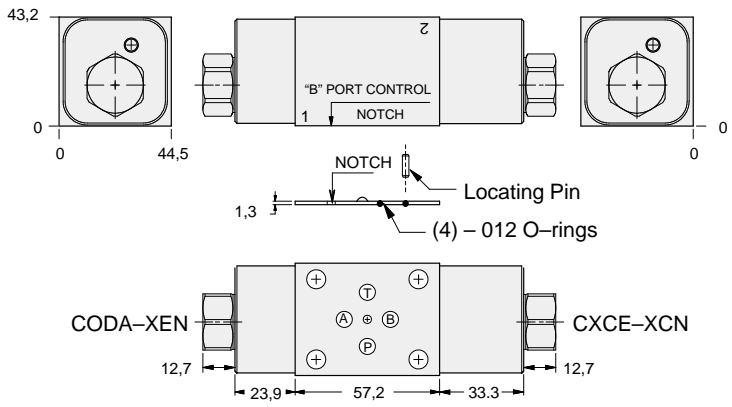
---

**B to A Regenerative (Full Time)**

---

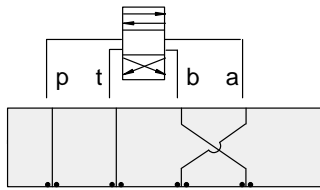
**A to B Regenerative (Full Time)**

## Circuit Savers



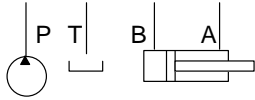
| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDCF-XCN-AA |            | YDCF-XCN-AA/S |            |

- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



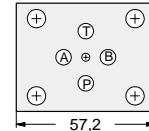
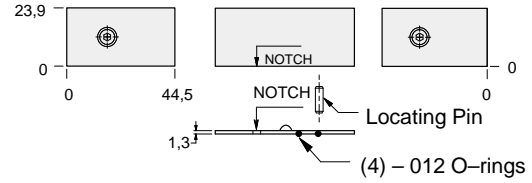
### FUNCTION

Swap Block  
Swaps A and B

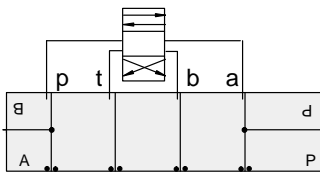
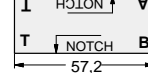
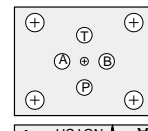
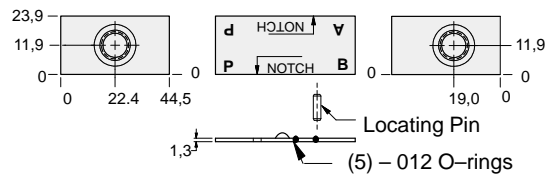


| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZKX        |            | ZKX/S      |            |

### Circuit Savers

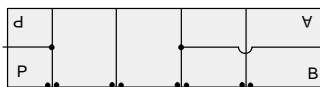


### Circuit Savers

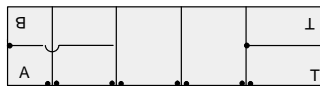


### FUNCTION

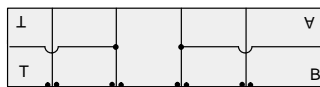
P and A  
Tap in Manifold



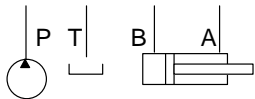
P and B  
Tap in Manifold



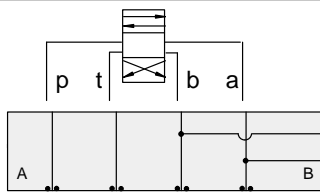
A and T  
Tap in Manifold



B and T  
Tap in Manifold

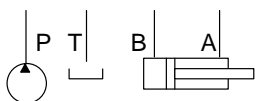


| External Port | ALUMINIUM  |            | SG IRON    |            |
|---------------|------------|------------|------------|------------|
|               | Model Code | List Price | Model Code | List Price |
| .25 NPTF      | ZWW        |            | ZWW/S      |            |
| SAE-4         | ZPT        |            | ZPT/S      |            |
| .25 BSPP      | ZVC        |            | ZVC/S      |            |

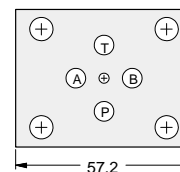
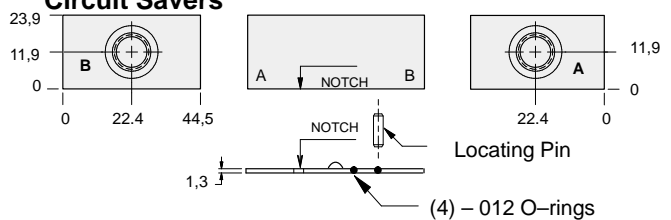


### FUNCTION

A and B  
Tap in Manifold



### Circuit Savers



| Ports<br>A, B | ALUMINIUM  |            | SG IRON    |            |
|---------------|------------|------------|------------|------------|
|               | Model Code | List Price | Model Code | List Price |
| .25 NPTF      | ZWV        |            | ZWV/S      |            |
| SAE-4         | ZUO        |            | ZUO/S      |            |
| .25 BSPP      | ZVB        |            | ZVB/S      |            |



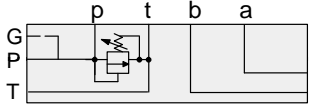
# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 SUBPLATE

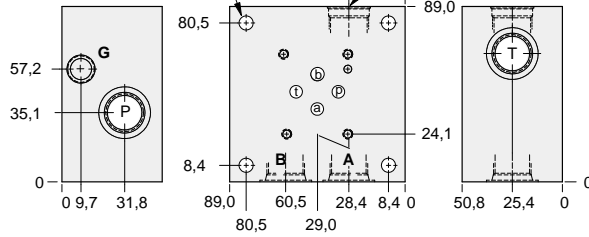
### FUNCTION



Relief P to T

### Side Ported Subplates

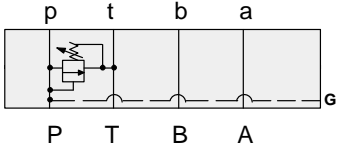
Mounting Holes:  
7,1 diameter through hole.  
4 places.



4 Interface Bolt Holes  
x 9,7 deep  
Inch:10-24 UNC  
Metric: M5 x 0.8

| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|---------------|------------|------------|------------|------------|
|                     |            |               | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | .375 NPTF     | FSB        |            | FSB/S      |            |
| Inch                | .25 NPTF   | SAE-8         | FSJ        |            | FSJ/S      |            |
| Metric              | .25 BSPP   | .375 BSPP     | FSU        |            | FSU/S      |            |

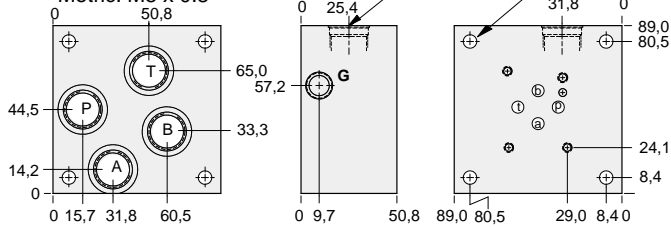
### FUNCTION



Relief P to T

### Rear Ported Subplates

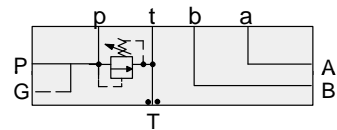
4 Interface Bolt Holes  
x 9,7 deep  
Inch:10-24 UNC  
Metric: M5 x 0.8



Mounting Holes:  
7,1 diameter through hole.  
4 places.

| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|---------------|------------|------------|------------|------------|
|                     |            |               | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | .375 NPTF     | FRB        |            | FRB/S      |            |
| Inch                | .25 NPTF   | SAE-8         | FRJ        |            | FRJ/S      |            |
| Metric              | .25 BSPP   | .375 BSPP     | FRU        |            | FRU/S      |            |

### FUNCTION

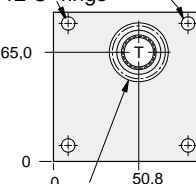


Relief P to T

### Side Ported Subplates with Gasket Mount Tank Port

Mounting Holes (Sealed):  
7,1 diameter through hole.  
4 places.

(4) - O12 O-rings



T-10A Cavity  
Locating Shoulder  
Depth 0,8

4 Interface Bolt Holes  
x 9,7 deep  
Inch:10-24 UNC  
Metric: M5 x 0.8

| Bolt Hole Interface | Gauge Port | Ports A,B,P | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|-------------|------------|------------|------------|------------|
|                     |            |             | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | .375 NPTF   | FTB        |            | FTB/S      |            |
| Inch                | .25 NPTF   | SAE-8       | FTJ        |            | FTJ/S      |            |
| Metric              | .25 BSPP   | .375 BSPP   | FTU        |            | FTU/S      |            |

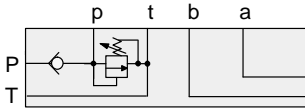
### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|  |   |  |   |
|--|---|--|---|
|  | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve |
|  | RPEC Page 1.06                              |  | RQEB Page 1.12                          |
|  | Pilot Operated, Rapid Response Relief Valve |  | Direct Acting Relief Valve              |
|  | RPEE Page 1.08                              |  | RDDA Page 1.10                          |

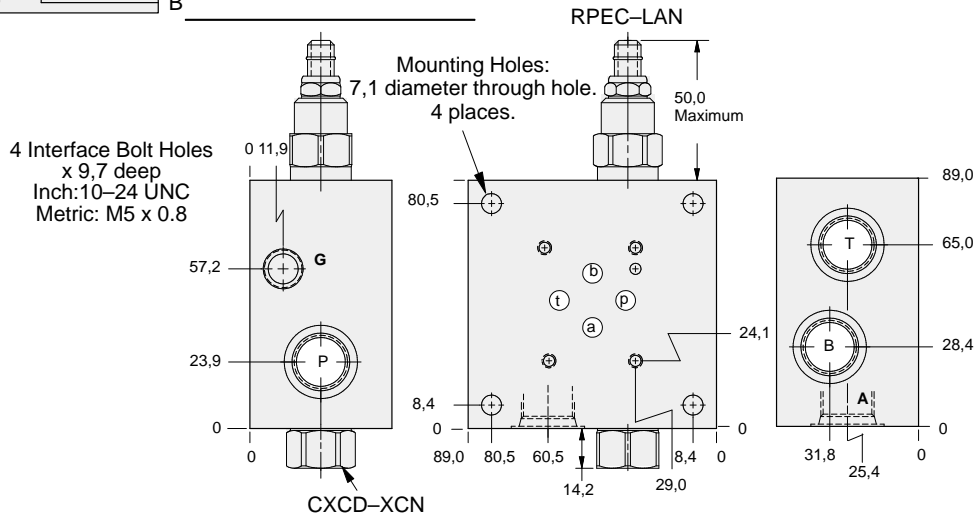
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

### FUNCTION



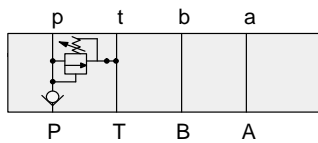
Relief P to T  
Check on P



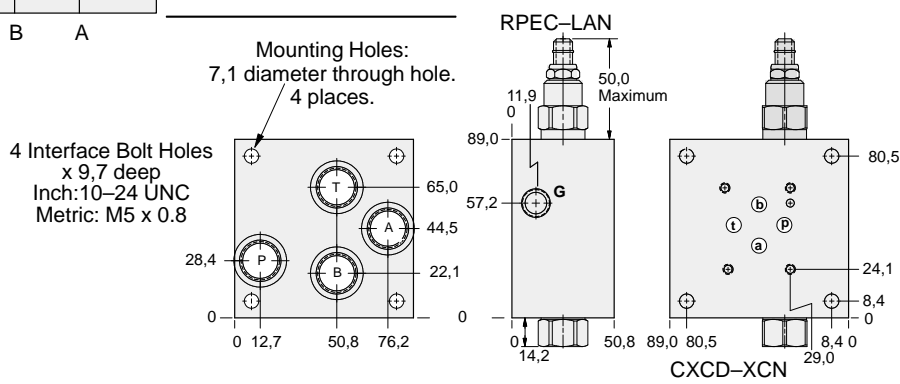
| Bolt Hole Interface | Gauge Port | Port A,B,P,T | ALUMINIUM   |            | SG IRON       |            |
|---------------------|------------|--------------|-------------|------------|---------------|------------|
|                     |            |              | Model Code  | List Price | Model Code    | List Price |
| Inch                | .25 NPTF   | .375 NPTF    | YRCC-LAN-BB |            | YRCC-LAN-BB/S |            |
| Inch                | .25 NPTF   | SAE-8        | YRCC-LAN-BJ |            | YRCC-LAN-BJ/S |            |
| Metric              | .25 BSPP   | .375 BSPP    | YRCC-LAN-BU |            | YRCC-LAN-BU/S |            |

## Rear Ported Subplates

### FUNCTION



Relief P to T  
Check on P



| Bolt Hole Interface | Gauge Port | Port A,B,P,T | ALUMINIUM   |            | SG IRON       |            |
|---------------------|------------|--------------|-------------|------------|---------------|------------|
|                     |            |              | Model Code  | List Price | Part Number   | List Price |
| Inch                | .25 NPTF   | .375 NPTF    | YRCB-LAN-BB |            | YRCB-LAN-BB/S |            |
| Inch                | .25 NPTF   | SAE-8        | YRCB-LAN-BJ |            | YRCB-LAN-BJ/S |            |
| Metric              | .25 BSPP   | .375 BSPP    | YRCB-LAN-BU |            | YRCB-LAN-BU/S |            |



# ISO 03 SANDWICH BODIES

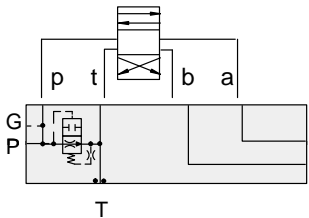


- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

03 SUBPLATE

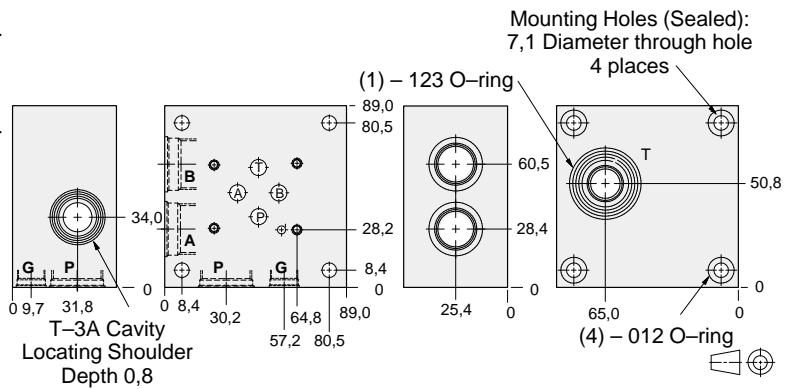
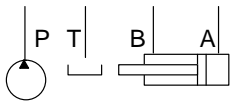
|  |  |  |  | ALUMINIM   |            | DUCTILE IRON |            |
|--|--|--|--|------------|------------|--------------|------------|
|  |  |  |  | Model Code | List Price | Model Code   | List Price |
|  |  |  |  |            |            |              |            |
|  |  |  |  |            |            |              |            |
|  |  |  |  |            |            |              |            |

### Side Ported Subplates with Gasket Mount Tank Port



#### FUNCTION

Air-Bleed and Start-Up



| Bolt Hole Interface | Ports T   | Ports A,B,P | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|---------------------|-----------|-------------|------------|------------|------------|------------|------------|
|                     |           |             |            | Model Code | List Price | Model Code | List Price |
| Inch                | .375 NPTF | .375 NPTF   | .25 NPTF   | CTB        |            | CTB/S      |            |
| Inch                | .375 NPTF | SAE-8       | .25 NPTF   | CTJ        |            | CTJ/S      |            |
| Metric              | .375 BSPP | .375 BSPP   | .25 BSPP   | CTU        |            | CTU/S      |            |

#### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|  |                              |  |  |
|--|------------------------------|--|--|
|  | Air Bleed and Start-up Valve |  |  |
|  | NQEB Page 10.16              |  |  |

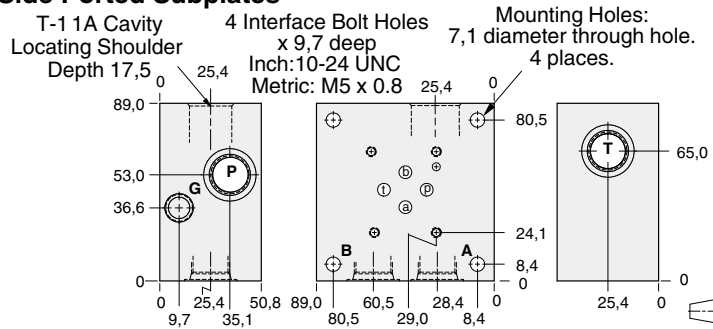
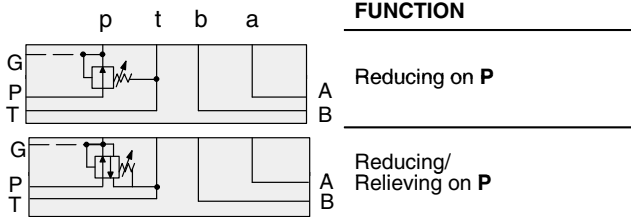


# ISO 03 SANDWICH BODIES



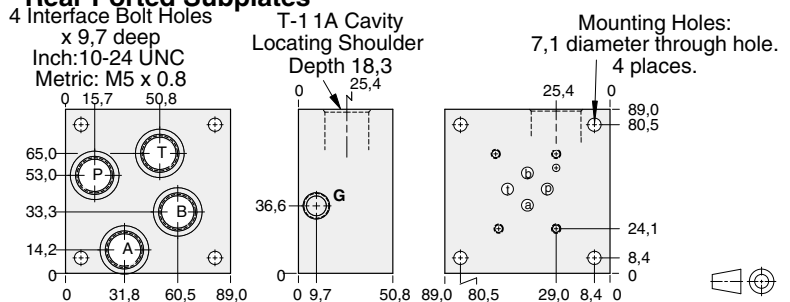
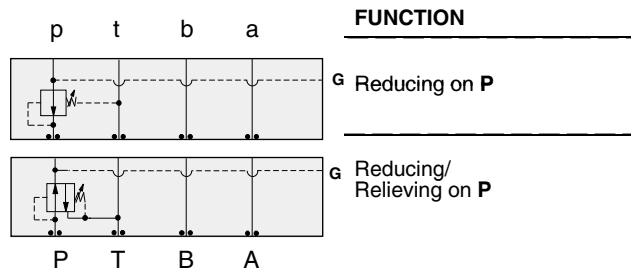
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates



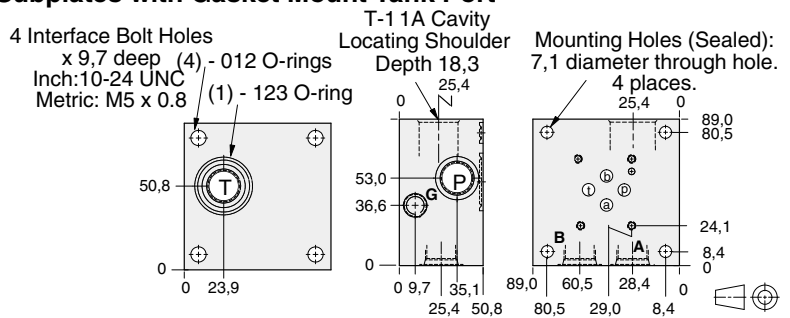
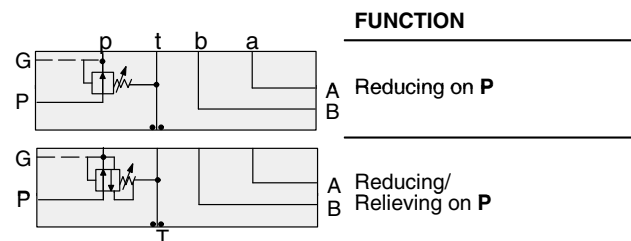
| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|---------------|------------|------------|------------|------------|
|                     |            |               | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | .375 NPTF     | ESB        |            | ESB/S      |            |
| Inch                | .25 NPTF   | SAE-8         | ESJ        |            | ESJ/S      |            |
| Metric              | .25 BSPP   | .375 BSPP     | ESU        |            | ESU/S      |            |

## Rear Ported Subplates



| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|---------------|------------|------------|------------|------------|
|                     |            |               | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | .375 NPTF     | ERB        |            | ERB/S      |            |
| Inch                | .25 NPTF   | SAE-8         | ERJ        |            | ERJ/S      |            |
| Metric              | .25 BSPP   | .375 BSPP     | ERU        |            | ERU/S      |            |

## Side Ported Subplates with Gasket Mount Tank Port



| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|---------------|------------|------------|------------|------------|
|                     |            |               | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | .375 NPTF     | ETB        |            | ETB/S      |            |
| Inch                | .25 NPTF   | SAE-8         | ETJ        |            | ETJ/S      |            |
| Metric              | .25 BSPP   | .375 BSPP     | ETU        |            | ETU/S      |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |                             |
|---|-------------------------------|--|-----------------------------|
|   | Pilot Operated Reducing Valve |  | Pilot Operated Relief Valve |
|   | PBDB Page 3.06                |  | PPDB Page 3.10              |



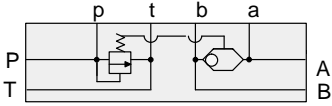
# ISO 03 SANDWICH BODIES



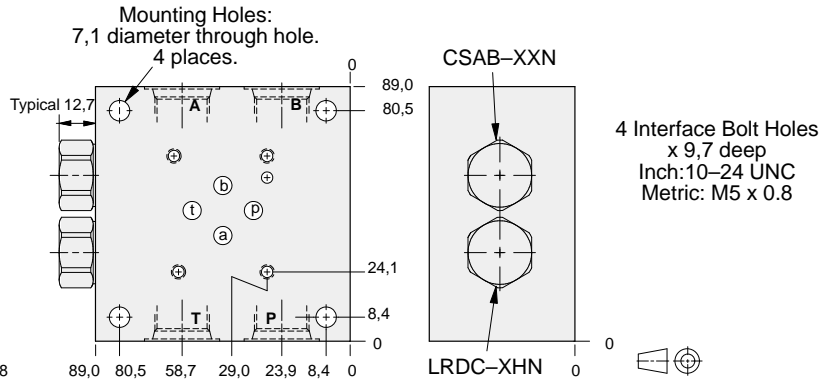
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

### FUNCTION



Bypass  
Compensator  
for Proportional  
Valves



| Bolt Hole Interface | Port A,B,P,T | ALUMINIUM   |            | SG IRON       |            |
|---------------------|--------------|-------------|------------|---------------|------------|
|                     |              | Model Code  | List Price | Model Code    | List Price |
| Inch                | .375 NPTF    | YFCL-XHN-BB |            | YFCL-XHN-BB/S |            |
| Inch                | SAE-8        | YFCL-XHN-BJ |            | YFCL-XHN-BJ/S |            |
| Metric              | .375 BSPP    | YFCL-XHN-BU |            | YFCL-XHN-BU/S |            |



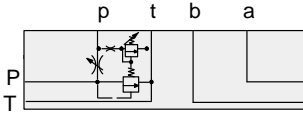
# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

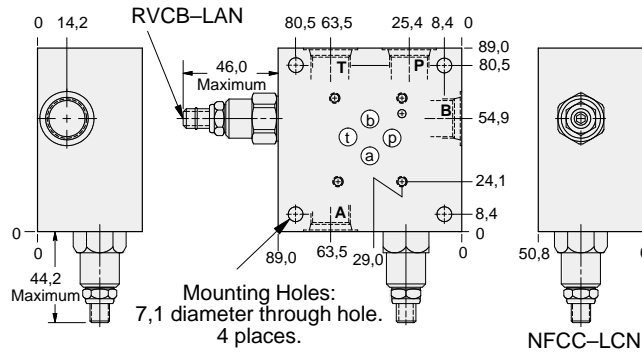
## Side Ported Subplates

### FUNCTION



Relief P to T  
and Bypass  
A Flow Regulator

4 Interface Bolt Holes  
x 9,7 deep  
Inch: 10-24 UNC  
Metric: M5 x 0.8



| Bolt Hole Interface | Port A,B,P,T | ALUMINIUM     |            | SG IRON       |            |
|---------------------|--------------|---------------|------------|---------------|------------|
|                     |              | Model Code    | List Price | Model Code    | List Price |
| Inch                | .375 NPTF    | YFCS-LCN-BB   |            | YFCS-LCN-BB/S |            |
| Inch                | SAE-8        | YFCS-LCN-BJ   |            | YFCS-LCN-BJ/S |            |
| Metric              | .375 BSPP    | YFCS-LCN-BU/M |            | YFCS-LCN-BU/T |            |

03 SUBPLATE





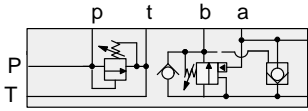
# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

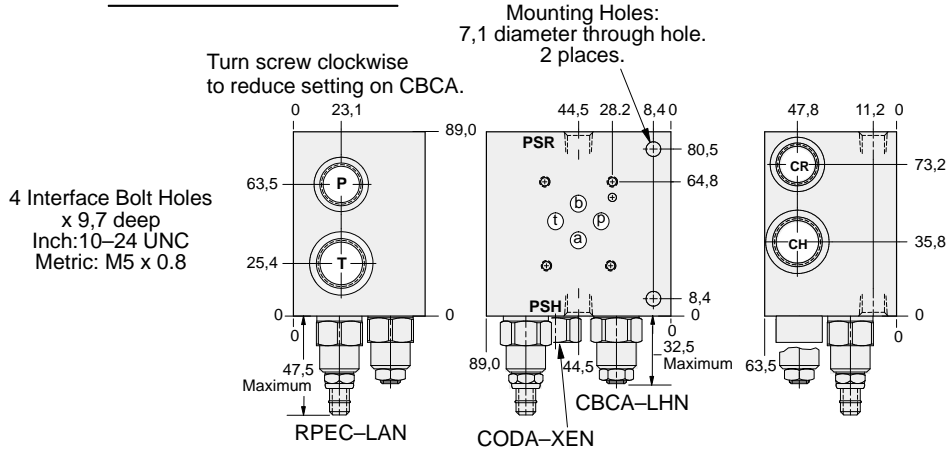
## Side Ported Subplates

### FUNCTION



A Relief P to T  
Regenerative  
B to A

03 SUBPLATE



| Bolt Holes Interface | Ports T, CH | Ports P, CR | Ports PSH, PSR | ALUMINIUM   |            | SG IRON       |            |
|----------------------|-------------|-------------|----------------|-------------|------------|---------------|------------|
|                      |             |             |                | Model Code  | List Price | Model Code    | List Price |
| Inch                 | .50 NPTF    | .375 NPTF   | .25 NPTF       | YDCG-LHN-BC |            | YDCG-LHN-BC/S |            |
| Inch                 | SAE-10      | SAE-8       | .25 NPTF       | YDCG-LHN-BK |            | YDCG-LHN-BK/S |            |
| Metric               | .50 BSPP    | .375 BSPP   | .25 BSPP       | YDCG-LHN-BV |            | YDCG-LHN-BV/S |            |

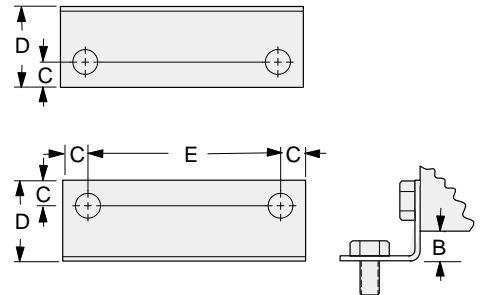


# BAR MANIFOLDS



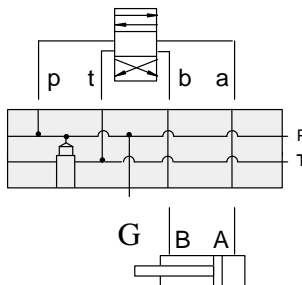
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

Some of the bar manifolds offered in this catalogue are manufactured by Daman Products Company, Inc. All bar manifolds are parallel circuit type and contain a cavity for a Sun relief valve, pressure to tank, as well as a gauge port. Mounting kits for all bar manifolds must be ordered separately and contain brackets, bolts and washers. Metric mounting kits are also available.



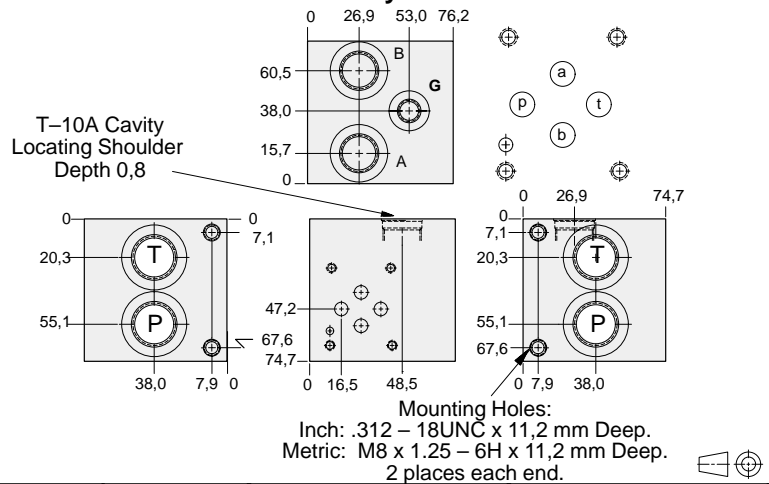
| Manifold Interface | Thread Size              | Mounting Bracket Dimensions |      |      |       | Bracket | Bolts       | Washer      | Model Code  |
|--------------------|--------------------------|-----------------------------|------|------|-------|---------|-------------|-------------|-------------|
|                    |                          | B                           | C    | D    | E     |         |             |             |             |
| ISO 03             | .312-18UNC x .62 lg.     | 9,4                         | 7,9  | 25,4 | 60,5  | 700-020 | 300-005-001 | Washer Head | 991-021-001 |
| ISO 03             | M8 x 1.25 x 16,0 mm lg.  | 9,4                         | 7,9  | 25,4 | 60,5  | 700-020 | 300-006-001 | 450-002-001 | 991-021-002 |
| ISO 05             | .312-18UNC x .62 lg.     | 9,4                         | 7,9  | 25,4 | 60,5  | 700-020 | 300-005-001 | Washer Head | 991-021-003 |
| ISO 05             | M8 x 1.25 x 16,0 mm lg.  | 9,4                         | 7,9  | 25,4 | 60,5  | 700-020 | 300-006-001 | 450-002-001 | 991-021-004 |
| ISO 05 y           | .375-16UNC x .75 lg.     | 14,2                        | 11,2 | 35,1 | 104,9 | 700-021 | 300-005-002 | 450-001-002 | 991-021-005 |
| ISO 05 y           | M10 x 1.5 x 20,0 mm lg.  | 14,2                        | 11,2 | 35,1 | 104,9 | 700-021 | 300-006-002 | 450-002-002 | 991-021-006 |
| ISO 07             | .375-16UNC x .75 lg.     | 14,2                        | 11,2 | 35,1 | 104,9 | 700-021 | 300-005-002 | 450-001-002 | 991-021-007 |
| ISO 07             | M10 x 1.5 x 20,0 mm lg.  | 14,2                        | 11,2 | 35,1 | 104,9 | 700-021 | 300-006-002 | 450-002-002 | 991-021-008 |
| ISO 08             | .500-13UNC x 1.0 lg.     | 14,2                        | 14,2 | 41,4 | 124,0 | 700-022 | 300-005-003 | 450-001-003 | 991-021-009 |
| ISO 08             | M12 x 1.75 x 25,0 mm lg. | 14,2                        | 14,2 | 41,4 | 124,0 | 700-022 | 300-006-003 | 450-002-003 | 991-021-010 |

## ISO 03 Parallel Circuit with Relief Cavity



### FUNCTION

One Station



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .50 NPTF   | .375 NPTF  | .25 NPTF   | VSA        |            | VSA/S      |            |
| inch           | SAE-10     | SAE-8      | SAE-4      | VSL        |            | VSL/S      |            |
| metric         | .50 BSPP   | .375 BSPP  | .25 BSPP   | VPA        |            | VPA/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPEC Page 1.06              |  | RDDA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

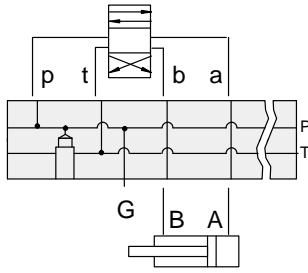


# BAR MANIFOLDS



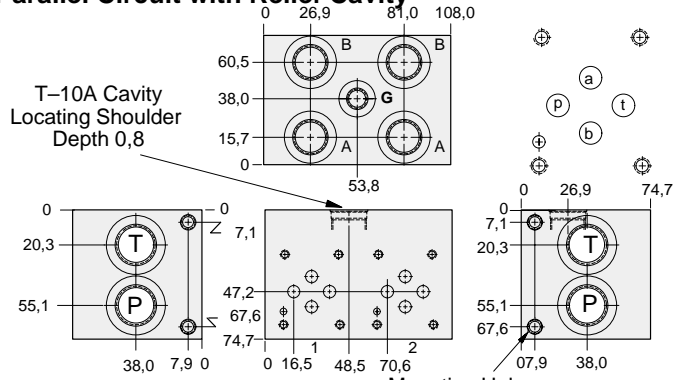
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 03 Parallel Circuit with Relief Cavity



### FUNCTION

Two Station

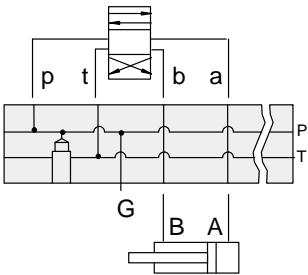


Mounting Holes:  
 Inch: .312 – 18UNC x 11,2 mm Deep.  
 Metric: M8 x 1.25 – 6H x 11,2 mm Deep.  
 2 places each end.

| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON      |            |
|----------------|------------|------------|------------|------------|------------|--------------|------------|
|                |            |            |            | Model Code | List Price | Model Code   | List Price |
| inch           | .50 NPTF   | .375 NPTF  | .25 NPTF   | <b>VSB</b> |            | <b>VSB/S</b> |            |
| inch           | SAE-10     | SAE-8      | SAE-4      | <b>VSM</b> |            | <b>VSM/S</b> |            |
| metric         | .50 BSPP   | .375 BSPP  | .25 BSPP   | <b>VPB</b> |            | <b>VPB/S</b> |            |

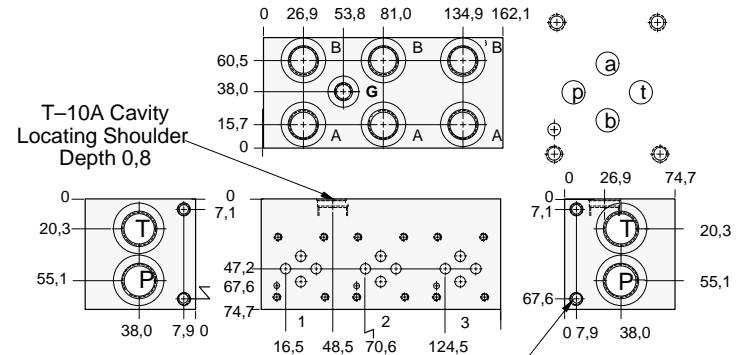
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 03 Parallel Circuit with Relief Cavity



### FUNCTION

Three Station



Mounting Holes:  
 Inch: .312 – 18UNC x 11,2 mm Deep.  
 Metric: M8 x 1.25 – 6H x 11,2 mm Deep.  
 2 places each end.

| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON      |            |
|----------------|------------|------------|------------|------------|------------|--------------|------------|
|                |            |            |            | Model Code | List Price | Model Code   | List Price |
| inch           | .50 NPTF   | .375 NPTF  | .25 NPTF   | <b>VSC</b> |            | <b>VSC/S</b> |            |
| inch           | SAE-10     | SAE-8      | SAE-4      | <b>VSN</b> |            | <b>VSN/S</b> |            |
| metric         | .50 BSPP   | .375 BSPP  | .25 BSPP   | <b>VPC</b> |            | <b>VPC/S</b> |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPEC Page 1.06              |  | RDDA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

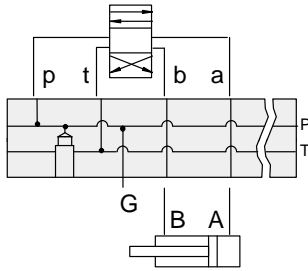


# BAR MANIFOLDS



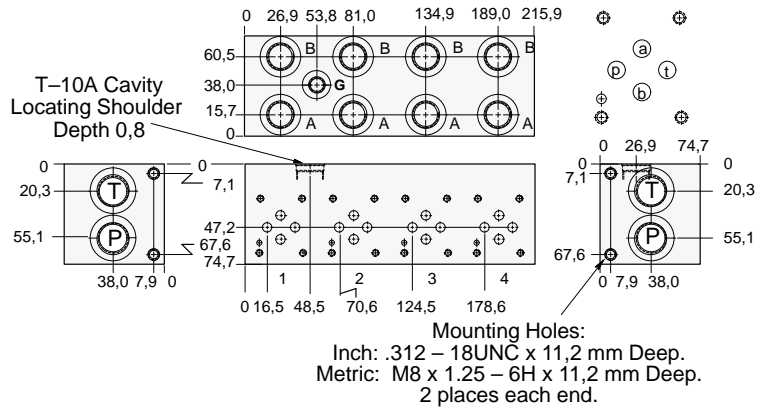
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 03 Parallel Circuit with Relief Cavity



### FUNCTION

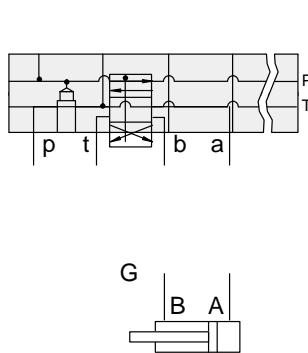
Four Station



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .50 NPTF   | .375 NPTF  | .25 NPTF   | VSD        |            | VSD/S      |            |
| inch           | SAE-10     | SAE-8      | SAE-4      | VSP        |            | VSP/S      |            |
| metric         | .50 BSPP   | .375 BSPP  | .25 BSPP   | VPD        |            | VPD/S      |            |

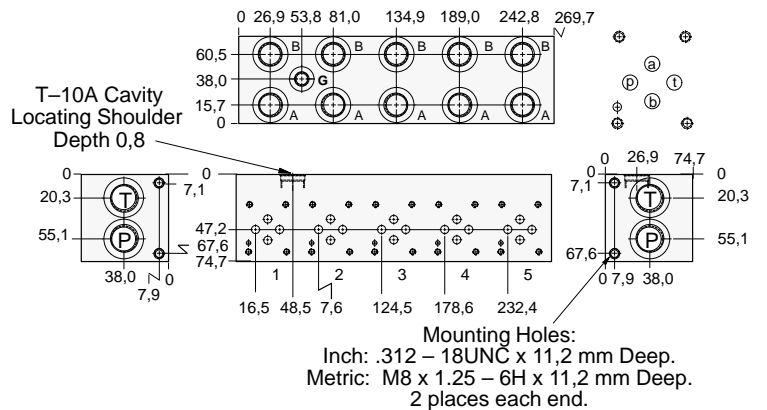
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 03 Parallel Circuit with Relief Cavity



### FUNCTION

Five Station



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .50 NPTF   | .375 NPTF  | .25 NPTF   | VSE        |            | VSE/S      |            |
| inch           | SAE-10     | SAE-8      | SAE-4      | VSR        |            | VSR/S      |            |
| metric         | .50 BSPP   | .375 BSPP  | .25 BSPP   | VPE        |            | VPE/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPEC Page 1.06              |  | RDDA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

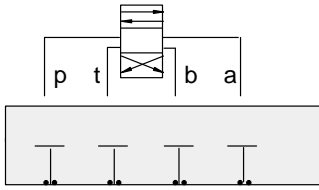


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

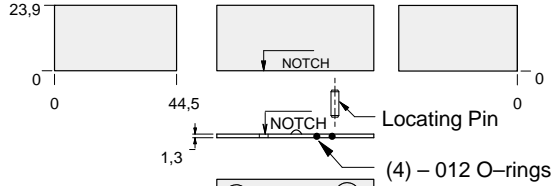
03 COVER PLATE



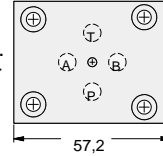
### FUNCTION

All Ports Blocked

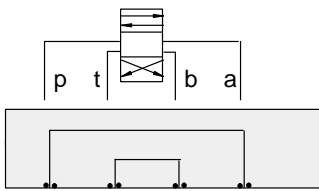
### Cover Plates



Mounting Holes:  
5,1 diameter through hole.  
Counterbore 9,1 diameter  
x 12,7 deep.  
4 places.



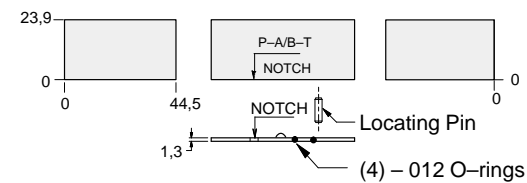
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZJR        |            | ZJR/S      |            |



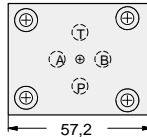
### FUNCTION

P to A and B to T

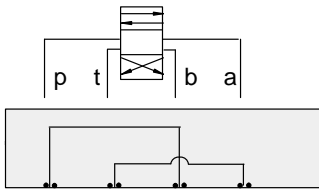
### Cover Plates



Mounting Holes:  
5,1 diameter through hole.  
Counterbore 9,1 diameter  
x 12,7 deep.  
4 places.



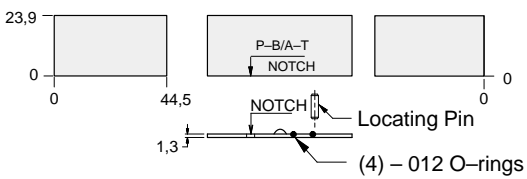
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZJS        |            | ZJS/S      |            |



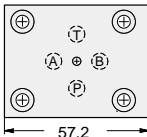
### FUNCTION

P to B and A to T

### Cover Plates

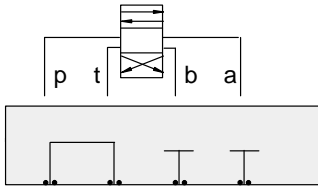


Mounting Holes:  
5,1 diameter through hole.  
Counterbore 9,1 diameter  
x 12,7 deep.  
4 places.



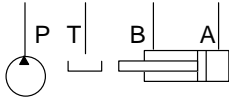
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZJT        |            | ZJT/S      |            |

- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

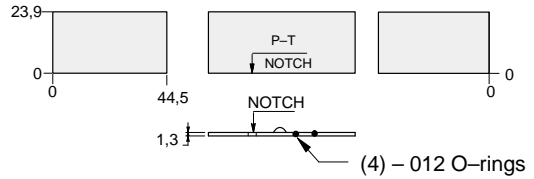


### FUNCTION

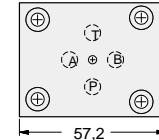
**P to T**  
**A and B blocked**



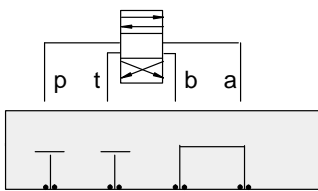
### Cover Plates



Mounting Holes:  
5,1 diameter through hole.  
Counterbore 9,1 diameter  
x 12,7 deep.  
4 places.

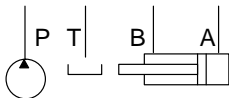


| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>ZJV</b> |            | <b>ZJV/S</b> |            |

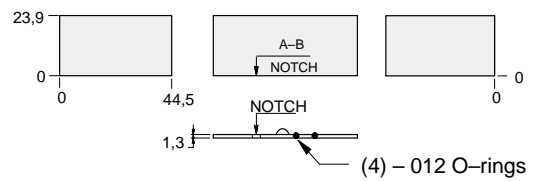


### FUNCTION

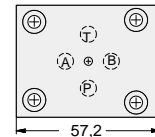
**A to B**  
**P and T blocked**



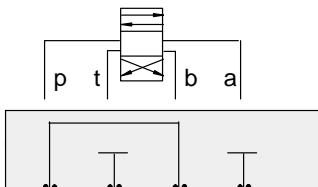
### Cover Plates



Mounting Holes:  
5,1 diameter through hole.  
Counterbore 9,1 diameter  
x 12,7 deep.  
4 places.

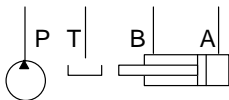


| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>ZJW</b> |            | <b>ZJW/S</b> |            |

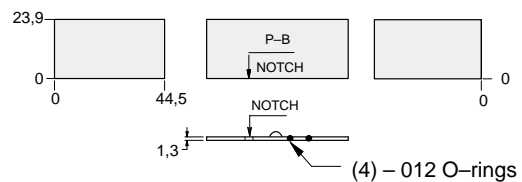


### FUNCTION

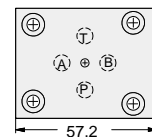
**P to B**  
**A and T blocked**



### Cover Plates



Mounting Holes:  
5,1 diameter through hole.  
Counterbore 9,1 diameter  
x 12,7 deep  
4 places



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>ZWE</b> |            | <b>ZWE/S</b> |            |

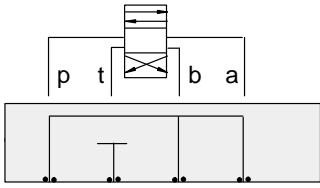


# ISO 03 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

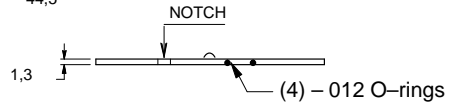
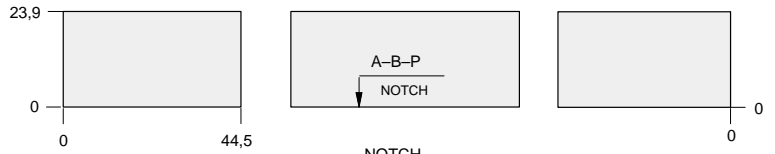
03 COVER PLATE



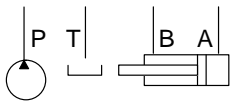
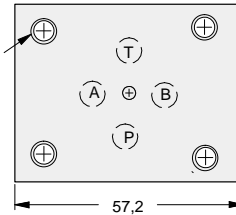
### FUNCTION

**P to A and B  
T blocked**

### Cover Plates



Mounting Holes:  
5,1 Diameter through hole  
Counterbore 9,1 diameter  
x 12,7 deep  
4 places.



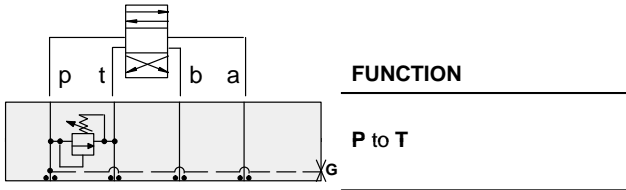
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>WJG</b>        |                   | <b>WJG/S</b>      |                   |



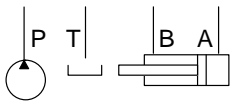
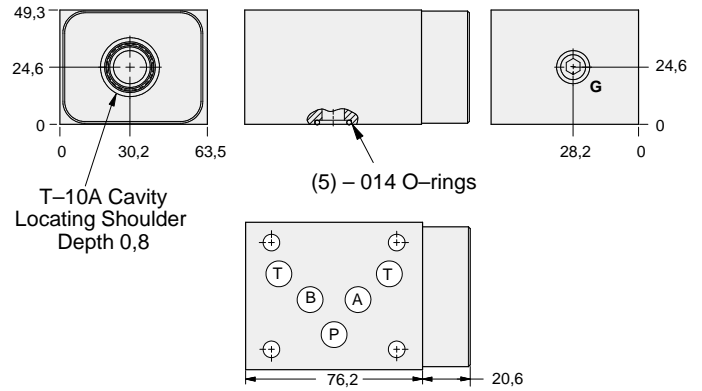
# ISO 05 SANDWICH BODIES



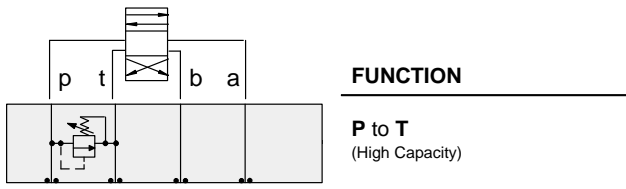
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



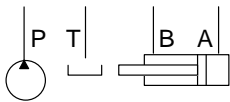
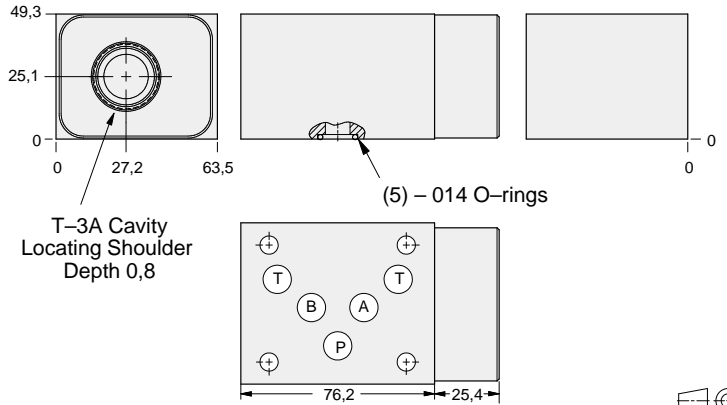
## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CBE</b>   |            | <b>CBE/S</b> |            |
| .25 BSPP                | <b>CBE/M</b> |            | <b>CBE/T</b> |            |



## Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CBP</b> |            | <b>CBP/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RP*C</b> Page 1.06                              |  | <b>RQ*B</b> Page 1.12                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RP*E</b> Page 1.08                              |  | <b>RPGD</b> Page 1.14 (use with CBP)               |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RD*A</b> Page 1.10                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

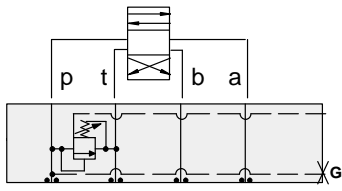




# ISO 05 SANDWICH BODIES



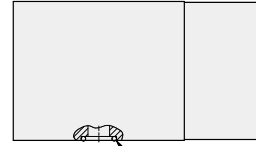
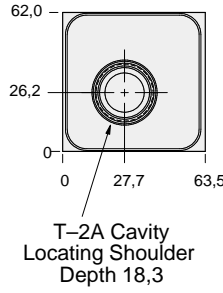
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



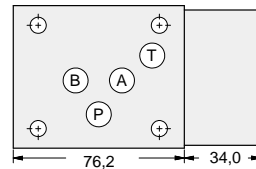
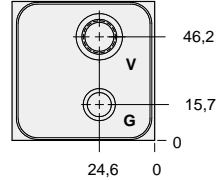
### FUNCTION

**P to T**  
Externally Vented

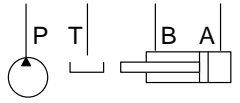
### Relief Valves



(5) - 014 O-rings



05 RELIEF



| Gauge Port<br>(Plugged) | Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|-----------|--------------|------------|--------------|------------|
|                         |           | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | SAE-6     | <b>BBC</b>   |            | <b>BBC/S</b> |            |
| .25 BSPP                | .25 BSPP  | <b>BBC/M</b> |            | <b>BBC/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

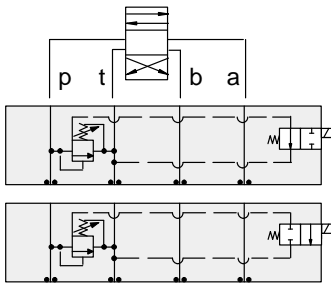
|                      |   |  |  |
|----------------------|---|--|--|
|                      | <i>Pilot Operated Vented Relief Valve</i> |  |  |
|                      | <b>RVEA Page 1.18</b>                     |  |  |
|                      |   |  |  |
|                      |   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

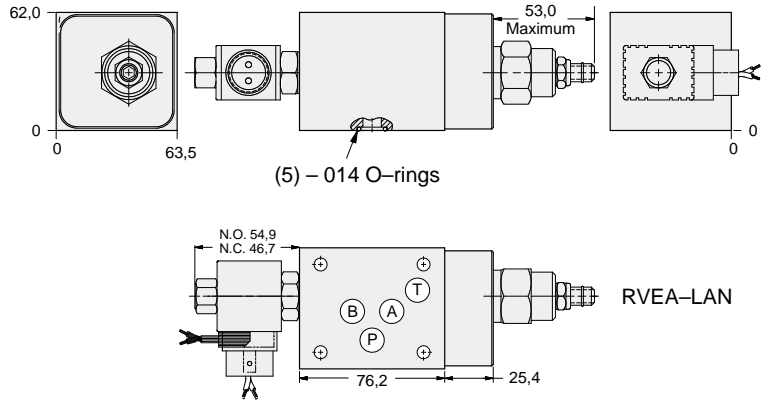


### FUNCTION

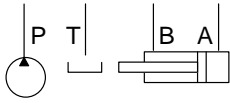
**P to T**  
N.O. Solenoid  
Vented \*

**P to T**  
N.C. Solenoid  
Vented \*

### Relief Valves



Operating pressure is limited to 210 bar.



| Solenoid Type | ALUMINUM    |            | DUCTILE IRON  |            |
|---------------|-------------|------------|---------------|------------|
|               | Model Code  | List Price | Model Code    | List Price |
| N.O.          | YREO-LAN-*A |            | YREO-LAN-*A/S |            |
| N.C.          | YREP-LAN-*A |            | YREP-LAN-*A/S |            |

\* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.

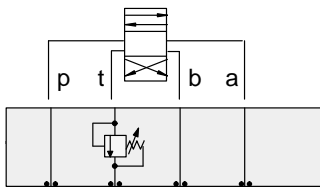


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

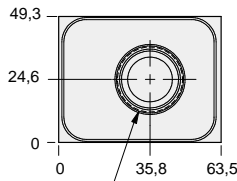
05 RELIEF



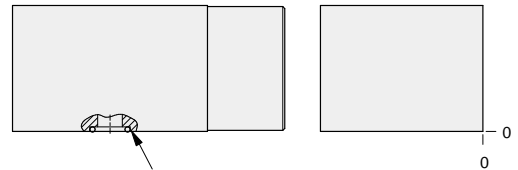
### FUNCTION

Out of T  
(High Capacity)

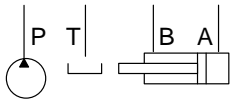
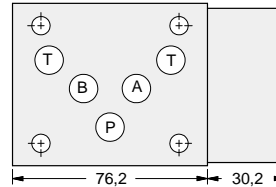
### Relief Valves



T-3A Cavity  
Locating Shoulder  
Depth 1,5



(5) - 014 O-rings



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>CBT</b>        |                   | <b>CBT/S</b>       |                   |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

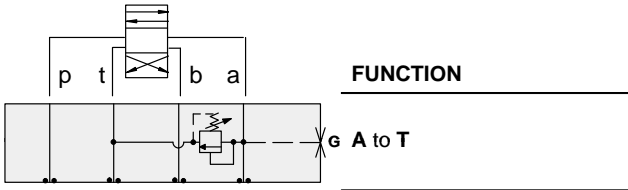
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



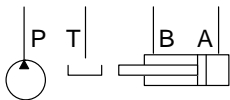
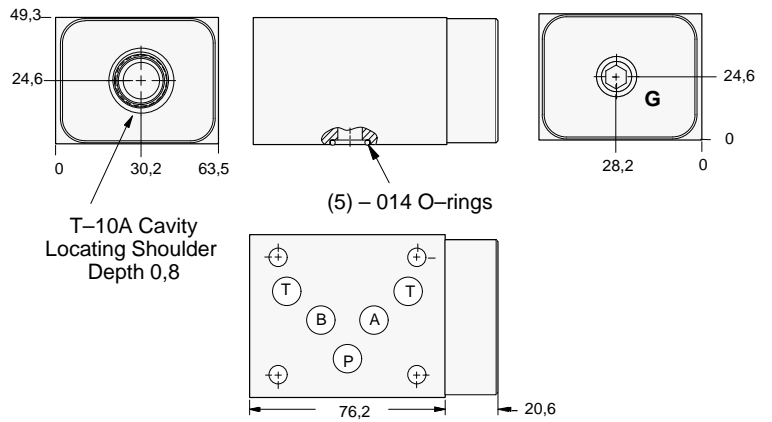
# ISO 05 SANDWICH BODIES



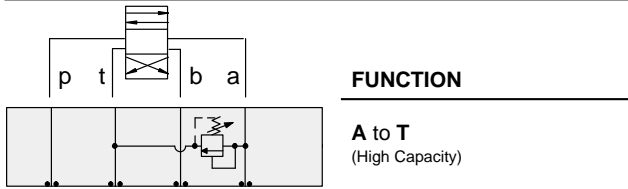
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



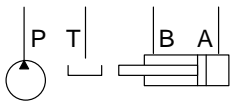
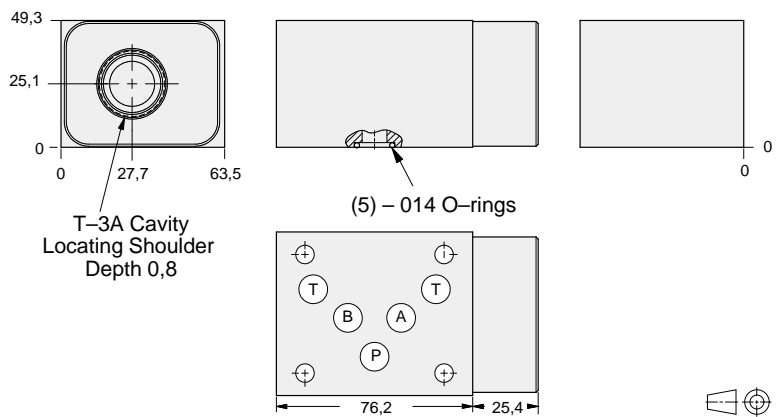
## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CBF</b>   |            | <b>CBF/S</b> |            |
| .25 BSPP                | <b>CBF/M</b> |            | <b>CBF/T</b> |            |



## Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CBA</b> |            | <b>CBA/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

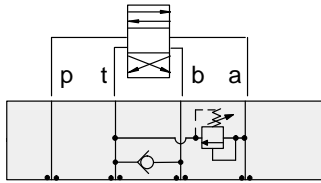
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RP*C</b> Page 1.06                              |  | <b>RQ*B</b> Page 1.12                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RP*E</b> Page 1.08                              |  | <b>RPGD</b> Page 1.14 (use with CBA)               |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RD*A</b> Page 1.10                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 05 SANDWICH BODIES



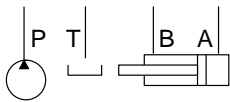
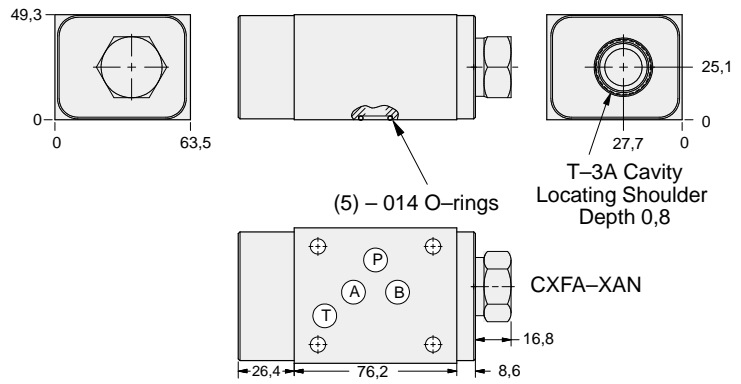
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**A to T**  
FF Check T to B

### Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CB2</b> |            | <b>CB2/S</b> |            |

05 RELIEF

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

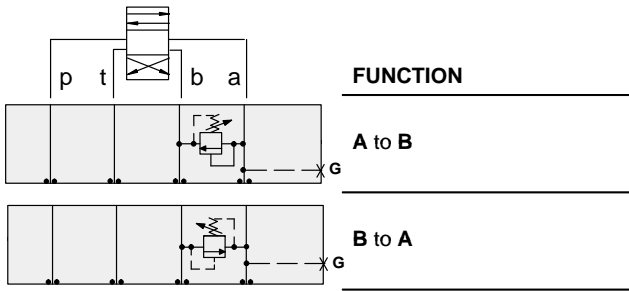
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



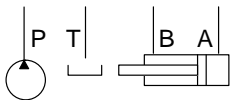
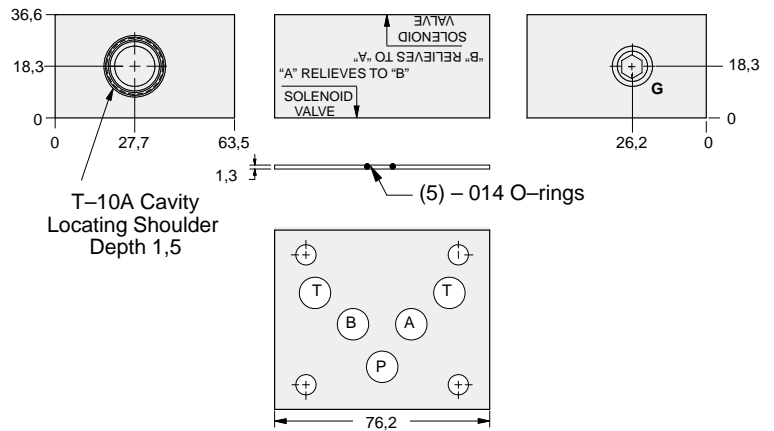
# ISO 05 SANDWICH BODIES



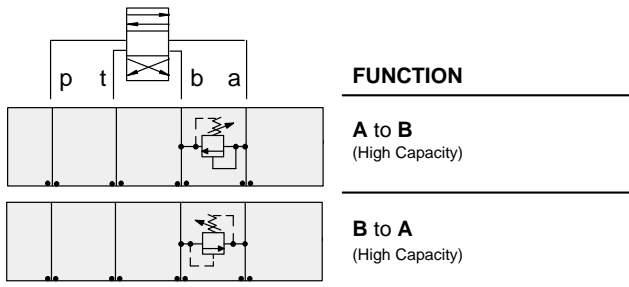
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



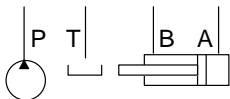
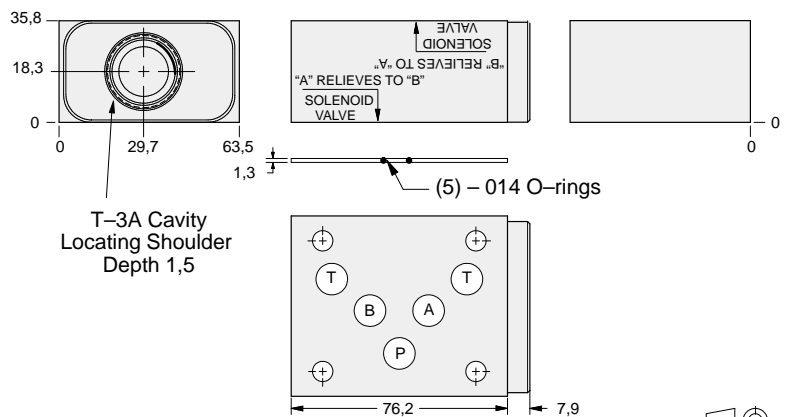
## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CBH</b>   |            | <b>CBH/S</b> |            |
| .25 BSPP                | <b>CBH/M</b> |            | <b>CBH/T</b> |            |



## Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CBC</b> |            | <b>CBC/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

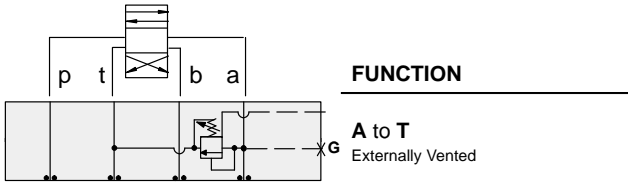
|  |  |  |  |
|--|--|--|--|
|  | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|  | <b>RP*C Page 1.06</b>                              |  | <b>RQ*B Page 1.12</b>                              |
|  | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|  | <b>RP*E Page 1.08</b>                              |  | <b>RPGD Page 1.14 (use with CBC)</b>               |
|  | <i>Direct Acting Relief Valve</i>                  |  |  |
|  | <b>RD*A Page 1.10</b>                              |  |  |



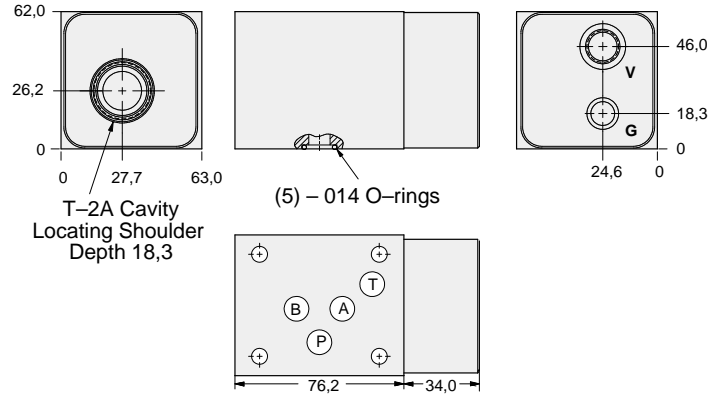
# ISO 05 SANDWICH BODIES



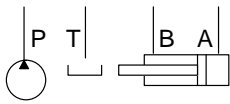
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



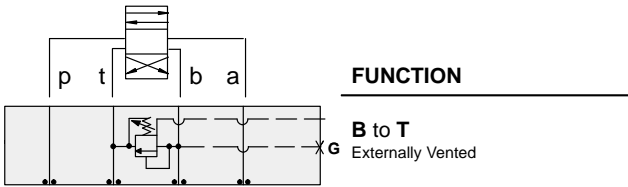
## Relief Valves



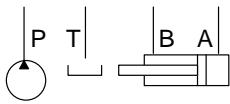
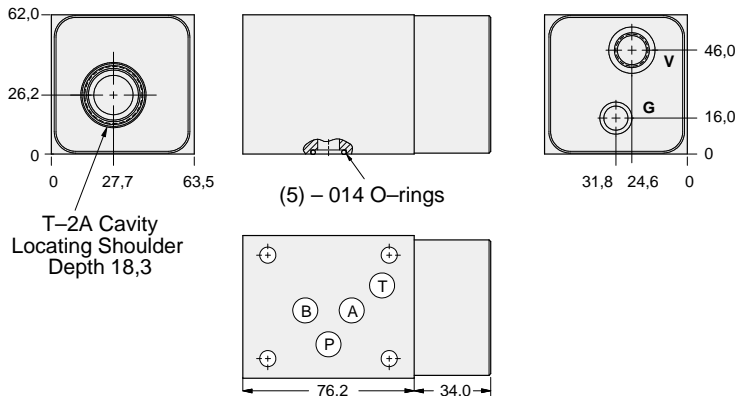
05 RELIEF



| Gauge Port<br>(Plugged) | Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|-----------|--------------|------------|--------------|------------|
|                         |           | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | SAE-6     | <b>BBD</b>   |            | <b>BBD/S</b> |            |
| .25 BSPP                | .25 BSPP  | <b>BBD/M</b> |            | <b>BBD/T</b> |            |



## Relief Valves



| Gauge Port<br>(Plugged) | Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|-----------|--------------|------------|--------------|------------|
|                         |           | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | SAE-6     | <b>BBE</b>   |            | <b>BBE/S</b> |            |
| .25 BSPP                | .25 BSPP  | <b>BBE/M</b> |            | <b>BBE/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

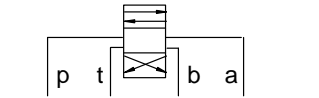
| Cartridge Diagram | Cartridge Name                     | Page Reference |
|-------------------|------------------------------------|----------------|
|                   | Pilot Operated Vented Relief Valve | RVEA Page 1.18 |
|                   |                                    |                |
|                   |                                    |                |
|                   |                                    |                |
| OTHER VALVES:     |                                    |                |



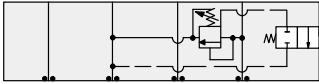
# ISO 05 SANDWICH BODIES



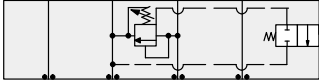
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



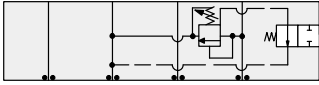
### FUNCTION



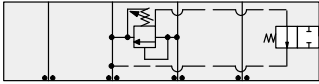
**A to T**  
N.C. Solenoid  
Vented



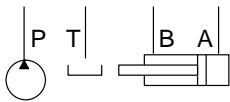
**B to T**  
N.C. Solenoid Vented



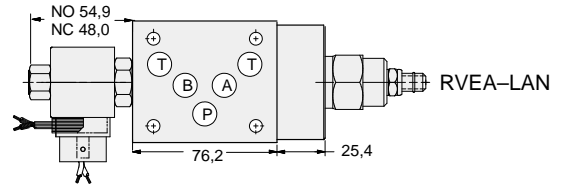
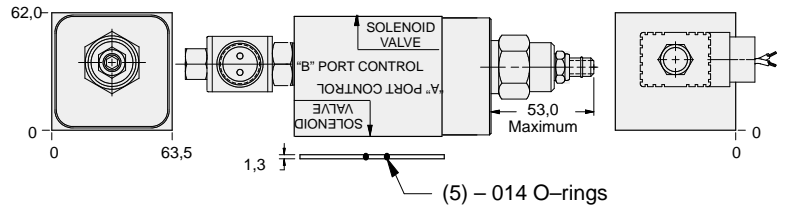
**A to T**  
N.O. Solenoid  
Vented



**B to T**  
N.O. Solenoid Vented



### Relief Valves



Operating pressure limited to 210 bar.

| Solenoid Type | ALUMINIUM   |            | SG IRON       |            |
|---------------|-------------|------------|---------------|------------|
|               | Model Code  | List Price | Model Code    | List Price |
| N.C.          | YRET-LAN-*A |            | YRET-LAN-*A/S |            |
| N.O.          | YREU-LAN-A  |            | YREU-LAN-A/S  |            |

\* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.

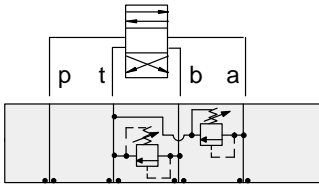




# ISO 05 SANDWICH BODIES



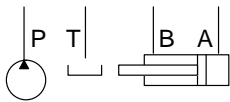
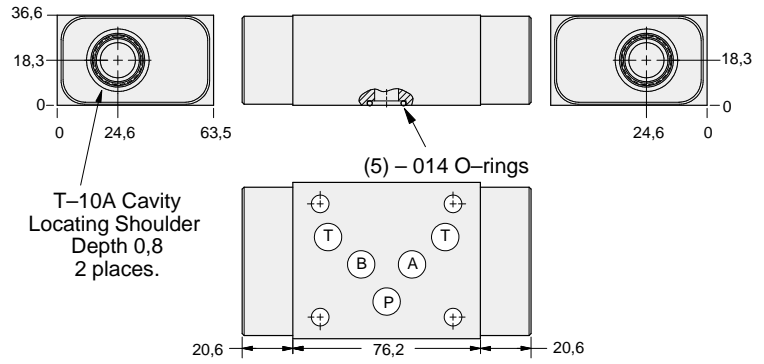
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## FUNCTION

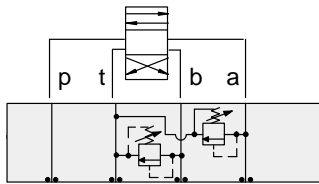
A and B to T

## Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CBD</b> |            | <b>CBD/S</b> |            |

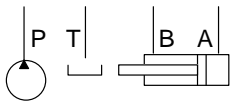
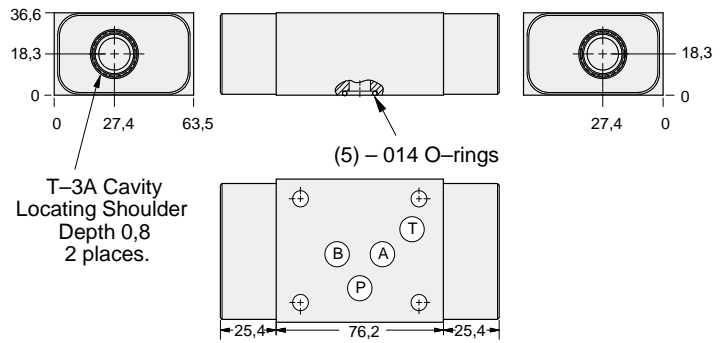
05 RELIEF



## FUNCTION

A and B to T  
(High Capacity)

## Relief Valves

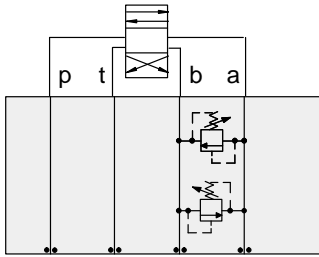


| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CBX</b> |            | <b>CBX/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|  |   |  |   |
|--|---|--|---|
|  | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve     |
|  | RP*C Page 1.06                              |  | RQ*B Page 1.12                              |
|  | Pilot Operated, Rapid Response Relief Valve |  | Air Controlled, Pilot Operated Relief Valve |
|  | RP*E Page 1.08                              |  | RPGD Page 1.14 (use with CBX)               |
|  | Direct Acting Relief Valve                  |  |   |
|  | RD*A Page 1.10                              |  |   |

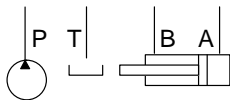
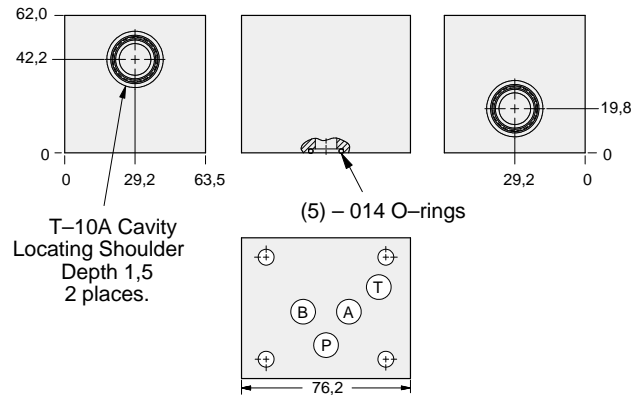
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



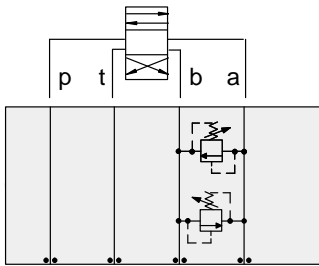
### FUNCTION

**A to B and  
B to A**  
(Cross Port)

### Relief Valves



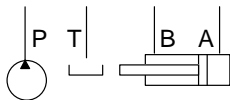
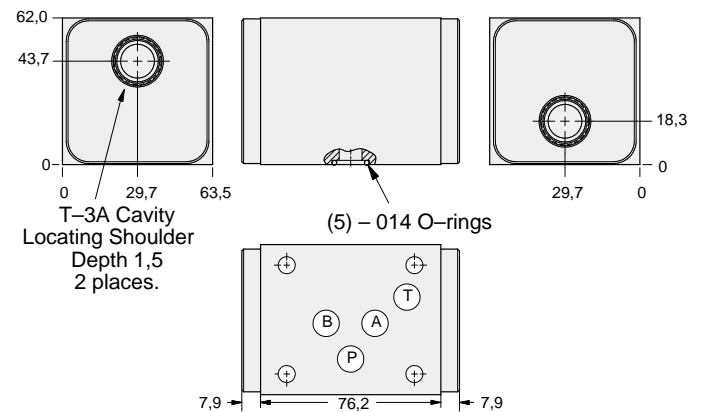
| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Model Code  | List Price |
| <b>CBI</b> |            | <b>CB/S</b> |            |



### FUNCTION

**A to B and  
B to A**  
(High Capacity)  
(Cross Port)

### Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CBY</b> |            | <b>CBY/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

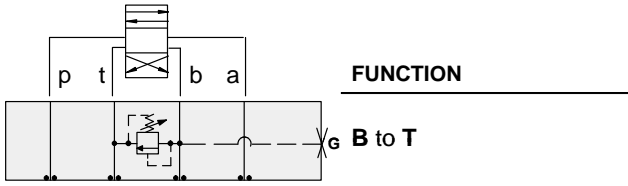
|  |  |  |  |
|--|--|--|--|
|  | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|  | <b>RP*C Page 1.06</b>                              |  | <b>RQ*B Page 1.12</b>                              |
|  | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|  | <b>RP*E Page 1.08</b>                              |  | <b>RPGD Page 1.14 (use with CBY)</b>               |
|  | <i>Direct Acting Relief Valve</i>                  |  |  |
|  | <b>RD*A Page 1.10</b>                              |  |  |



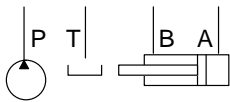
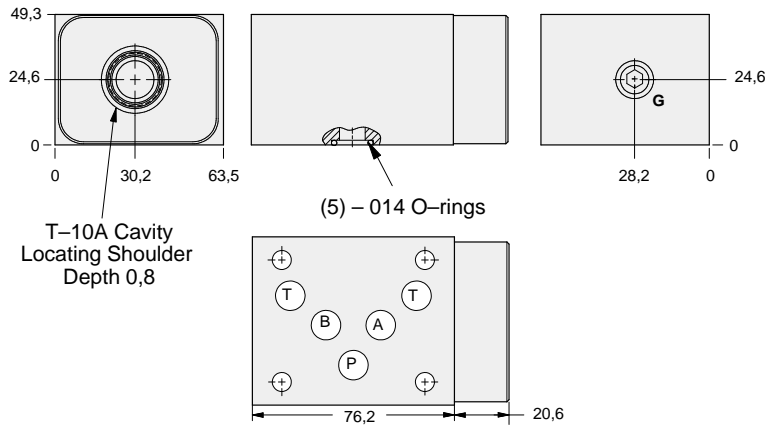
# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

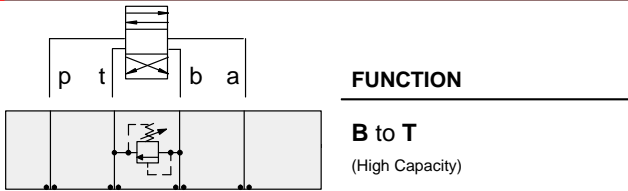


## Relief Valves

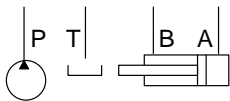
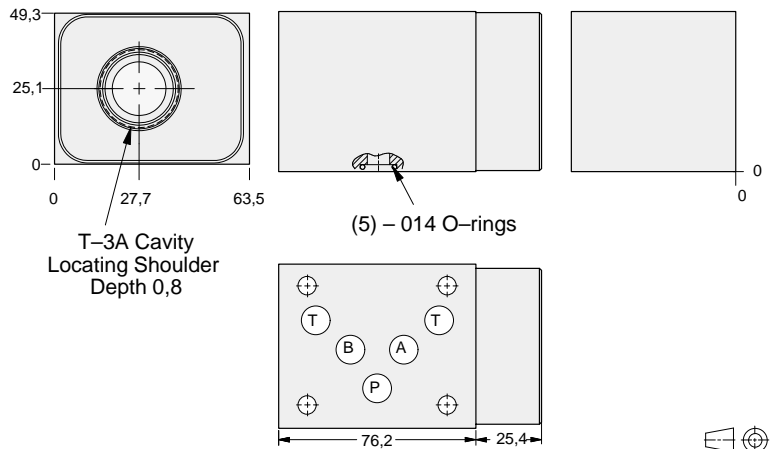


| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CBG</b>   |            | <b>CBG/S</b> |            |
| .25 BSPP                | <b>CBG/M</b> |            | <b>CBG/T</b> |            |

05 RELIEF



## Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CBB</b> |            | <b>CBB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

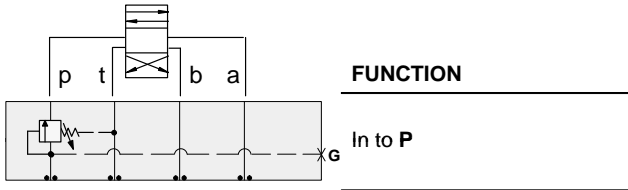
|  |   |  |   |
|--|---|--|---|
|  | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve     |
|  | RP*C Page 1.06                              |  | RQ*B Page 1.12                              |
|  | Pilot Operated, Rapid Response Relief Valve |  | Air Controlled, Pilot Operated Relief Valve |
|  | RP*E Page 1.08                              |  | RP*D Page 1.14 (use with CBB)               |
|  | Direct Acting Relief Valve                  |  |   |
|  | RD*A Page 1.10                              |  |   |



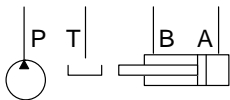
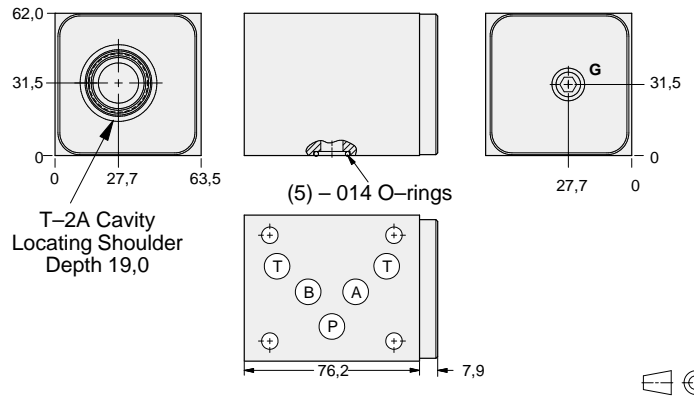
# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Sequence Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBW</b>   |            | <b>BBW/S</b> |            |
| .25 BSPP                | <b>BBW/M</b> |            | <b>BBW/T</b> |            |

05 SEQUENCE

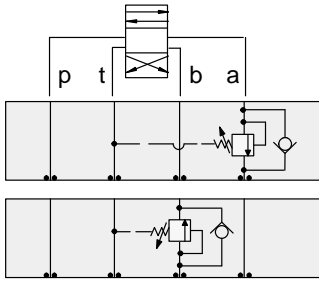
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Sequence Valve</i>                 |  |  |
|   | <b>RSFC Page 2.06</b>                                |  |  |
|   | <i>Pilot Operated "Kick-Down" Sequence Valve</i>     |  |  |
|   | <b>SQFB Page 2.08</b>                                |  |  |
|   | <i>Air Controlled, Pilot Operated Sequence Valve</i> |  |  |
|   | <b>RSFE Page 2.10</b>                                |  |  |
| <b>OTHER VALVES:</b>                            | SCEA   |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

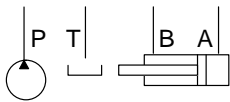
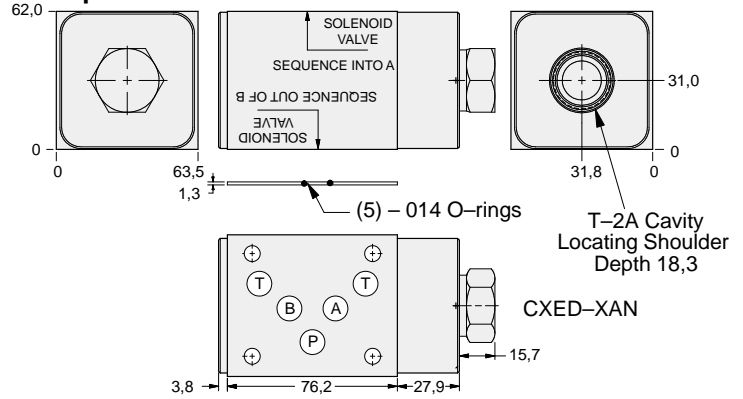


### FUNCTION

**In to A**  
Reverse FF Check

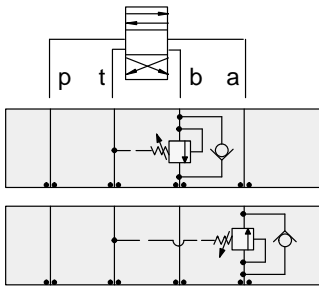
**Out of B**  
Reverse FF Check

### Sequence Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BB4</b> |            | <b>BB4/S</b> |            |

05 SEQUENCE

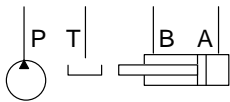
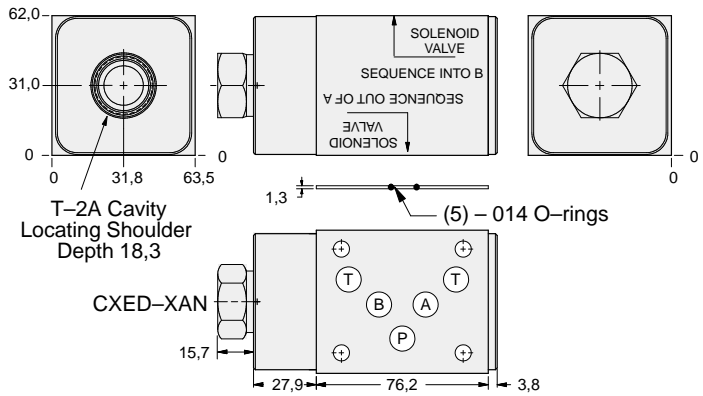


### FUNCTION

**In to B**  
Reverse FF Check

**Out of A**  
Reverse FF Check

### Sequence Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BB5</b> |            | <b>BB5/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

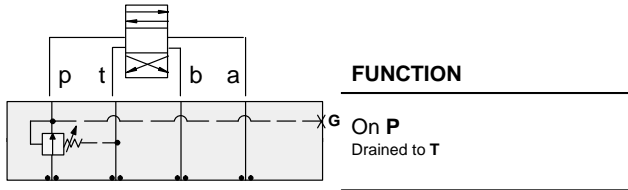
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Sequence Valve                 |  |  |
|                      | <b>RSFC Page 2.06</b>                         |  |  |
|                      | Pilot Operated "Kick-Down" Sequence Valve     |  |  |
|                      | <b>SQFB Page 2.08</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Sequence Valve |  |  |
|                      | <b>RSFE Page 2.10</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



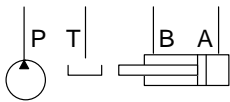
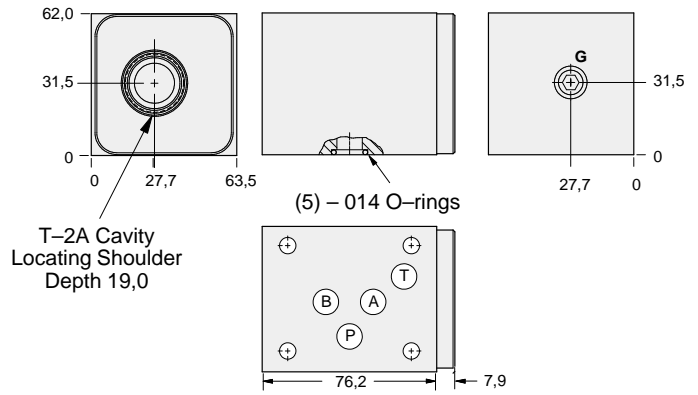
# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBP</b>   |            | <b>BBP/S</b> |            |
| .25 BSPP                | <b>BBP/M</b> |            | <b>BBP/T</b> |            |

05 REDUCING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

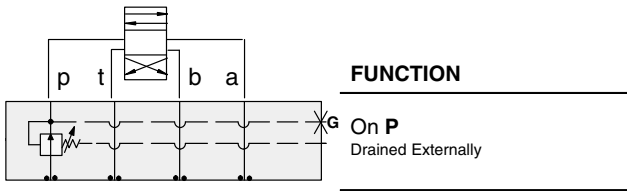
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Reducing Valve</i>                 |  |  |
|                      | <b>PBFB Page 3.06</b>                                |  |  |
|                      | <i>Air Controlled, Pilot Operated Reducing Valve</i> |  |  |
|                      | <b>PBFC Page 3.08</b>                                |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



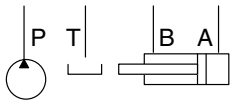
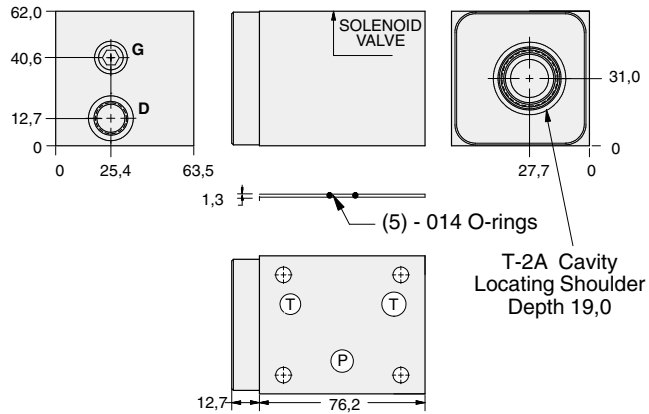
# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



| Gauge Port<br>(Plugged) | Drain Port | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|------------|--------------|------------|--------------|------------|
|                         |            | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | SAE-6      | <b>BBQ</b>   |            | <b>BBQ/S</b> |            |
| .25 BSPP                | .25 BSPP   | <b>BBQ/M</b> |            | <b>BBQ/T</b> |            |

05 REDUCING

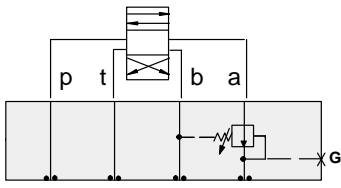
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing Valve</i>                 |  |  |
|   | <b>PBFB Page 3.06</b>                                |  |  |
|   | <i>Air Controlled, Pilot Operated Reducing Valve</i> |  |  |
|   | <b>PBFC Page 3.08</b>                                |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 05 SANDWICH BODIES



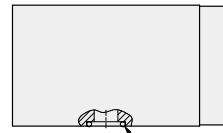
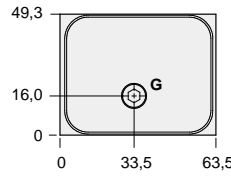
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



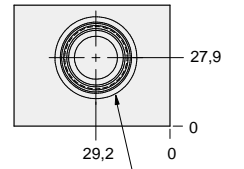
### FUNCTION

On A  
Drained to B

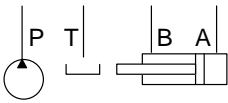
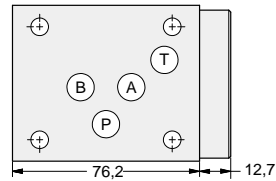
### Reducing Valves



(5) - 014 O-rings



T-2A Cavity  
Locating Shoulder  
Depth 29,7



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBA</b>   |            | <b>BBA/S</b> |            |
| .25 BSPP                | <b>BBA/M</b> |            | <b>BBA/T</b> |            |

05 REDUCING

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing Valve                 |  |  |
|   | PBFB Page 3.06                                |  |  |
|   | Air Controlled, Pilot Operated Reducing Valve |  |  |
|   | PBFC Page 3.08                                |  |  |
| OTHER VALVES:                                   |   |  |  |

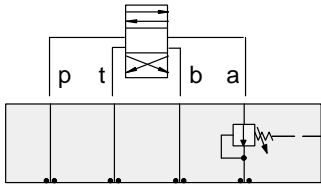




# ISO 05 SANDWICH BODIES



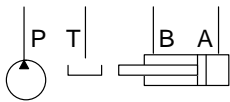
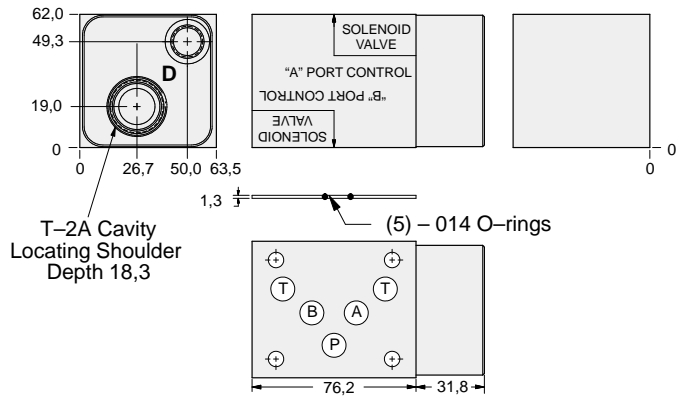
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

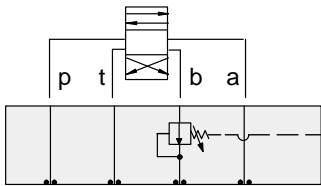
**On A**  
Drained Externally

### Reducing Valves



| Drain Port | ALUMINIUM    |            | SG IRON      |            |
|------------|--------------|------------|--------------|------------|
|            | Model Code   | List Price | Model Code   | List Price |
| SAE-6      | <b>BBF</b>   |            | <b>BBF/S</b> |            |
| .25 BSPP   | <b>BBF/M</b> |            | <b>BBF/T</b> |            |

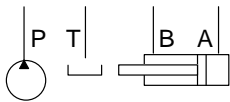
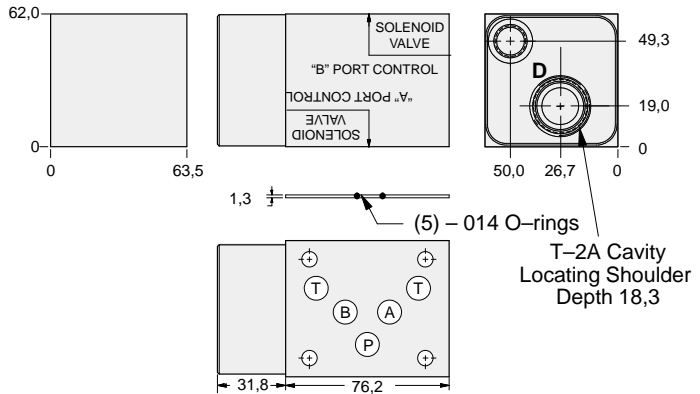
05 REDUCING



### FUNCTION

**On B**  
Drained Externally

### Reducing Valves



| Drain Port | ALUMINIUM    |            | SG IRON      |            |
|------------|--------------|------------|--------------|------------|
|            | Model Code   | List Price | Part Number  | List Price |
| SAE-6      | <b>BBG</b>   |            | <b>BBG/S</b> |            |
| .25 BSPP   | <b>BBG/M</b> |            | <b>BBG/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing Valve                 |  |  |
|                      | <b>PBFB Page 3.06</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Reducing Valve |  |  |
|                      | <b>PBFC Page 3.08</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

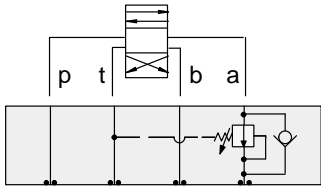


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

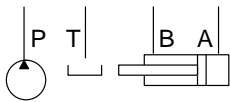
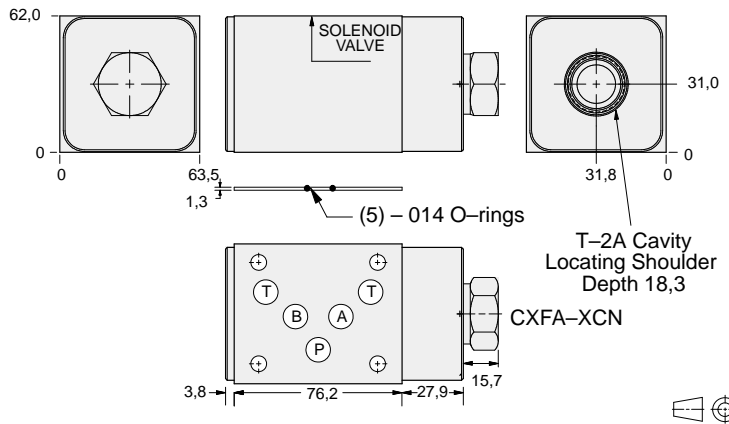
05 REDUCING



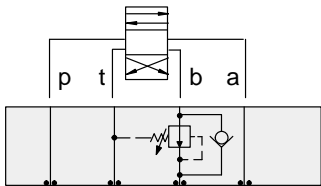
### FUNCTION

On A Drain to T  
Reverse FF Check

### Reducing Valves



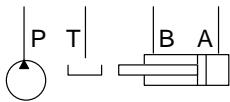
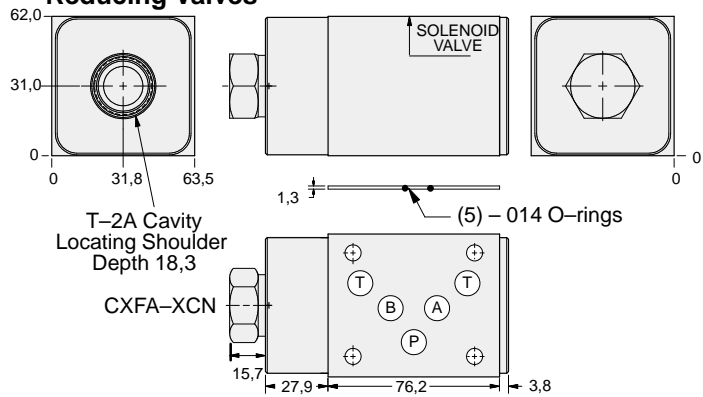
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BB2</b> |            | <b>BB2/S</b> |            |



### FUNCTION

On B Drain to T  
Reverse FF Check

### Reducing Valves

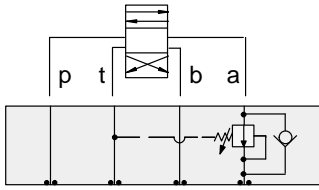


| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BB3</b> |            | <b>BB3/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing Valve                 |  |  |
|                      | <b>PBFB Page 3.06</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Reducing Valve |  |  |
|                      | <b>PBFC Page 3.08</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

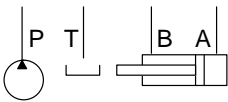
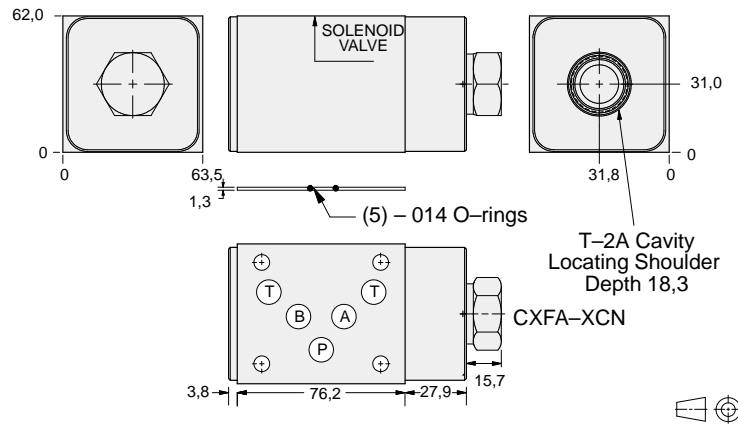
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

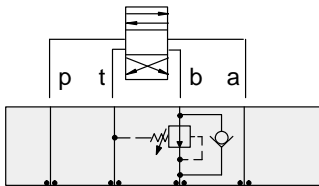
On A Drain to T  
Reverse FF Check

### Reducing Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BB2</b> |            | <b>BB2/S</b> |            |

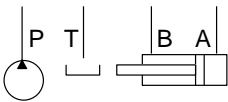
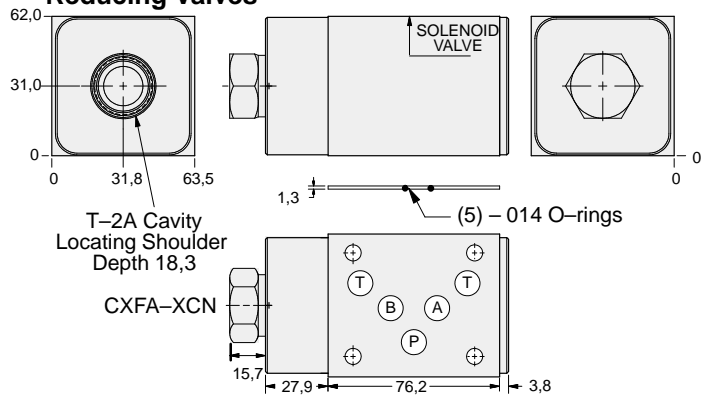
05 REDUCING



### FUNCTION

On B Drain to T  
Reverse FF Check

### Reducing Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BB3</b> |            | <b>BB3/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

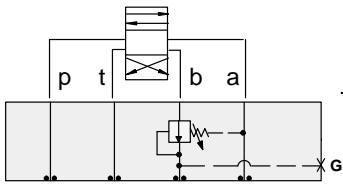
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing Valve                 |  |  |
|                      | <b>PBFB Page 3.06</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Reducing Valve |  |  |
|                      | <b>PBFC Page 3.08</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 05 SANDWICH BODIES



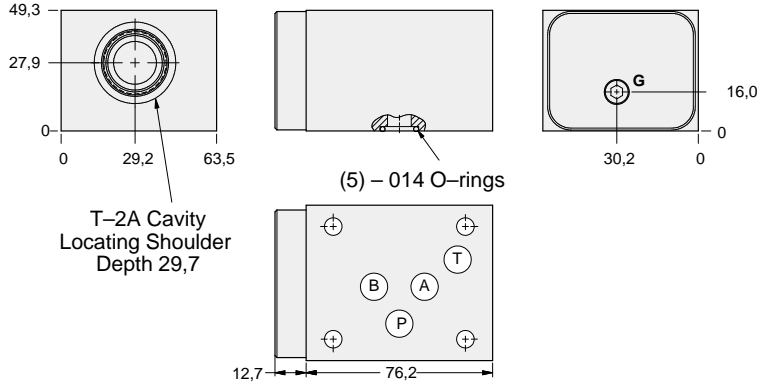
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



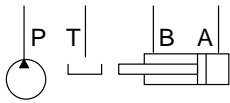
### FUNCTION

On B  
Drained to A

### Reducing Valves



05 REDUCING



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBB</b>   |            | <b>BBB/S</b> |            |
| .25 BSPP                | <b>BBB/M</b> |            | <b>BBB/T</b> |            |

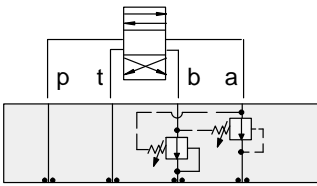
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |  |
|---|-------------------------------|--|--|
|   | Pilot Operated Reducing Valve |  |  |
|   | PBFB Page 3.06                |  |  |
|   |                               |  |  |
|   |                               |  |  |
| OTHER VALVES:                                   |                               |  |  |



# ISO 05 SANDWICH BODIES



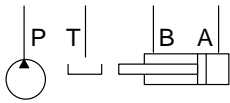
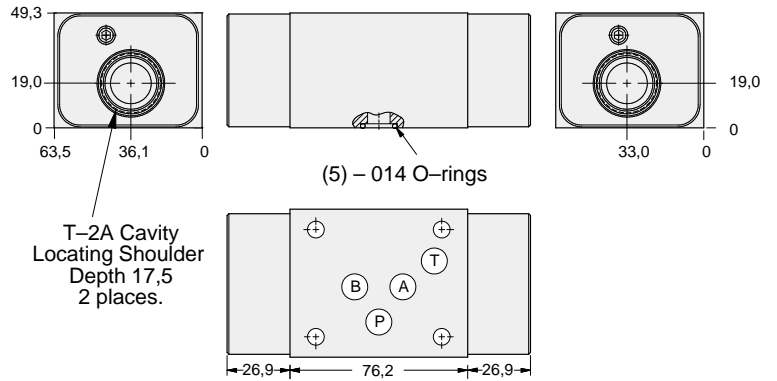
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Drains to Opposite Port

### Reducing Valves



| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>BBY</b>        |                   | <b>BBY/S</b>      |                   |



05 REDUCING

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                                      |  |  |
|---|--------------------------------------|--|--|
|   | <i>Pilot Operated Reducing Valve</i> |  |  |
|   | <b>PBFB Page 3.06</b>                |  |  |
|   |                                      |  |  |
|   |                                      |  |  |
| <b>OTHER VALVES:</b>                            |                                      |  |  |

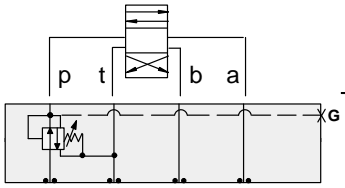


# ISO 05 SANDWICH BODIES



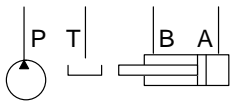
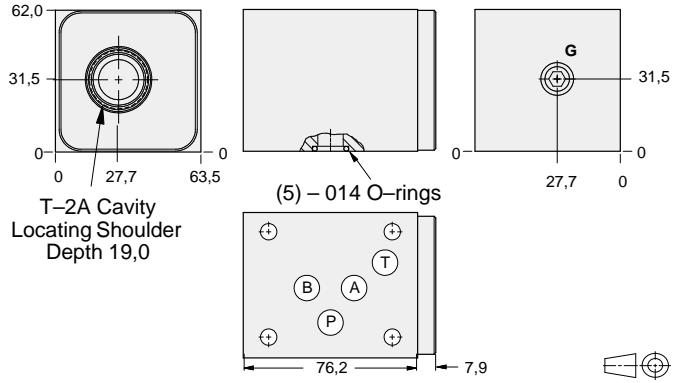
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Reducing/Relieving Valves



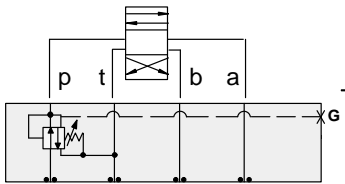
### FUNCTION

On P Tank to T  
Drained to T



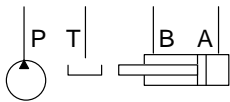
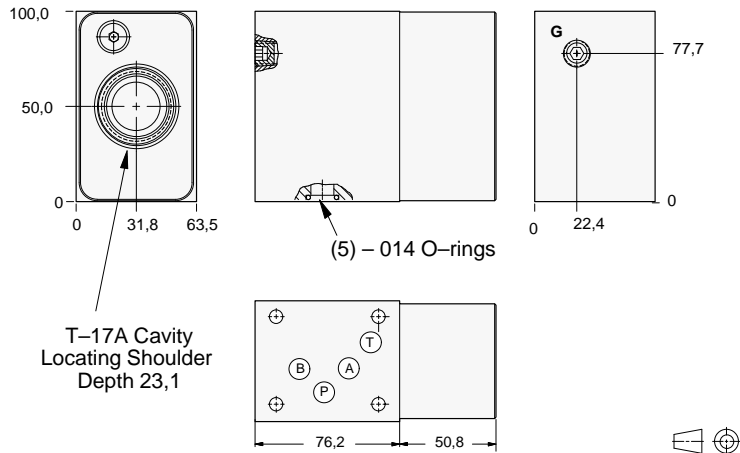
| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBP</b>   |            | <b>BBP/S</b> |            |
| .25 BSPP                | <b>BBP/M</b> |            | <b>BBP/T</b> |            |

## Reducing/Relieving Valves



### FUNCTION

On P Tank to T  
Drained to T  
(High Capacity)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>WCC</b>   |            | <b>WCC/S</b> |            |
| .25 BSPP                | <b>WCC/M</b> |            | <b>WCC/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing/Relieving Valve                 |  |  |
|                      | <b>PP*B Page 3.10, 3.11</b>                             |  |  |
|                      | Air Controlled, Pilot Operated Reducing/Relieving Valve |  |  |
|                      | <b>PP*C Page 3.12, 3.13</b>                             |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

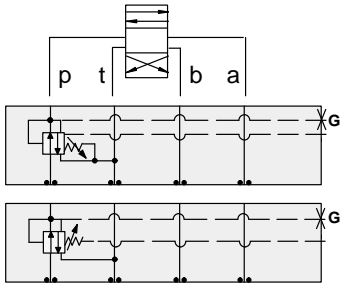


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

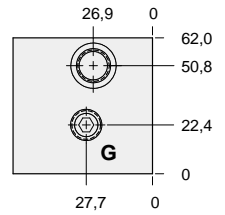
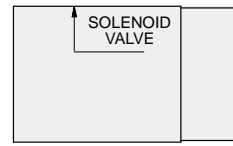
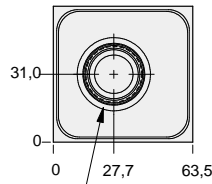
## Reducing/Relieving Valves



### FUNCTION

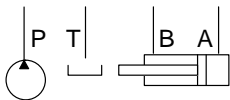
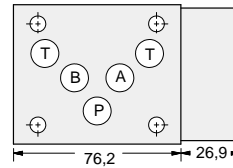
On **P** Tank to **T**  
Vented Externally

On **P** Tank to **T**  
Drained Externally



(5) - O14 O-rings

T-22A Cavity  
Locating Shoulder  
Depth 33,3



| Gauge Port<br>(Plugged) | External<br>Port | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|------------------|--------------|------------|--------------|------------|
|                         |                  | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | SAE-6            | <b>NBP</b>   |            | <b>NBP/S</b> |            |
| .25 BSPP                | .25 BSPP         | <b>NBP/M</b> |            | <b>NBP/T</b> |            |



05 REDUCING/RELIEVING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing/Relieving Valve with Drain Port |  |  |
|                      | <b>PVFA Page 3.14</b>                                   |  |  |
|                      | Pilot Operated Reducing/Relieving Valve with Vent Port  |  |  |
|                      | <b>PVFB Page 3.16</b>                                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

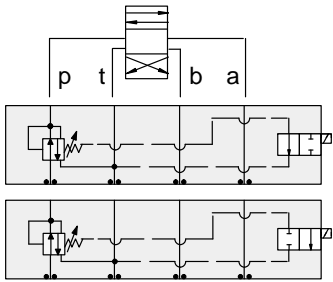


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

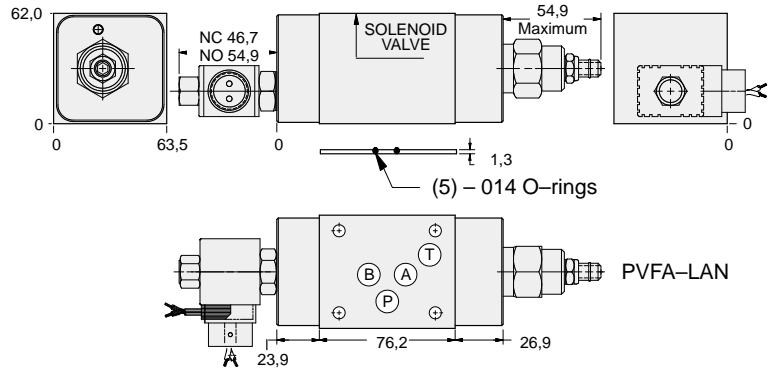
## Reducing/Relieving Valves



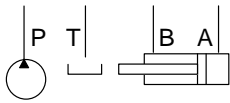
### FUNCTION

On P Tank to T  
N.O. Solenoid  
on Drain \*

On P Tank to T  
N.C. Solenoid  
on Drain \*



Operating pressure is limited to 210 bar.



| Solenoid Type | ALUMINIUM   |            | SG IRON       |            |
|---------------|-------------|------------|---------------|------------|
|               | Model Code  | List Price | Model Code    | List Price |
| N.O.          | YPDG-LAN-*A |            | YPDG-LAN-*A/S |            |
| N.C.          | YPDH-LAN-*A |            | YPDH-LAN-*A/S |            |

\* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.

05 REDUCING/RELIEVING

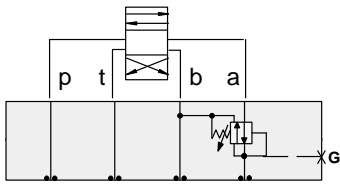




# ISO 05 SANDWICH BODIES



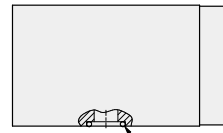
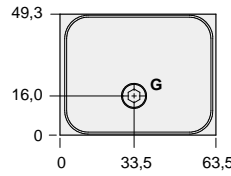
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



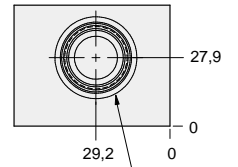
### FUNCTION

On **A** Tank to **B**  
Drained to **B**

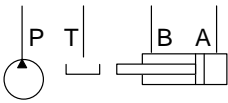
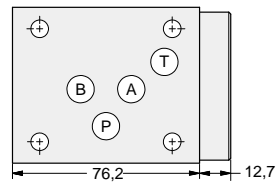
### Reducing/Relieving Valves



(5) - 014 O-rings



T-2A Cavity  
Locating Shoulder  
Depth 29,7



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBA</b>   |            | <b>BBA/S</b> |            |
| .25 BSPP                | <b>BBA/M</b> |            | <b>BBA/T</b> |            |

05 REDUCING/RELIEVING

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PPFB Page 3.10</b>                          |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

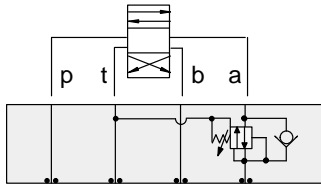


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

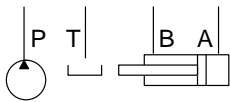
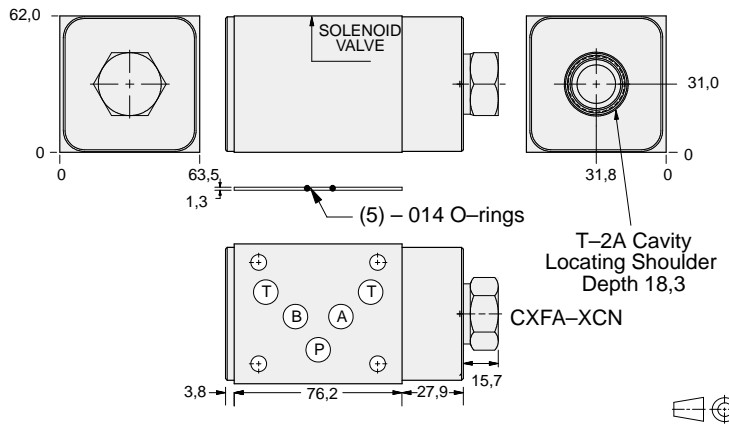
05 REDUCING/RELIEVING



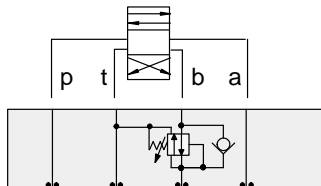
### FUNCTION

On A Tank to T  
 Drained to T  
 Reverse FF Check

### Reducing/Relieving Valves



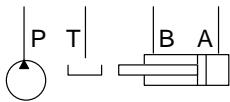
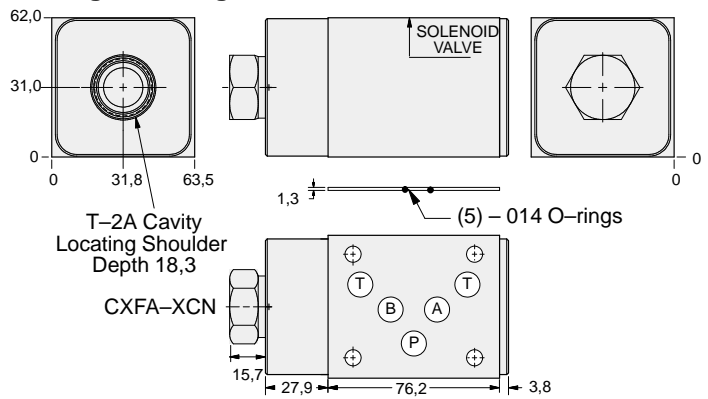
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BB2</b> |            | <b>BB2/S</b> |            |



### FUNCTION

On B Tank to T  
 Drained to T  
 Reverse FF Check

### Reducing/Relieving Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BB3</b> |            | <b>BB3/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

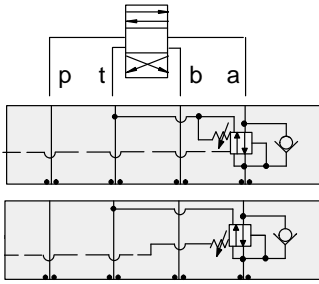
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing/Relieving Valve                 |  |  |
|                      | <b>PPFB Page 3.10</b>                                   |  |  |
|                      | Air Controlled, Pilot Operated Reducing/Relieving Valve |  |  |
|                      | <b>PPFC Page 3.12</b>                                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

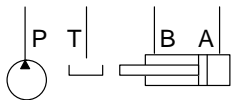
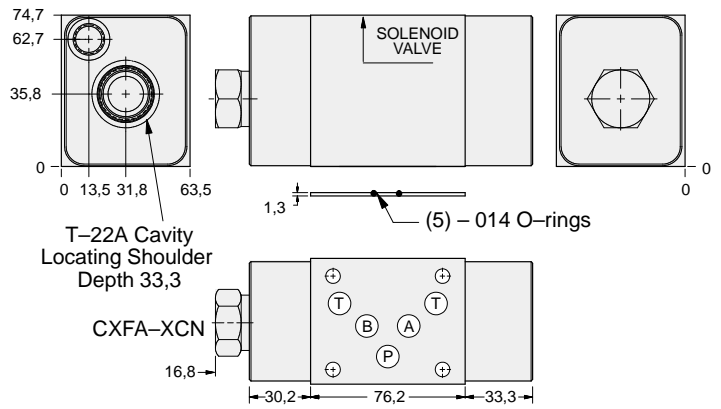


### FUNCTION

On **A** tank to **T**  
Vented Externally  
Reverse FF Check

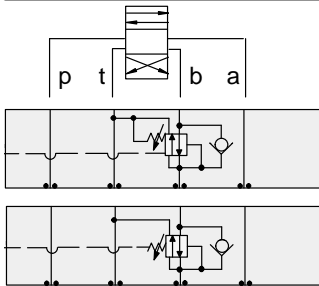
On **A** tank to **T**  
Drained Externally  
Reverse FF Check

### Reducing/Relieving Valves



| External Port | ALUMINIUM    |            | SG IRON      |            |
|---------------|--------------|------------|--------------|------------|
|               | Model Code   | List Price | Model Code   | List Price |
| SAE-6         | <b>NB2</b>   |            | <b>NB2/S</b> |            |
| .25 BSPP      | <b>NB2/M</b> |            | <b>NB2/T</b> |            |

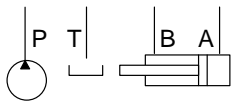
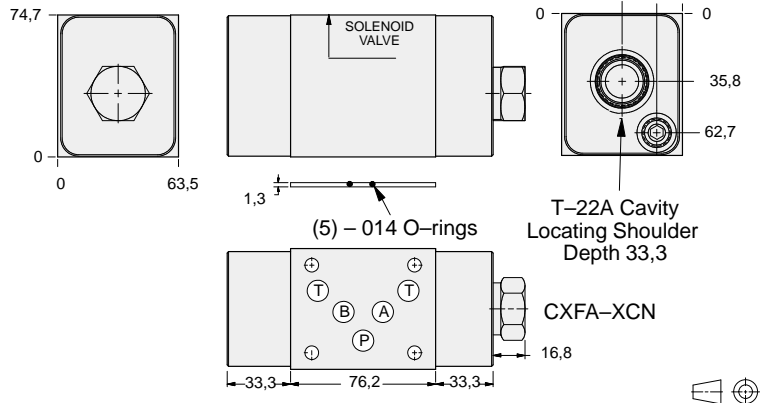
### Reducing/Relieving Valves



### FUNCTION

On **B** Tank to **T**  
Vented Externally  
Reverse FF Check

On **B** Tank to **T**  
Drained Externally  
Reverse FF Check



| External Port (Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| SAE-6                   | <b>NB3</b>   |            | <b>NB3/S</b> |            |
| .25 BSPP                | <b>NB3/M</b> |            | <b>NB3/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

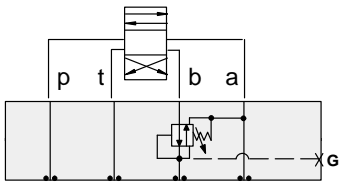
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing/Relieving Valve with Drain Port |  |  |
|                      | <b>PVFA Page 3.14</b>                                   |  |  |
|                      | Pilot Operated Reducing/Relieving Valve with Vent Port  |  |  |
|                      | <b>PVFB Page 3.16</b>                                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 05 SANDWICH BODIES



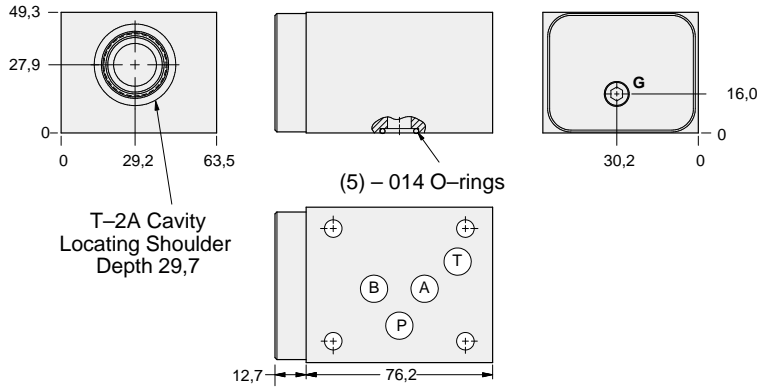
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



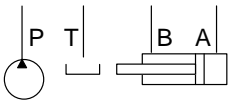
### FUNCTION

On **B** Tank to **A**  
Drained to **A**

### Reducing/Relieving Valves



05 REDUCING/RELIEVING



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBB</b>   |            | <b>BBB/S</b> |            |
| .25 BSPP                | <b>BBB/M</b> |            | <b>BBB/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

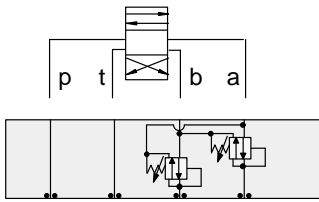
|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing/Relieving Valve |  |  |
|               | PPFB Page 3.10                          |  |  |
|               |   |  |  |
|               |   |  |  |
| OTHER VALVES: |   |  |  |



# ISO 05 SANDWICH BODIES



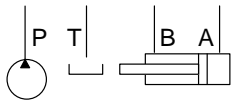
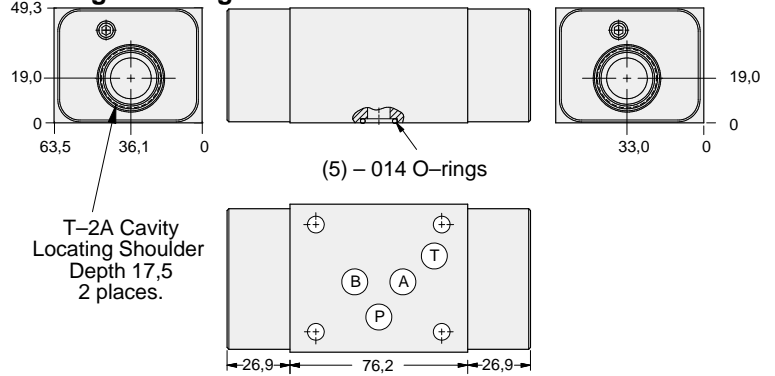
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Tanks and Drains to  
Opposite Port

### Reducing/Relieving Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BBY</b> |            | <b>BBY/S</b> |            |

05 REDUCING/RELIEVING

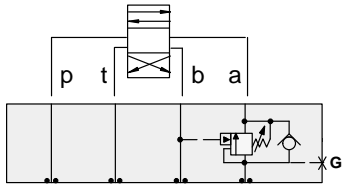
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing/Relieving Valve |  |  |
|   | PPFB Page 3.10                          |  |  |
|   |   |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 SANDWICH BODIES



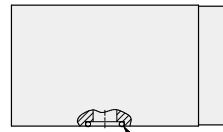
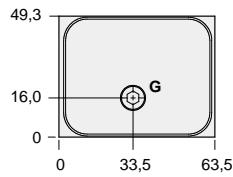
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



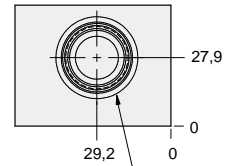
### FUNCTION

On A Pilot from B

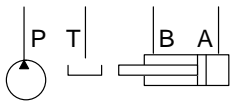
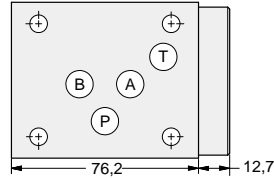
### Counterbalance Valves



(5) - 014 O-rings



T-2A Cavity Locating Shoulder Depth 29,7



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBA</b>   |            | <b>BBA/S</b> |            |
| .25 BSPP                | <b>BBA/M</b> |            | <b>BBA/T</b> |            |

05 COUNTERBALANCE

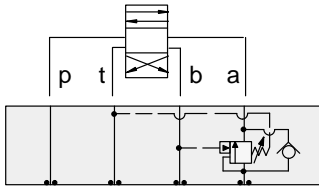
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | <b>CBEA Page 4.10</b>                   |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | <b>CBEG Page 4.12</b>                   |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 SANDWICH BODIES



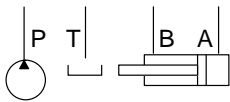
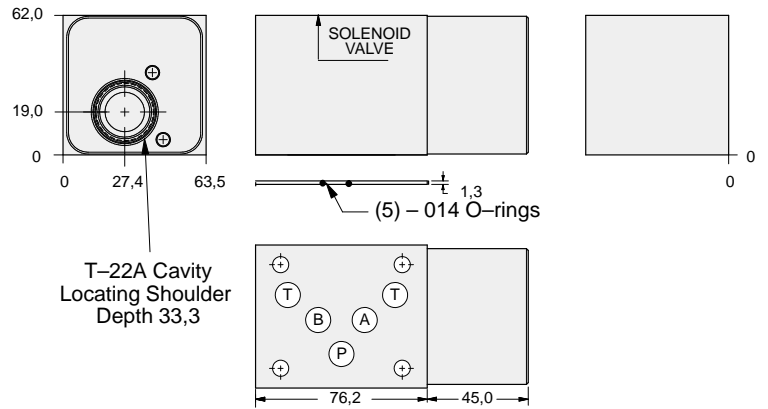
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



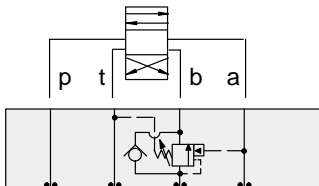
### FUNCTION

On **A** Pilot from **B**  
Vent to **T**

### Counterbalance Valves



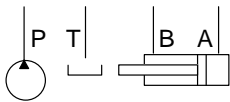
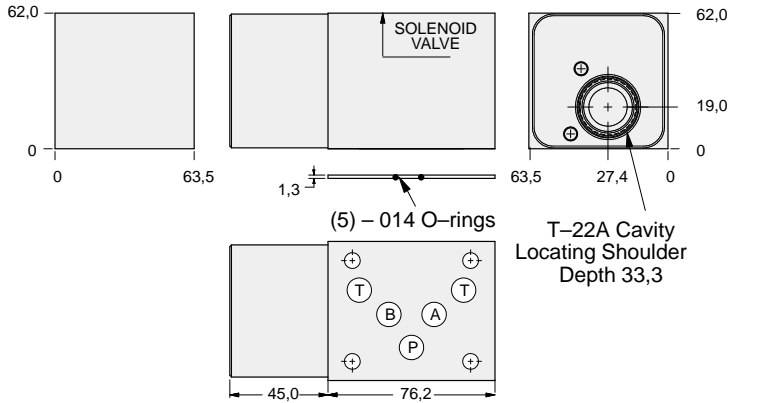
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NBA</b> |            | <b>NBA/S</b> |            |



### FUNCTION

On **B** Pilot from **A**  
Vent to **T**

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>NBB</b> |            | <b>NBB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|               | CWEA Page 4.18                               |  |  |
|               | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|               | CWEG Page 4.20                               |  |  |
| OTHER VALVES: |  |  |  |

05 COUNTERBALANCE

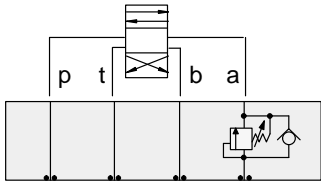


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

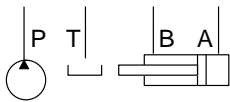
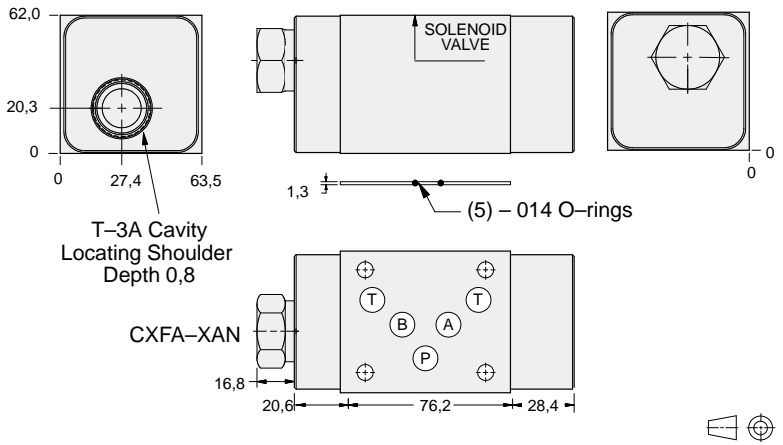
05 COUNTERBALANCE



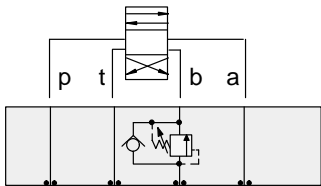
### FUNCTION

On **A**  
No Pilot Assist

### Counterbalance Valves



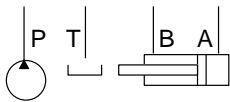
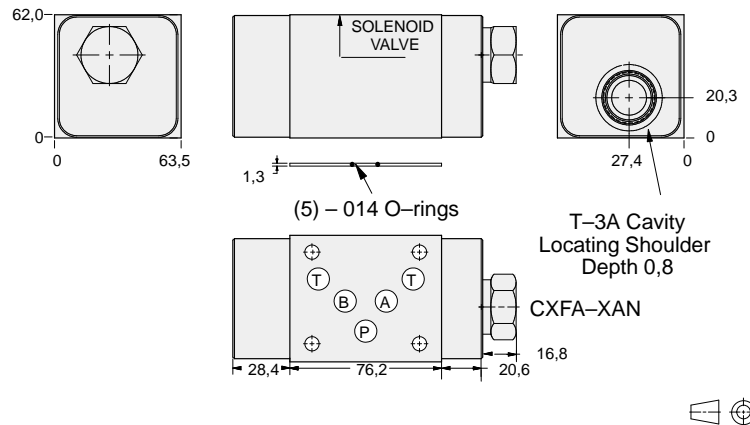
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CB4</b> |            | <b>CB4/S</b> |            |



### FUNCTION

On **B**  
No Pilot Assist

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CB5</b> |            | <b>CB5/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |                            |  |  |
|----------------------|----------------------------|--|--|
|                      | Direct Acting Relief Valve |  |  |
|                      | RDFA Page 1.10             |  |  |
|                      |                            |  |  |
|                      |                            |  |  |
| <b>OTHER VALVES:</b> |                            |  |  |

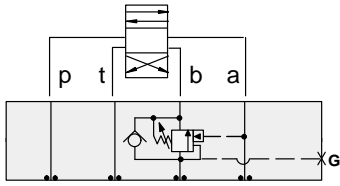




# ISO 05 SANDWICH BODIES



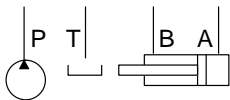
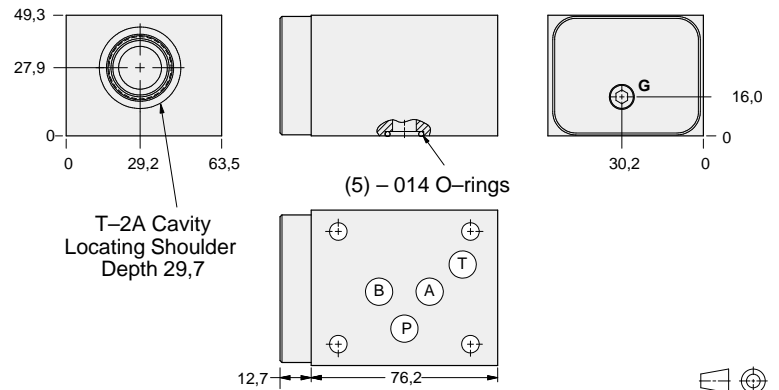
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **B**  
Pilot from **A**

### Counterbalance Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBB</b>   |            | <b>BBB/S</b> |            |
| .25 BSPP                | <b>BBB/M</b> |            | <b>BBB/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

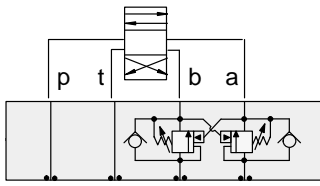
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|                      | <b>CBEA Page 4.10</b>                   |  |  |
|                      | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|                      | <b>CBEG Page 4.12</b>                   |  |  |
|                      | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|                      | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 05 SANDWICH BODIES



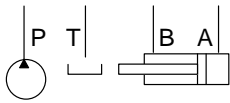
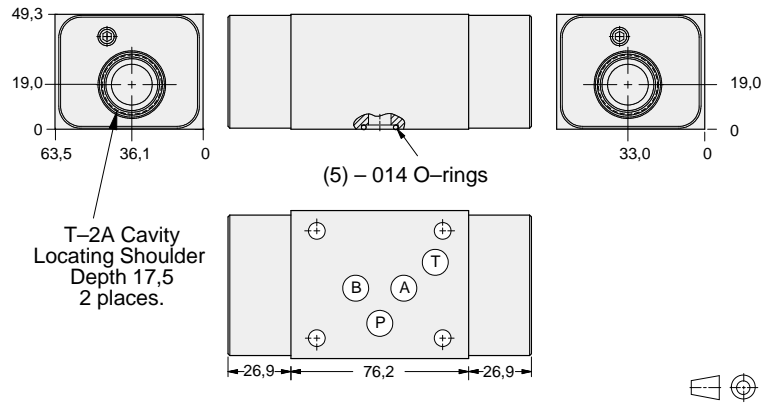
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Cross-Piloted

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BBY</b> |            | <b>BBY/S</b> |            |

05 COUNTERBALANCE

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

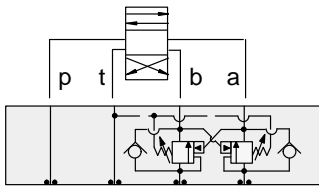
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|                      | <b>CBEA Page 4.10</b>                   |  |  |
|                      | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|                      | <b>CBEG Page 4.12</b>                   |  |  |
|                      | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|                      | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 05 SANDWICH BODIES



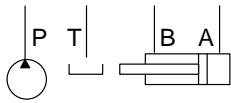
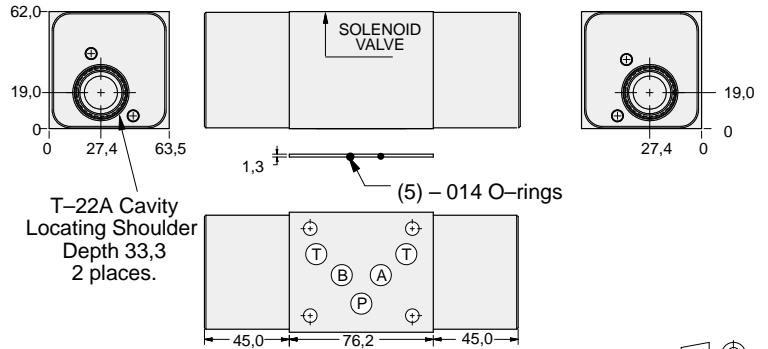
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NBY</b> |            | <b>NBY/S</b> |            |

05 COUNTERBALANCE

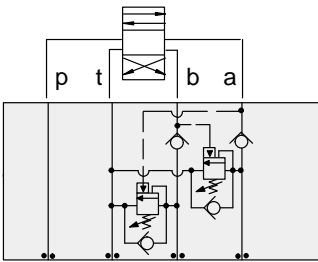
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|   | <b>CWEA Page 4.18</b>                        |  |  |
|   | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|   | <b>CWEG Page 4.20</b>                        |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 05 SANDWICH BODIES



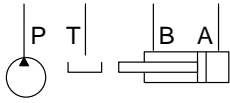
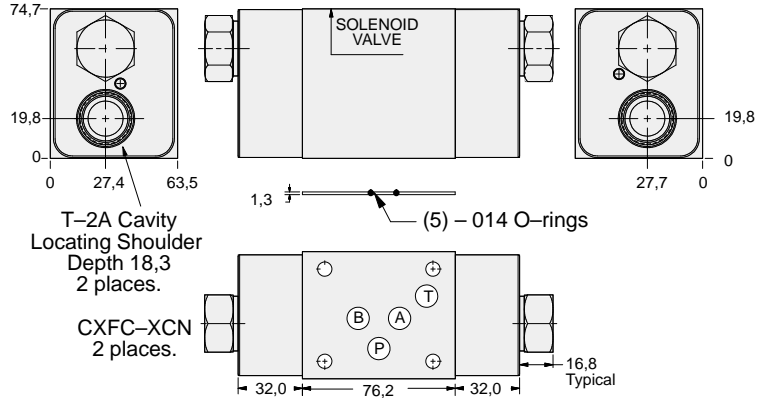
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

Cushion Lock  
Circuit  
On **A** and **B**

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BB8</b> |            | <b>BB8/S</b> |            |

05 P.O. CHECK

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|                      | <b>CBEA Page 4.10</b>                   |  |  |
|                      | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|                      | <b>CBEG Page 4.12</b>                   |  |  |
|                      | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|                      | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

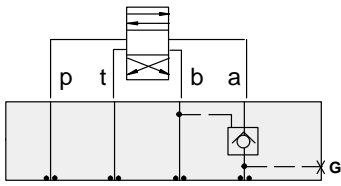


# ISO 05 SANDWICH BODIES



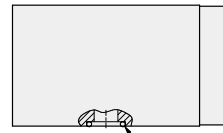
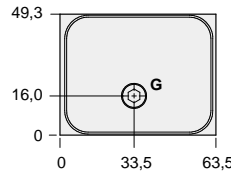
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves

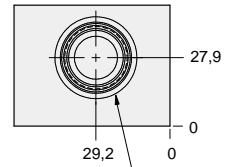


### FUNCTION

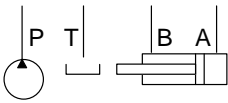
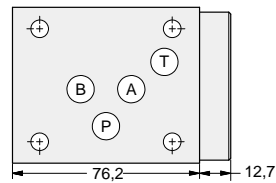
On A  
Pilot from B



(5) - 014 O-rings



T-2A Cavity  
Locating Shoulder  
Depth 29,7



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBA</b>   |            | <b>BBA/S</b> |            |
| .25 BSPP                | <b>BBA/M</b> |            | <b>BBA/T</b> |            |

05 P.O. CHECK

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | <i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i> |  |  |
|   | <b>CKEB Page 4.16</b>                             |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |

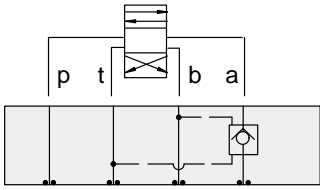


# ISO 05 SANDWICH BODIES



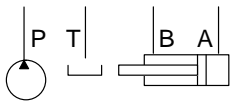
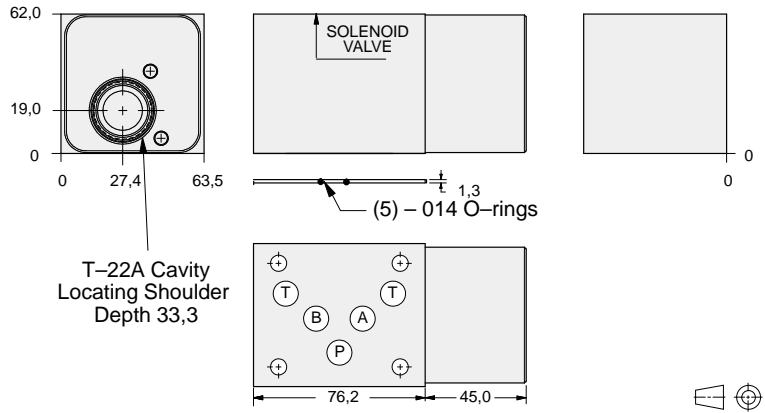
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



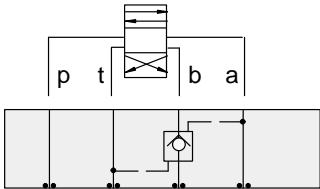
### FUNCTION

On A  
Pilot from B  
Vent to T



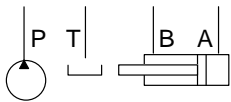
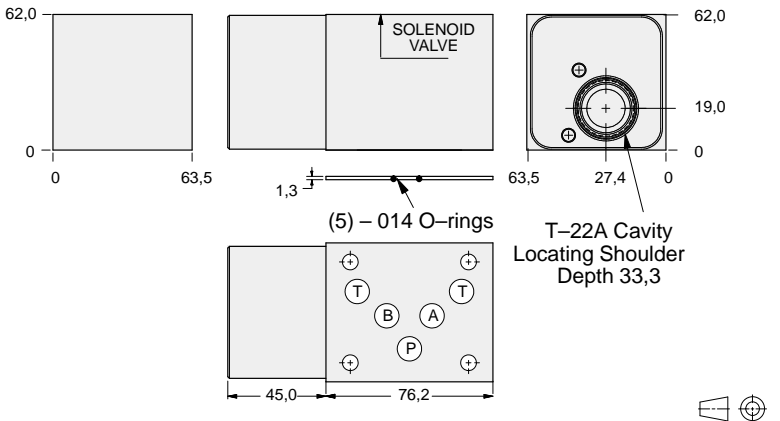
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NBA</b> |            | <b>NBA/S</b> |            |

## Pilot Operated Check Valves



### FUNCTION

On B  
Pilot from A  
Vent to T



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>NBB</b> |            | <b>NBB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|                      | <b>CVEV Page 4.22</b>                                |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

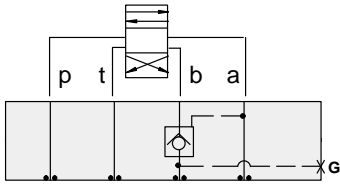


# ISO 05 SANDWICH BODIES



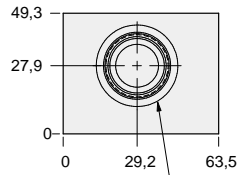
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves

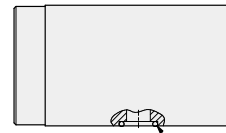


### FUNCTION

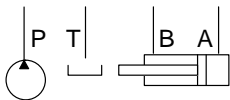
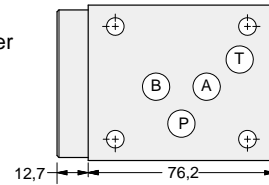
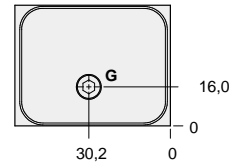
On **B**  
Pilot from **A**



T-2A Cavity  
Locating Shoulder  
Depth 29,7



(5) – 014 O-rings



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BBB</b>   |            | <b>BBB/S</b> |            |
| .25 BSPP                | <b>BBB/M</b> |            | <b>BBB/T</b> |            |

05 P.O. CHECK

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | <i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i> |  |  |
|   | <b>CKEB Page 4.16</b>                             |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |

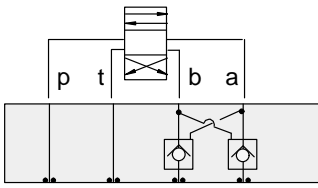


# ISO 05 SANDWICH BODIES



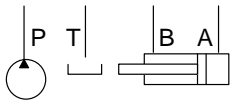
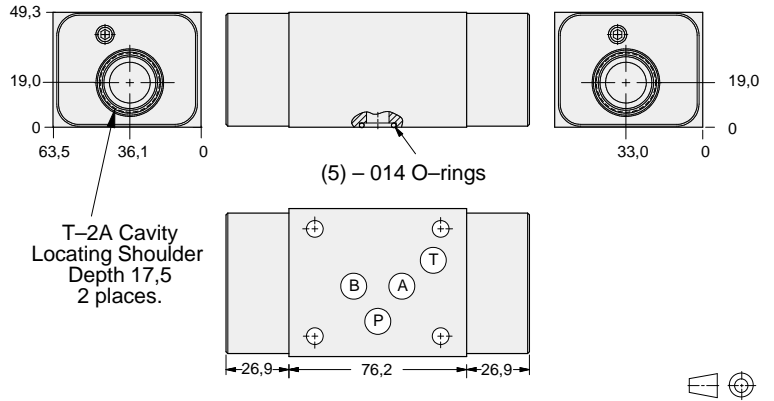
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



### FUNCTION

On A and B  
Cross-Piloted



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| BBY        |            | BBY/S      |            |

05 P.O. CHECK

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|               | CKEB Page 4.16                             |  |  |
|               |  |  |  |
|               |  |  |  |
| OTHER VALVES: |  |  |  |



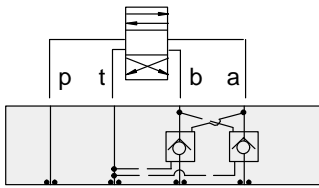


# ISO 05 SANDWICH BODIES



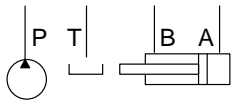
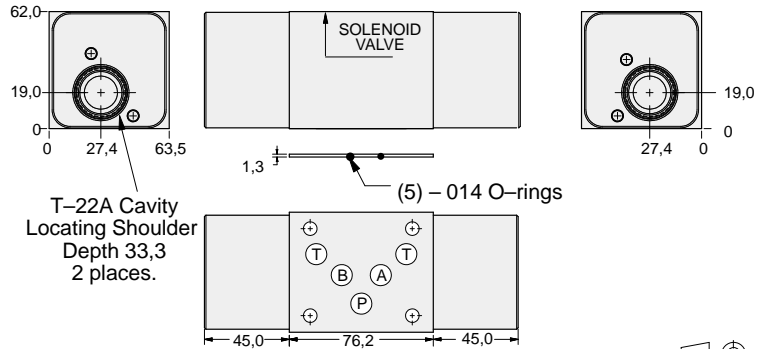
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| NBY        |            | NBY/S      |            |

05 COUNTERBALANCE

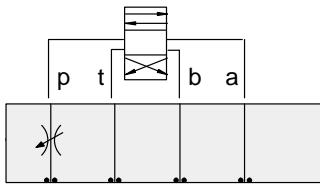
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|   | CVEV Page 4.22                                       |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 05 SANDWICH BODIES



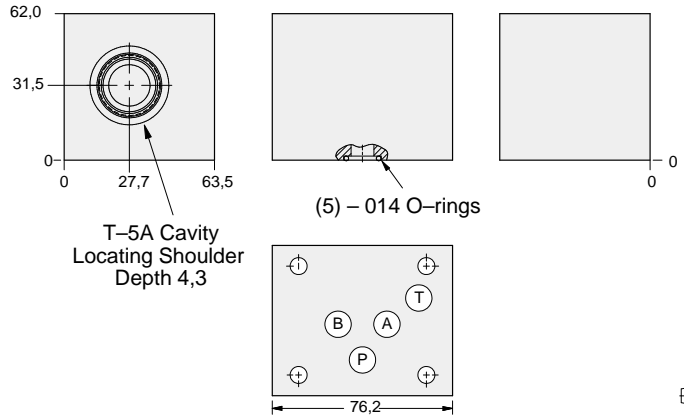
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



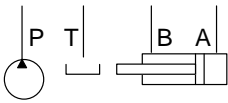
### FUNCTION

Meter-In P

### Flow Control Valves



05 FLOW CONTROL



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBP</b> |            | <b>DBP/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

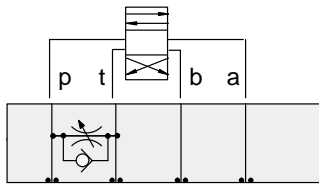
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve                    |  |  |
|               | NFDC Page 5.12                                   |  |  |
|               | Fixed Orifice, Pressure-Compensated Flow Control |  |  |
|               | FXDA Page 5.20                                   |  |  |
| OTHER VALVES: |  |  |  |



# ISO 05 SANDWICH BODIES



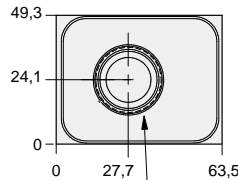
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



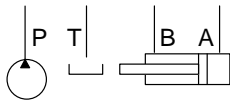
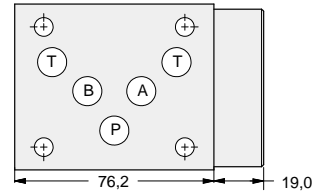
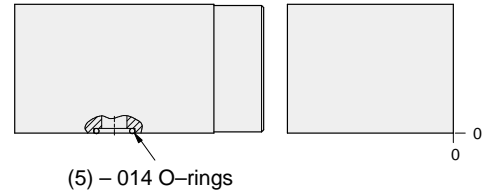
### FUNCTION

Bleed-Off  
P to T

### Flow Control Valves



T-5A Cavity  
Locating Shoulder  
Depth 0,8



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DBQ        |            | DBQ/S      |            |

05 FLOW CONTROL

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

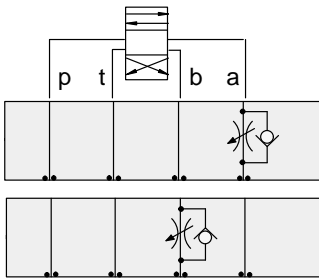
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFDC Page 5.12   |  | FXDA Page 5.20   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCEB Page 5.16   |  | FCDB Page 5.22   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NCEC Page 5.18   |  | FDCB Page 5.24   |
| OTHER VALVES: | CNEC   |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

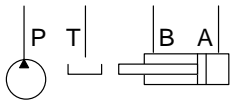
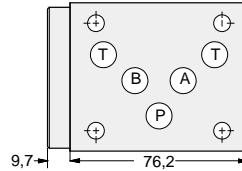
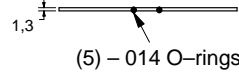
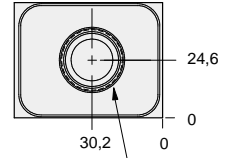
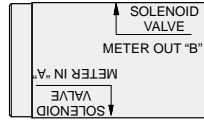
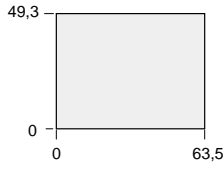


### FUNCTION

Meter-In A

Meter-Out B

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBB</b> |            | <b>DBB/S</b> |            |

05 FLOW CONTROL

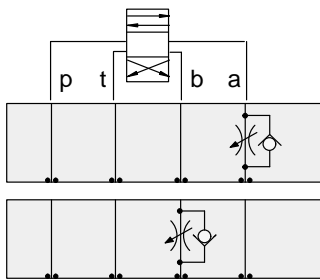
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |   |
|---|--|--|---|
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check<br><b>NCEB Page 5.16</b>                    |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check<br><b>FDCB Page 5.24</b> |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow<br><b>NCEC Page 5.18</b>          |  |   |
|   | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check<br><b>FCDB Page 5.22</b> |  |   |
| <b>OTHER VALVES:</b>                            | <b>CNEC</b>  |  |   |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

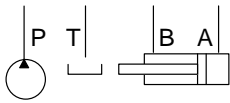
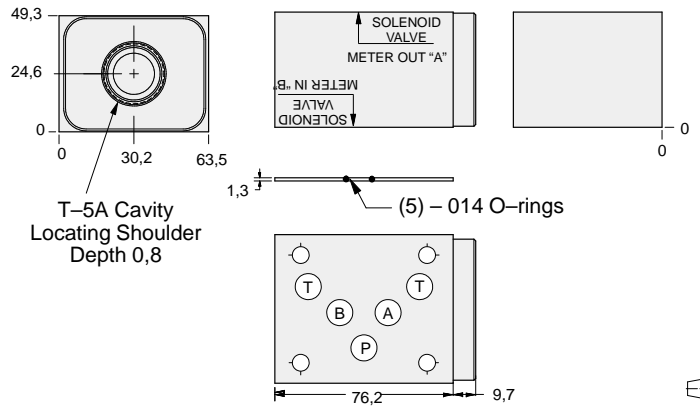


### FUNCTION

Meter-Out A

Meter-In B

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBA</b> |            | <b>DBA/S</b> |            |

05 FLOW CONTROL

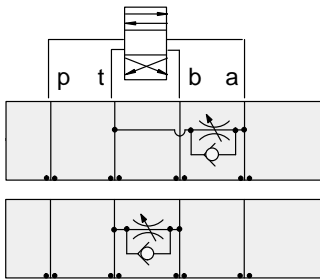
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check                    |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|   | NCEB Page 5.16  |  | FDCB Page 5.24   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow          |  |  |
|   | NCEC Page 5.18  |  |  |
|   | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check |  |  |
|   | FCDB Page 5.22  |  |  |
| OTHER VALVES:                                   | CNEC  |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

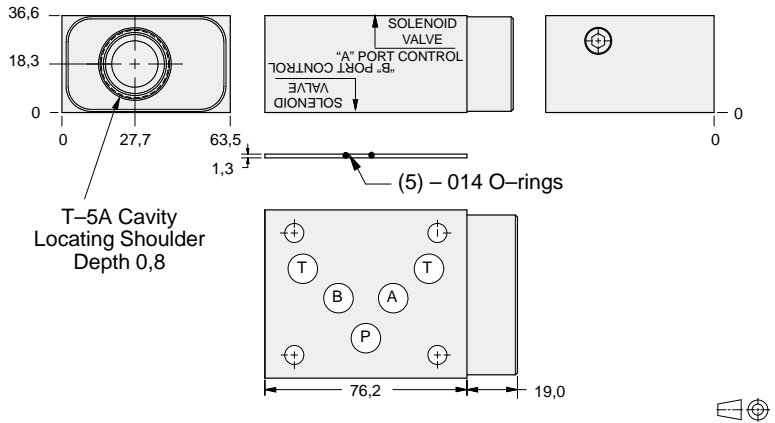


### FUNCTION

Bleed-Off  
A to T

Bleed-Off  
B to T

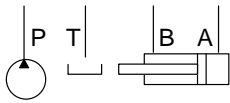
### Flow Control Valves



T-5A Cavity  
Locating Shoulder  
Depth 0,8

(5) - O14 O-rings

05 FLOW CONTROL



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBC</b> |            | <b>DBC/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

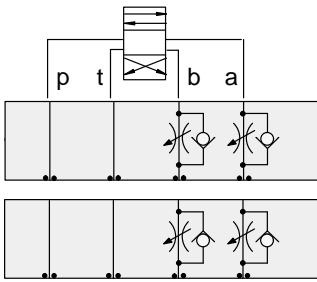
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFDC Page 5.12   |  | FXDA Page 5.20   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCEB Page 5.16   |  | FCDB Page 5.22   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NCEC Page 5.18   |  | FDCB Page 5.24   |
| OTHER VALVES: | CNEC   |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

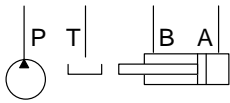
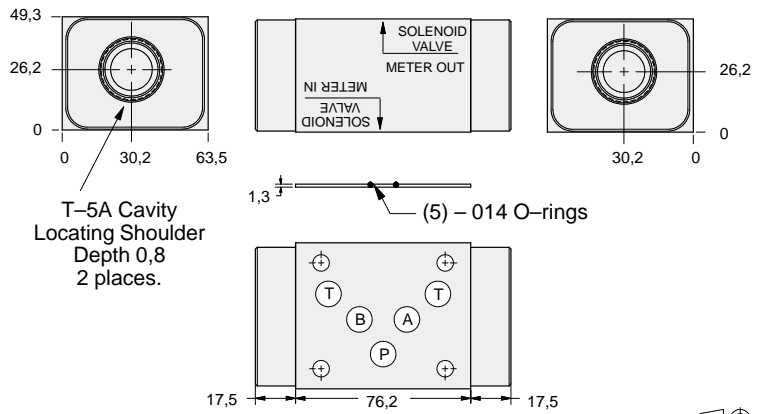


### FUNCTION

Meter-In  
A and B

Meter-Out  
A and B

### Flow Control Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DBY        |            | DBY/S      |            |

05 FLOW CONTROL

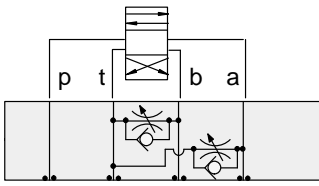
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |   |
|---|--|--|---|
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check<br><b>NCEB Page 5.16</b>                    |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check<br><b>FDCB Page 5.24</b> |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow<br><b>NCEC Page 5.18</b>          |  |   |
|   | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check<br><b>FCDB Page 5.22</b> |  |   |
|   | <b>OTHER VALVES:</b> CNEC  |  |   |



# ISO 05 SANDWICH BODIES



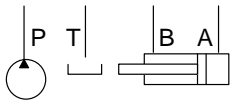
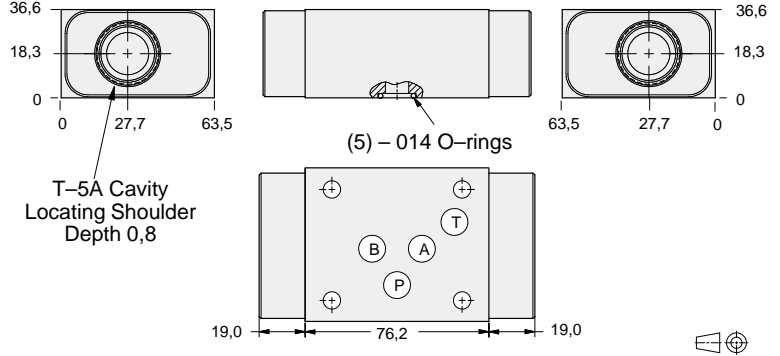
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

Bleed-Off  
A and B to T

### Flow Control Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DBX        |            | DBX/S      |            |

05 FLOW CONTROL

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFDC Page 5.12   |  | FXDA Page 5.20   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCEB Page 5.16   |  | FCDB Page 5.22   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NCEC Page 5.18   |  | FDCB Page 5.24   |
| OTHER VALVES: | CNEC   |  |  |

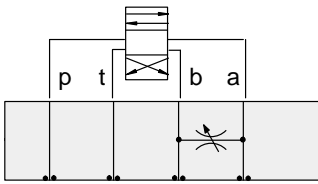




# ISO 05 SANDWICH BODIES



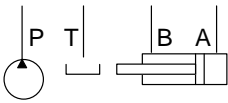
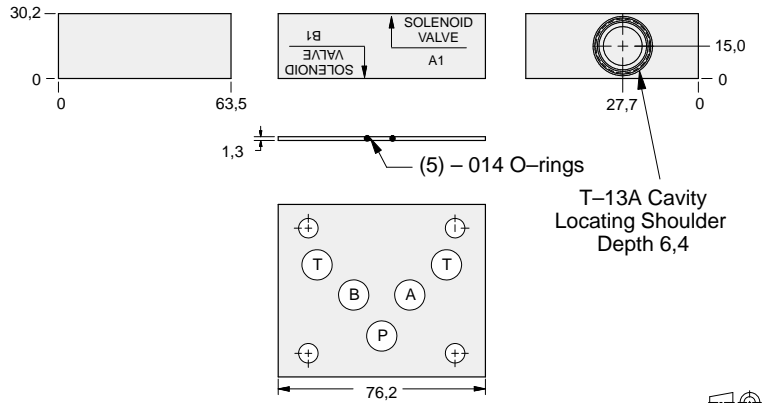
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

Bleed-Off  
A to B and  
B to A

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBS</b> |            | <b>DBS/S</b> |            |

05 FLOW CONTROL

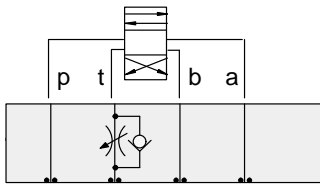
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |  |
|---|-------------------------------|--|--|
|   | Fully Adjustable Needle Valve |  |  |
|   | NFDC Page 5.12                |  |  |
|   |                               |  |  |
|   |                               |  |  |
| OTHER VALVES:                                   | CNEC                          |  |  |



# ISO 05 SANDWICH BODIES



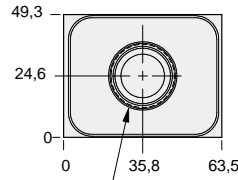
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



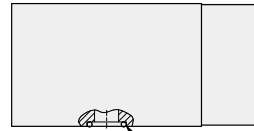
## FUNCTION

Meter-Out T

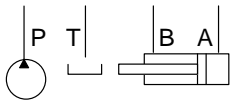
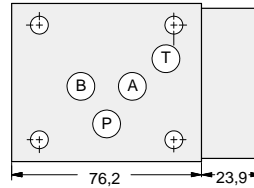
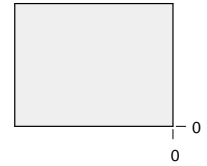
## Flow Control Valves



T-5A Cavity  
Locating Shoulder  
Depth 1,5



(5) - 014 O-rings



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DBT        |            | DBT/S      |            |

05 FLOW CONTROL

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

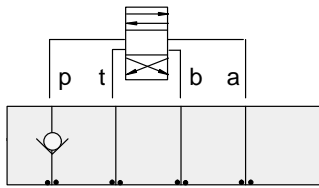
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFDC Page 5.12   |  | FXDA Page 5.20   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCEB Page 5.16   |  | FCDB Page 5.22   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NCEC Page 5.18   |  | FDCB Page 5.24   |
| OTHER VALVES: | CNEC   |  |  |



# ISO 05 SANDWICH BODIES



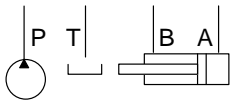
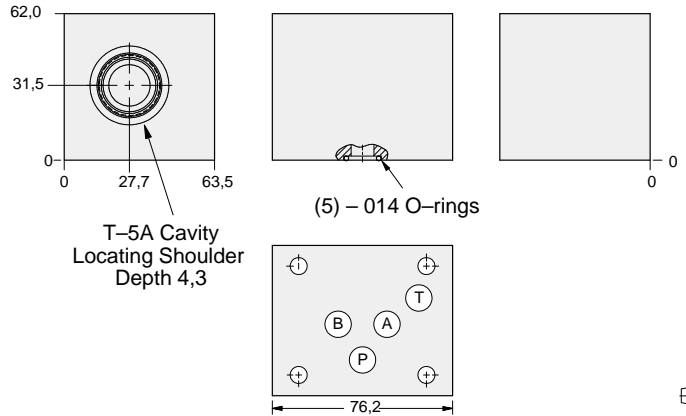
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On P

### Check Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DBP        |            | DBP/S      |            |

05 CHECK

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

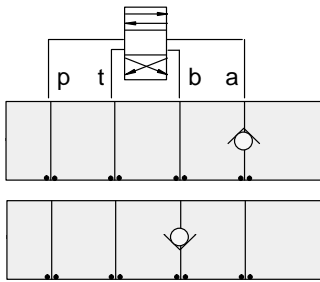
|               |   |  |  |
|---------------|---|--|--|
|               | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|               | CXFA Page 5.08  |  |  |
|               |   |  |  |
|               |   |  |  |
|               |   |  |  |
| OTHER VALVES: |   |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

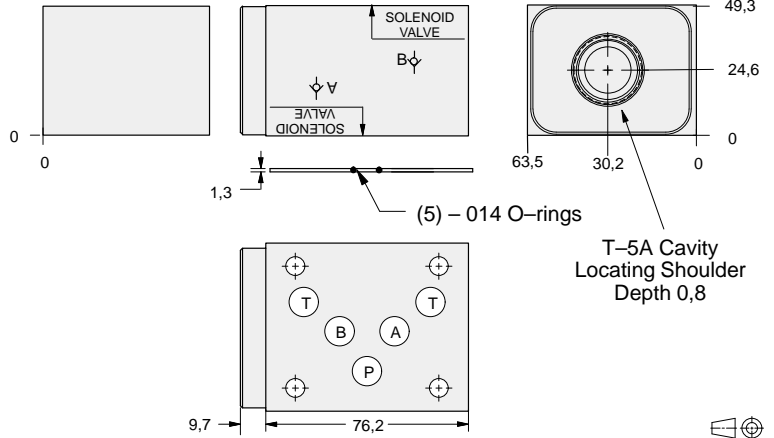


### FUNCTION

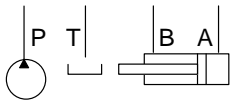
**On A**  
Free Flow Out  
of Valve

**On B**  
Free Flow Into  
Valve

### Check Valves



05 CHECK



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBK</b> |            | <b>DBK/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

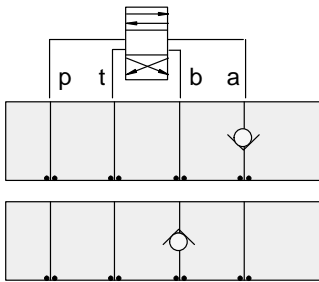
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXFA Page 5.08</b>                                     |  |  |
|                      |   |  |  |
|                      |   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

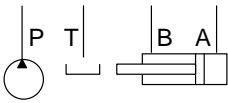
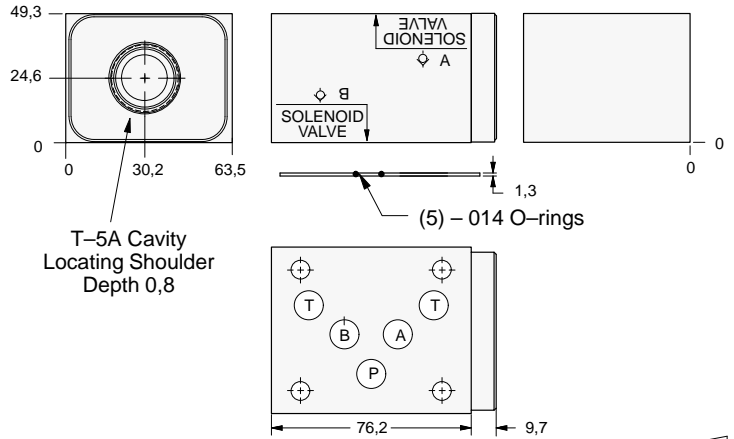


### FUNCTION

**On A**  
Free Flow Into  
Valve

**On B**  
Free Flow Out  
of Valve

### Check Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DBJ        |            | DBJ/S      |            |

05 CHECK

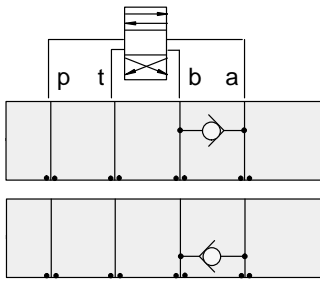
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | CXFA Page 5.08   |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

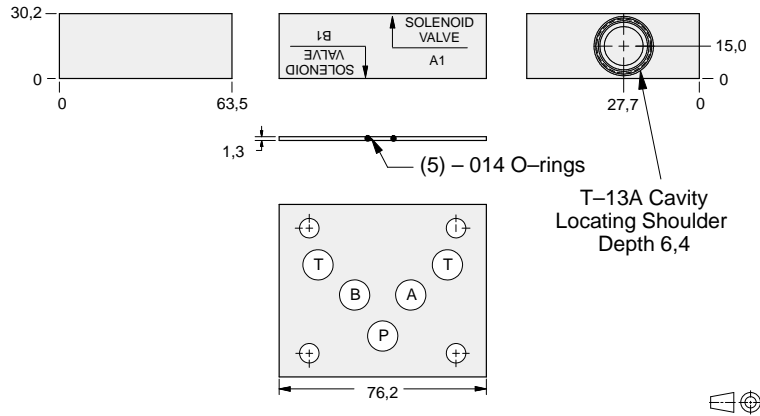


### FUNCTION

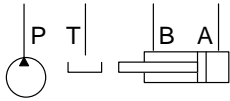
B to A

A to B

### Check Valves



05 CHECK



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBS</b> |            | <b>DBS/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

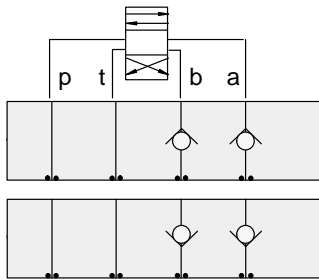
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | CXDA Page 5.08   |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

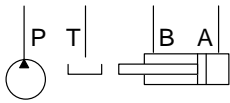
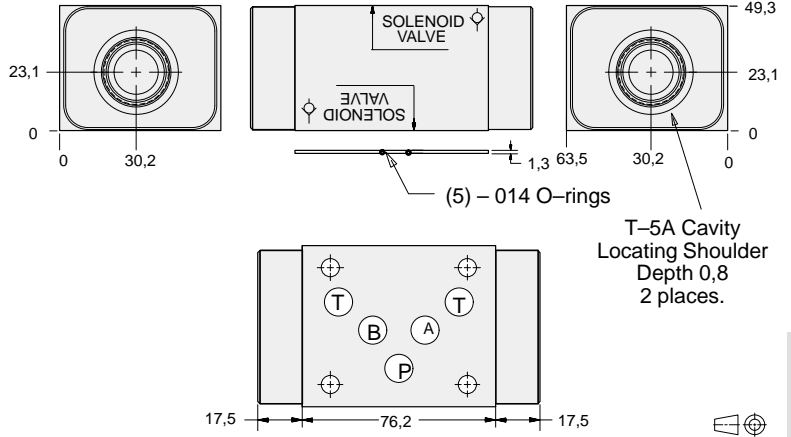


### FUNCTION

On **A** and **B**  
Free Flow **Out**  
of Valve

On **A** and **B**  
Free Flow **Into** Valve

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBL</b> |            | <b>DBL/S</b> |            |

05 CHECK

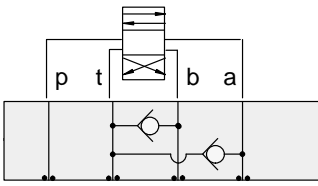
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | CXFA Page 5.08   |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 05 SANDWICH BODIES



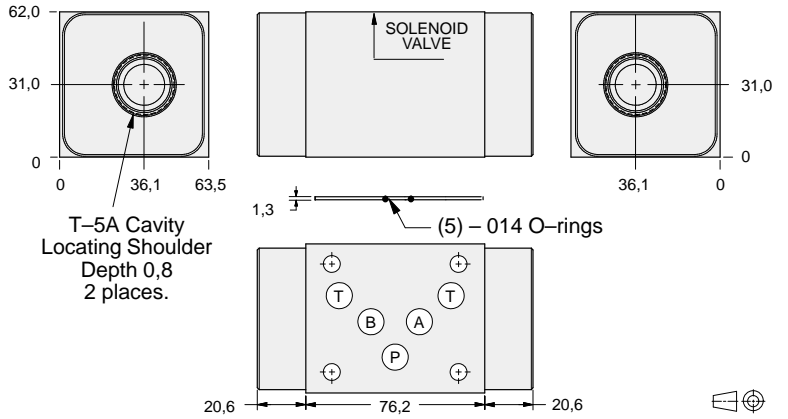
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



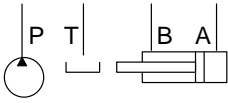
### FUNCTION

T to A and B

### Check Valves



05 CHECK



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBW</b> |            | <b>DBW/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | <b>CXFA Page 5.08</b>                                  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

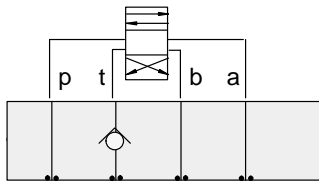




# ISO 05 SANDWICH BODIES



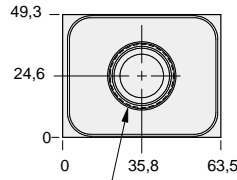
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On T

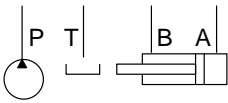
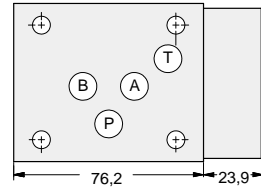
### Check Valves



T-5A Cavity  
Locating Shoulder  
Depth 1,5



(5) - 014 O-rings



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DBT        |            | DBT/S      |            |



05 CHECK

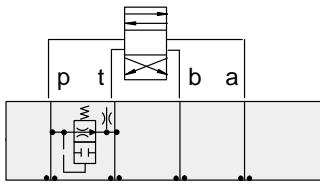
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | CXFA Page 5.08   |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 05 SANDWICH BODIES



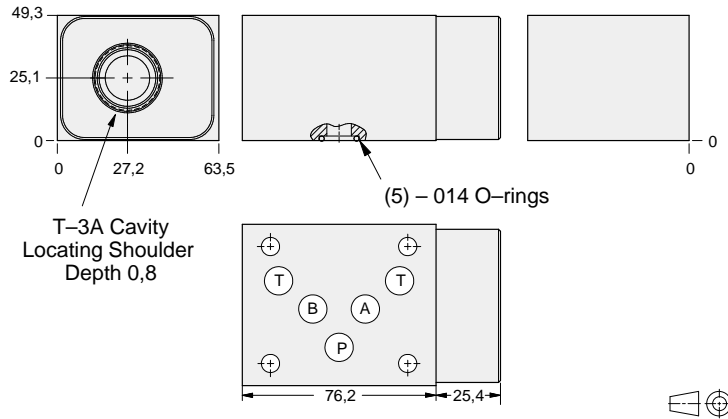
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



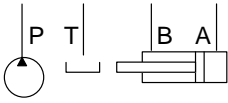
### FUNCTION

Air-Bleed  
and Start-Up

### Circuit Savers



05 CIRCUIT SAVER



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CBP</b> |            | <b>CBP/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

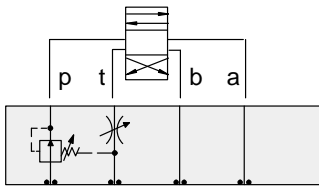
|               |                              |  |  |
|---------------|------------------------------|--|--|
|               | Air Bleed and Start-up Valve |  |  |
|               | NQEB Page 10.16              |  |  |
|               |                              |  |  |
|               |                              |  |  |
| OTHER VALVES: |                              |  |  |



# ISO 05 SANDWICH BODIES



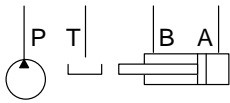
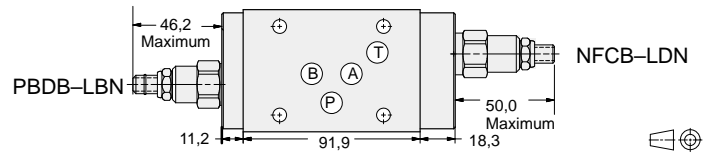
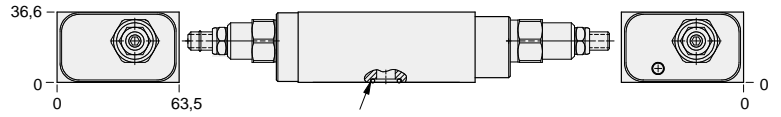
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

Pilot Choke

### Circuit Savers



| ALUMINIUM          |                   | SG IRON              |                   |
|--------------------|-------------------|----------------------|-------------------|
| <i>Model Code</i>  | <i>List Price</i> | <i>Model Code</i>    | <i>List Price</i> |
| <b>YNAB-LDN-BA</b> |                   | <b>YNAB-LDN-BA/S</b> |                   |

05 CIRCUIT SAVER

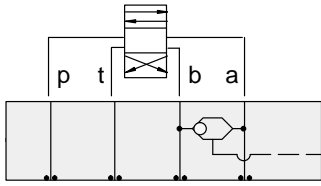


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

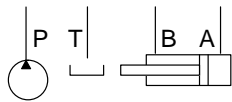
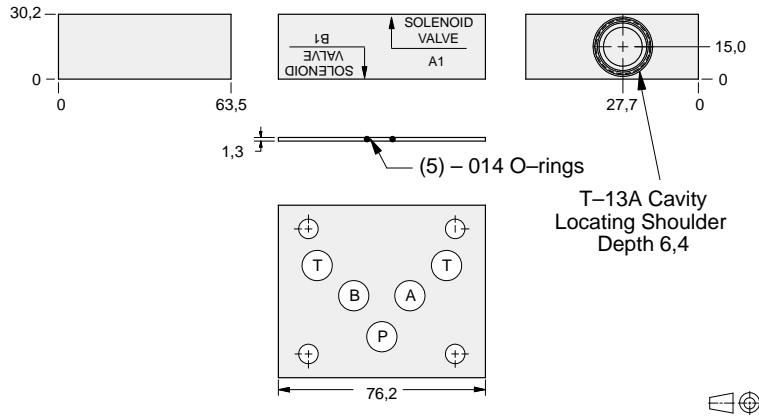
05 CIRCUIT SAVER



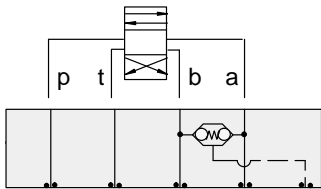
### FUNCTION

Shuttle  
**A and B**  
Output External

### Circuit Savers



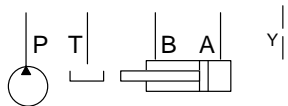
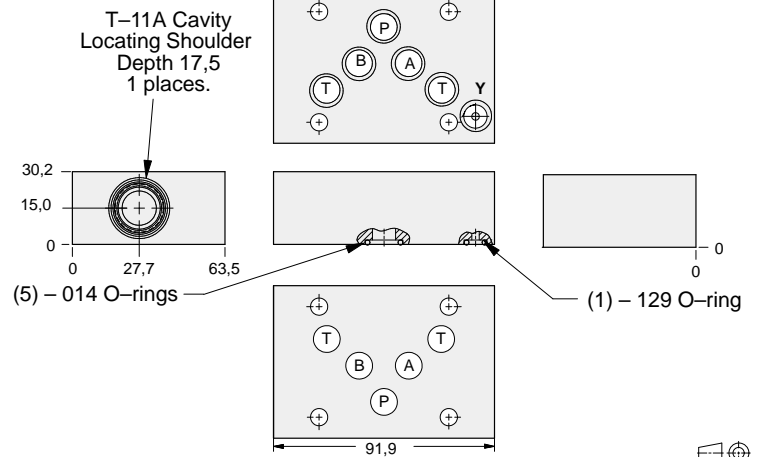
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DBS</b> |            | <b>DBS/S</b> |            |



### FUNCTION

Checks from  
**A and B**-Adapter  
to ISO 05 w/Y Port

### Circuit Savers



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BJS</b> |            | <b>BJS/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

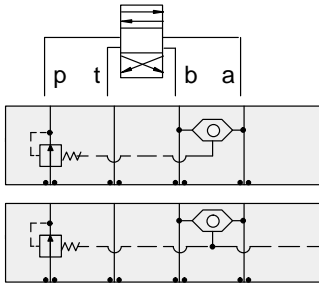
|               |  |  |  |
|---------------|--|--|--|
|               | 2 Port Shuttle Valve, Signal External  |  |  |
|               | CSAA Page 10.09 (use with DBS)         |  |  |
|               | 3 Port Shuttle Valve, Signal at Port 3 |  |  |
|               | CDAB Page 10.10 (use with BJS)         |  |  |
| OTHER VALVES: |  |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

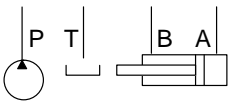
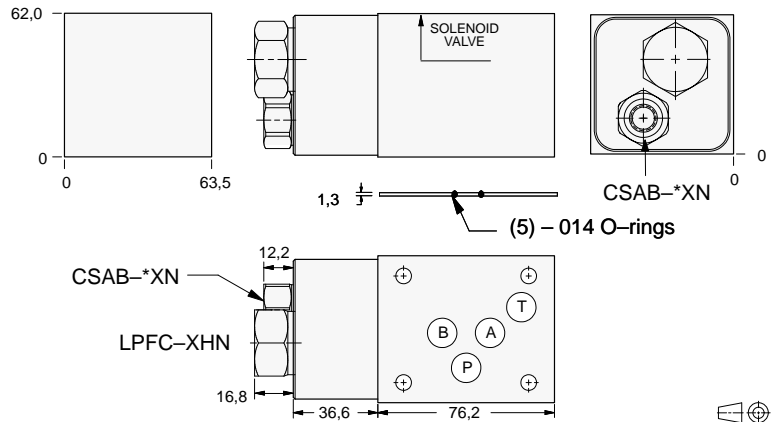


### FUNCTION

Pressure Compensator (Restrictive)

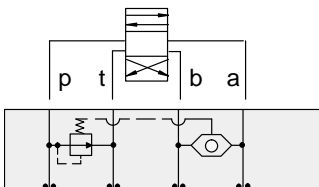
Pressure Compensator (Restrictive) w/Load-Sensing Port

### Circuit Savers



| Shuttle Cartridge | External Shuttle Port | ALUMINIUM     |            | SG IRON       |            |
|-------------------|-----------------------|---------------|------------|---------------|------------|
|                   |                       | Model Code    | List Price | Model Code    | List Price |
| CSAB-XXN          | None                  | YFEJ-XHN-BA   |            | YFEJ-XHN-BA/S |            |
| CSAB-AXN          | SAE-4                 | YFEP-XHN-BA   |            | YFEP-XHN-BA/S |            |
| CSAB-BXN          | .25 BSPP              | YFEP-XHN-BA/M |            | YFEP-XHN-BA/T |            |

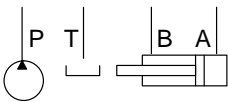
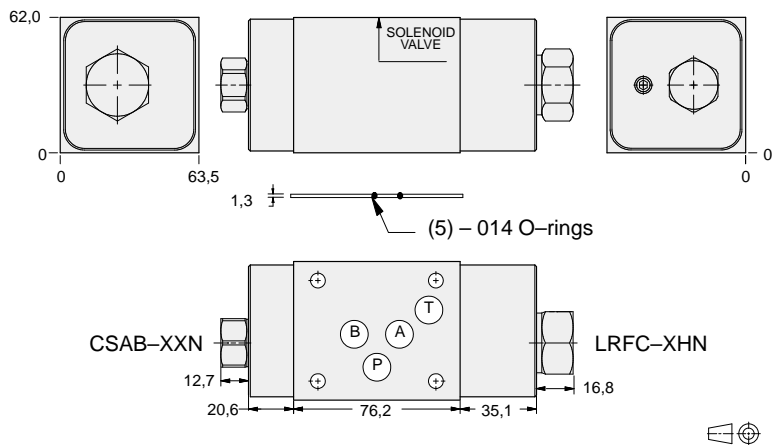
05 CIRCUIT SAVER



### FUNCTION

Pressure Compensator (Bypass)

### Circuit Savers



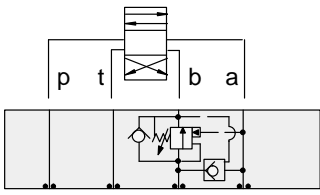
| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YFEV-XHN-BA |            | YFEV-XHN-BA/S |            |



# ISO 05 SANDWICH BODIES



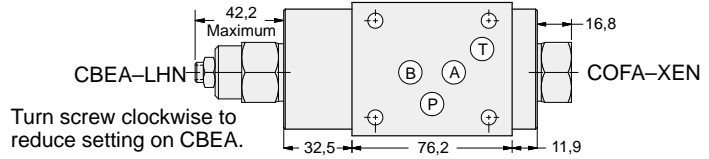
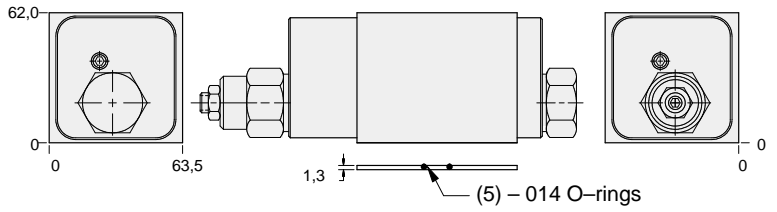
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



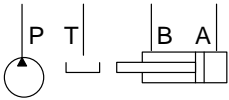
### FUNCTION

**B to A**  
Regenerative

### Circuit Savers

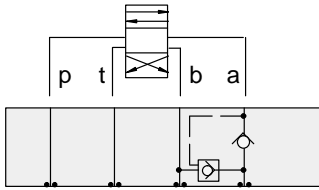


05 CIRCUIT SAVER



| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| YDES-LHN-BA       |                   | YDES-LHN-BA/S     |                   |

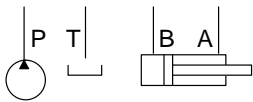
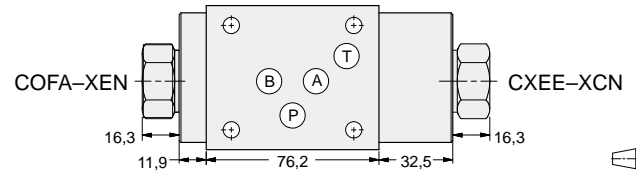
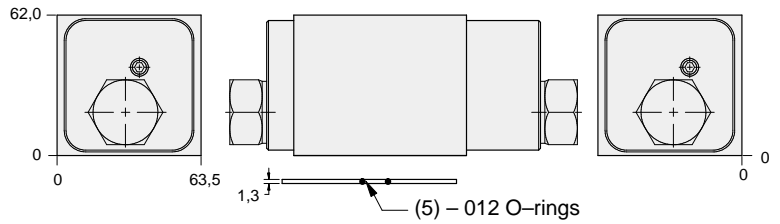
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

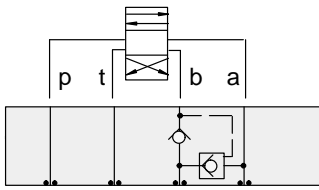
**A to B**  
Regenerative  
(Full Time)

### Circuit Savers



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDEV-XCN-BA |            | YDEV-XCN-BA/S |            |

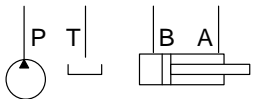
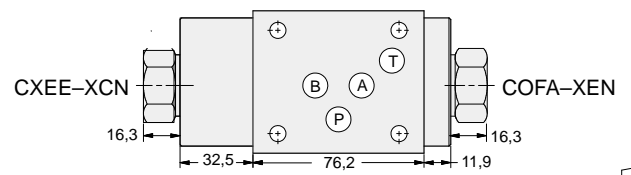
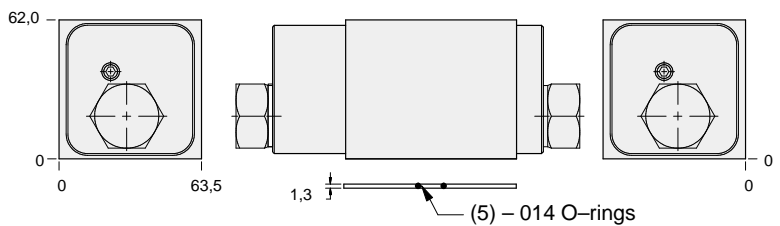
05 CIRCUIT SAVER



### FUNCTION

**B to A**  
Regenerative  
(Full Time)

### Circuit Savers



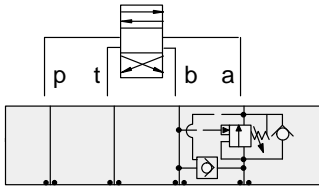
| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YDET-XCN-BA |            | YDET-XCN-BA/S |            |



# ISO 05 SANDWICH BODIES



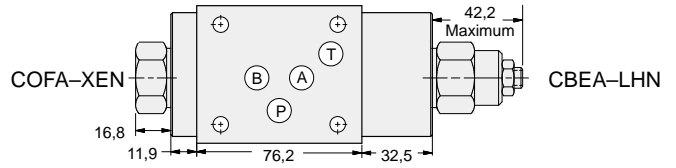
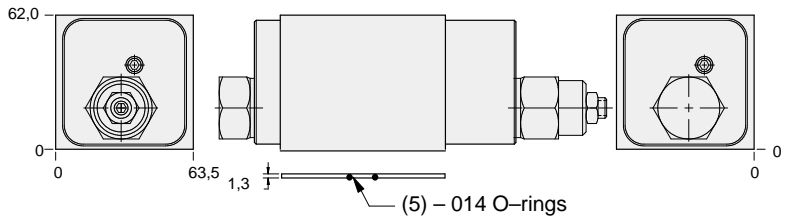
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



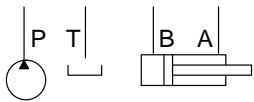
### FUNCTION

**A to B**  
Regenerative

### Circuit Savers



Turn screw clockwise to reduce setting on CBEA.



| ALUMINIUM          |                   | SG IRON              |                   |
|--------------------|-------------------|----------------------|-------------------|
| <i>Model Code</i>  | <i>List Price</i> | <i>Model Code</i>    | <i>List Price</i> |
| <b>YDER-LHN-BA</b> |                   | <b>YDER-LHN-BA/S</b> |                   |

05 CIRCUIT SAVER

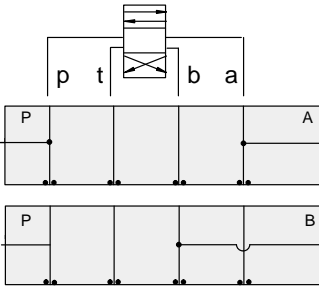




# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

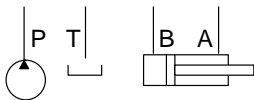
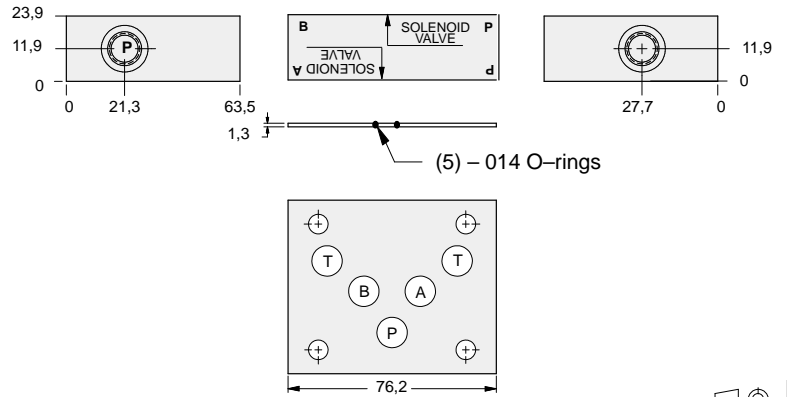


### FUNCTION

**P and A**  
Tap in Manifold

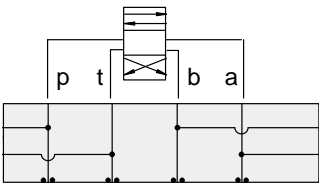
**P and B**  
Tap in Manifold

### Circuit Savers



| External Port | ALUMINIUM  |            | SG IRON      |            |
|---------------|------------|------------|--------------|------------|
|               | Model Code | List Price | Model Code   | List Price |
| SAE-4         | <b>ZPS</b> |            | <b>ZPS/S</b> |            |
| .250 BSPP     | <b>ZVE</b> |            | <b>ZVE/S</b> |            |
| .25 NPTF      | <b>ZXE</b> |            | <b>ZXE/S</b> |            |

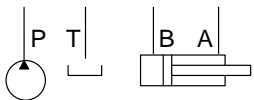
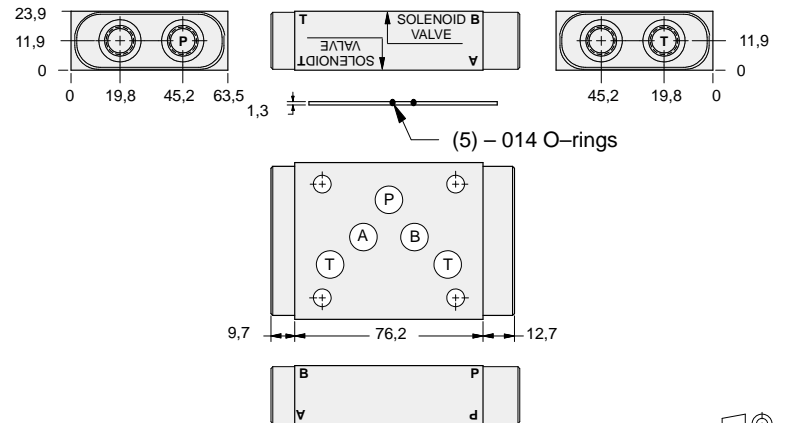
05 CIRCUIT SAVER



### FUNCTION

**P, T, A and B**  
Tap in Manifold

### Circuit Savers



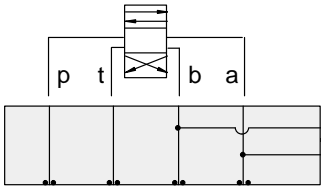
| External Port | ALUMINIUM  |            | SG IRON      |            |
|---------------|------------|------------|--------------|------------|
|               | Model Code | List Price | Part Number  | List Price |
| SAE-4         | <b>ZKL</b> |            | <b>ZKL/S</b> |            |
| .250 BSPP     | <b>ZKM</b> |            | <b>ZKM/S</b> |            |
| .25 NPTF      | <b>ZKK</b> |            | <b>ZKK/S</b> |            |



# ISO 05 SANDWICH BODIES



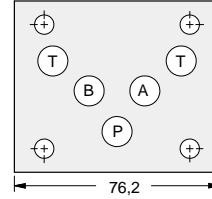
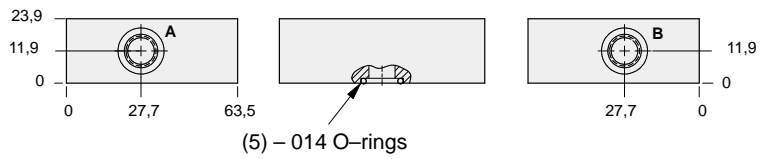
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



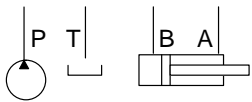
### FUNCTION

**A and B**  
Tap in Manifold

### Circuit Savers

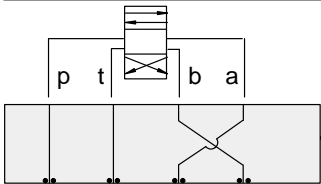


05 CIRCUIT SAVER



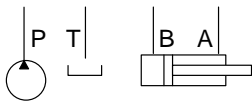
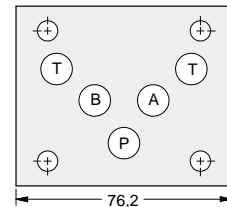
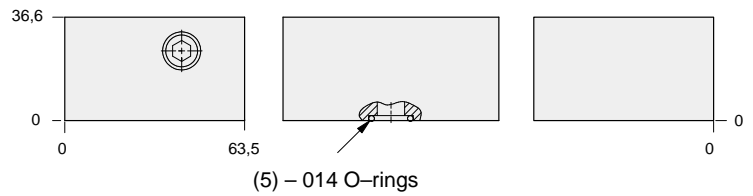
| External Ports | ALUMINIUM  |            | SG IRON      |            |
|----------------|------------|------------|--------------|------------|
|                | Model Code | List Price | Model Code   | List Price |
| SAE-4          | <b>ZPR</b> |            | <b>ZPR/S</b> |            |
| .25 NPTF       | <b>ZXD</b> |            | <b>ZXD/S</b> |            |
| .25 BSPP       | <b>ZVD</b> |            | <b>ZVD/S</b> |            |

### Circuit Savers



### FUNCTION

Swap Block  
Swaps **A** and **B**



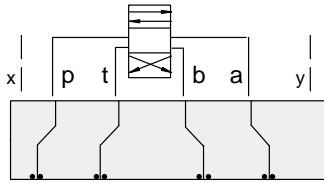
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>ZTB</b> |            | <b>ZTB/S</b> |            |



# ISO 05 SANDWICH BODIES



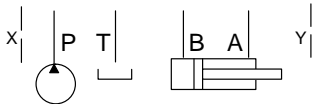
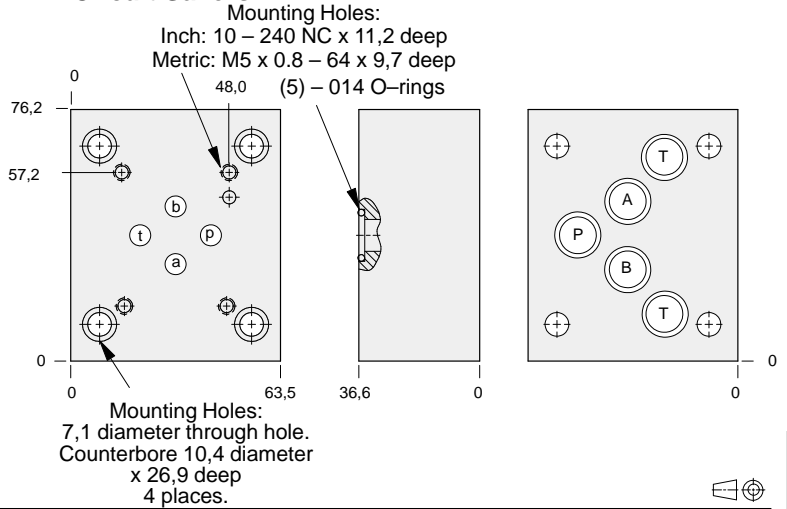
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

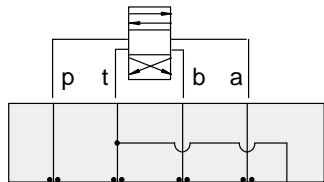
Adapter to Next Smaller Valve Pattern

### Circuit Savers



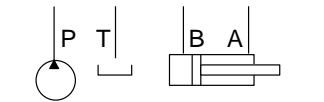
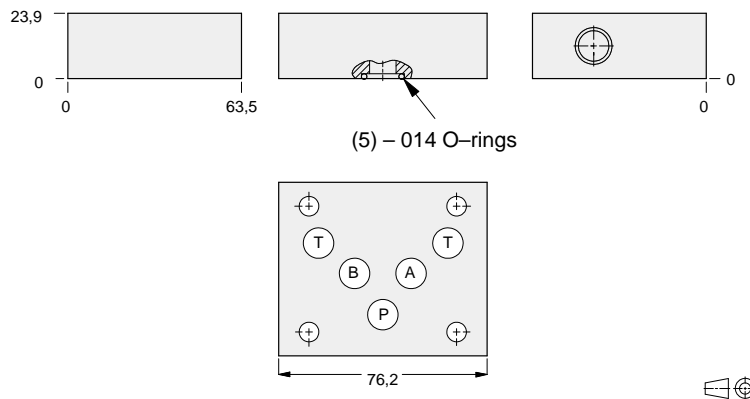
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZWU        |            | ZWU/S      |            |
| ZVT        |            | ZVT/S      |            |

### Circuit Savers



### FUNCTION

ISO 05 to ISO 05 with Dual Tank Ports



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| ZXC        |            | ZXC/S       |            |

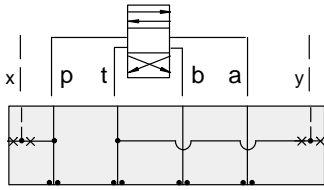
05 CIRCUIT SAVER



# ISO 05 SANDWICH BODIES



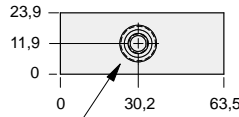
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



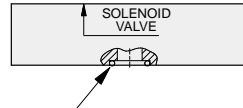
### FUNCTION

ISO 05 to ISO 05  
with **X** and **Y**  
Access to **X** and **Y** (Amer)

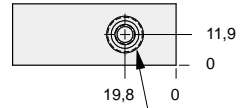
### Circuit Savers



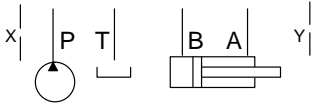
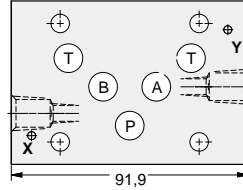
External Drain:  
Use .062 NPTF Plug  
Internal Drain:  
Use .250 NPTF Plug



(5) - 014 O-rings  
(1) 990-999-006 Installation Kit  
(includes plugs)

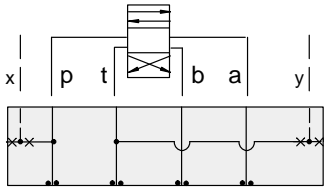


External Pilot:  
Use .062 NPTF Plug  
Internal Pilot:  
Use .250 NPTF Plug



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>ZSV</b> |            | <b>ZSV/S</b> |            |

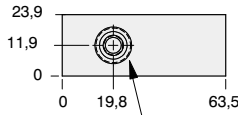
05 CIRCUIT SAVER



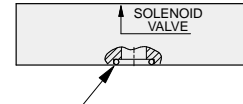
### FUNCTION

ISO 05 to ISO 05  
with **X** and **Y**  
Access to **X** and **Y** (Euro)

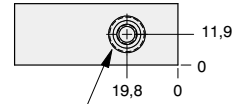
### Circuit Savers



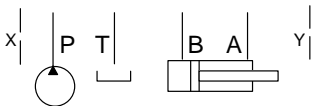
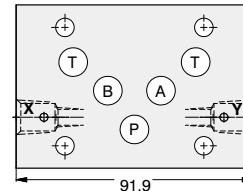
External Drain:  
Use .062 NPTF Plug  
Internal Drain:  
Use .250 NPTF Plug



(5) - 014 O-rings  
(1) 990-999-006 Installation Kit  
(includes plugs)



External Pilot:  
Use .062 NPTF Plug  
Internal Pilot:  
Use .250 NPTF Plug



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>ZST</b> |            | <b>ZST/S</b> |            |

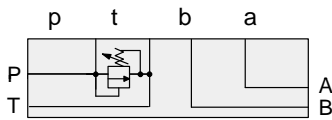


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates



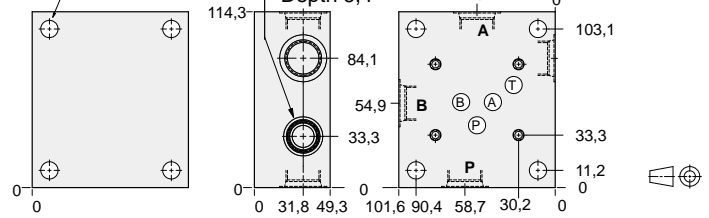
### FUNCTION

Relief P to T

Mounting Holes:  
11,2 diameter through hole.  
4 places.

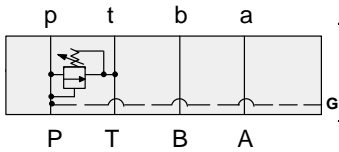
T-10A Cavity  
Locating Shoulder  
Depth 6,4

4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0



| Bolt Hole Interface | Ports A,B,P,T | ALUMINIUM  |            | SG IRON      |            |
|---------------------|---------------|------------|------------|--------------|------------|
|                     |               | Model Code | List Price | Model Code   | List Price |
| Inch                | .50 NPTF      | <b>FSC</b> |            | <b>FSC/S</b> |            |
| Inch                | SAE-10        | <b>FSK</b> |            | <b>FSK/S</b> |            |
| Metric              | .50 BSPP      | <b>FSV</b> |            | <b>FSV/S</b> |            |

## Rear Ported Subplates



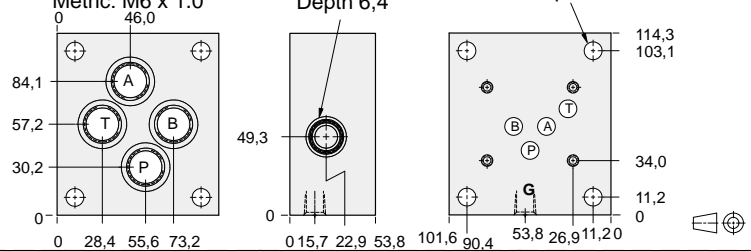
### FUNCTION

Relief P to T

4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0

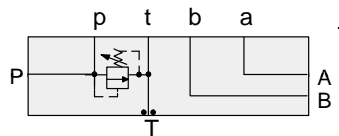
T-10A Cavity  
Locating Shoulder  
Depth 6,4

Mounting Holes:  
11,2 diameter through hole.  
4 places.



| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON      |            |
|---------------------|------------|---------------|------------|------------|--------------|------------|
|                     |            |               | Model Code | List Price | Model Code   | List Price |
| Inch                | .25 NPTF   | .50 NPTF      | <b>FRC</b> |            | <b>FRC/S</b> |            |
| Inch                | .25 NPTF   | SAE-10        | <b>FRK</b> |            | <b>FRK/S</b> |            |
| Metric              | .25 BSPP   | .50 BSPP      | <b>FRV</b> |            | <b>FRV/S</b> |            |

## Side Ported Subplates with Gasket Mount Tank Port



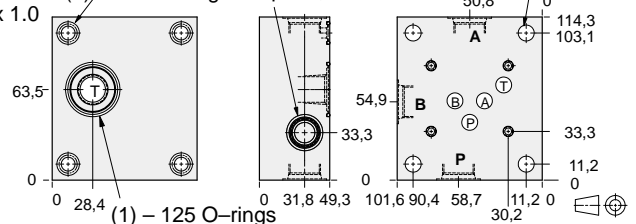
### FUNCTION

Relief P to T

4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC (4) - O12 O-rings  
Metric: M6 x 1.0

T-10A Cavity  
Locating Shoulder  
Depth 6,4

Mounting Holes (Sealed):  
11,2 diameter through hole.  
4 places.



| Bolt Hole Interface | Ports A,B,P | ALUMINIUM  |            | SG IRON      |            |
|---------------------|-------------|------------|------------|--------------|------------|
|                     |             | Model Code | List Price | Model Code   | List Price |
| Inch                | .50 NPTF    | <b>FTC</b> |            | <b>FTC/S</b> |            |
| Inch                | SAE-10      | <b>FTK</b> |            | <b>FTK/S</b> |            |
| Metric              | .50 BSPP    | <b>FTV</b> |            | <b>FTV/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|  |   |  |   |
|--|---|--|---|
|  | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve |
|  | RPEC Page 1.06                              |  | RQEB Page 1.12                          |
|  | Pilot Operated, Rapid Response Relief Valve |  | Direct Acting Relief Valve              |
|  | RPEE Page 1.08                              |  | RDDA Page 1.10                          |



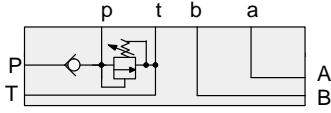
# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

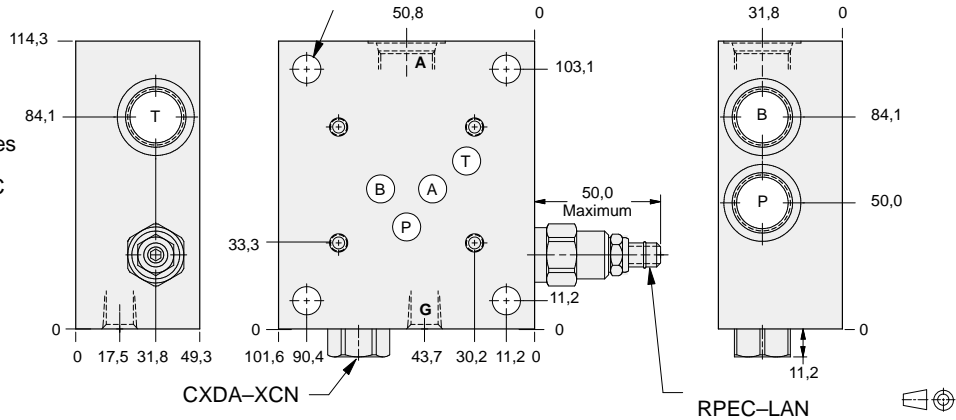
### FUNCTION



Relief P to T  
Check on P

Mounting Holes:  
11,2 diameter through hole.  
4 places.

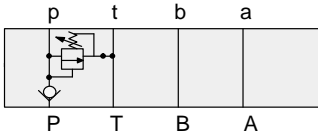
4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0



| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM   |            | SG IRON       |            |
|---------------------|------------|---------------|-------------|------------|---------------|------------|
|                     |            |               | Model Code  | List Price | Model Code    | List Price |
| Inch                | .25 NPTF   | .50 NPTF      | YREJ-LAN-BC |            | YREJ-LAN-BC/S |            |
| Inch                | .25 NPTF   | SAE-10        | YREJ-LAN-BK |            | YREJ-LAN-BK/S |            |
| Metric              | .25 BSPP   | .50 BSPP      | YREJ-LAN-BV |            | YREJ-LAN-BV/S |            |

## Rear Ported Subplates

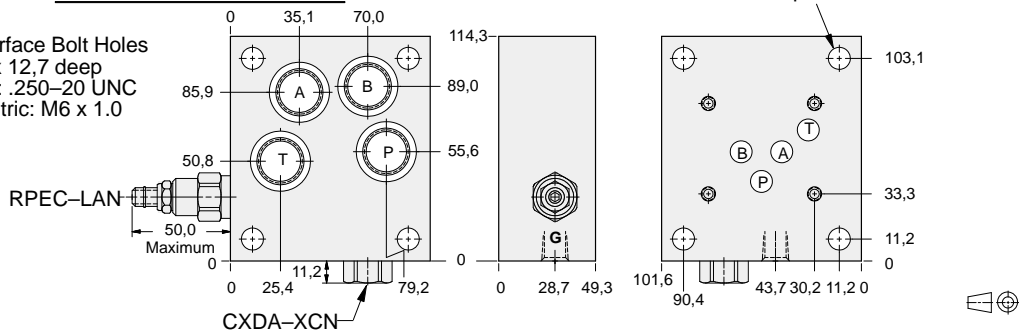
### FUNCTION



Relief P to T  
Check on P

Mounting Holes:  
11,2 diameter through hole.  
4 places.

4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0



| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | ALUMINIUM   |            | SG IRON       |            |
|---------------------|------------|---------------|-------------|------------|---------------|------------|
|                     |            |               | Model Code  | List Price | Part Number   | List Price |
| Inch                | .25 NPTF   | .50 NPTF      | YREQ-LAN-BC |            | YREQ-LAN-BC/S |            |
| Inch                | .25 NPTF   | SAE-10        | YREQ-LAN-BK |            | YREQ-LAN-BK/S |            |
| Metric              | .25 BSPP   | .50 BSPP      | YREQ-LAN-BV |            | YREQ-LAN-BV/S |            |

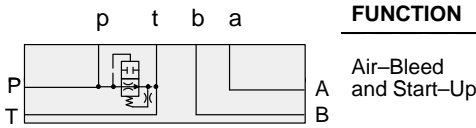


# ISO 05 SANDWICH BODIES



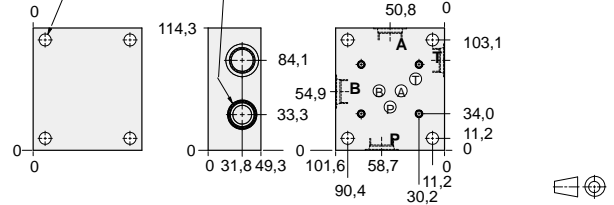
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates



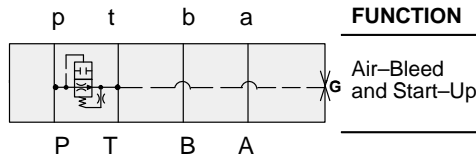
Mounting Holes:  
11,2 diameter through hole.  
4 places.

T-3A Cavity  
Locating Shoulder  
Depth 0,8



| Interface Bolt Holes | Ports A,B,P,T | ALUMINIUM  |            | SG IRON      |            |
|----------------------|---------------|------------|------------|--------------|------------|
|                      |               | Model Code | List Price | Model Code   | List Price |
| Inch                 | .50 NPTF      | <b>CSC</b> |            | <b>CSC/S</b> |            |
| Inch                 | SAE-10        | <b>CSK</b> |            | <b>CSK/S</b> |            |
| Metric               | .50 BSPP      | <b>CSV</b> |            | <b>CSV/S</b> |            |

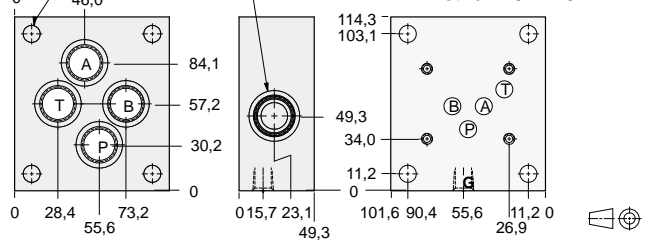
## Rear Ported Subplates



Mounting Holes:  
11,2 diameter through hole.  
4 places.

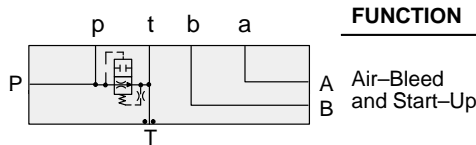
T-3A Cavity  
Locating Shoulder  
Depth 0,8

4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0



| Interface Bolt Holes | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON      |            |
|----------------------|------------|---------------|------------|------------|--------------|------------|
|                      |            |               | Model Code | List Price | Model Code   | List Price |
| Inch                 | .25 NPTF   | .50 NPTF      | <b>CRC</b> |            | <b>CRC/S</b> |            |
| Inch                 | .25 NPTF   | SAE-10        | <b>CRK</b> |            | <b>CRK/S</b> |            |
| Metric               | .25 BSPP   | .50 BSPP      | <b>CRV</b> |            | <b>CRV/S</b> |            |

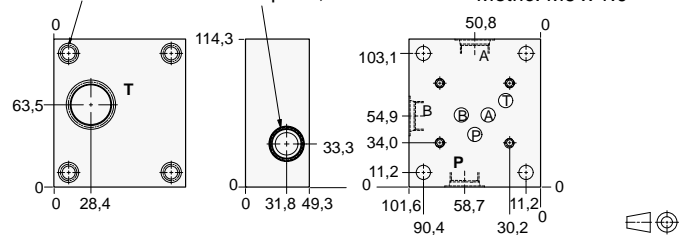
## Side Ported Subplates with Gasket Mount Tank Port



Mounting Holes:  
11,2 diameter through hole.  
4 places.

T-3A Cavity  
Locating Shoulder  
Depth 0,8

4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0



| Interface Bolt Holes | Ports P, A, B | Port T   | ALUMINIUM  |            | SG IRON      |            |
|----------------------|---------------|----------|------------|------------|--------------|------------|
|                      |               |          | Model Code | List Price | Model Code   | List Price |
| Inch                 | .50 NPTF      | .50 NPTF | <b>CTC</b> |            | <b>CTC/S</b> |            |
| Inch                 | SAE-10        | .50 NPTF | <b>CTK</b> |            | <b>CTK/S</b> |            |
| Metric               | .50 BSPP      | .50 BSPP | <b>CTV</b> |            | <b>CTV/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

| Cartridge | Function                     | Material | Model Code | List Price |
|-----------|------------------------------|----------|------------|------------|
|           | Air Bleed and Start-up Valve |          |            |            |
|           | NQEBPage 10.16               |          |            |            |

05 SUBPLATE

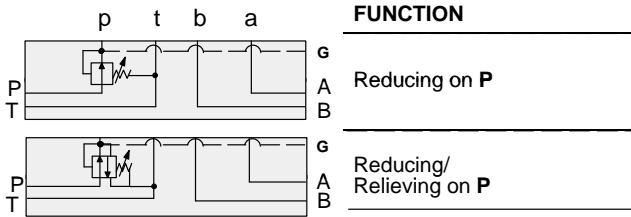


# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

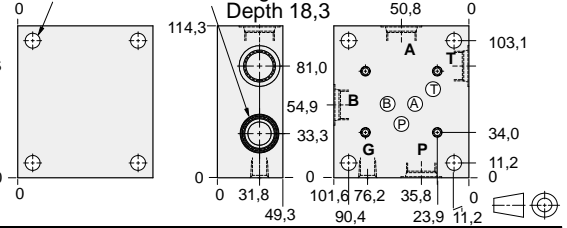


Mounting Holes:

11,2 diameter through hole.  
4 places.

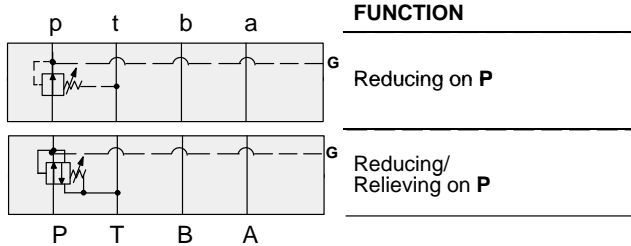
4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0

T-2A Cavity  
Locating Shoulder  
Depth 18,3



| Interface Bolt Holes | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON    |            |
|----------------------|------------|---------------|------------|------------|------------|------------|
|                      |            |               | Model Code | List Price | Model Code | List Price |
| Inch                 | .25 NPTF   | .50 NPTF      | BSC        |            | BSC/S      |            |
| Inch                 | .25 NPTF   | SAE-10        | BSK        |            | BSK/S      |            |
| Metric               | .25 BSPP   | .50 BSPP      | BSV        |            | BSV/S      |            |

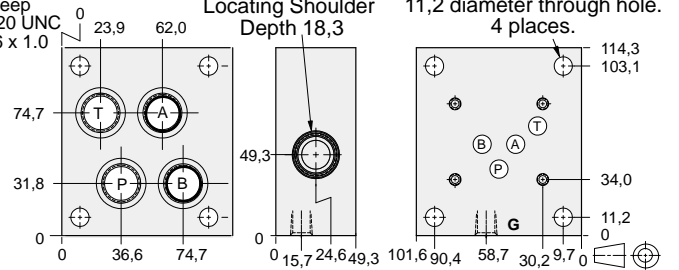
## Rear Ported Subplates



4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0

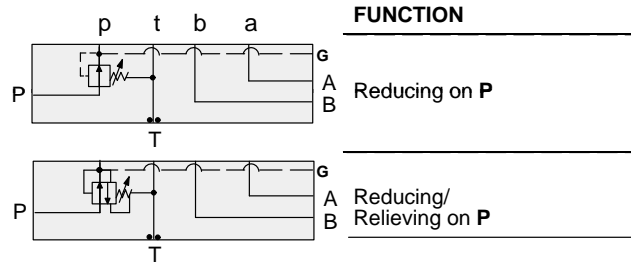
T-2A Cavity  
Locating Shoulder  
Depth 18,3

Mounting Holes:  
11,2 diameter through hole.  
4 places.



| Interface Bolt Holes | Gauge Port | Ports A,B,P,T | ALUMINIUM  |            | SG IRON    |            |
|----------------------|------------|---------------|------------|------------|------------|------------|
|                      |            |               | Model Code | List Price | Model Code | List Price |
| Inch                 | .25 NPTF   | .50 NPTF      | BRC        |            | BRC/S      |            |
| Inch                 | .25 NPTF   | SAE-10        | BRK        |            | BRK/S      |            |
| Metric               | .25 BSPP   | .50 BSPP      | BRV        |            | BRV/S      |            |

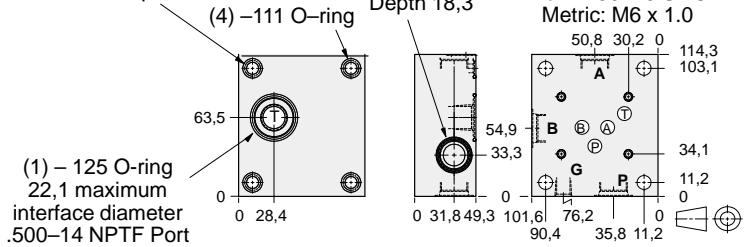
## Side Ported Subplates with Gasket Mount Tank Port



Mounting Holes (Sealed):  
11,2 diameter through hole.  
4 places.

T-2A Cavity  
Locating Shoulder  
Depth 18,3

4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0



| Interface Bolt Holes | Gauge Port | Ports A,B,P | ALUMINIUM  |            | SG IRON    |            |
|----------------------|------------|-------------|------------|------------|------------|------------|
|                      |            |             | Model Code | List Price | Model Code | List Price |
| Inch                 | .25 NPTF   | .50 NPTF    | BTC        |            | BTC/S      |            |
| Inch                 | .25 NPTF   | SAE-10      | BTK        |            | BTK/S      |            |
| Metric               | .25 BSPP   | .50 BSPP    | BTV        |            | BTV/S      |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

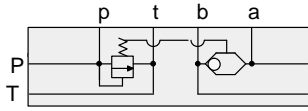
|  |   |  |   |
|--|---|--|---|
|  | Pilot Operated Reducing Valve<br>PBFB Page 3.06 |  | Pilot Operated Reducing/Relieving Valve<br>PPFB Page 3.10 |
|--|---|--|---|



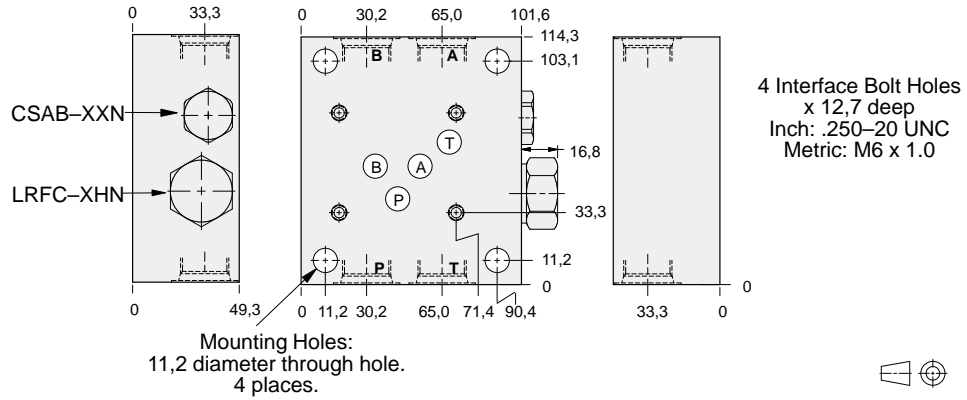
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

### FUNCTION



Bypass  
Compensator  
for Proportional  
Valves



| Bolt Hole Interface | Ports A,B,P,T | ALUMINIUM   |            | SG IRON       |            |
|---------------------|---------------|-------------|------------|---------------|------------|
|                     |               | Model Code  | List Price | Model Code    | List Price |
| Inch                | .50 NPTF      | YFES-XHN-BC |            | YFES-XHN-BC/S |            |
| Inch                | SAE-10        | YFES-XHN-BK |            | YFES-XHN-BK/S |            |
| Metric              | .50 BSPP      | YFES-XHN-BV |            | YFES-XHN-BV/S |            |



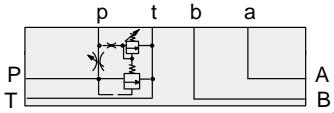
# ISO 05 SANDWICH BODIES



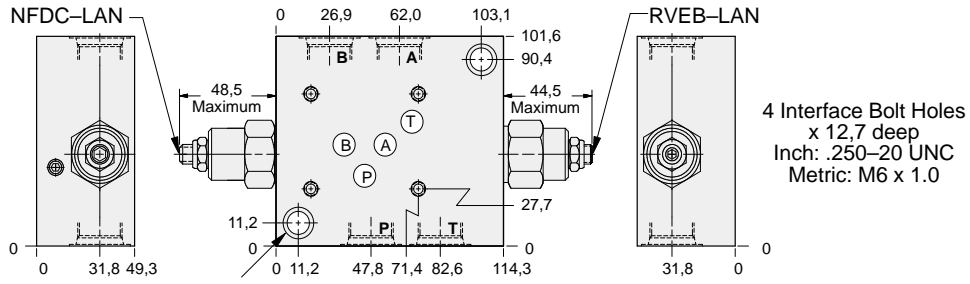
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

### FUNCTION



Relief **P** to **T**  
and Bypass  
Flow Regulator



4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0

Mounting Holes:  
11,9 diameter through hole.  
Counterbore 17,5 diameter x 11,2 deep.  
2 places.



| Bolt Hole Interface | Ports A,B,P,T | ALUMINIUM   |            | SG IRON       |            |
|---------------------|---------------|-------------|------------|---------------|------------|
|                     |               | Model Code  | List Price | Model Code    | List Price |
| Inch                | .50 NPTF      | YFED-LAN-BC |            | YFED-LAN-BC/S |            |
| Inch                | SAE-10        | YFED-LAN-BK |            | YFED-LAN-BK/S |            |
| Metric              | .50 BSPP      | YFED-LAN-BV |            | YFED-LAN-BV/S |            |

05 SUBPLATE



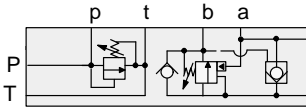
# ISO 05 SANDWICH BODIES



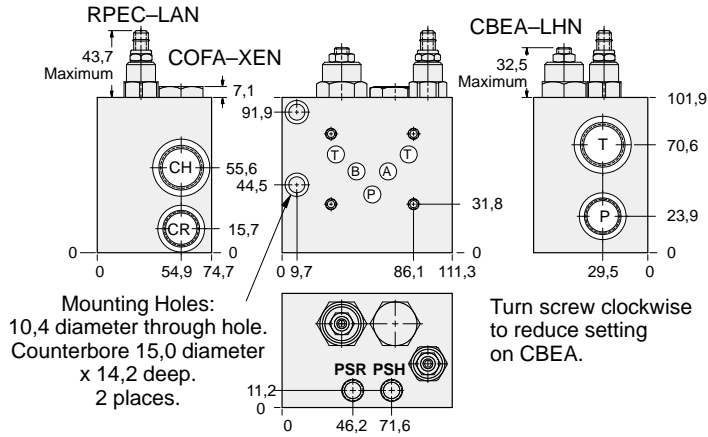
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

### FUNCTION



Relief P to T  
Regenerative  
B to A



4 Interface Bolt Holes  
x 12,7 deep  
Inch: .250-20 UNC  
Metric: M6 x 1.0

| Bolt Hole Interface | Ports    |          |          | ALUMINIUM   |            | SG IRON       |            |
|---------------------|----------|----------|----------|-------------|------------|---------------|------------|
|                     | P,CR     | T,CH     | PSH,PSR  | Model Code  | List Price | Model Code    | List Price |
| Inch                | .50 NPTF | .75 NPTF | .25 NPTF | YDEM-LHN-BD |            | YDEM-LHN-BD/S |            |
| Inch                | SAE-10   | SAE-12   | .25 NPTF | YDEM-LHN-BL |            | YDEM-LHN-BL/S |            |
| Metric              | .50 BSPP | .75 BSPP | .25 BSPP | YDEM-LHN-BW |            | YDEM-LHN-BW/S |            |

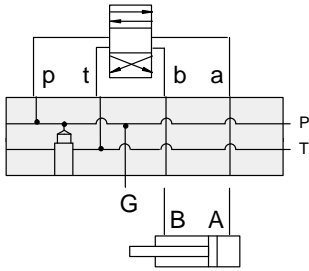


# BAR MANIFOLDS



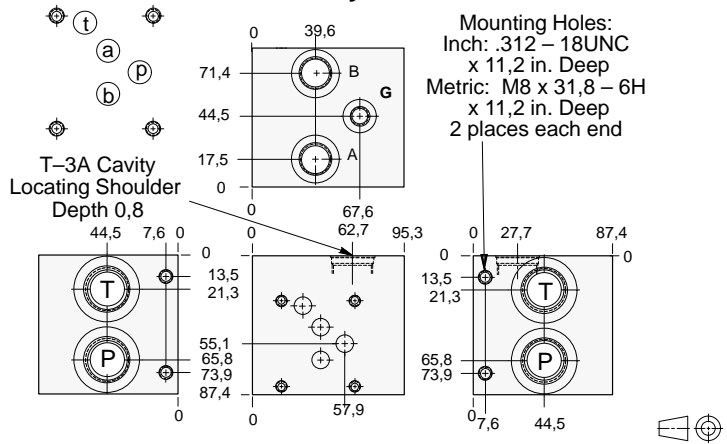
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

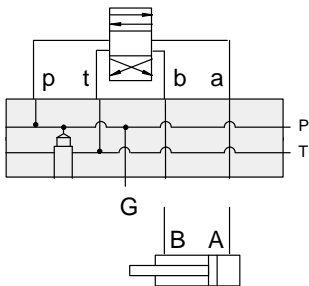
One Station



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .75 NPTF   | .50 NPTF   | .25 NPTF   | VPL        |            | VPL/S      |            |
| inch           | SAE-12     | SAE-8      | SAE-4      | VPT        |            | VPT/S      |            |
| metric         | .75 BSPP   | .50 BSPP   | .25 BSPP   | VNA        |            | VNA/S      |            |

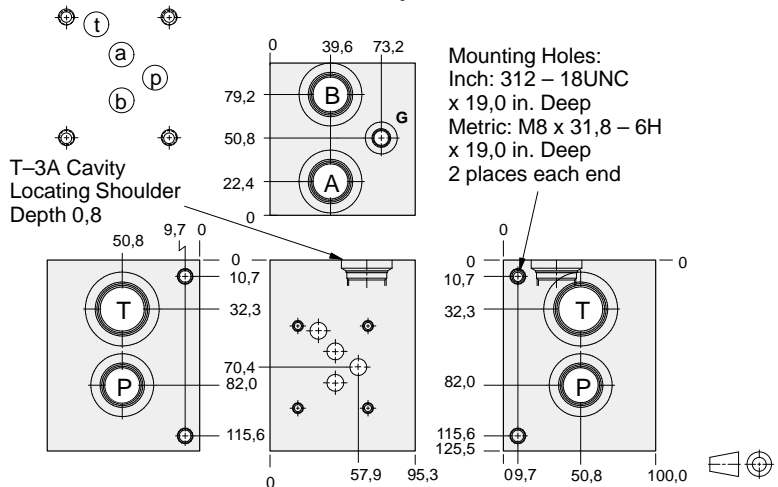
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

One Station  
(High Capacity)



| Mounting Holes | Port T    | Ports A, B, P | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|------------|------------|------------|------------|------------|
|                |           |               |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF   | VNG        |            | VNG/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-4      | VNN        |            | VNN/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP   | VNW        |            | VNWS       |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

| Pilot Operated Relief Valve |                | Direct Acting Relief Valve |                |
|-----------------------------|----------------|----------------------------|----------------|
|                             | RPGC Page 1.06 |                            | RDFA Page 1.10 |
| OTHER VALVES:               |                |                            |                |

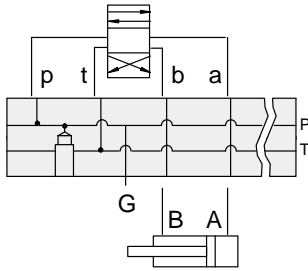


# BAR MANIFOLDS



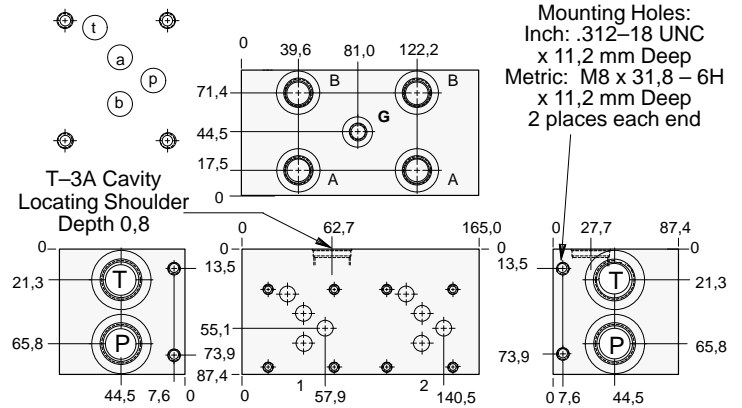
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

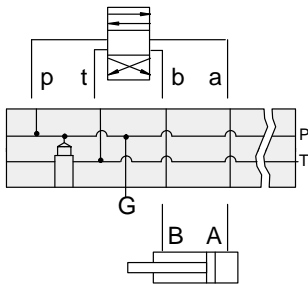
Two Station



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .75 NPTF   | .50 NPTF   | .25 NPTF   | VPM        |            | VPM/S      |            |
| inch           | SAE-12     | SAE-8      | SAE-4      | VPV        |            | VPV/S      |            |
| metric         | .75 BSPP   | .50 BSPP   | .25 BSPP   | VNB        |            | VNB/S      |            |

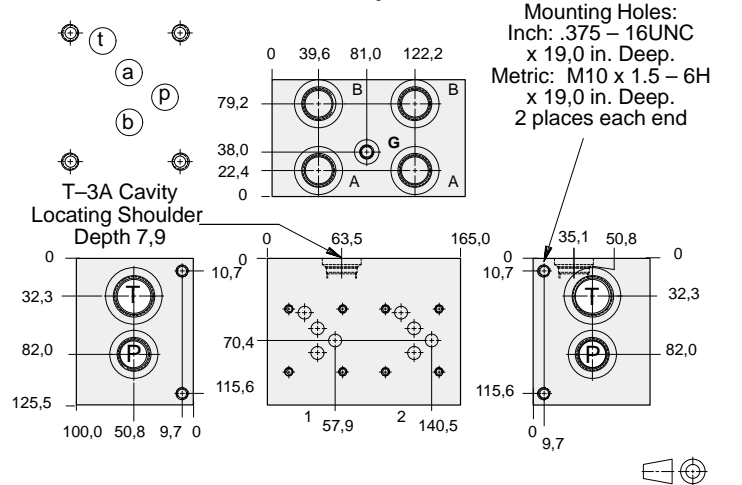
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

Two Station  
(High Capacity)



| Mounting Holes | Port T    | Ports A, B, P | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|------------|------------|------------|------------|------------|
|                |           |               |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF   | VNH        |            | VNH/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-4      | VNP        |            | VNP/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP   | VNX        |            | VNX/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

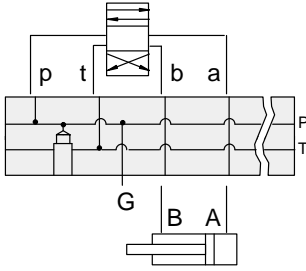


# BAR MANIFOLDS



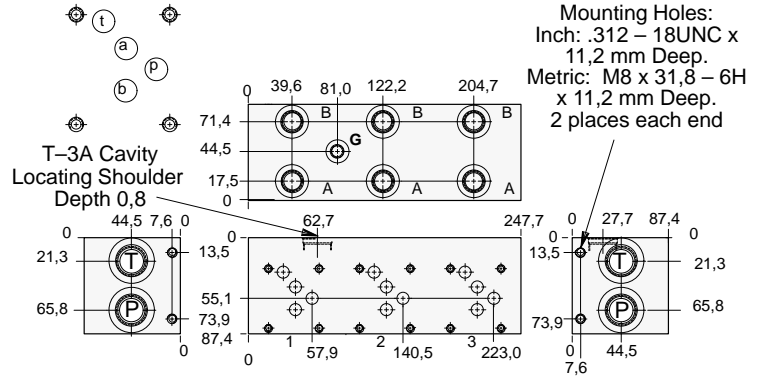
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

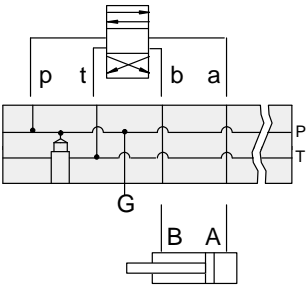
Three Station



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .75 NPTF   | .50 NPTF   | .25 NPTF   | VPN        |            | VPN/S      |            |
| inch           | SAE-12     | SAE-8      | SAE-4      | VPW        |            | VPW/S      |            |
| metric         | .75 BSPP   | .50 BSPP   | .25 BSPP   | VNC        |            | VNC/S      |            |

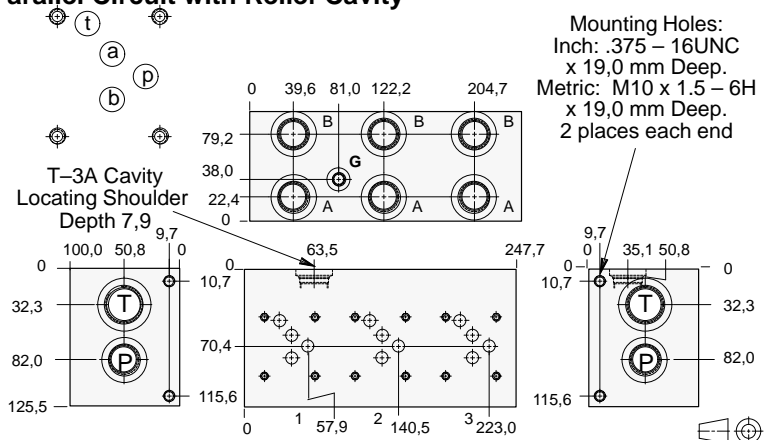
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

Three Station  
(High Capacity)



| Mounting Holes | Port T    | Ports A, B, P | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|------------|------------|------------|------------|------------|
|                |           |               |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF   | VNJ        |            | VNJ/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-4      | VNR        |            | VNR/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP   | VNY        |            | VNY/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

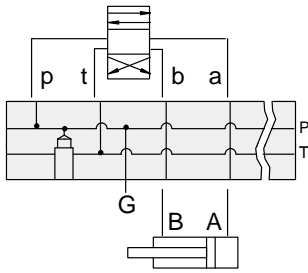
|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |



# BAR MANIFOLDS



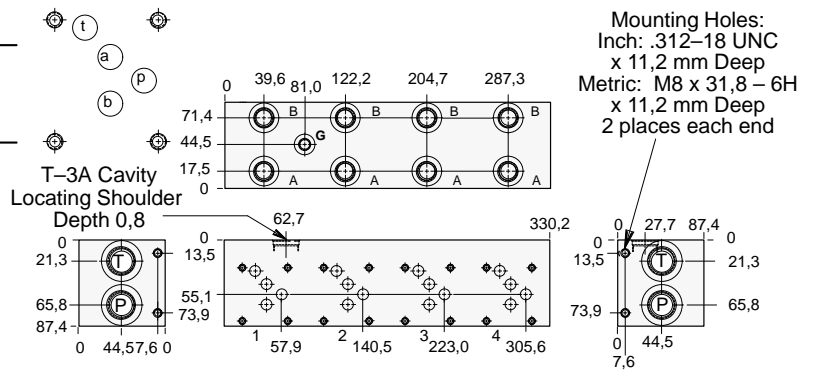
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

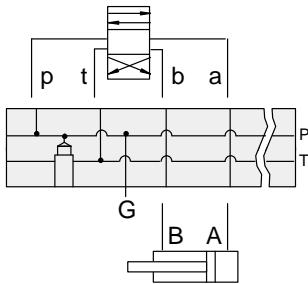
Four Station

## ISO 05 Parallel Circuit with Relief Cavity



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .75 NPTF   | .50 NPTF   | .25 NPTF   | VPP        |            | VPP/S      |            |
| inch           | SAE-12     | SAE-8      | SAE-4      | VPX        |            | VPX/S      |            |
| metric         | .75 BSPP   | .50 BSPP   | .25 BSPP   | VND        |            | VND/S      |            |

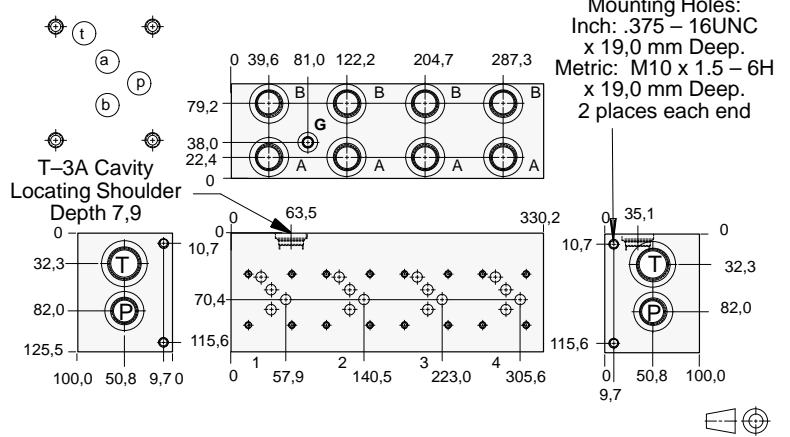
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.



### FUNCTION

Four Station  
(High Capacity)

## ISO 05 Parallel Circuit with Relief Cavity



| Mounting Holes | Port T    | Ports A, B, P | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|------------|------------|------------|------------|------------|
|                |           |               |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF   | VNK        |            | VNK/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-4      | VNS        |            | VNS/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP   | VNZ        |            | VNZ/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

| OTHER VALVES: | Pilot Operated Relief Valve | Direct Acting Relief Valve |
|---------------|-----------------------------|----------------------------|
|               | RPGC Page 1.06              | RDFA Page 1.10             |

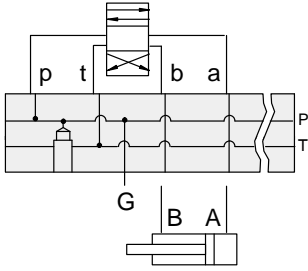


# BAR MANIFOLDS



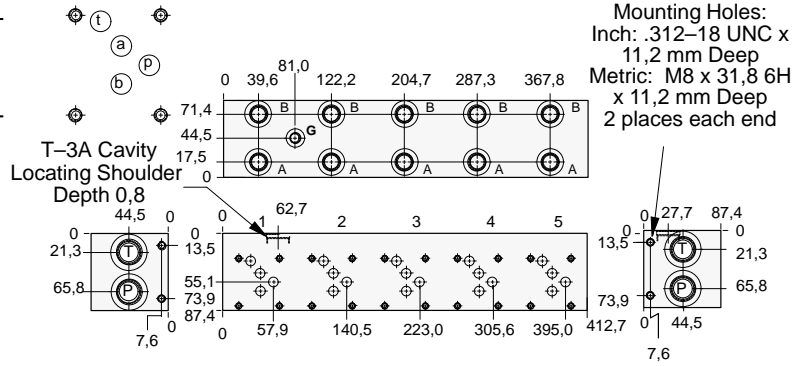
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

Five Station



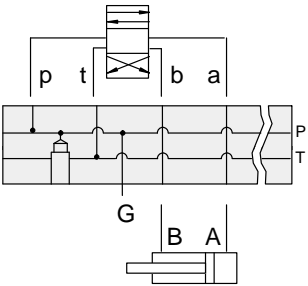
Mounting Holes:  
 Inch: .312-18 UNC x  
 11,2 mm Deep  
 Metric: M8 x 31,8 6H  
 x 11,2 mm Deep  
 2 places each end



| Mounting Holes | Ports P, T | Ports A, B | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|------------|------------|------------|------------|------------|------------|------------|
|                |            |            |            | Model Code | List Price | Model Code | List Price |
| inch           | .75 NPTF   | .50 NPTF   | .25 NPTF   | VPR        |            | VPR/S      |            |
| inch           | SAE-12     | SAE-8      | SAE-4      | VPY        |            | VPY/S      |            |
| metric         | .75 BSPP   | .50 BSPP   | .25 BSPP   | VNE        |            | VNE/S      |            |

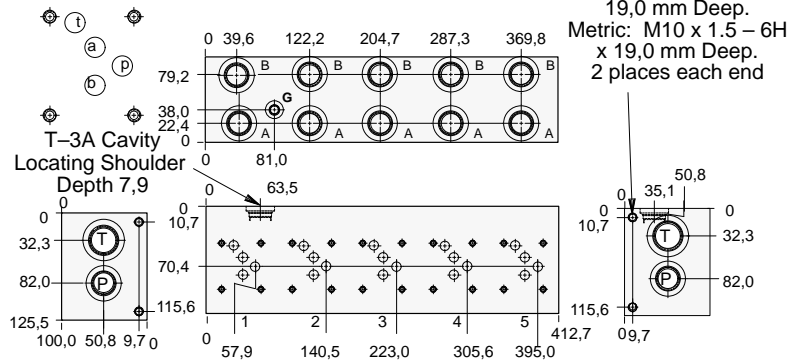
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 Parallel Circuit with Relief Cavity



### FUNCTION

Five Station  
(High Capacity)



Mounting Holes:  
 Inch: .375 - 16UNC x  
 19,0 mm Deep  
 Metric: M10 x 1.5 - 6H  
 x 19,0 mm Deep  
 2 places each end



| Mounting Holes | Port T    | Ports A, B, P | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|------------|------------|------------|------------|------------|
|                |           |               |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF   | VNL        |            | VNL/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-4      | VNT        |            | VNT/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP   | VMA        |            | VMA/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

| Pilot Operated Relief Valve |                | Direct Acting Relief Valve |                |
|-----------------------------|----------------|----------------------------|----------------|
|                             | RPGC Page 1.06 |                            | RDFA Page 1.10 |
| OTHER VALVES:               |                |                            |                |

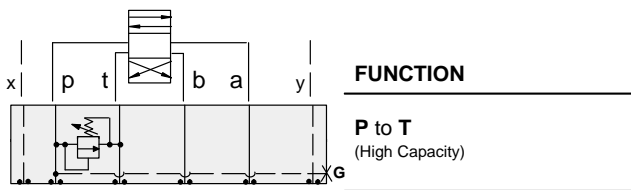




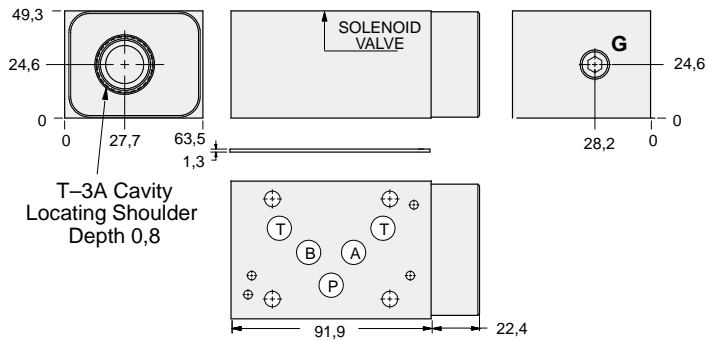
# ISO 05 X,Y SANDWICH BODIES



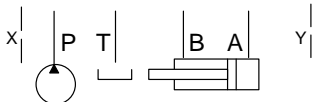
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Relief Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>CJP</b>   |            | <b>CJP/S</b> |            |
| .25 BSPP                | <b>CJP/M</b> |            | <b>CJP/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

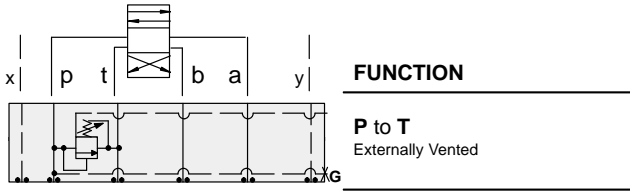
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



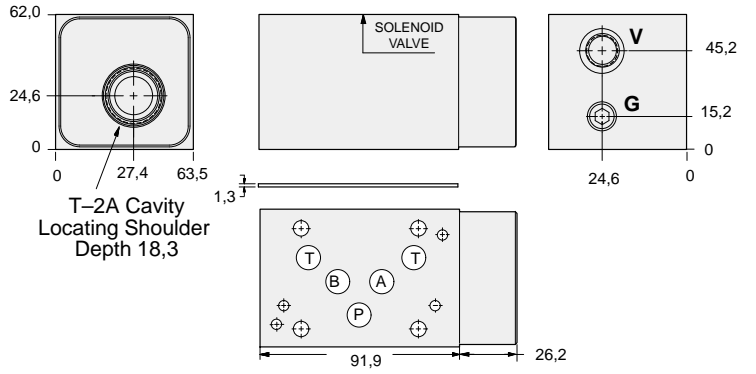
# ISO 05 X,Y SANDWICH BODIES



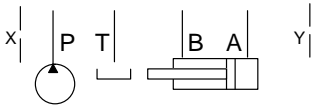
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Relief Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



|  | Gauge Port<br>(Plugged) | Vent Port | ALUMINIUM    |            | SG IRON      |            |
|--|-------------------------|-----------|--------------|------------|--------------|------------|
|  |                         |           | Model Code   | List Price | Model Code   | List Price |
|  | .25 NPTF                | SAE-6     | <b>BJC</b>   |            | <b>BJC/S</b> |            |
|  | .25 BSPP                | .25 BSPP  | <b>BJC/M</b> |            | <b>BJC/T</b> |            |

05xy RELIEF

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

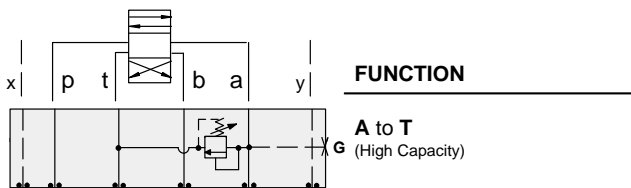
|                      |                                    |  |  |
|----------------------|------------------------------------|--|--|
|                      | Pilot Operated Vented Relief Valve |  |  |
|                      | RVEA Page 1.18                     |  |  |
|                      |                                    |  |  |
|                      |                                    |  |  |
| <b>OTHER VALVES:</b> |                                    |  |  |



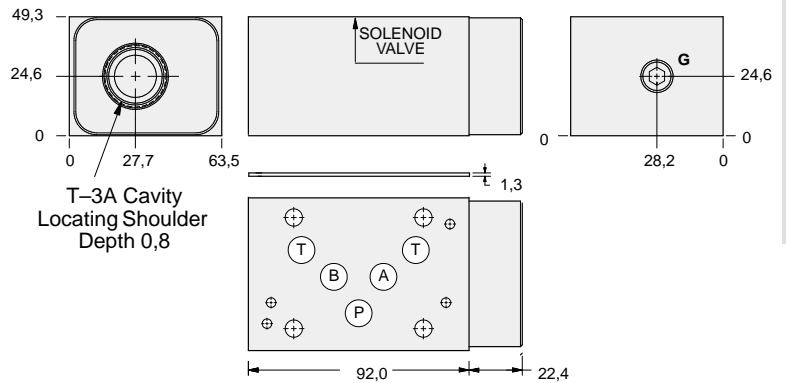
# ISO 05 X,Y SANDWICH BODIES



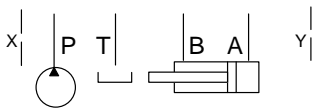
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Relief Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>CJA</b>   |            | <b>CJA/S</b> |            |
| .25 BSPP                | <b>CJA/M</b> |            | <b>CJA/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

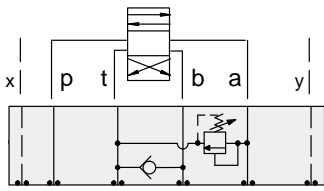
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



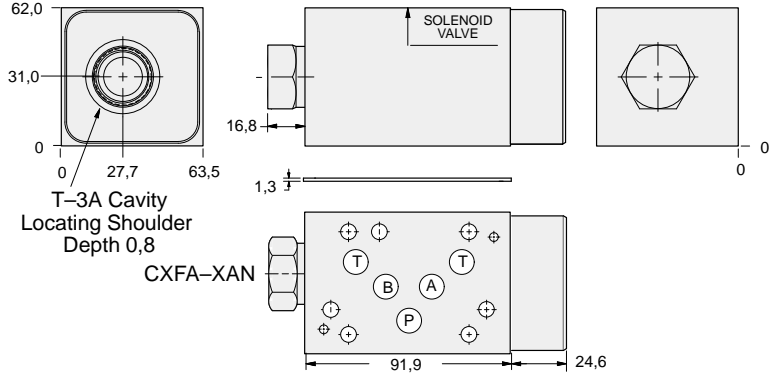
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



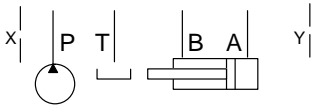
### FUNCTION

**A to T**  
FF Check T to B

### Relief Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CJ2</b> |            | <b>CJ2/S</b> |            |

05xy RELIEF

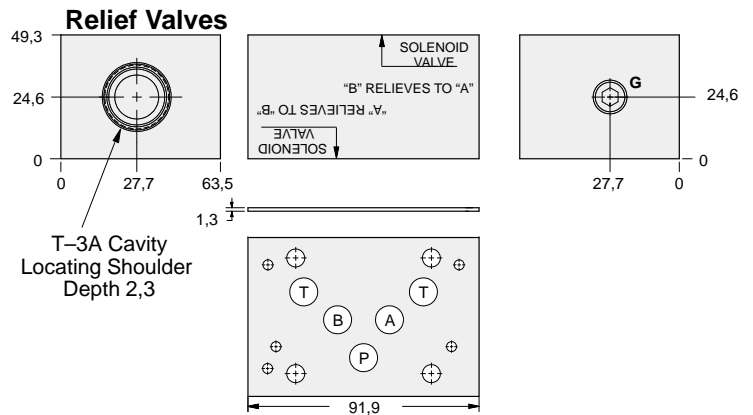
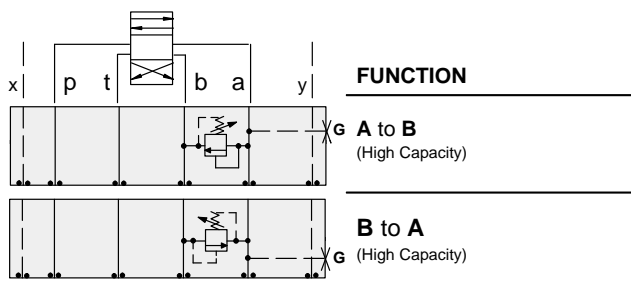
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |   |
|---|---|--|---|
|   | <i>Pilot Operated Relief Valve</i><br><b>RPGC Page 1.06</b>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i><br><b>RQGB Page 1.12</b>     |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i><br><b>RPGE Page 1.08</b> |  | <i>Air Controlled, Pilot Operated Relief Valve</i><br><b>RPGD Page 1.14</b> |
|   | <i>Direct Acting Relief Valve</i><br><b>RDFA Page 1.10</b>                  |  |   |
| <b>OTHER VALVES:</b>                            |   |  |   |



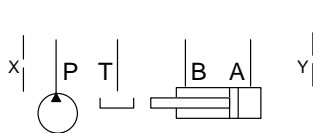
# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>CJC</b>   |            | <b>CJC/S</b> |            |
| .25 BSPP                | <b>CJC/M</b> |            | <b>CJC/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|   | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|   | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|   | <i>Direct Acting Relief Valve</i>                  |  |  |
|   | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

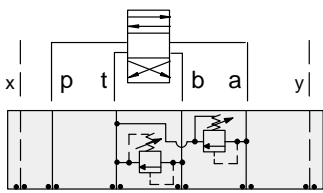


# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

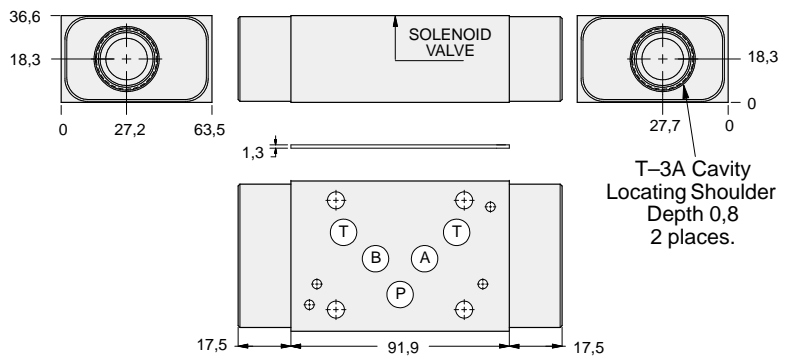
05xy RELIEF



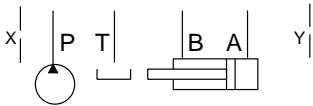
### FUNCTION

**A and B to T**  
(High Capacity)

### Relief Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CJX</b> |            | <b>CJX/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

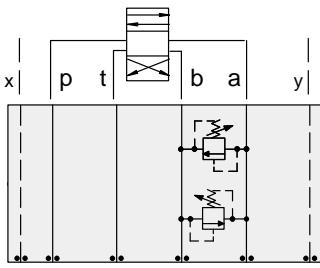
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



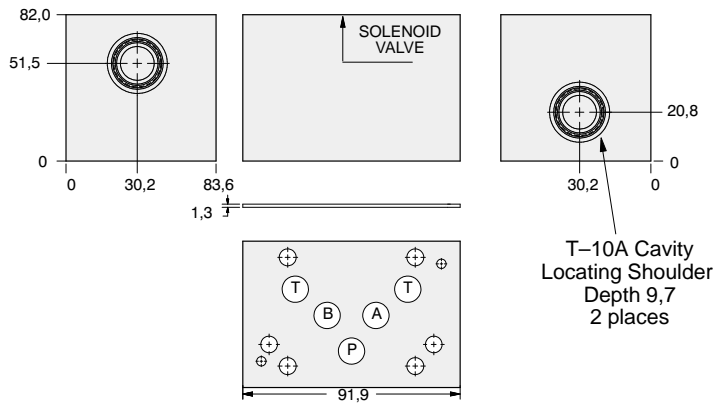
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



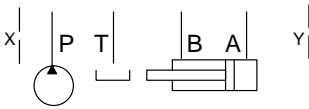
### FUNCTION

**A to B and B to A**  
(Cross Port)

### Relief Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CJY</b> |            | <b>CJY/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i> |
|   | <b>RPEC Page 1.06</b>                              |  | <b>RQEB Page 1.12</b>                          |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i> |  |  |
|   | <b>RPEE Page 1.08</b>                              |  |  |
|   | <i>Direct Acting Relief Valve</i>                  |  |  |
|   | <b>RDDA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

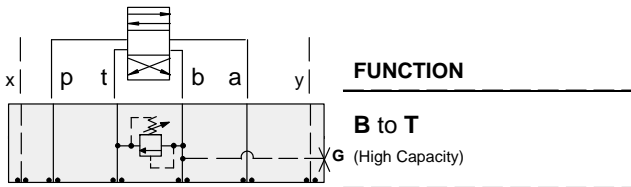


# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

RELIEF  
05xy

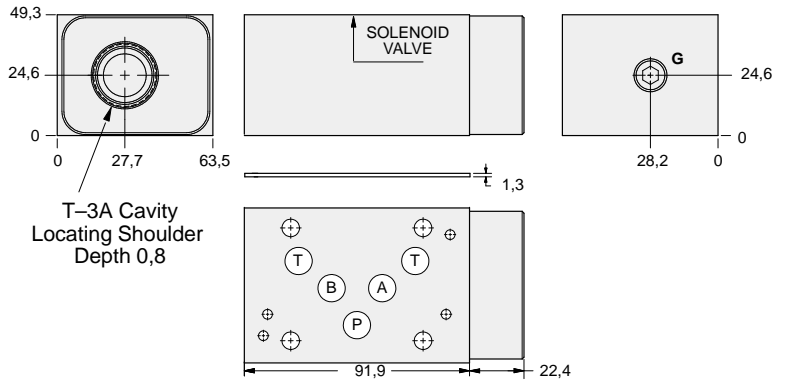


### FUNCTION

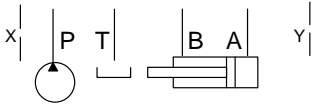
**B to T**

G (High Capacity)

### Relief Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>CJB</b>   |            | <b>CJB/S</b> |            |
| .25 BSPP                | <b>CJB/M</b> |            | <b>CJB/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Pilot Operated Relief Valve<br><b>RPGC Page 1.06</b>                 |  | Pilot Operated "Kick-Down" Relief Valve<br><b>RQGB Page 1.12</b>     |
|                      | Pilot Operated, Rapid Response Relief Valve<br><b>RPGE Page 1.08</b> |  | Air Controlled, Pilot Operated Relief Valve<br><b>RPGD Page 1.14</b> |
|                      | Direct Acting Relief Valve<br><b>RDFA Page 1.10</b>                  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |





## NOTES

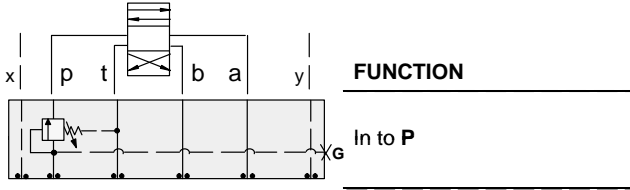




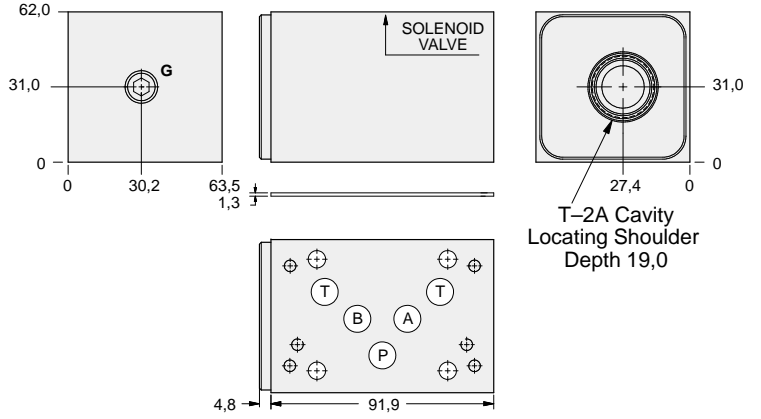
# ISO 05 X,Y SANDWICH BODIES



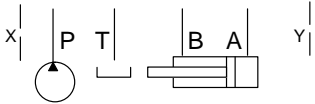
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Sequence Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJW</b>   |            | <b>BJW/S</b> |            |
| .25 BSPP                | <b>BJW/M</b> |            | <b>BJW/T</b> |            |

05<sub>xy</sub> SEQUENCE

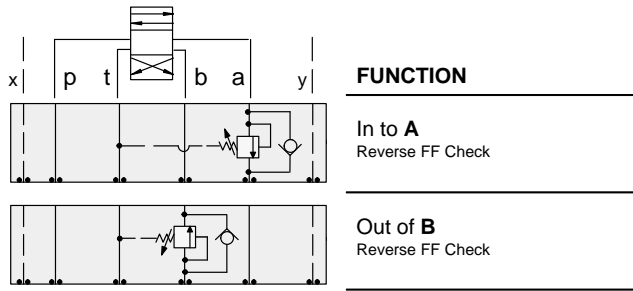
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Sequence Valve</i>                 |  | <i>Direct Acting Sequence Valve with Reverse Free Flow Check</i> |
|   | <b>RSFC Page 2.06</b>                                |  | <b>SCEA Page 2.12</b>  |
|   | <i>Pilot Operated "Kick-Down" Sequence Valve</i>     |  |  |
|   | <b>SQFB Page 2.08</b>                                |  |  |
|   | <i>Air Controlled, Pilot Operated Sequence Valve</i> |  |  |
|   | <b>RSFE Page 2.10</b>                                |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



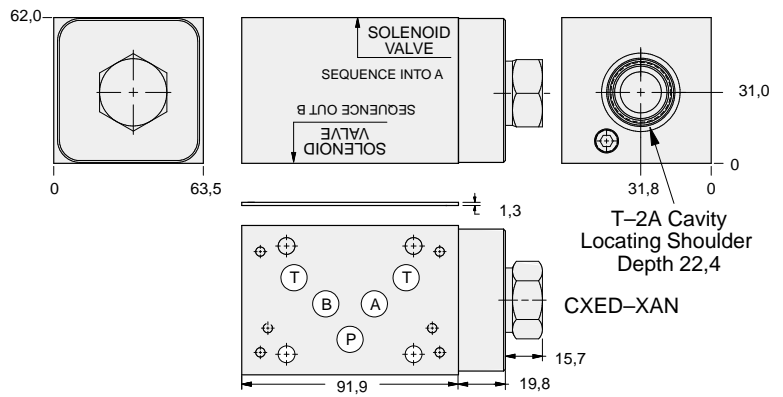
# ISO 05 X,Y SANDWICH BODIES



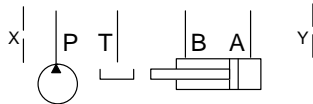
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



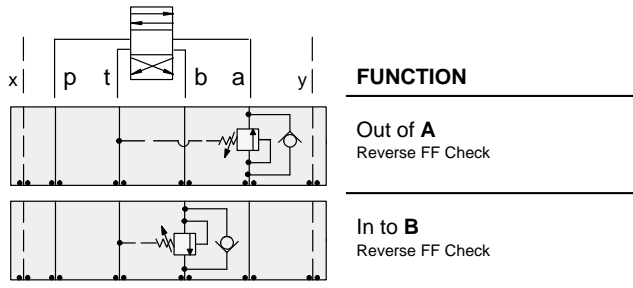
## Sequence Valves



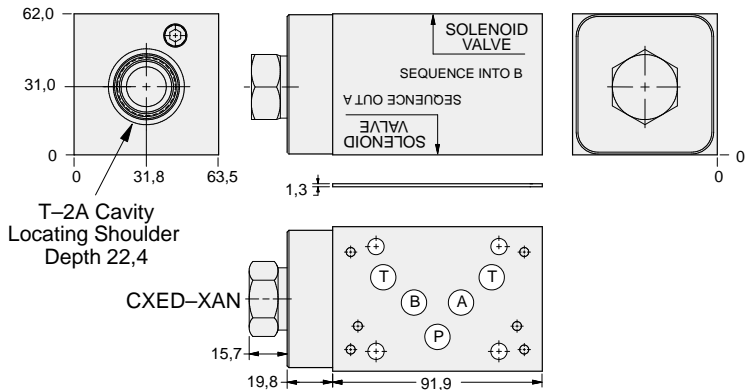
Order Retainer and Seal Kits separately.  
(See Page 12.002)



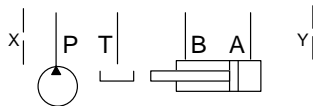
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJ4</b> |            | <b>BJ4/S</b> |            |



## Sequence Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BJ5</b> |            | <b>BJ5/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

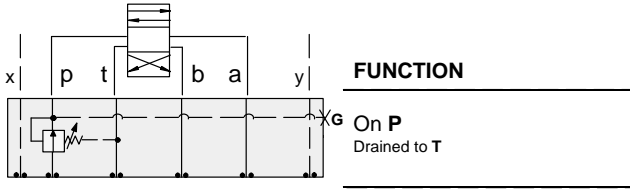
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Sequence Valve                 |  |  |
|                      | <b>RSFC Page 2.06</b>                         |  |  |
|                      | Pilot Operated "Kick-Down" Sequence Valve     |  |  |
|                      | <b>SQFB Page 2.08</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Sequence Valve |  |  |
|                      | <b>RSFE Page 2.10</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



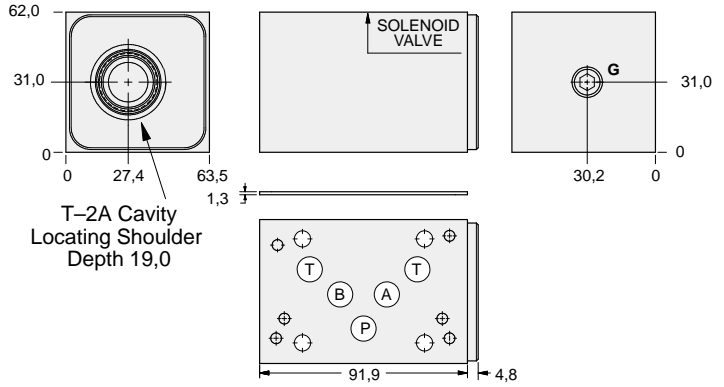
# ISO 05 X,Y SANDWICH BODIES



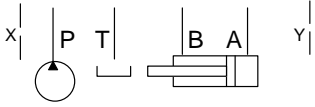
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJP</b>   |            | <b>BJP/S</b> |            |
| .25 BSPP                | <b>BJP/M</b> |            | <b>BJP/T</b> |            |

05xy REDUCING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

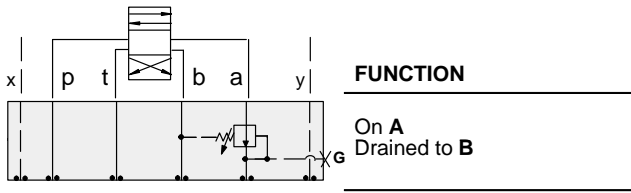
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Reducing Valve</i>                 |  |  |
|                      | <b>PBFB Page 3.06</b>                                |  |  |
|                      | <i>Air Controlled, Pilot Operated Reducing Valve</i> |  |  |
|                      | <b>PBFC Page 3.08</b>                                |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



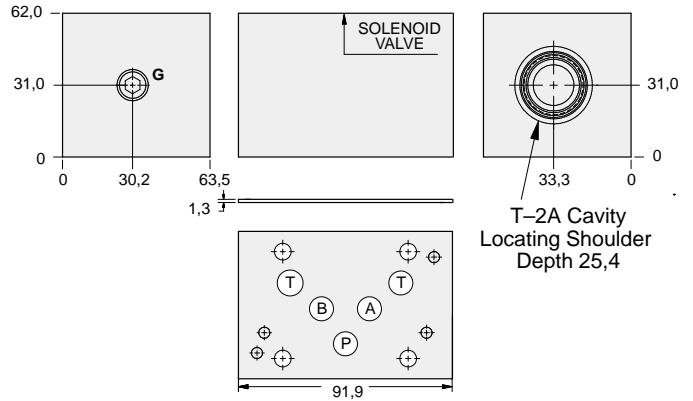
# ISO 05 X,Y SANDWICH BODIES



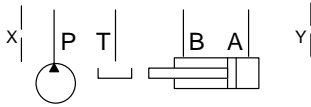
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJA</b>   |            | <b>BJA/S</b> |            |
| .25 BSPP                | <b>BJA/M</b> |            | <b>BJA/T</b> |            |

05xy REDUCING

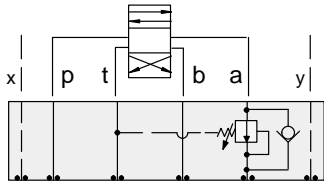
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                                      |  |  |
|---|--------------------------------------|--|--|
|   | <i>Pilot Operated Reducing Valve</i> |  |  |
|   | <b>PBFB Page 3.06</b>                |  |  |
|   |                                      |  |  |
|   |                                      |  |  |
| <b>OTHER VALVES:</b>                            |                                      |  |  |



# ISO 05 X,Y SANDWICH BODIES



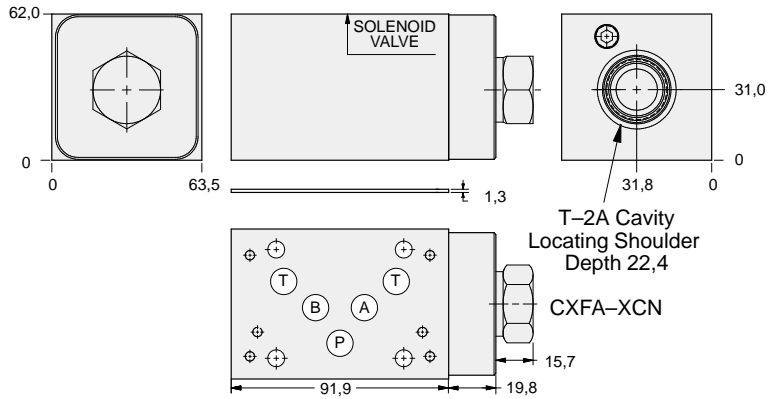
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



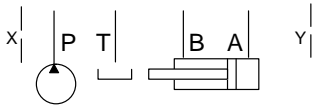
### FUNCTION

On A Drain to T  
Reverse FF Check

### Reducing Valves

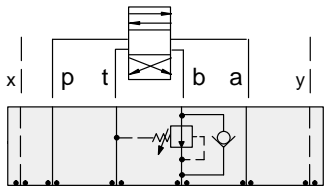


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJ2</b> |            | <b>BJ2/S</b> |            |

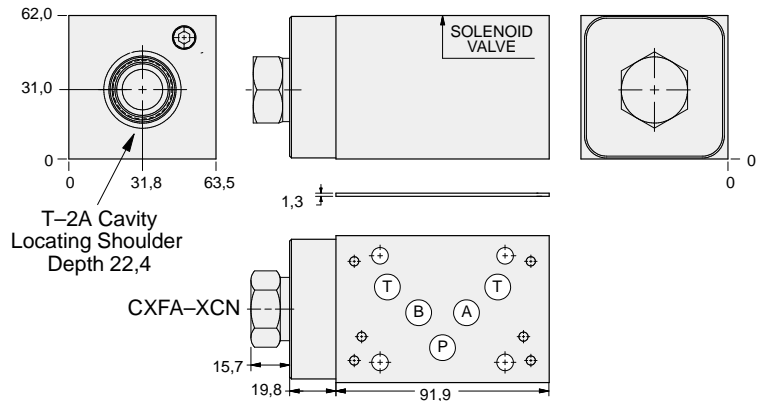
05xy REDUCING



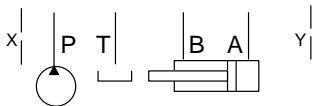
### FUNCTION

On B Drain to T  
Reverse FF Check

### Reducing Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BJ3</b> |            | <b>BJ3/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

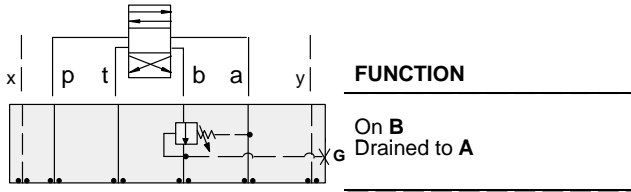
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing Valve                           |  |  |
|                      | <b>PBFB Page 3.06</b>                                   |  |  |
|                      | Air Controlled, Pilot Operated Reducing/Relieving Valve |  |  |
|                      | <b>PBFC Page 3.08</b>                                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



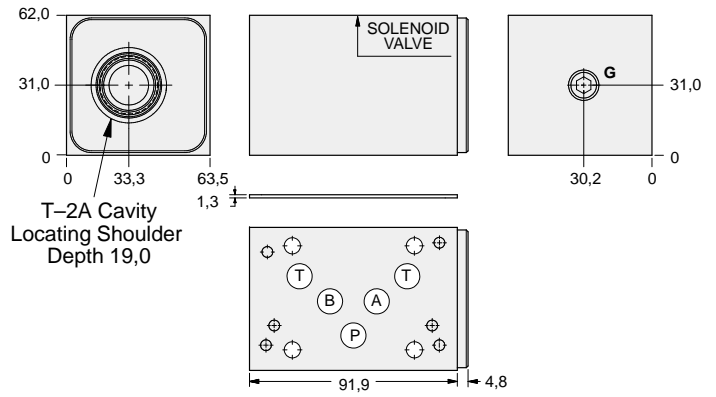
# ISO 05 X,Y SANDWICH BODIES



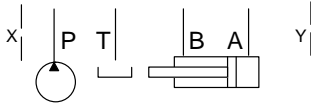
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJB</b>   |            | <b>BJB/S</b> |            |
| .25 BSPP                | <b>BJB/M</b> |            | <b>BJB/T</b> |            |



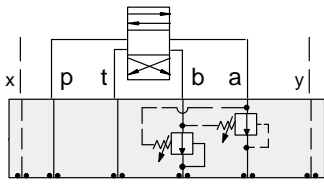
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |  |
|---|-------------------------------|--|--|
|   | Pilot Operated Reducing Valve |  |  |
|   | PBFB Page 3.06                |  |  |
|   |                               |  |  |
|   |                               |  |  |
|   |                               |  |  |
| OTHER VALVES:                                   |                               |  |  |



# ISO 05 X,Y SANDWICH BODIES



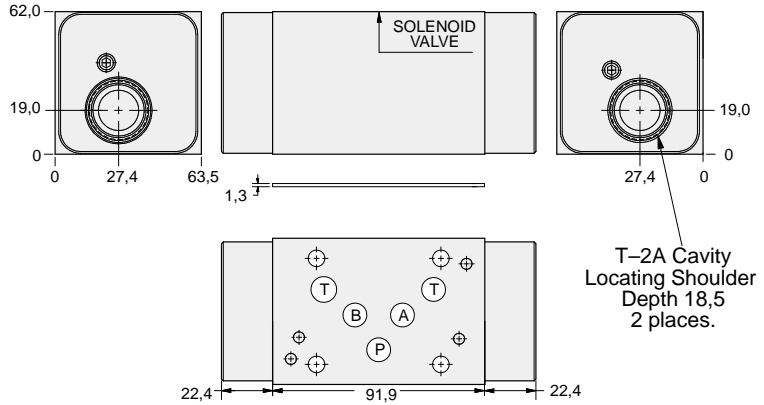
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



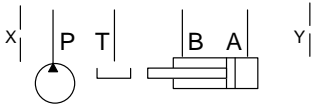
### FUNCTION

On **A** and **B**  
Drains to Opposite Port

### Reducing Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJY</b> |            | <b>BJY/S</b> |            |

05xy REDUCING

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |  |
|---|-------------------------------|--|--|
|   | Pilot Operated Reducing Valve |  |  |
|   | PBFB Page 3.06                |  |  |
|   |                               |  |  |
|   |                               |  |  |
| OTHER VALVES:                                   |                               |  |  |

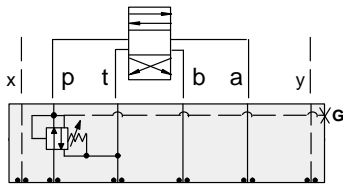




# ISO 05 X,Y SANDWICH BODIES



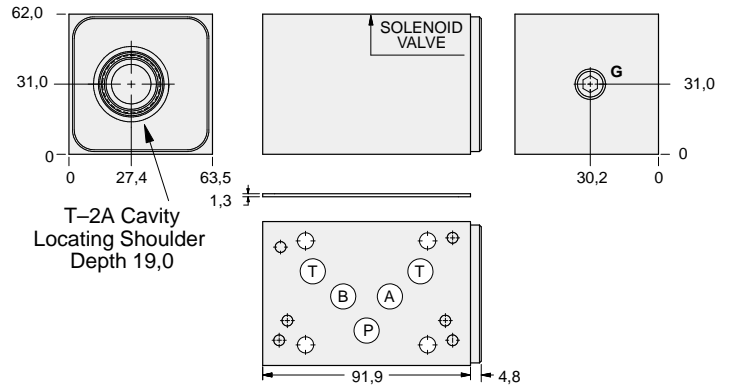
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



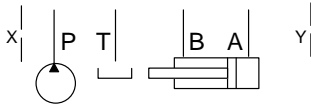
### FUNCTION

On P Tank to T  
Drained to T

### Reducing/Relieving Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJP</b>   |            | <b>BJP/S</b> |            |
| .25 BSPP                | <b>BJP/M</b> |            | <b>BJP/T</b> |            |

05xy REDUCING/RELIEVING

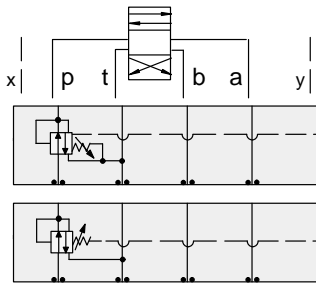
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i>                 |  |  |
|   | <b>PPFB Page 3.10</b>  |  |  |
|   | <i>Air Controlled, Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PPFC Page 3.12</b>  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 05 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

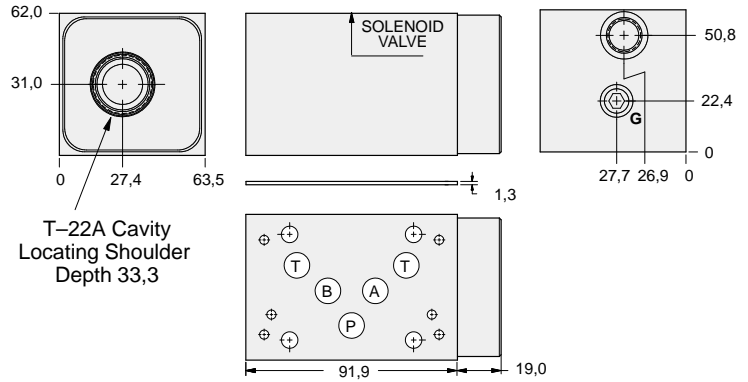


### FUNCTION

On P Tank to T  
Vented Externally

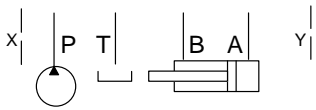
On P Tank to T  
Drained Externally

### Reducing/Relieving Valves



T-22A Cavity  
Locating Shoulder  
Depth 33,3

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| External Port | Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|---------------|-------------------------|--------------|------------|--------------|------------|
|               |                         | Model Code   | List Price | Model Code   | List Price |
| SAE-6         | .25 NPTF                | <b>NJP</b>   |            | <b>NJP/S</b> |            |
| .25 BSPP      | .25 BSPP                | <b>NJP/M</b> |            | <b>NJP/T</b> |            |

05xyREDUCING/RELIEVING

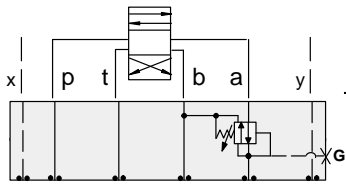
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing/Relieving Valve with Drain Port |  |  |
|   | <b>PVFA Page 3.14</b>                                   |  |  |
|   | Pilot Operated Reducing/Relieving Valve with Vent Port  |  |  |
|   | <b>PVFB Page 3.16</b>                                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



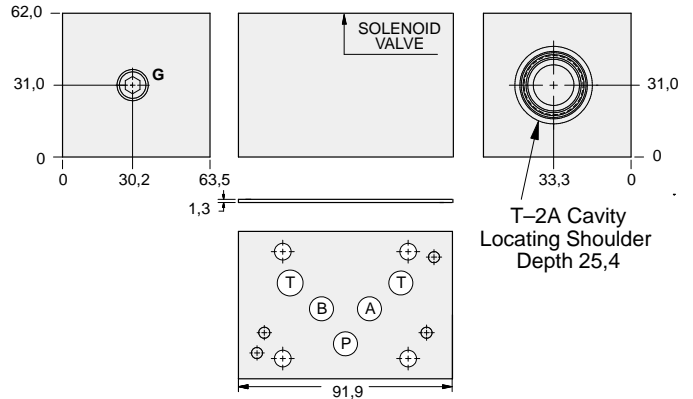
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



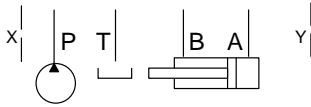
### FUNCTION

On A Tank to B  
Drained to B

### Reducing/Relieving Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJA</b>   |            | <b>BJA/S</b> |            |
| .25 BSPP                | <b>BJA/M</b> |            | <b>BJA/T</b> |            |

05xy REDUCING/RELIEVING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

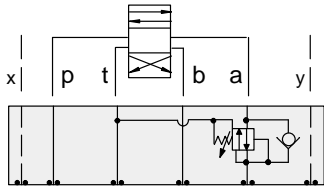
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|                      | <b>PPFB Page 3.10</b>                          |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



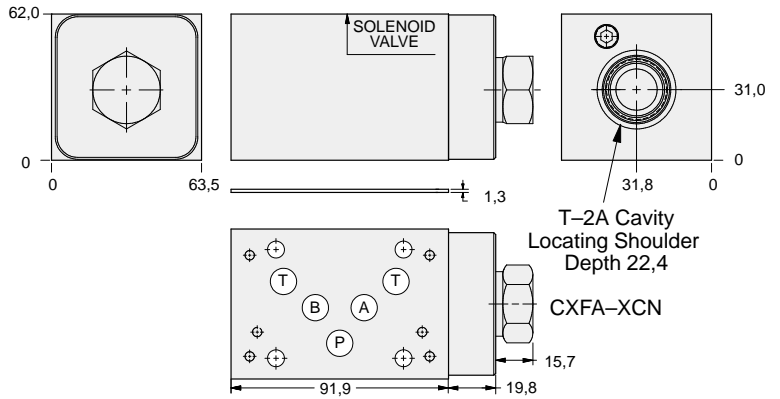
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



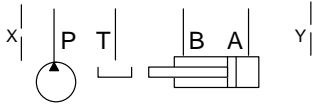
### FUNCTION

On A Tank to T  
Drained to T  
Reverse FF Check

### Reducing/Relieving Valves

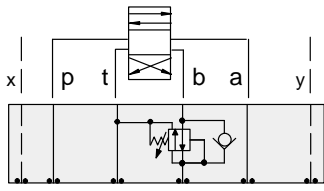


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJ2</b> |            | <b>BJ2/S</b> |            |

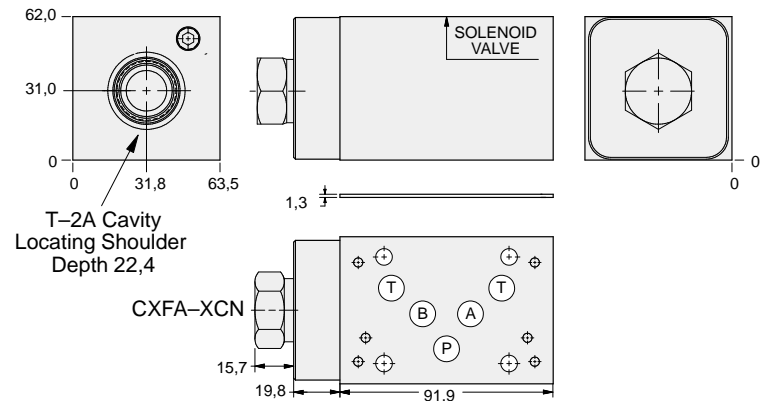
05xyREDUCING/RELIEVING



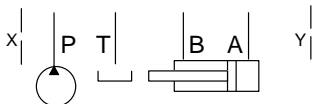
### FUNCTION

On B Tank to T  
Drained to T  
Reverse FF Check

### Reducing/Relieving Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BJ3</b> |            | <b>BJ3/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

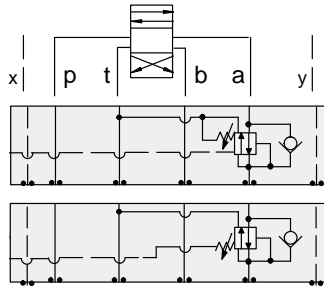
|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing/Relieving Valve                 |  |  |
|               | PPFB Page 3.10  |  |  |
|               | Air Controlled, Pilot Operated Reducing/Relieving Valve |  |  |
|               | PPFC Page 3.12  |  |  |
| OTHER VALVES: |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

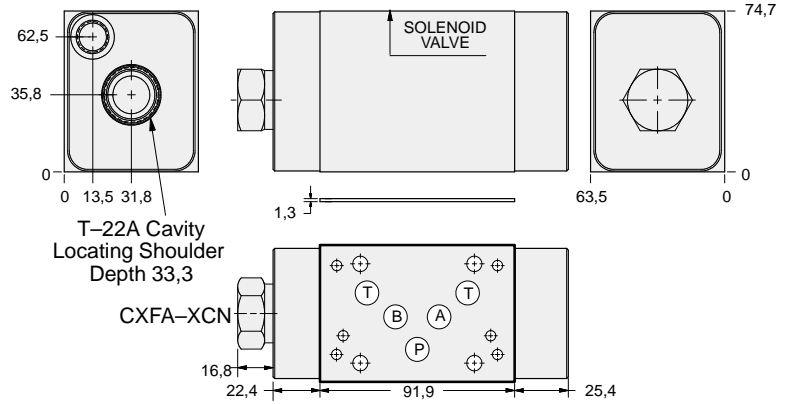


### FUNCTION

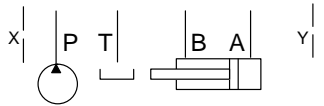
On A tank to T  
Vented Externally  
Reverse FF Check

On A tank to T  
Drained Externally  
Reverse FF Check

### Reducing/Relieving Valves

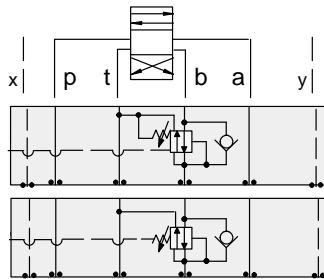


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| External Port | ALUMINIUM  |            | SG IRON    |            |
|---------------|------------|------------|------------|------------|
|               | Model Code | List Price | Model Code | List Price |
| SAE-6         | NJ2        |            | NJ2/S      |            |
| .25 BSPP      | NJ2/M      |            | NJ2/T      |            |

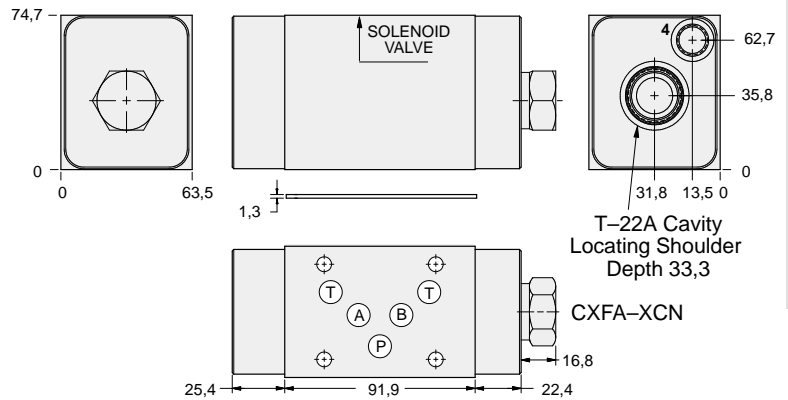
### Reducing/Relieving Valves



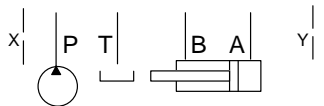
### FUNCTION

On B Tank to T  
Vented Externally  
Reverse FF Check

On B Tank to T  
Drained Externally  
Reverse FF Check



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Mounting Holes | ALUMINIUM  |            | SG IRON     |            |
|----------------|------------|------------|-------------|------------|
|                | Model Code | List Price | Part Number | List Price |
| SAE-6          | NJ3        |            | NJ3/S       |            |
| .25 BSPP       | NJ3/M      |            | NJ3/T       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing/Relieving Valve with Drain Port |  |  |
|               | PVFA Page 3.14  |  |  |
|               | Pilot Operated Reducing/Relieving Valve with Vent Port  |  |  |
|               | PVFB Page 3.16  |  |  |
| OTHER VALVES: |   |  |  |

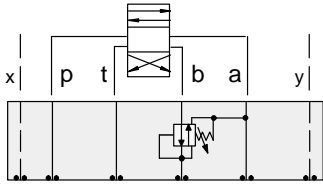
05xy REDUCING/RELIEVING



# ISO 05 X,Y SANDWICH BODIES



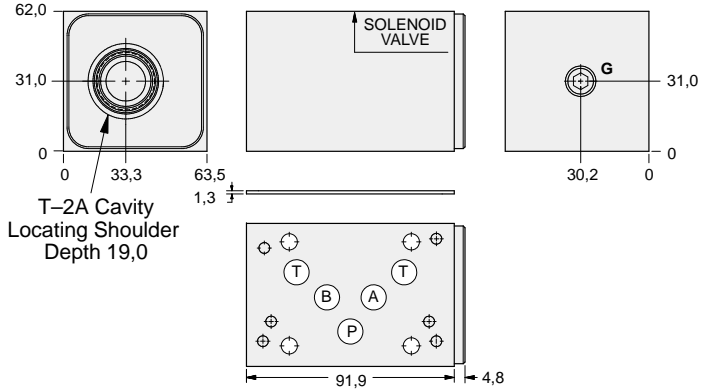
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



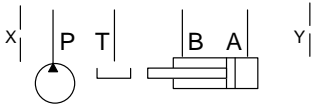
### FUNCTION

On B Tank to A  
Drained to A

### Reducing/Relieving Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJB</b>   |            | <b>BJB/S</b> |            |
| .25 BSPP                | <b>BJB/M</b> |            | <b>BJB/T</b> |            |

05xy REDUCING/RELIEVING

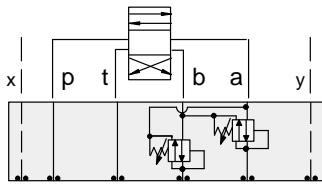
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PPFB Page 3.10</b>                          |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



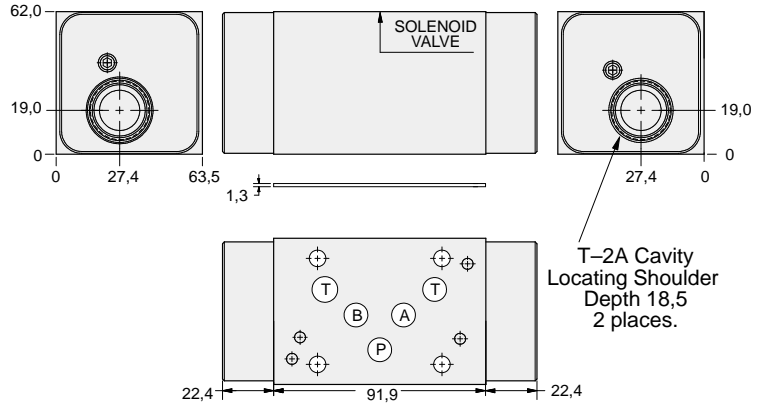
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



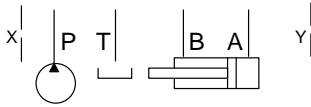
### FUNCTION

On **A** and **B**  
Tanks and Drains to  
Opposite Port

### Reducing/Relieving Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJY</b> |            | <b>BJY/S</b> |            |

05xy REDUCING/RELIEVING

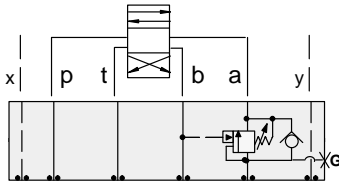
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PPFB Page 3.10</b>                          |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



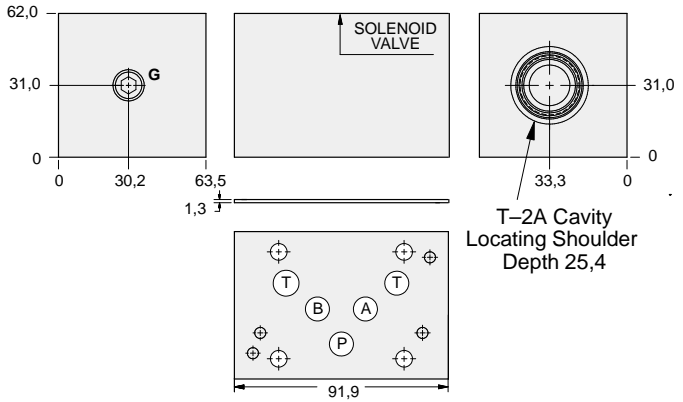
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



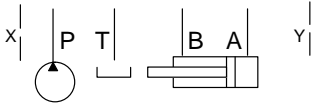
### FUNCTION

On A Pilot from B

### Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJA</b>   |            | <b>BJA/S</b> |            |
| .25 BSPP                | <b>BJA/M</b> |            | <b>BJA/T</b> |            |

05<sub>xy</sub> COUNTERBALANCE

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | <b>CBEA Page 4.10</b>                   |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | <b>CBEG Page 4.12</b>                   |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |

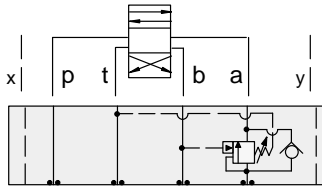




# ISO 05 X,Y SANDWICH BODIES



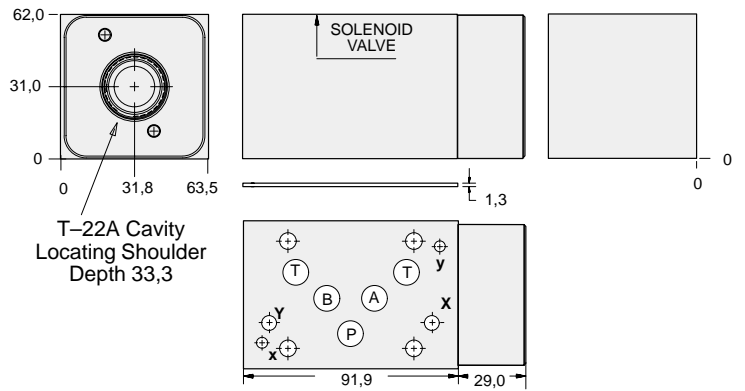
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



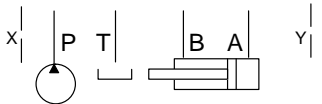
### FUNCTION

On **A** Pilot from **B**  
Vent to **T**

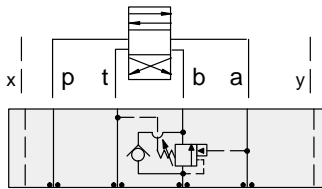
### Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



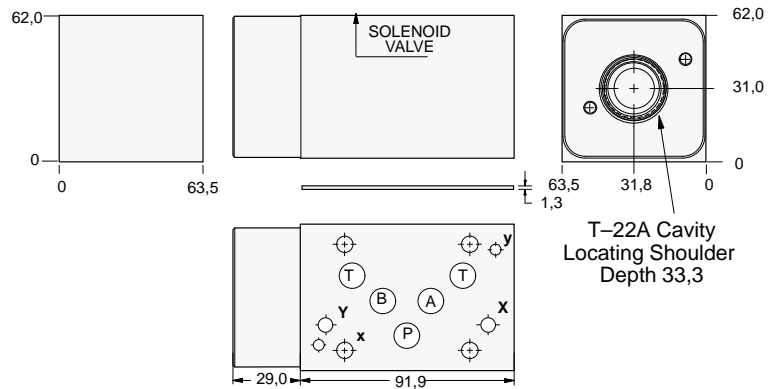
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NJA</b> |            | <b>NJA/S</b> |            |



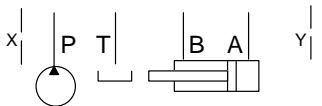
### FUNCTION

On **B** Pilot from **A**  
Vent to **T**

### Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>NJB</b> |            | <b>NJB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|                      | <b>CWEA Page 4.18</b>                        |  |  |
|                      | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|                      | <b>CWEG Page 4.20</b>                        |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

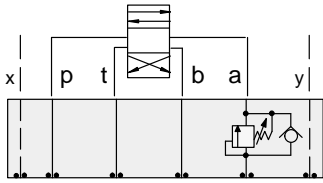
05xy COUNTERBALANCE



# ISO 05 X,Y SANDWICH BODIES



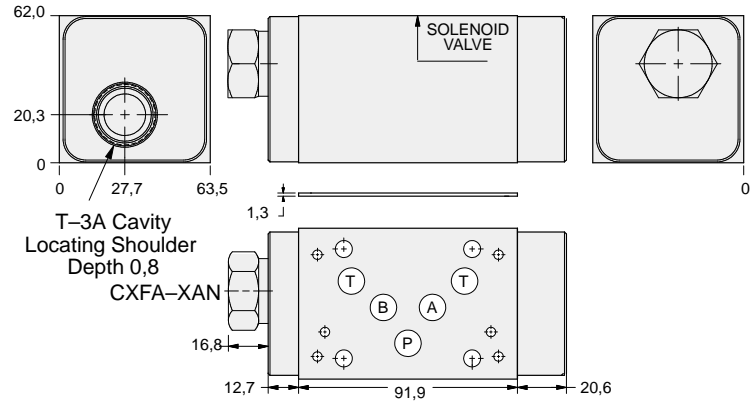
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



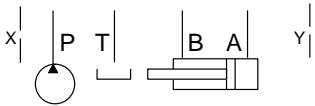
### FUNCTION

On A  
No Pilot Assist

### Counterbalance Valves

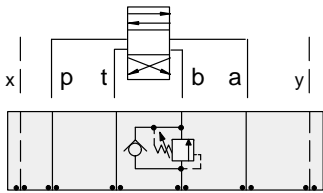


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CJ4</b> |            | <b>CJ4/S</b> |            |

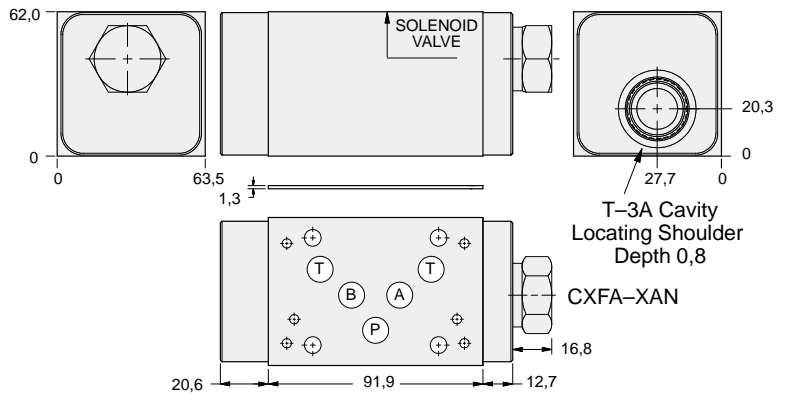
05xy COUNTERBALANCE



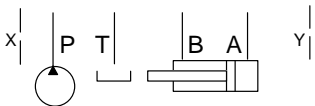
### FUNCTION

On B  
No pilot assist

### Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CJ5</b> |            | <b>CJ5/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

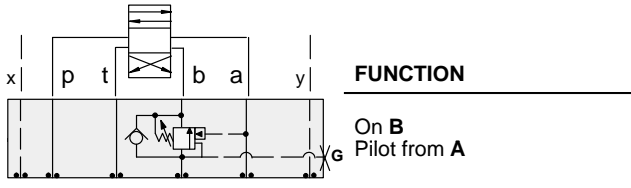
|                      |                            |  |  |
|----------------------|----------------------------|--|--|
|                      | Direct Acting Relief Valve |  |  |
|                      | RDFA Page 1.10             |  |  |
|                      |                            |  |  |
|                      |                            |  |  |
| <b>OTHER VALVES:</b> |                            |  |  |



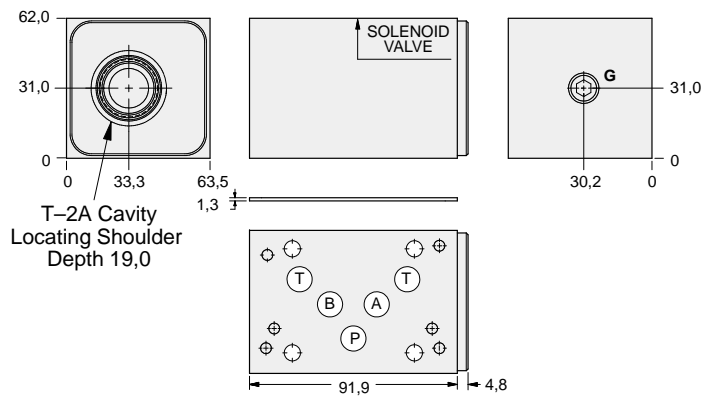
# ISO 05 X,Y SANDWICH BODIES



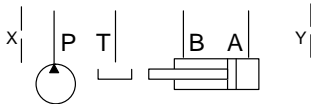
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJB</b>   |            | <b>BJB/S</b> |            |
| .25 BSPP                | <b>BJB/M</b> |            | <b>BJB/T</b> |            |



05xy COUNTERBALANCE

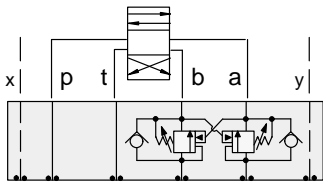
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | <b>CBEA Page 4.10</b>                   |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | <b>CBEG Page 4.12</b>                   |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



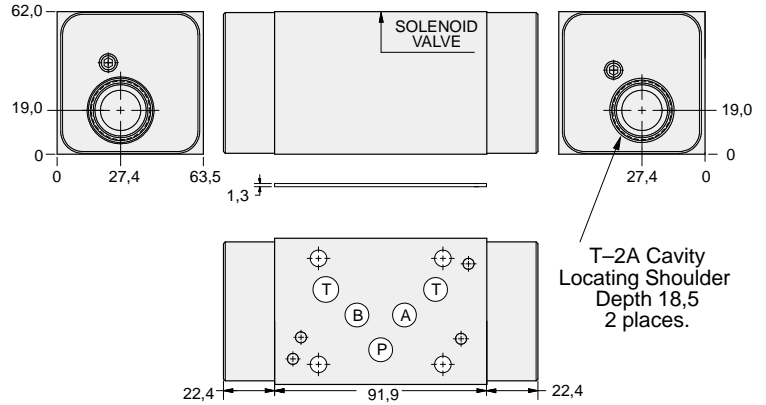
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



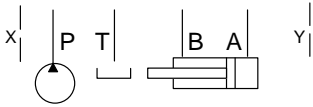
### FUNCTION

On A and B  
Cross-Piloted

### Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJY</b> |            | <b>BJY/S</b> |            |

05<sub>xy</sub> COUNTERBALANCE

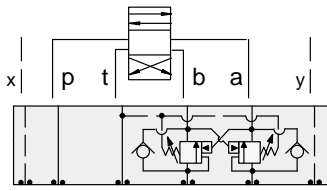
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | <b>CBEA Page 4.10</b>                   |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | <b>CBEG Page 4.12</b>                   |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



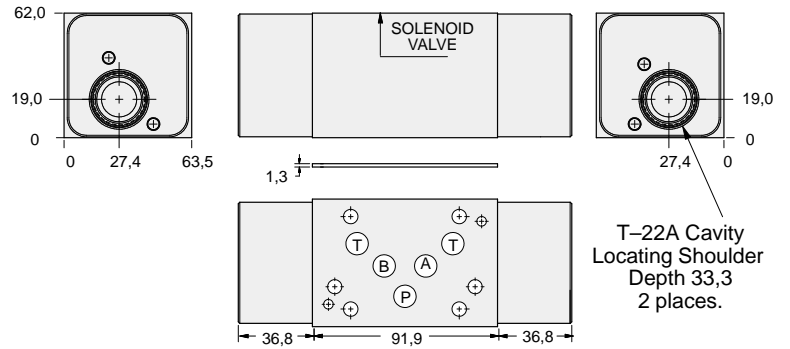
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



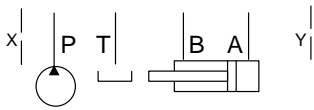
### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**

### Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NJY</b> |            | <b>NJY/S</b> |            |

05xy COUNTERBALANCE

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

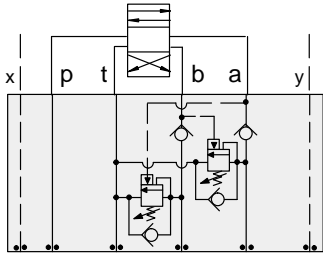
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|                      | <b>CWEA Page 4.18</b>                        |  |  |
|                      | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|                      | <b>CWEG Page 4.20</b>                        |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



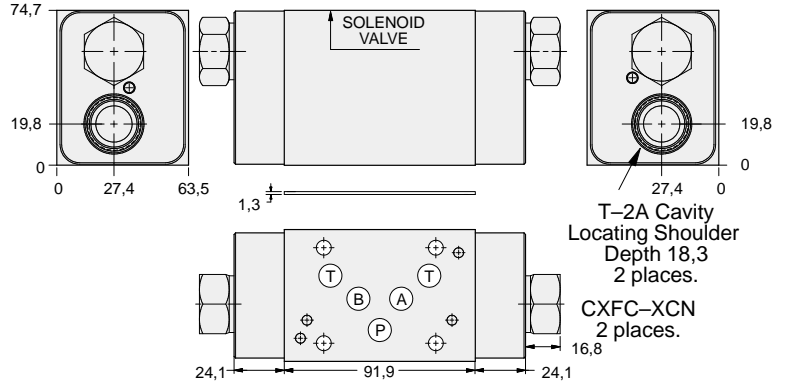
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



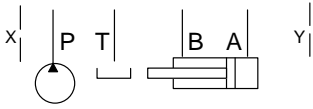
### FUNCTION

Cushion Lock  
Circuit  
On A and B

### Counterbalance Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJ8</b> |            | <b>BJ8/S</b> |            |

05<sub>xy</sub> COUNTERBALANCE

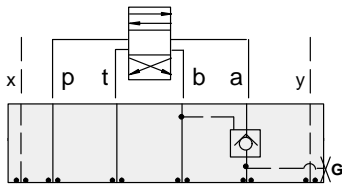
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | <b>CBEA Page 4.10</b>                   |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | <b>CBEG Page 4.12</b>                   |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | <b>CBEH Page 4.14</b>                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



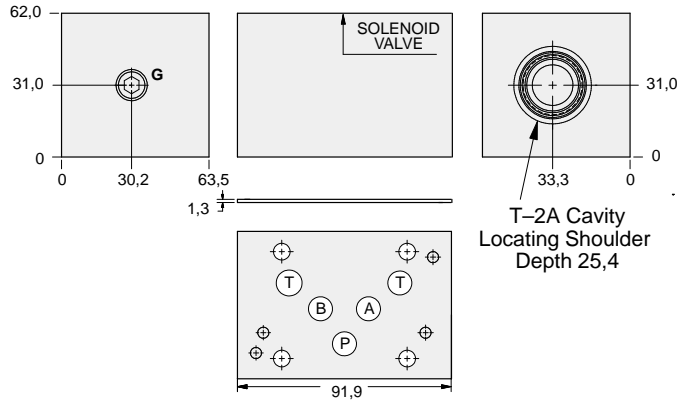
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



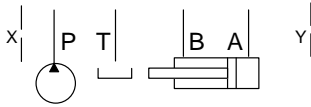
### FUNCTION

On A  
Pilot from B

### Pilot Operated Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJA</b>   |            | <b>BJA/S</b> |            |
| .25 BSPP                | <b>BJA/M</b> |            | <b>BJA/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|                      | <b>CKEB Page 4.16</b>                      |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

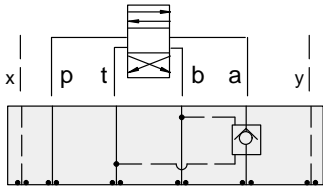


# ISO 05 X,Y SANDWICH BODIES



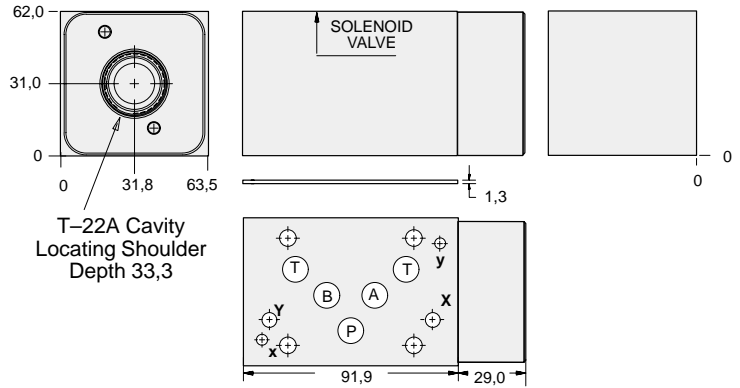
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves

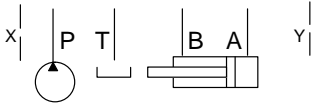


### FUNCTION

On A  
Pilot from B  
Vent to T

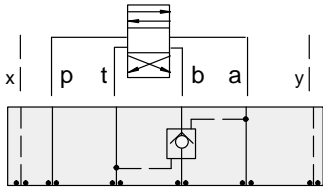


Order Retainer and Seal Kits separately.  
(See Page 12.002)



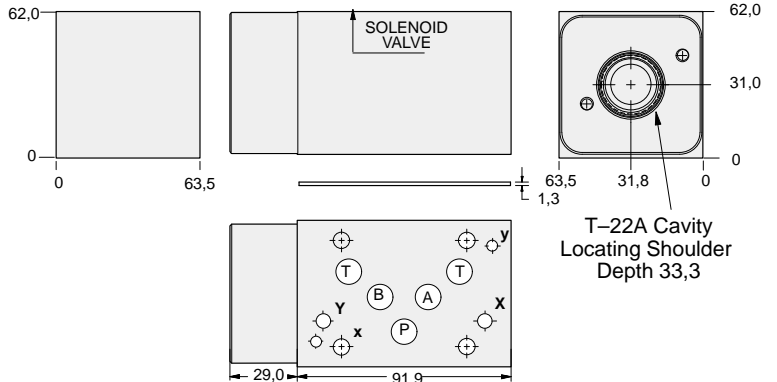
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NJA</b> |            | <b>NJA/S</b> |            |

## Pilot Operated Check Valves

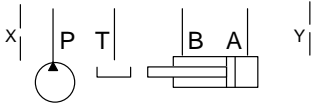


### FUNCTION

On B  
Pilot from A  
Vent to T



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>NJB</b> |            | <b>NJB/S</b> |            |

05xy P.O. CHECK

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|                      | <b>CVEV Page 4.22</b>                                |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

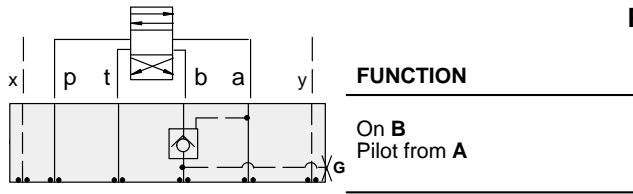




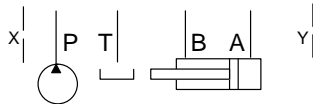
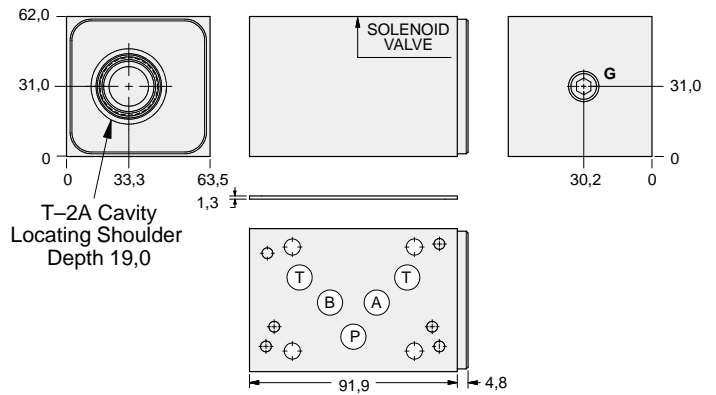
# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Pilot Operated Check Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BJB</b>   |            | <b>BJB/S</b> |            |
| .25 BSPP                | <b>BJB/M</b> |            | <b>BJB/T</b> |            |



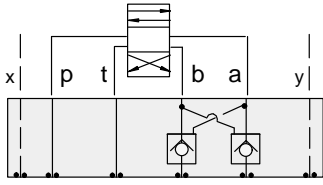
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | <i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i> |  |  |
|   | <b>CKEB Page 4.16</b>                             |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



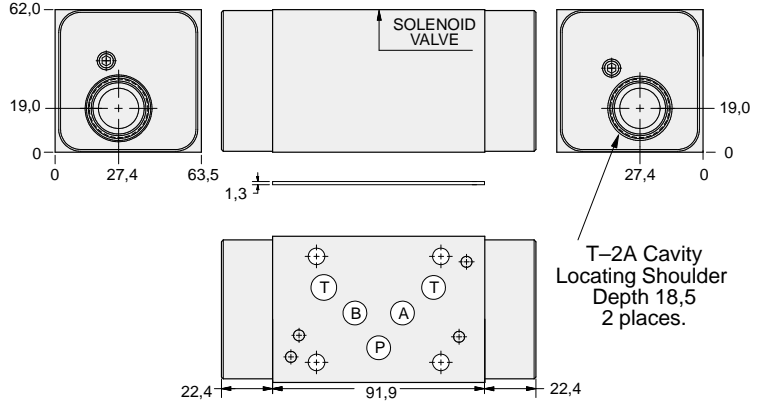
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



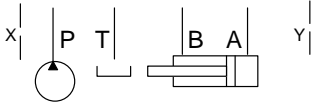
### FUNCTION

On A and B  
Cross-Piloted

### Pilot Operated Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BJY</b> |            | <b>BJY/S</b> |            |

05xy P.O. CHECK

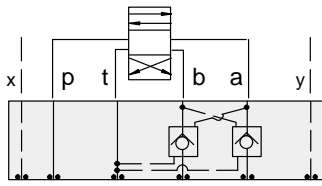
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|   | CKEB Page 3.16                             |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



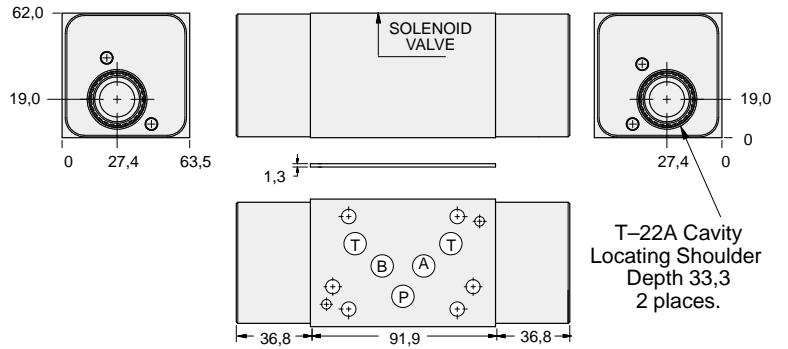
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



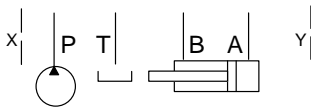
### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**

### Pilot Operated Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NJY</b> |            | <b>NJY/S</b> |            |



05xy P.O. CHECK

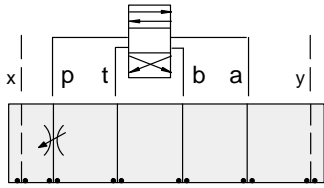
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|   | <b>CVEV Page 4.22</b>                                |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



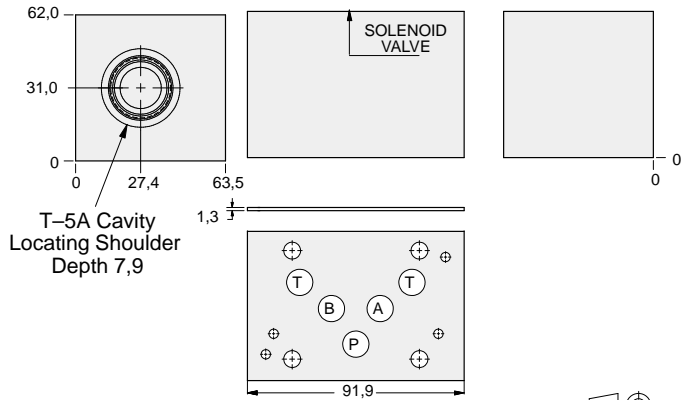
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

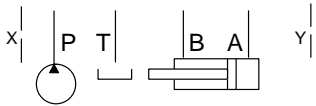
Meter-In P

### Flow Control Valves



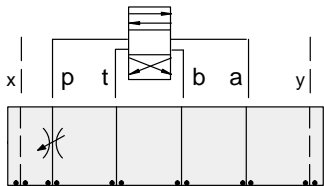
T-5A Cavity  
Locating Shoulder  
Depth 7,9

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJP        |            | DJP/S      |            |

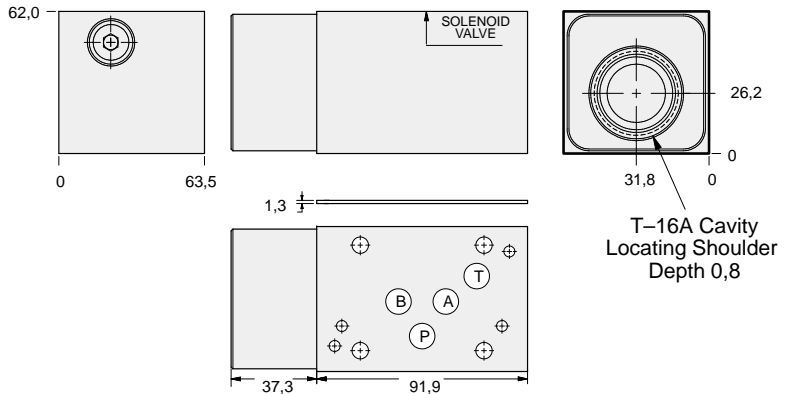
05xy FLOW CONTROL



### FUNCTION

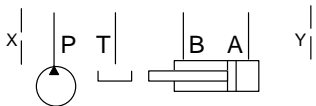
Meter-In P  
(High Capacity)

### Flow Control Valves



T-16A Cavity  
Locating Shoulder  
Depth 0,8

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DJO        |            | DJO/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

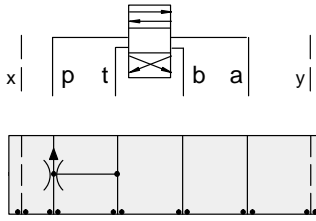
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve                    |  |  |
|               | NF*C Page 5.12, 5.13                             |  |  |
|               | Fixed Orifice, Pressure-Compensated Flow Control |  |  |
|               | FX*A Page 5.20, 5.21                             |  |  |
| OTHER VALVES: |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



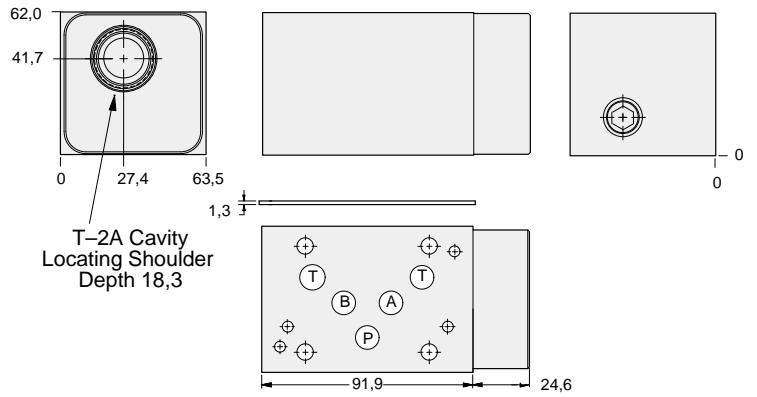
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



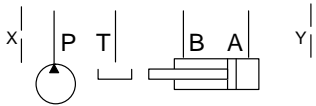
### FUNCTION

Priority Flow on P

### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJN        |            | DJN/S      |            |

05xy FLOW CONTROL

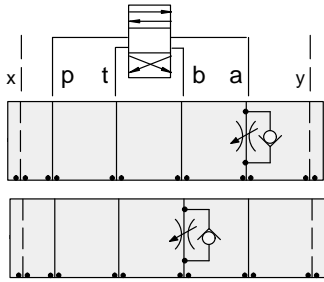
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Priority Flow Control, Bypass/Restrictive, Fixed Orifice |  |  |
|   | FRDA Page 6.02   |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

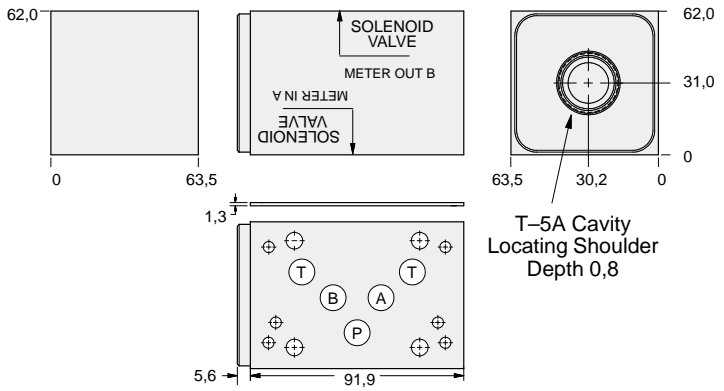


### FUNCTION

Meter-In A

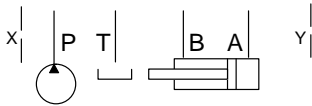
Meter-Out B

### Flow Control Valves



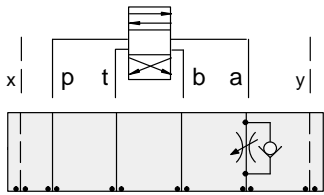
T-5A Cavity  
Locating Shoulder  
Depth 0,8

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DJB</b> |            | <b>DJB/S</b> |            |

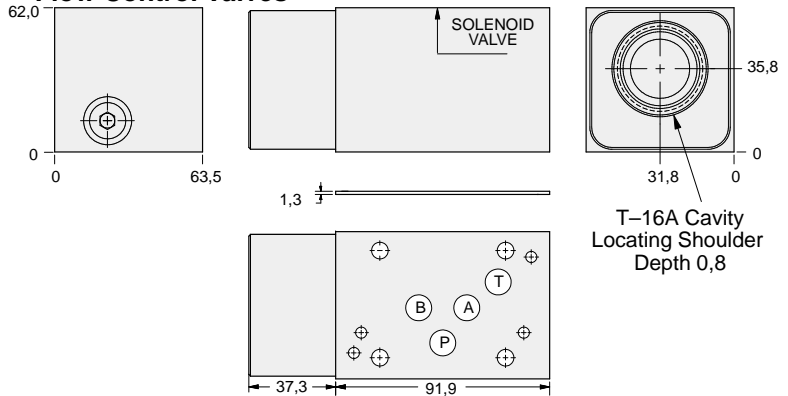
05xy FLOW CONTROL



### FUNCTION

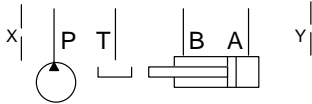
Meter-In A  
(High Capacity)

### Flow Control Valves



T-16A Cavity  
Locating Shoulder  
Depth 0,8

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DJC</b> |            | <b>DJC/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

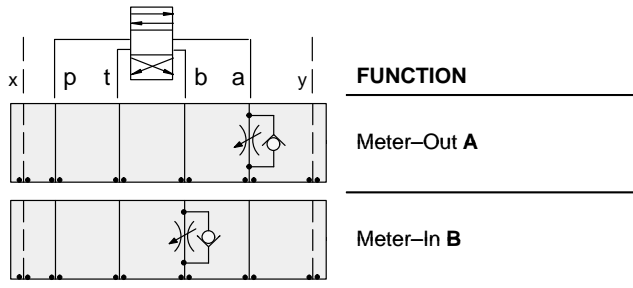
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve<br>NF*C Page 5.12, 5.13  |  | Fixed Orifice, Pressure-Compensated Flow Control<br>FX*A Page 5.20, 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check<br>NC*B Page 5.16, 5.17           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check<br>FC*B Page 5.22, 5.23              |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow<br>NC*C Page 5.18, 5.19 |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check<br>FDCB Page 5.24, FDEA Page 5.25 |
| OTHER VALVES: | CNEC, CNGC   |  |  |



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

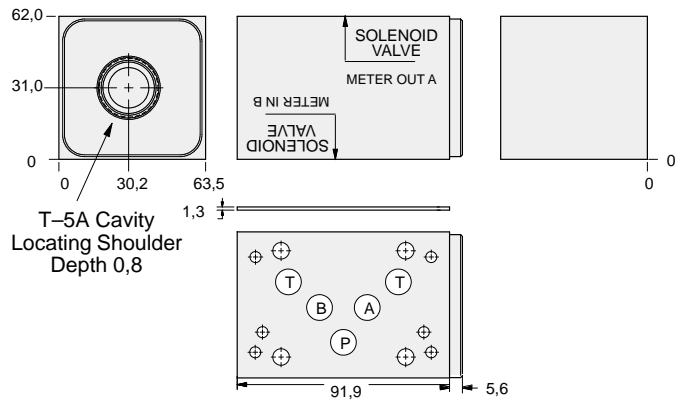


### FUNCTION

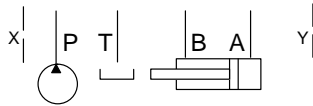
Meter-Out A

Meter-In B

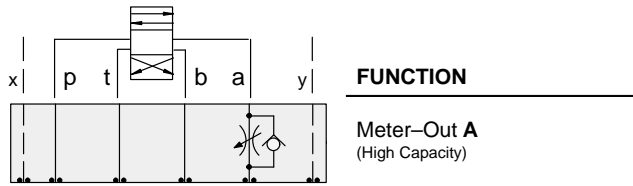
### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



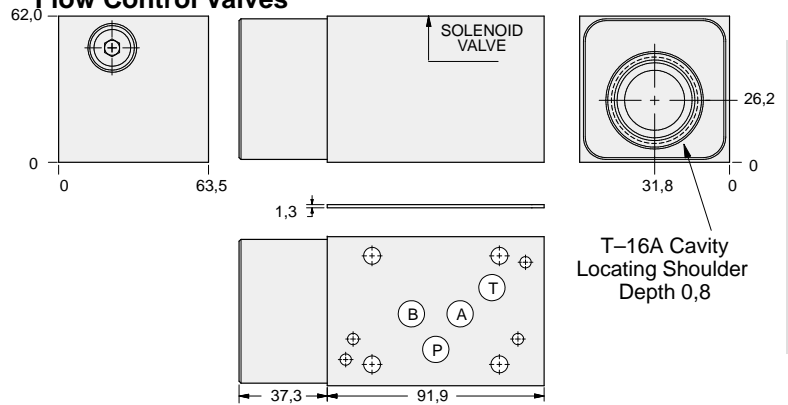
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJA        |            | DJA/S      |            |



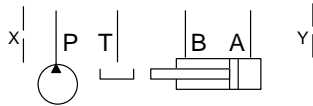
### FUNCTION

Meter-Out A  
(High Capacity)

### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DJD        |            | DJD/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.12, 5.13   |  | FX*A Page 5.20, 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.16, 5.17   |  | FC*B Page 5.22, 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.18, 5.19   |  | FDCB Page 5.24, FDEA Page 5.25   |
| OTHER VALVES: | CNEC, CNGC   |  |  |

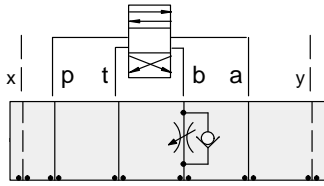
05xy FLOW CONTROL



# ISO 05 X,Y SANDWICH BODIES



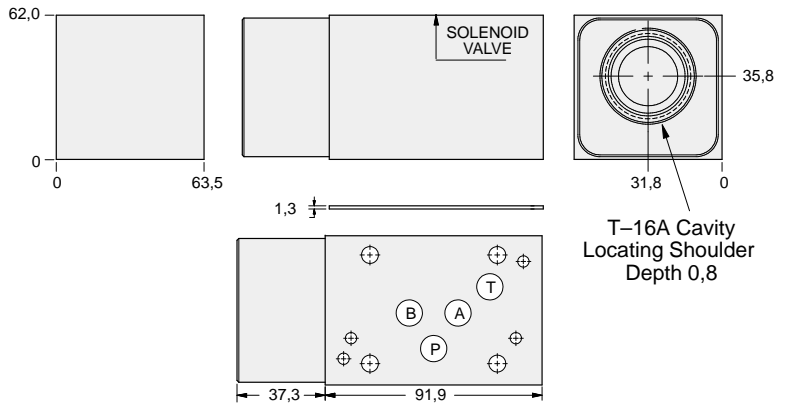
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



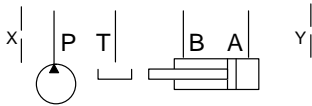
### FUNCTION

**Meter-In B**  
(High Capacity)

### Flow Control Valves

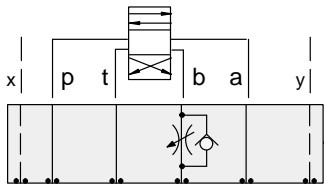


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DJE</b> |            | <b>DJE/S</b> |            |

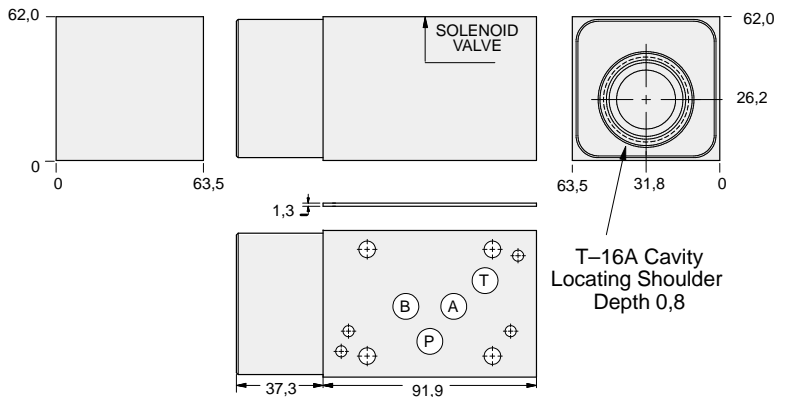
05xy FLOW CONTROL



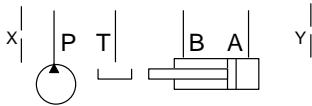
### FUNCTION

**Meter-Out B**  
(High Capacity)

### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DJF</b> |            | <b>DJF/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFEC Page 5.13   |  | FXEA Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCFB Page 5.17   |  | FCEB Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NFCF Page 5.19   |  | FDEA Page 5.25   |
| OTHER VALVES: | CNGC   |  |  |

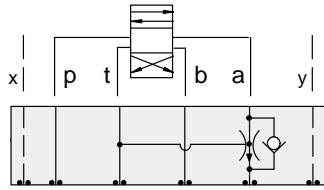




# ISO 05 X,Y SANDWICH BODIES



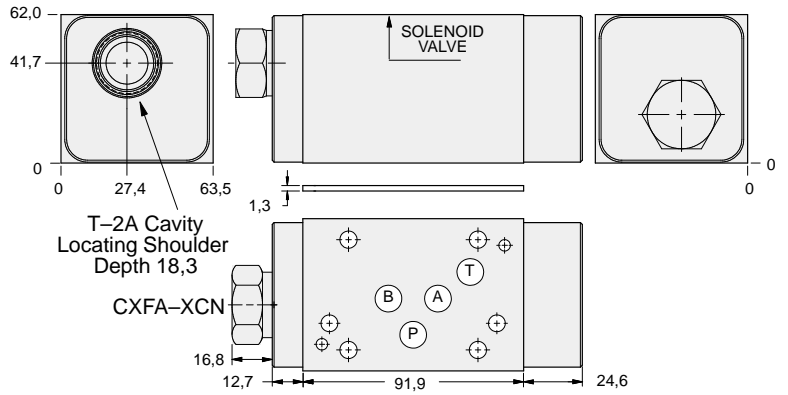
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



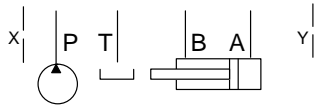
### FUNCTION

Priority Flow  
On **A**, Bypass to **T**  
Reverse FF Check

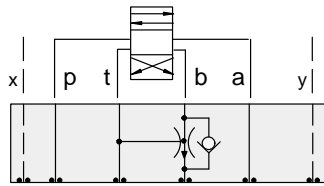
### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



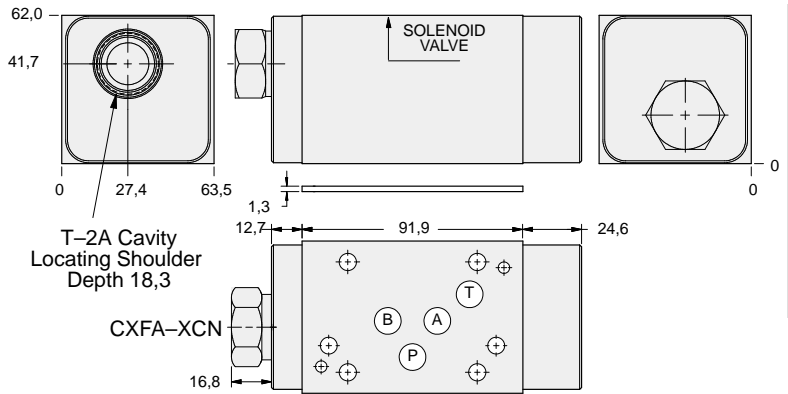
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>WHY</b>        |                   | <b>WHY/S</b>      |                   |



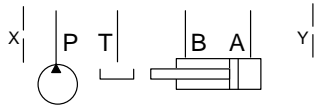
### FUNCTION

Priority Flow  
On **B**, Bypass to **T**  
Reverse FF Check

### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>WHZ</b>        |                   | <b>WHZ/S</b>       |                   |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Priority Flow Control, Bypass/Restrictive, Fixed Orifice |  |  |
|                      | FRDA Page 6.02   |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

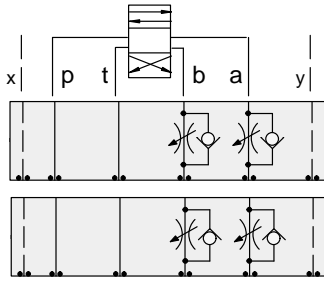
05xy FLOW CONTROL



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

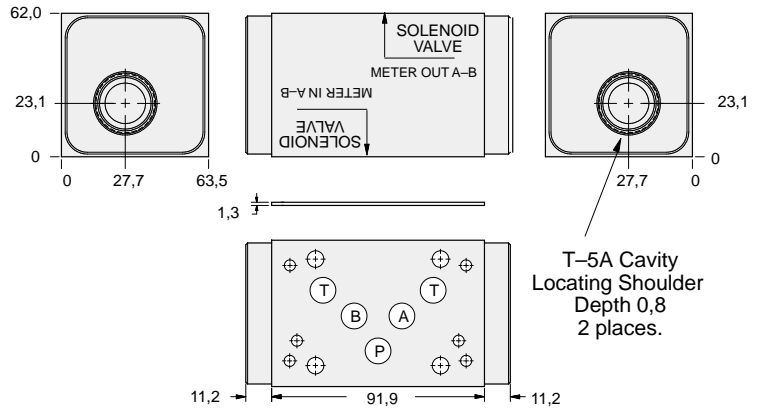


## FUNCTION

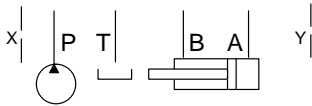
Meter-In  
A and B

Meter-Out  
A and B

## Flow Control Valves

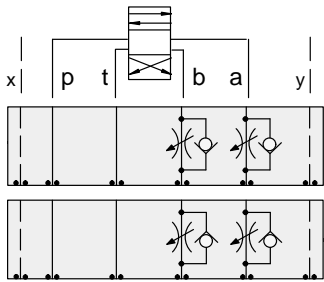


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DJY</b> |            | <b>DJY/S</b> |            |

05xy FLOW CONTROL

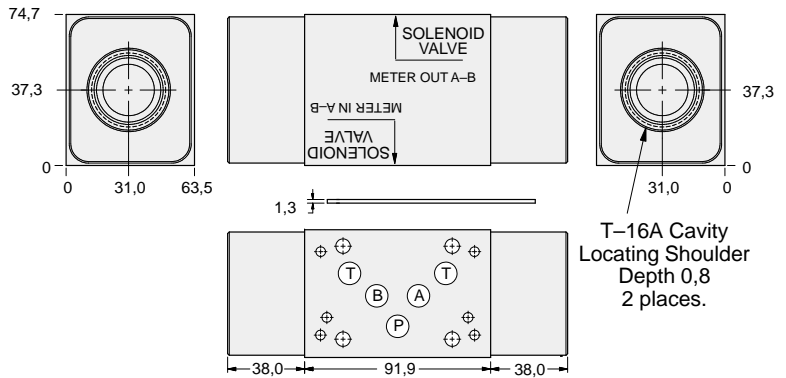


## FUNCTION

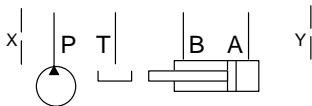
Meter-In  
A and B  
(High Capacity)

Meter-Out  
A and B  
(High Capacity)

## Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DJZ</b> |            | <b>DJZ/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

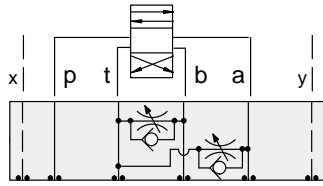
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.12, 5.13   |  | FX*A Page 5.20, 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.16, 5.17   |  | FC*B Page 5.22, 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.18, 5.19   |  | FDCB Page 5.24, FDEA Page 5.25   |
| OTHER VALVES: | CNEC, CNGC   |  |  |



# ISO 05 X,Y SANDWICH BODIES



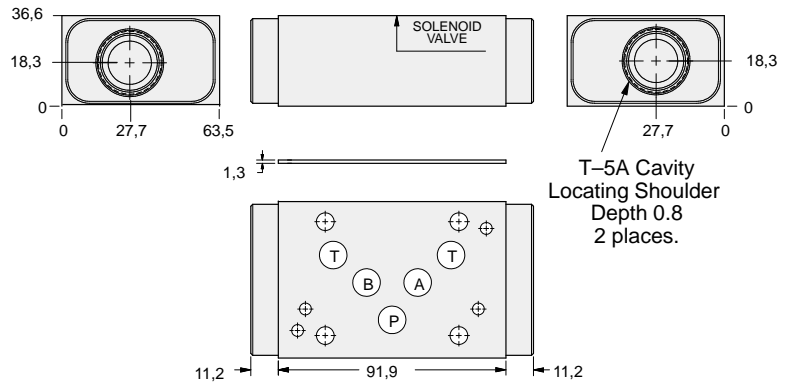
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



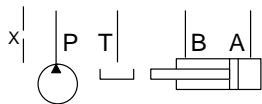
### FUNCTION

Bleed-Off  
A and B to T

### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DJX</b> |            | <b>DJX/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

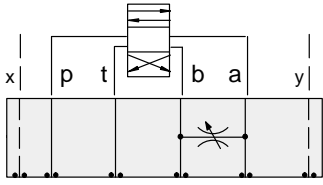
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFDC Page 5.12   |  | FXDA Page 5.20   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCEB Page 5.16   |  | FCDB Page 5.22   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NCEC Page 5.18   |  | FDCB Page 5.24   |
| OTHER VALVES: | CNEC, CNGC   |  |  |



# ISO 05 X,Y SANDWICH BODIES



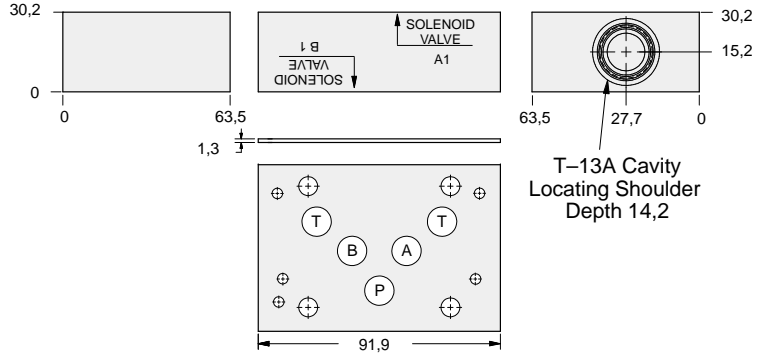
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



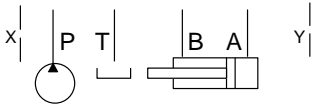
### FUNCTION

Bleed-Off  
A to B and  
B to A

### Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJS        |            | DJS/S      |            |

05xy FLOW CONTROL

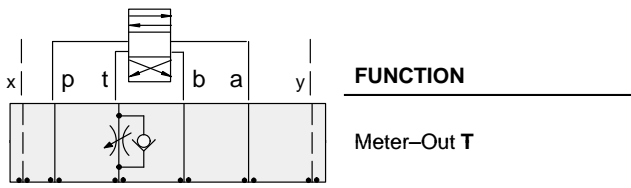
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Fixed Orifice Restrictor Valve with Reverse Free Flow Check |  |  |
|   | NFCC Page 5.12  |  |  |
|   |   |  |  |
|   |   |  |  |
| OTHER VALVES:                                   | CNCC  |  |  |



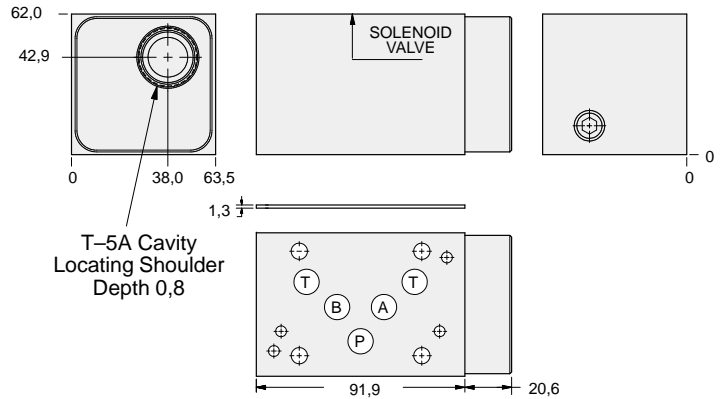
# ISO 05 X,Y SANDWICH BODIES



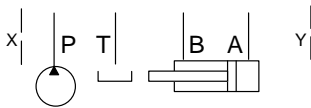
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Flow Control Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJT        |            | DJT/S      |            |

05xy FLOW CONTROL

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|   | NFDC Page 5.12   |  | FXDA Page 5.20   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|   | NCEB Page 5.16   |  | FCDB Page 5.22   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|   | NCEC Page 5.18   |  | FDCB Page 5.24   |
| OTHER VALVES:                                   | CNEC   |  |  |

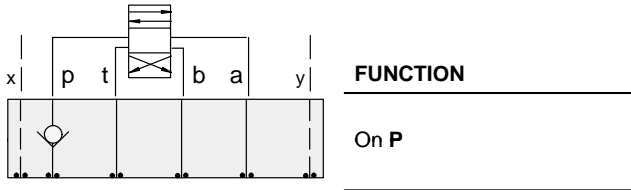




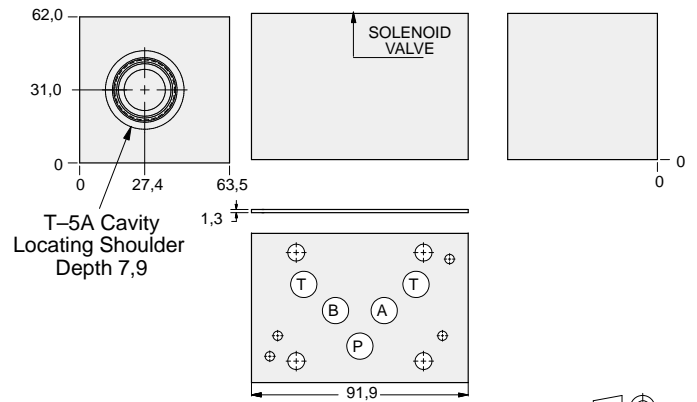
# ISO 05 X,Y SANDWICH BODIES



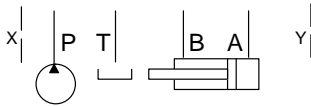
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



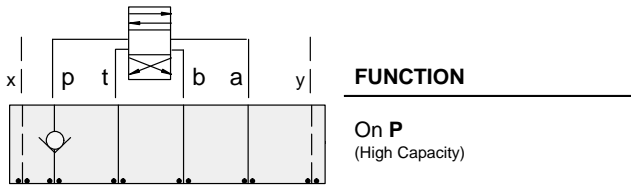
### Check Valves



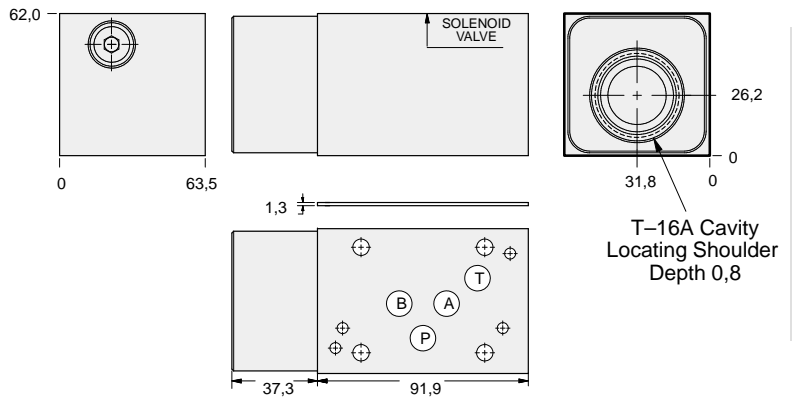
Order Retainer and Seal Kits separately.  
(See Page 12.002)



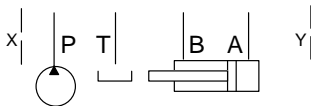
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJP        |            | DJP/S      |            |



### Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DJO        |            | DJO/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXFA</b> Page 5.08 (use with DJP)                      |  |  |
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXHA</b> Page 5.09 (use with DJO)                      |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

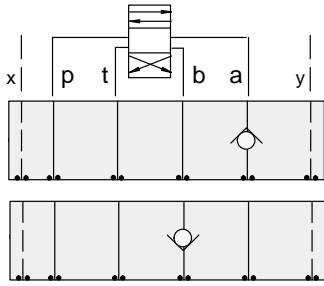
05xy CHECK



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

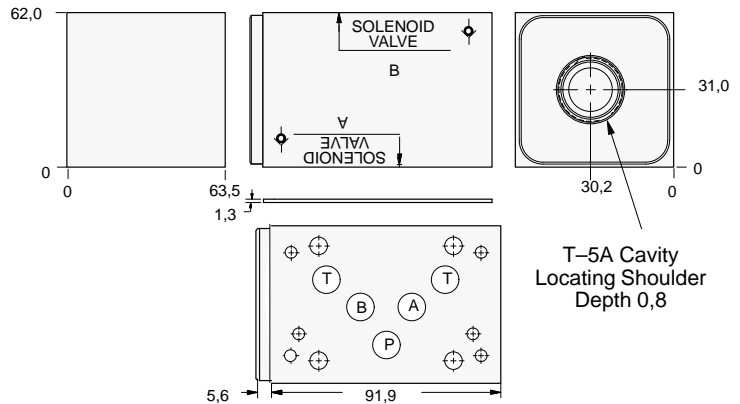


### FUNCTION

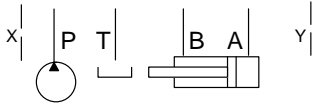
**On A**  
Free Flow Out  
of Valve

**On B**  
Free Flow Into Valve

### Check Valves

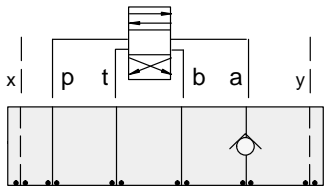


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DJK</b> |            | <b>DJK/S</b> |            |

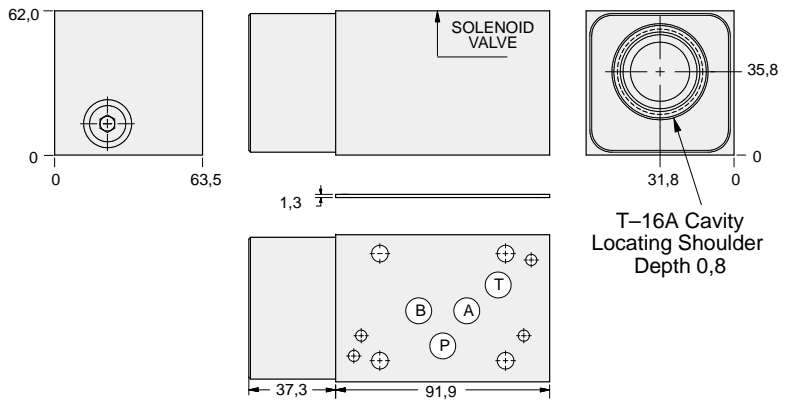
05xy CHECK



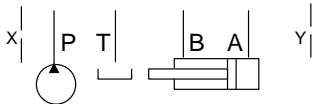
### FUNCTION

**On A**  
Free Flow Out of Valve  
(High Capacity)

### Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DJC</b> |            | <b>DJC/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXFA Page 5.08, (use with DJK)</b>                     |  |  |
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXHA Page 5.09 (use with DJC)</b>                      |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

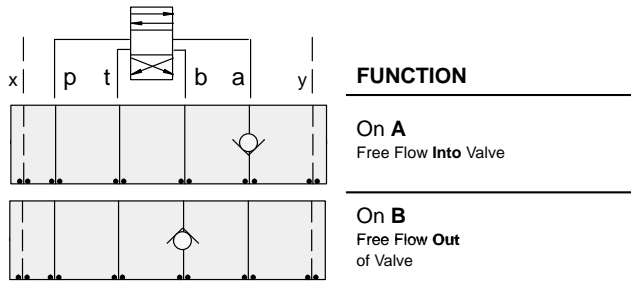




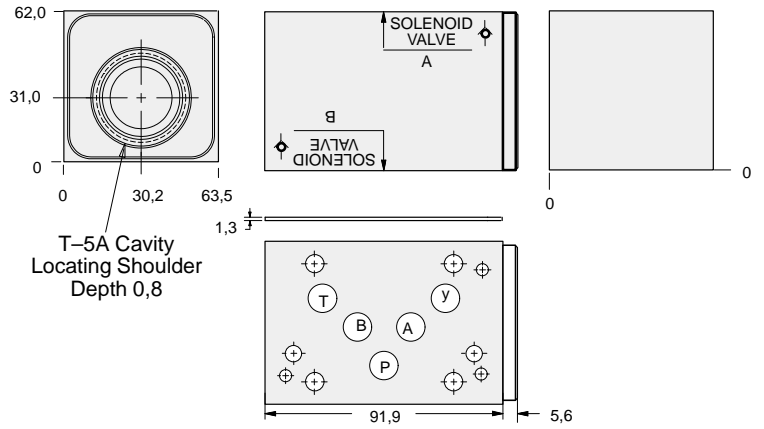
# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

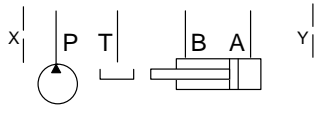


### Check Valves

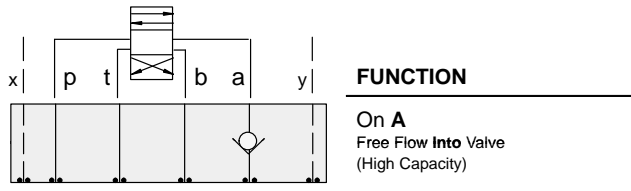


T-5A Cavity  
Locating Shoulder  
Depth 0,8

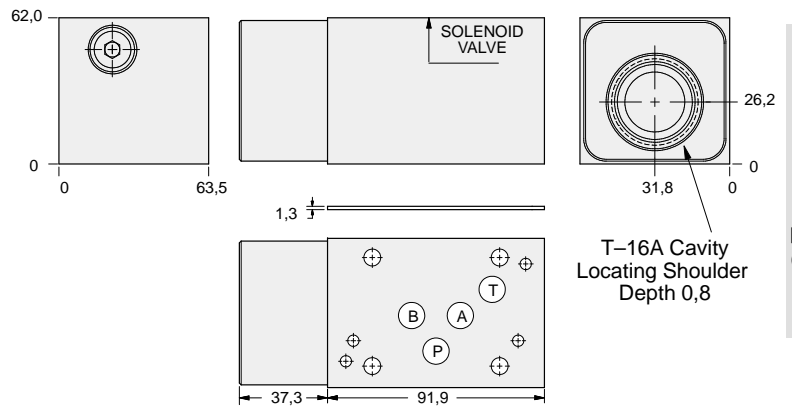
Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJJ        |            | DJJ/S      |            |

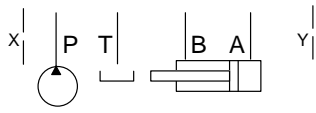


### Check Valves



T-16A Cavity  
Locating Shoulder  
Depth 0,8

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DJD        |            | DJD/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|               | CXFA Page 5.08 (use with DJJ)                          |  |  |
|               | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|               | CXHA Page 5.09 (use with DJJ)                          |  |  |
| OTHER VALVES: |  |  |  |

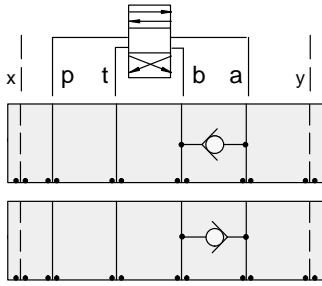
05xy CHECK



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

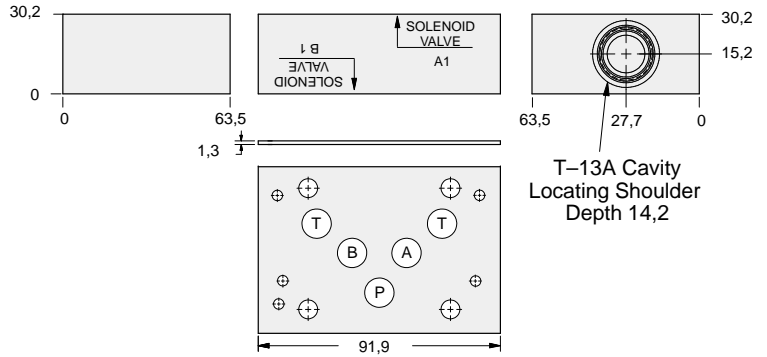


### FUNCTION

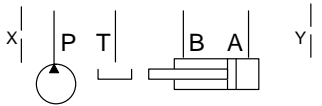
B to A

A to B

### Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DJS</b> |            | <b>DJS/S</b> |            |

05<sub>xy</sub> CHECK

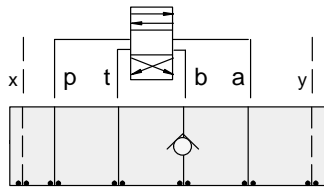
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | CXDA Page 3.08  |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



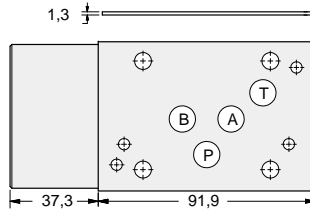
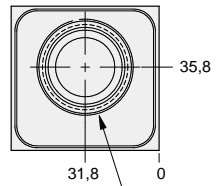
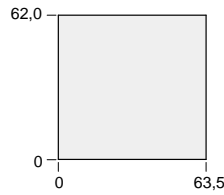
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

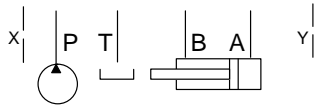
**On B**  
Free Flow **Out** of Valve  
(High Capacity)

### Check Valves

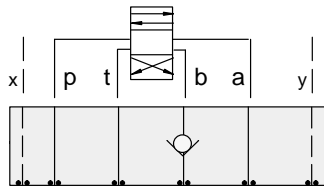


T-16A Cavity  
Locating Shoulder  
Depth 0,8

Order Retainer and Seal Kits separately.  
(See Page 12.002)



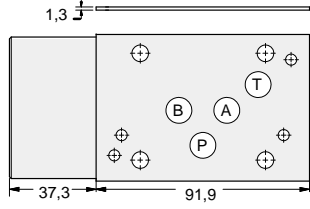
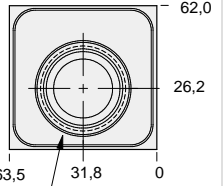
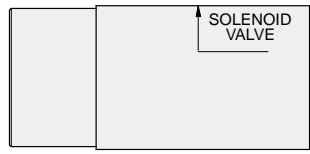
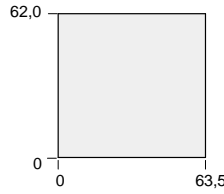
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJE        |            | DJE/S      |            |



### FUNCTION

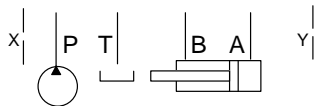
**On B**  
Free Flow **Into** Valve  
(High Capacity)

### Check Valves



T-16A Cavity  
Locating Shoulder  
Depth 0,8

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DJF        |            | DJF/S       |            |

05xy CHECK

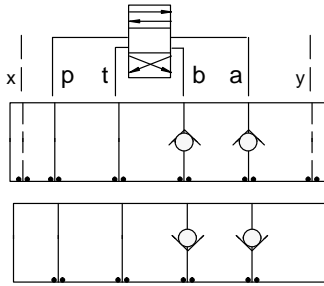
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | CXHA Page 5.09  |  |  |
|   |   |  |  |
|   |   |  |  |
| OTHER VALVES:                                   |   |  |  |



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

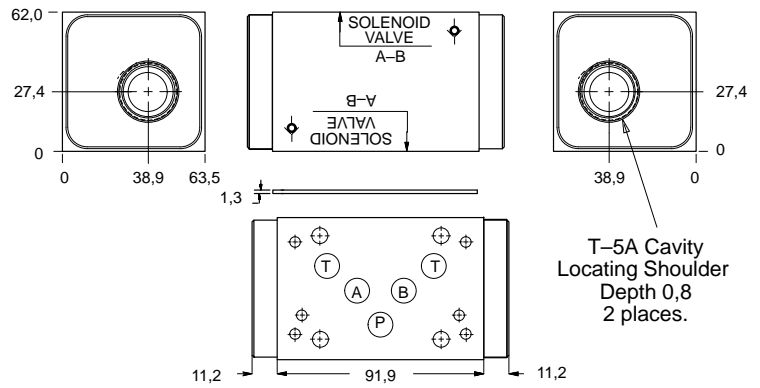


### FUNCTION

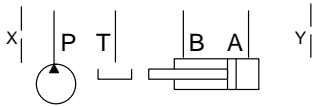
**On A and B**  
Free Flow Out  
of Valve

**On A and B**  
Free Flow Into Valve

### Check Valves

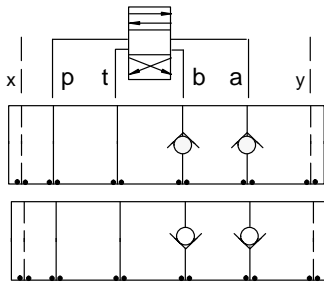


Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DJL</b> |            | <b>DJL/S</b> |            |

05xy CHECK

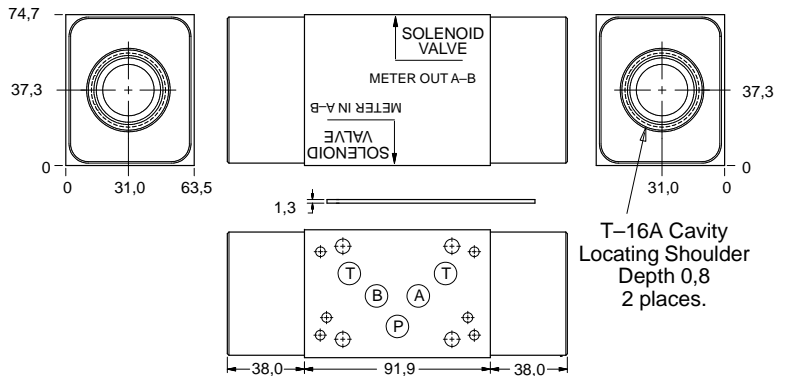


### FUNCTION

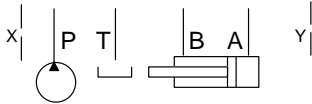
**On A and B**  
Free Flow Out of Valve  
(High Capacity)

**On A and B**  
Free Flow Into Valve  
(High Capacity)

### Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DJZ</b> |            | <b>DJZ/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

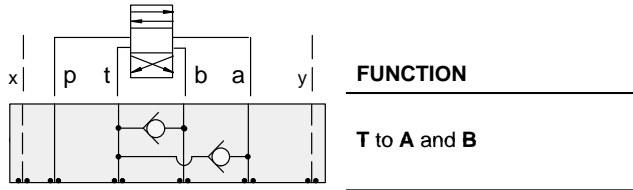
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXFA Page 5.08 (use with DJL)</b>                      |  |  |
|                      | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|                      | <b>CXHA Page 5.09 (use with DJZ)</b>                      |  |  |
| <b>OTHER VALVES:</b> | <b>NFEC, FXEA</b>   |  |  |



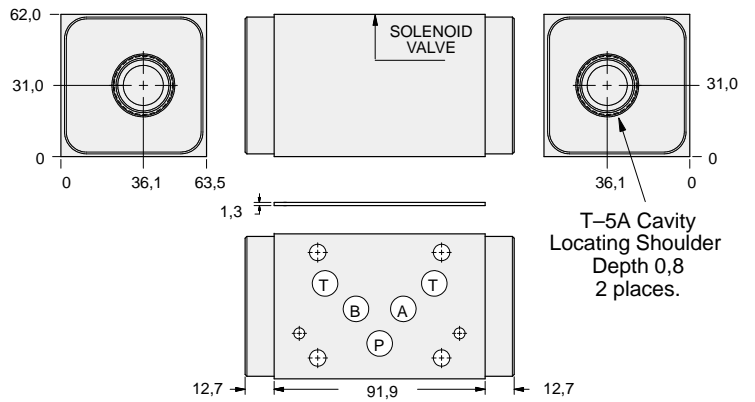
# ISO 05 X,Y SANDWICH BODIES



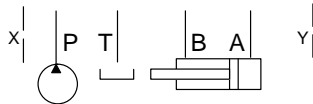
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJW        |            | DJW/S      |            |

05xy CHECK

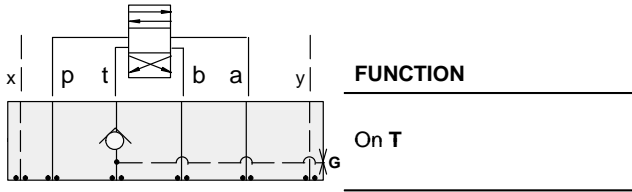
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | CXFA Page 5.08  |  |  |
|   |   |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



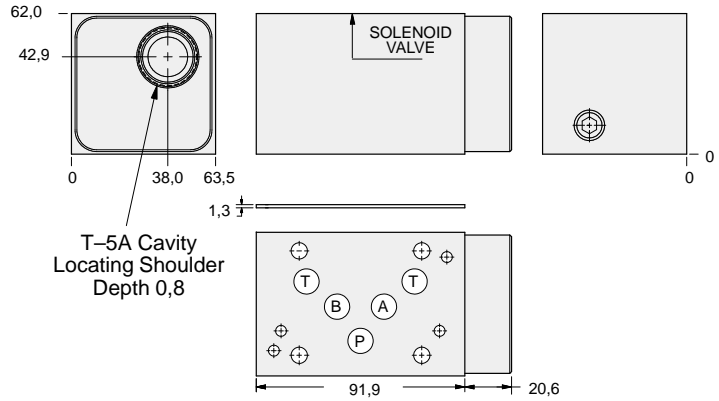
# ISO 05 X,Y SANDWICH BODIES



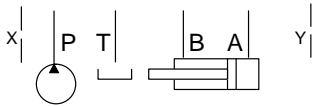
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Check Valves



Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM  |            | SG IRON    |            |
|-------------------------|------------|------------|------------|------------|
|                         | Model Code | List Price | Model Code | List Price |
| .25 NPTF                | DJT        |            | DJT/S      |            |
| .25 BSPP                | DJT/M      |            | DJT/T      |            |

05xy CHECK

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | CXFA Page 5.08  |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |

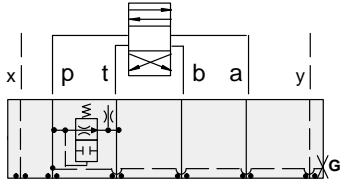




# ISO 05 X,Y SANDWICH BODIES



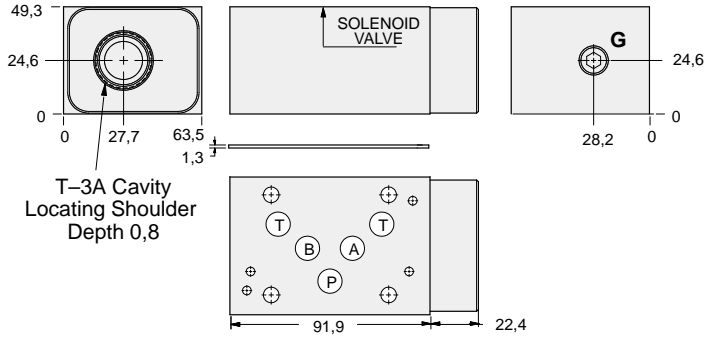
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## FUNCTION

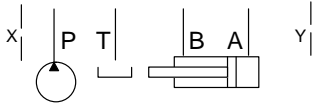
Air-Bleed and Start-Up

## Circuit Savers



T-3A Cavity  
Locating Shoulder  
Depth 0,8

Order Retainer and Seal Kits separately.  
(See Page 12.002)



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CJP</b>   |            | <b>CJP/S</b> |            |
| .25 BSPP                | <b>CJP/M</b> |            | <b>CJP/T</b> |            |

05<sub>xy</sub> CIRCUIT SAVER

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |                              |  |  |
|----------------------|------------------------------|--|--|
|                      | Air Bleed and Start-up Valve |  |  |
|                      | NQEB Page 10.16              |  |  |
|                      |                              |  |  |
|                      |                              |  |  |
| <b>OTHER VALVES:</b> |                              |  |  |

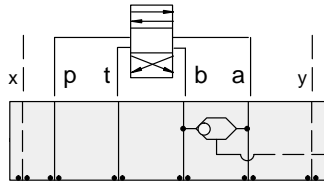




# ISO 05 X,Y SANDWICH BODIES



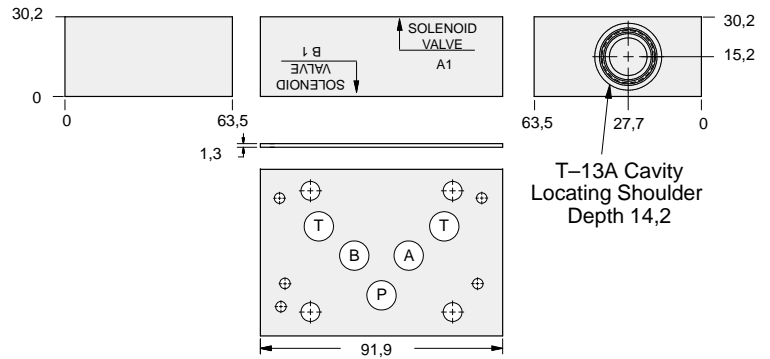
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



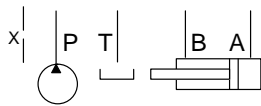
### FUNCTION

Shuttle  
A and B  
Output External

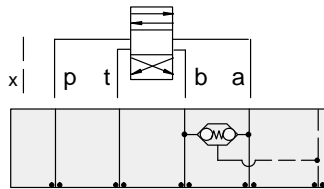
### Circuit Savers



Order Retainer and Seal Kits separately.  
(See Page 12.002)



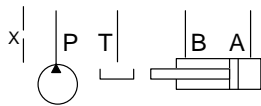
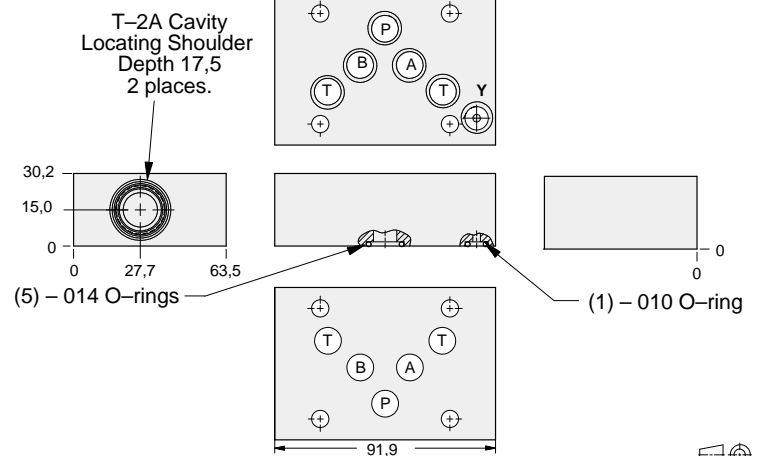
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DJS        |            | DJS/S      |            |



### FUNCTION

Checks from  
A and B—Adapter  
to ISO 05 w/Y Port

### Circuit Savers



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| BJS        |            | BJS/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |  |  |
|---------------|---|--|--|
|               | 2 Port Shuttle Valve, Signal External             |  |  |
|               | CSAA Page 10.09 (use with DJS)                    |  |  |
|               | 3 Port Back-to-Back Check Valve, Signal at Port 3 |  |  |
|               | CDAB Page 10.10 (use with BJS)                    |  |  |
| OTHER VALVES: |   |  |  |

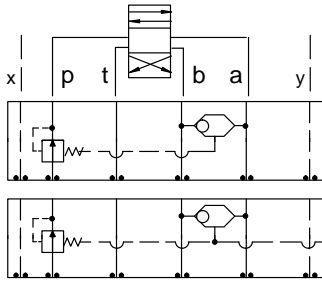
05xy CIRCUIT SAVER



# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

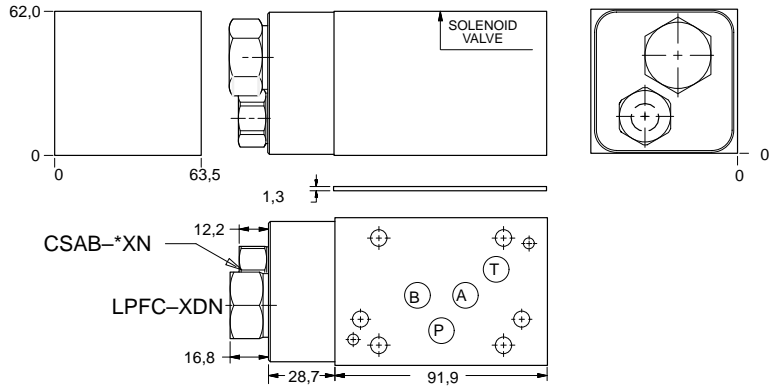


### FUNCTION

Pressure Compensator (Restrictive)

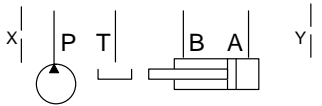
Pressure Compensator (Restrictive) w/Load-Sensing Port

### Circuit Savers

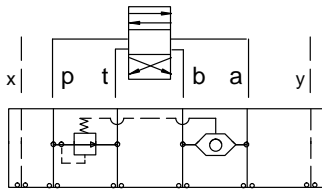


Order Retainer and Seal Kits separately. (See Page 12.002)

| Shuttle Cartridge | Load-Sensing Port in Shuttle | ALUMINIUM     |            | SG IRON       |            |
|-------------------|------------------------------|---------------|------------|---------------|------------|
|                   |                              | Model Code    | List Price | Model Code    | List Price |
| CSAB-XXN          | None                         | YFEK-XHN-BB   |            | YFEK-XHN-BB/S |            |
| CSAB-AXN          | SAE-4                        | YFEQ-XHN-BB   |            | YFEQ-XHN-BB/S |            |
| CSAB-BXN          | .25 BSPP                     | YFEQ-XHN-BB/M |            | YFEQ-XHN-BB/T |            |



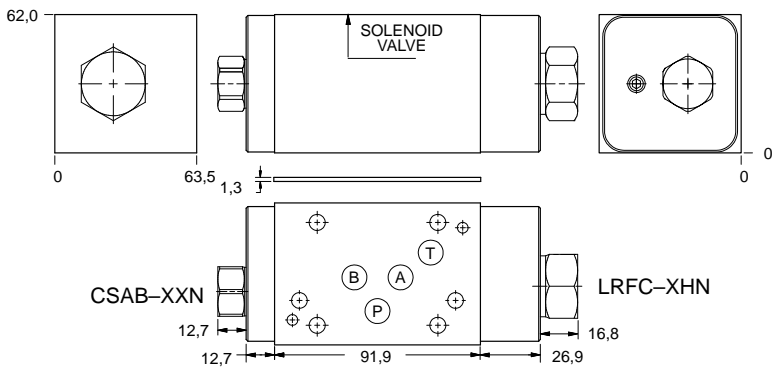
05xy CIRCUIT SAVER



### FUNCTION

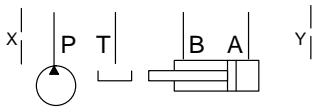
Pressure Compensator (Bypass)

### Circuit Savers



Order Retainer and Seal Kits separately. (See Page 12.002)

| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YFEW-XHN-BB |            | YFEW-XHN-BB/S |            |

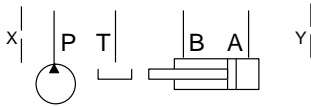
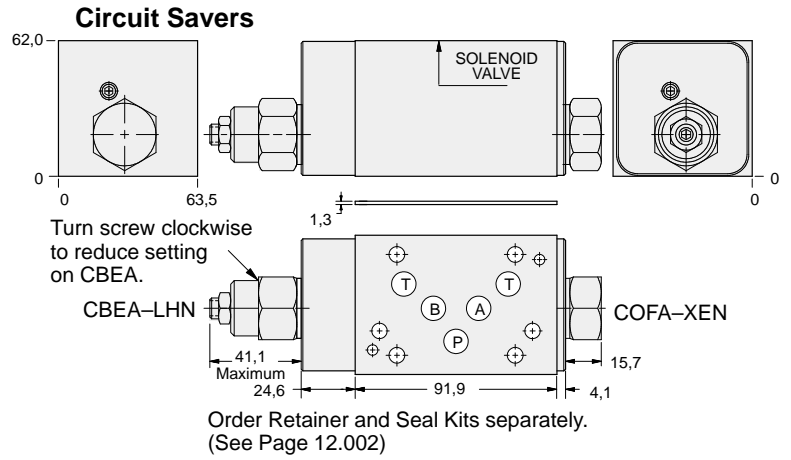
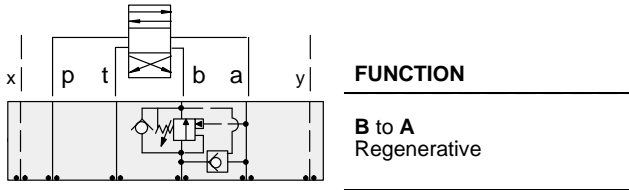




# ISO 05 X,Y SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



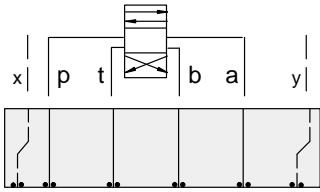
| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDEL-LHN-BB |            | YDEL-LHN-BB/S |            |



# ISO 05 X,Y SANDWICH BODIES



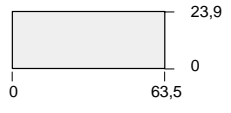
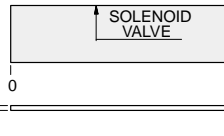
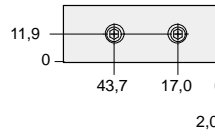
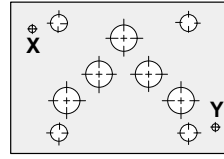
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



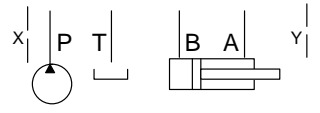
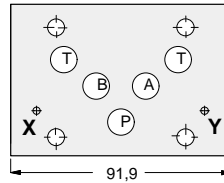
## FUNCTION

ISO 05 with X and Y  
Amer to Euro

## Circuit Savers

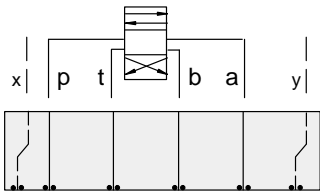


Order Seal Kit  
#990-120-009  
separately.



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZSX        |            | ZSX/S      |            |

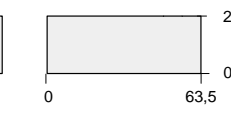
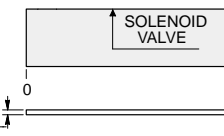
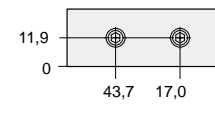
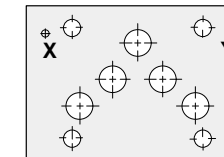
05xy CIRCUIT SAVER



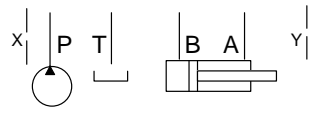
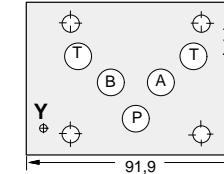
## FUNCTION

ISO 05 with X and Y  
Euro to Amer

## Circuit Savers



Order Seal Kit  
#990-120-012  
separately.



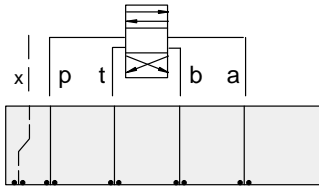
| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| ZSW        |            | ZSW/S       |            |



# ISO 05 X,Y SANDWICH BODIES



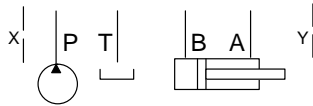
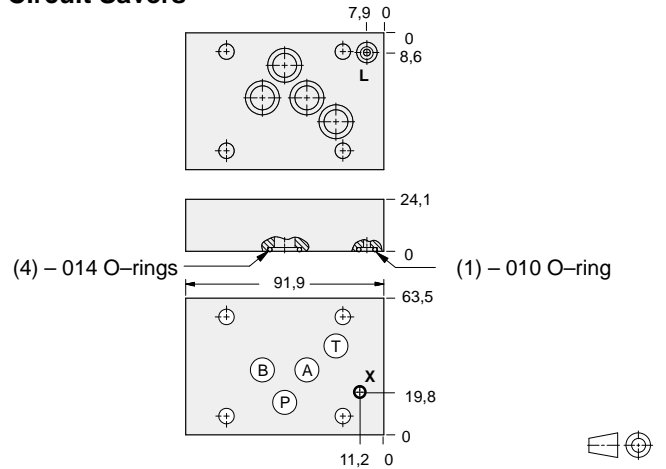
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



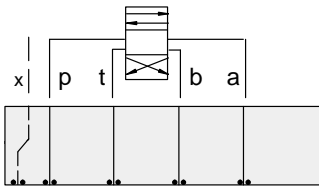
### FUNCTION

Bosch L Port to ISO 05 X Port (European)

### Circuit Savers



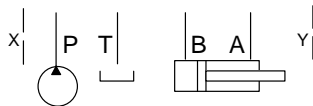
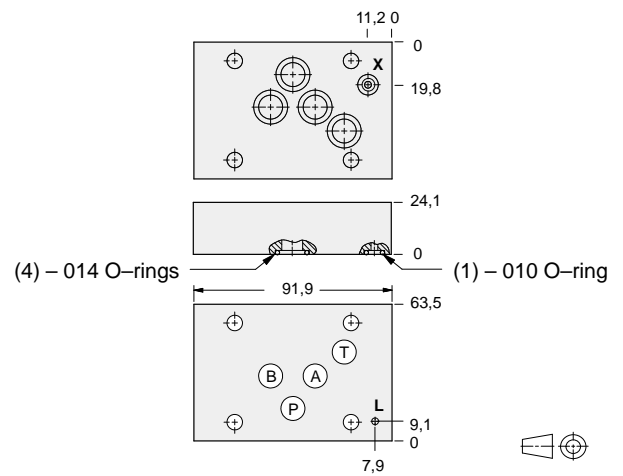
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZJA        |            | ZJA/S      |            |



### FUNCTION

ISO 05 X Port (European) to Bosch L Port

### Circuit Savers



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| ZJB        |            | ZJB/S       |            |

05xy CIRCUIT SAVER



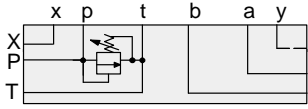
# ISO 05 X,Y SANDWICH BODIES



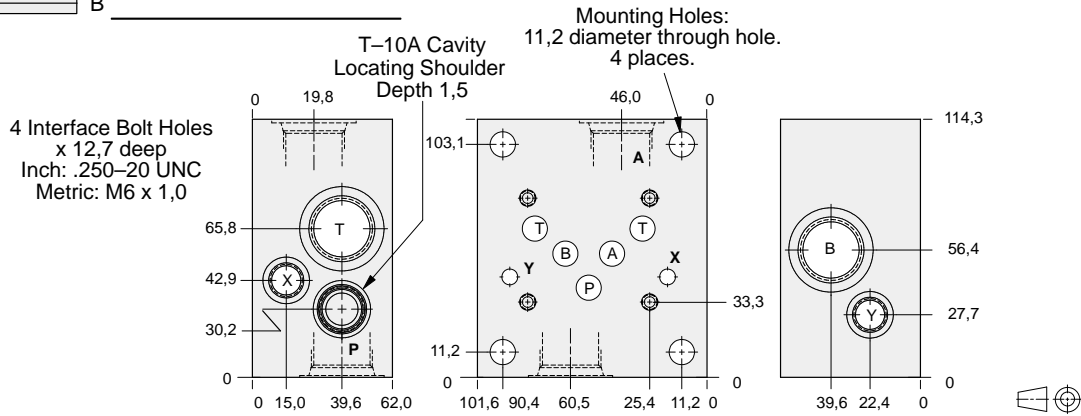
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

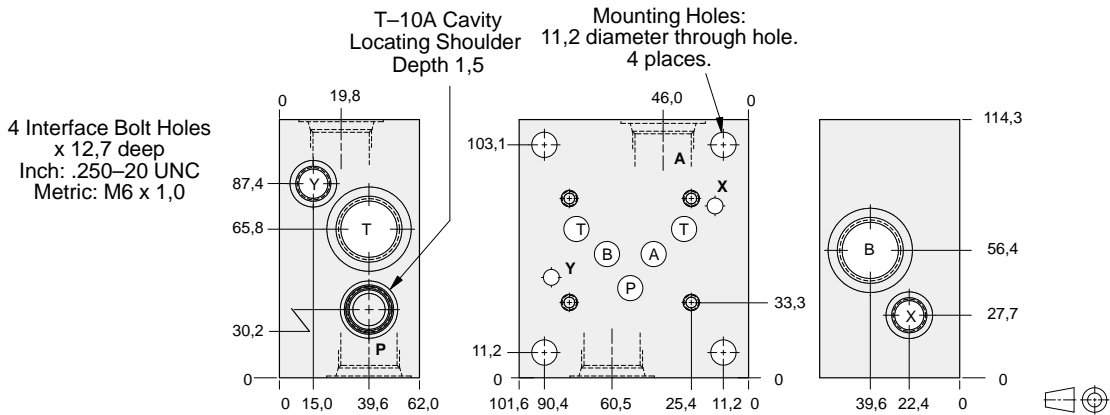
### FUNCTION



Relief P to T



### CETOP VERSION



### U.S. VERSION

| Bolt Hole Interface | Port A,B,P,T | Port X,Y | ALUMINIUM       |                  |            | SG IRON         |                  |            |
|---------------------|--------------|----------|-----------------|------------------|------------|-----------------|------------------|------------|
|                     |              |          | Model Code U.S. | Model Code CETOP | List Price | Model Code U.S. | Model Code CETOP | List Price |
| Inch                | .50 NPTF     | .25 NPTF | ZHH             | ZHP              |            | ZHH/S           | ZHP/S            |            |
| Inch                | .75 NPTF     | .25 NPTF | ZHJ             | ZHQ              |            | ZHJ/S           | ZHQ/S            |            |
| Inch                | SAE-10       | SAE-6    | ZHK             | ZHR              |            | ZHK/S           | ZHR/S            |            |
| Inch                | SAE-12       | SAE-6    | ZHL             | ZHS              |            | ZHL/S           | ZHS/S            |            |
| Metric              | .50 BSPP     | .25 BSPP | ZHM             | ZHT              |            | ZHM/S           | ZHT/S            |            |
| Metric              | .75 BSPP     | .25 BSPP | ZHN             | ZHV              |            | ZHN/S           | ZHV/S            |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|  |   |  |   |
|--|---|--|---|
|  | Pilot Operated Relief Valve                 |  | Direct Acting Relief Valve              |
|  | RPEC Page 1.06                              |  | RDDA Page 1.10                          |
|  | Pilot Operated, Rapid Response Relief Valve |  | Pilot Operated "Kick-Down" Relief Valve |
|  | RPEE Page 1.08                              |  | RQEB Page 1.12                          |

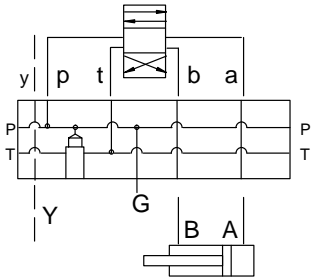


# BAR MANIFOLDS



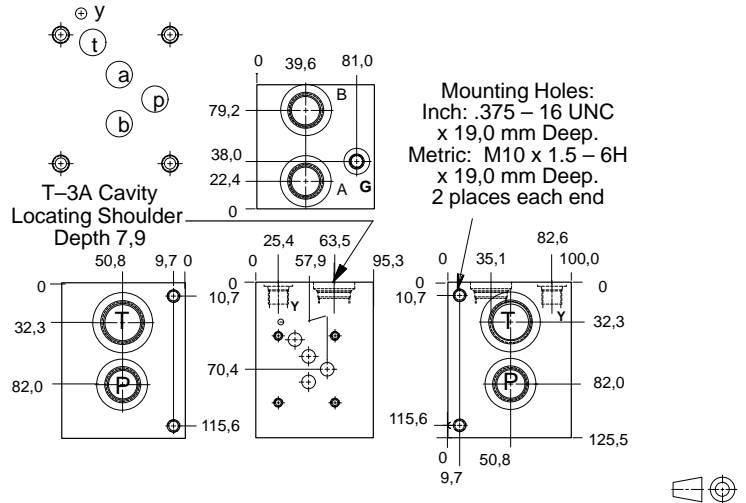
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 H (U.S) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

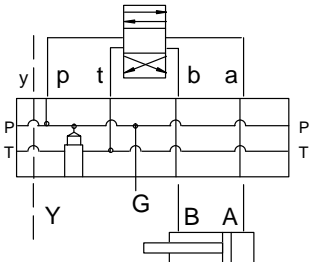
One Station  
(U.S. Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VMC        |            | VMC/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VMJ        |            | VMJ/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VMR        |            | VMR/S      |            |

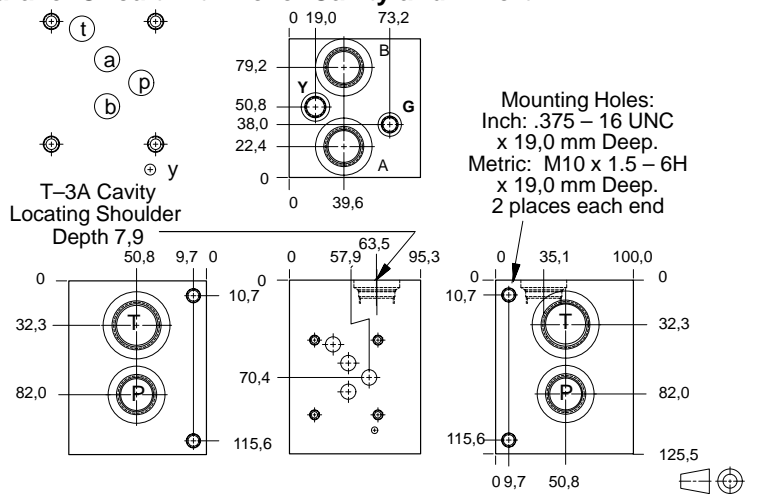
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

One Station  
(CETOP Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VRE        |            | VRE/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VRL        |            | VRL/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VRT        |            | VRT/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

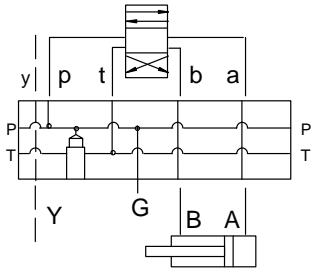


# BAR MANIFOLDS



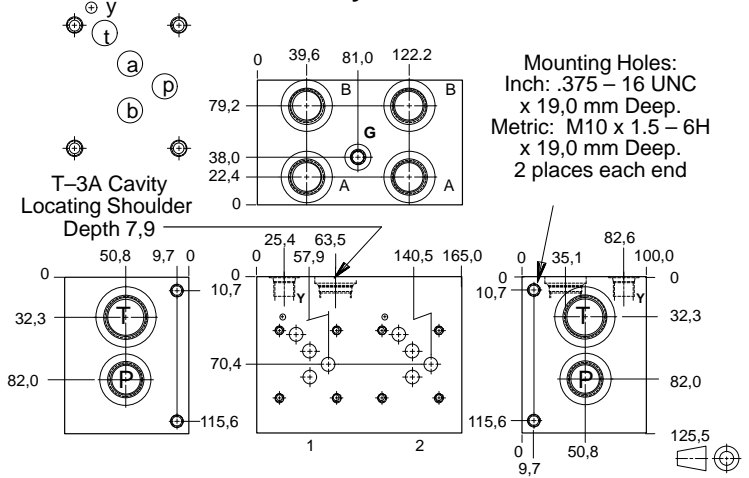
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

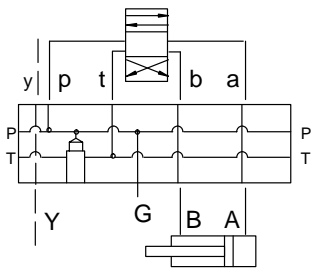
Two Station  
(U.S. Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VMD        |            | VMD/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VMK        |            | VMK/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VMT        |            | VMT/S      |            |

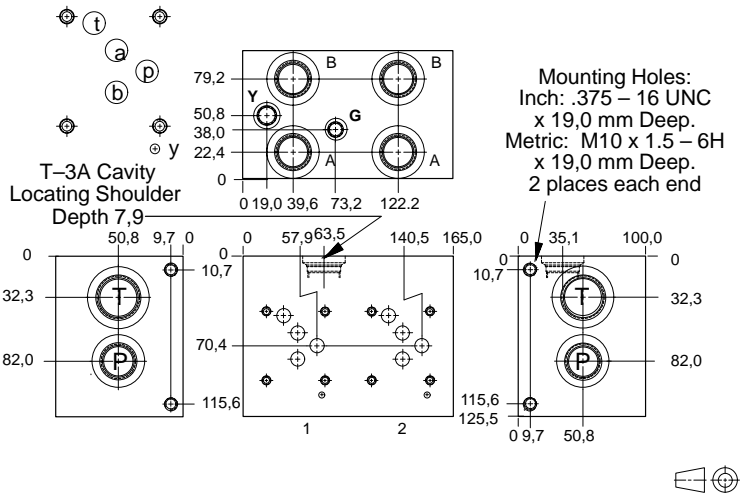
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

Two Station  
(CETOP Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VRF        |            | VRF/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VRM        |            | VRM/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VRV        |            | VRV/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

| OTHER VALVES: | Pilot Operated Relief Valve<br>RPGC Page 1.06 | Direct Acting Relief Valve<br>RDFA Page 1.10 |
|---------------|---|--|
|               |   |  |



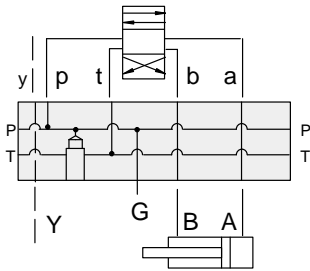


# BAR MANIFOLDS



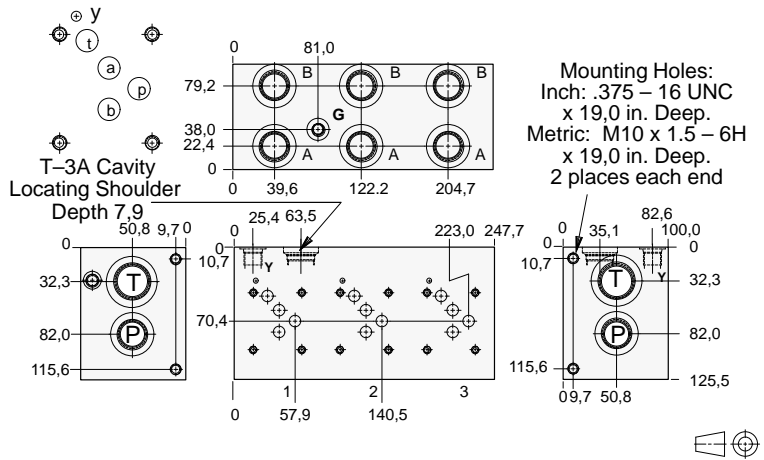
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

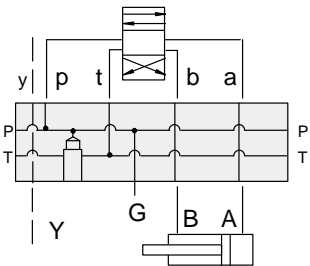
Three Station  
(U.S. Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VME        |            | VME/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VML        |            | VML/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VMW        |            | VMW/S      |            |

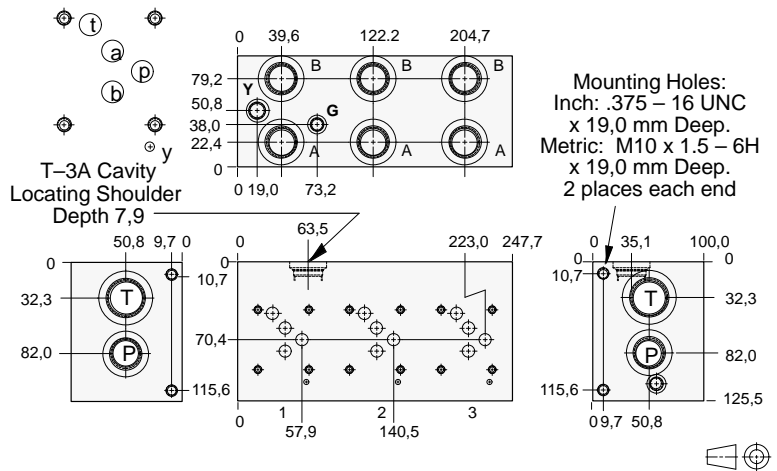
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

Three Station  
(CETOP Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VRG        |            | VRG/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VRN        |            | VRN/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VRW        |            | VRW/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

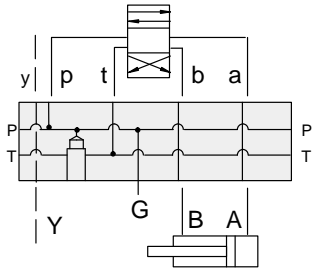


# BAR MANIFOLDS



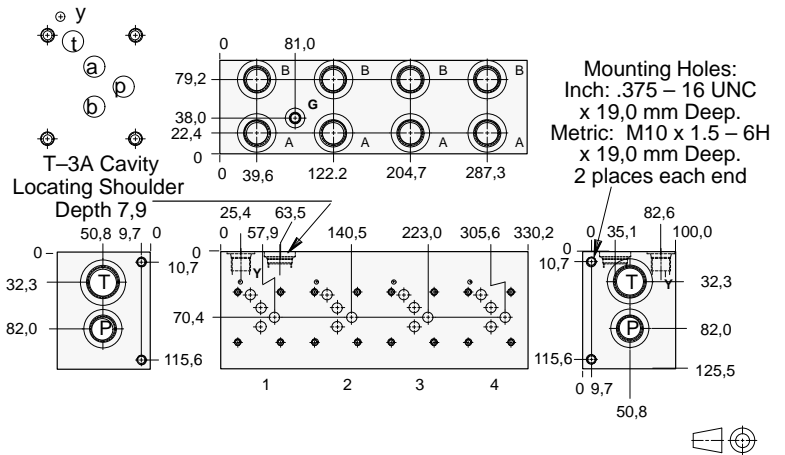
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

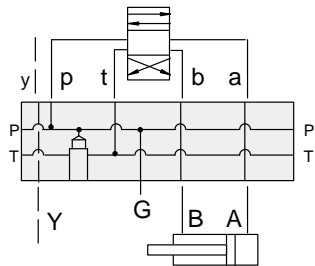
Four Station  
(U.S. Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VMF        |            | VMF/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VMM        |            | VMM/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VMX        |            | VMX/S      |            |

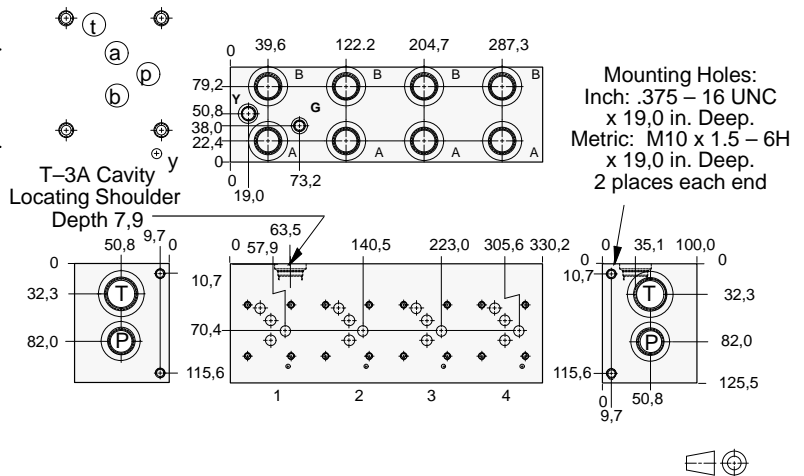
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

Four Station  
(CETOP Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VRH        |            | VRH/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VRP        |            | VRP/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VRX        |            | VRX/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

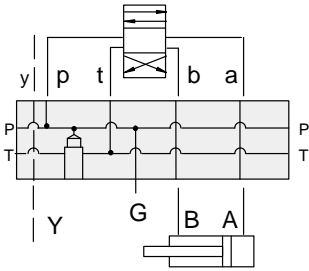


# BAR MANIFOLDS



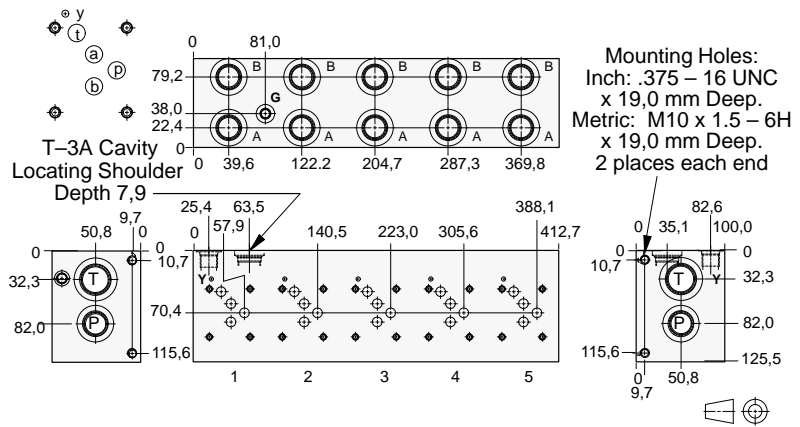
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 05 H (U.S.) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

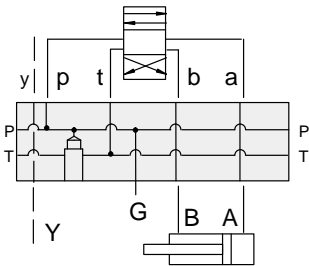
Five Station  
(U.S. Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VMG        |            | VMG/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VMN        |            | VMN/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VMY        |            | VMY/S      |            |

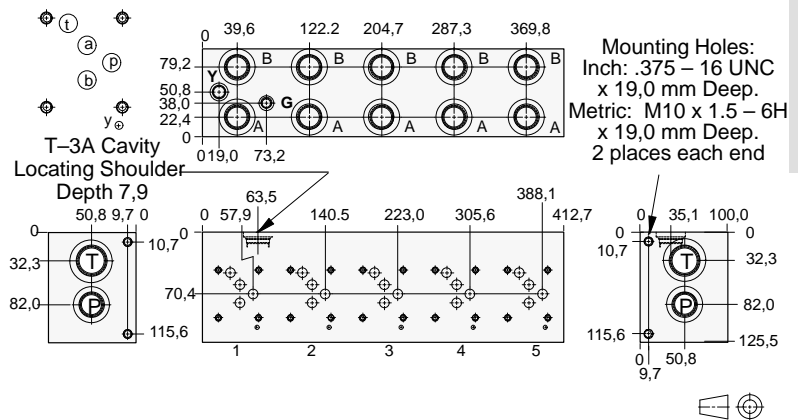
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 05 H (CETOP) Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

Five Station  
(CETOP Version)



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VRJ        |            | VRJ/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VRR        |            | VRR/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VRY        |            | VRY/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |



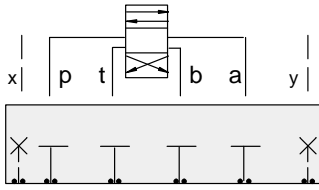


# ISO 05 X,Y SANDWICH BODIES



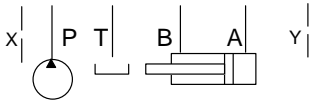
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Cover Plates

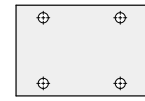


### FUNCTION

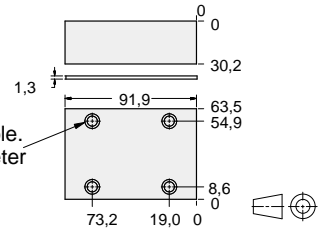
All Ports  
Blocked



Order Retainer and  
Seal Kits separately.  
See page 12.002

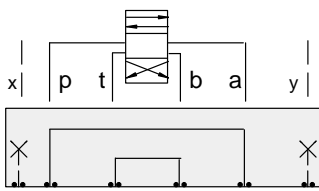


Mounting Holes:  
7,1 diameter through hole.  
Counterbore 10,4 diameter  
x 20,6 deep.  
4 places.



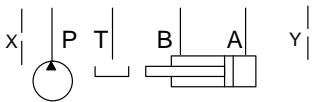
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZJP        |            | ZJP/S      |            |

## Cover Plates

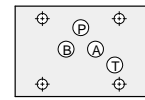


### FUNCTION

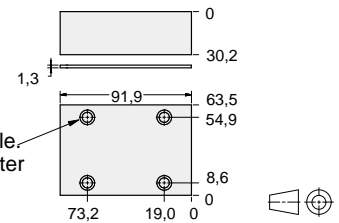
P to A and  
B to T



Order Retainer and  
Seal Kits separately.  
See page 12.002

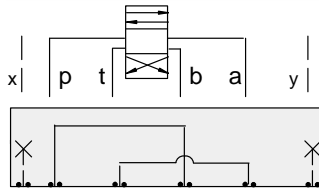


Mounting Holes:  
7,1 diameter through hole.  
Counterbore 10,4 diameter  
x 20,6 deep.  
4 places.



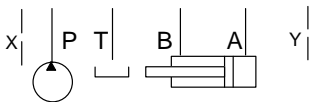
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZJM        |            | ZJM/S      |            |

## Cover Plates

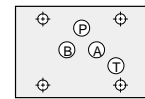


### FUNCTION

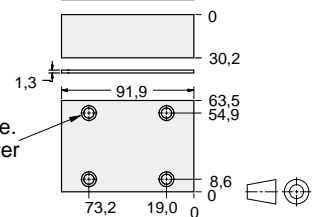
P to B and  
A to T



Order Retainer and  
Seal Kits separately.  
See page 12.002



Mounting Holes:  
7,1 diameter through hole.  
Counterbore 10,4 diameter  
x 20,6 deep.  
4 places.



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| ZJJ        |            | ZJJ/S      |            |

05xy COVER PLATE

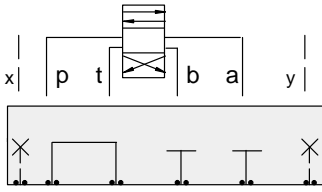


# ISO 05 X,Y SANDWICH BODIES



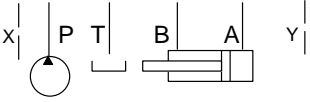
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Cover Plates



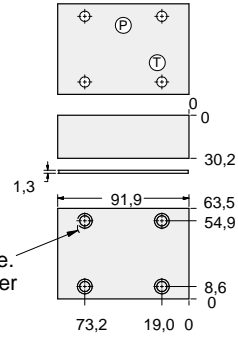
### FUNCTION

**P to T**  
**A and B** blocked



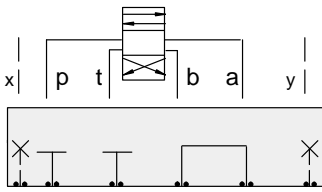
Order Retainer and Seal Kits separately. See page 12.002

Mounting Holes:  
7,1 diameter through hole.  
Counterbore 10,4 diameter  
x 20,6 deep.  
4 places.



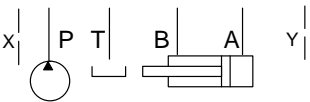
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>ZJN</b> |            | <b>ZJN/S</b> |            |

## Cover Plates



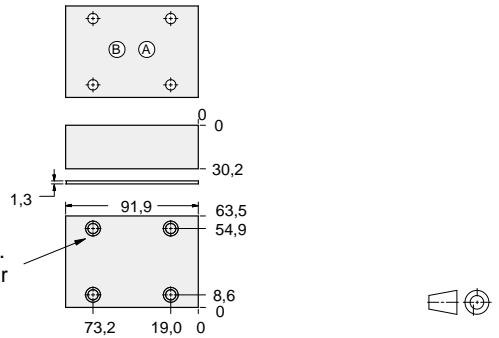
### FUNCTION

**A to B**  
**P and T** blocked



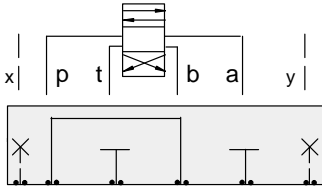
Order Retainer and Seal Kits separately. See page 12.002

Mounting Holes:  
7,1 diameter through hole.  
Counterbore 10,4 diameter  
x 20,6 deep.  
4 places.



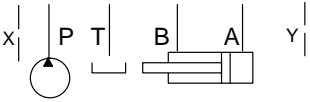
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>ZJL</b> |            | <b>ZJL/S</b> |            |

## Cover Plates



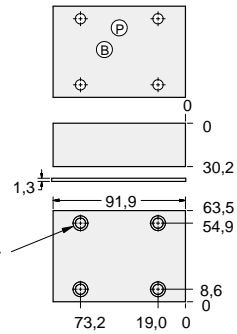
### FUNCTION

**P to B**  
**A and T** blocked



Order Retainer and Seals Kits separately. See page 12.002

Mounting Holes:  
7,1 diameter through hole.  
Counterbore 10,4 diameter  
x 20,6 deep.  
4 places.



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>ZJK</b> |            | <b>ZJK/S</b> |            |

05xy COVER PLATE





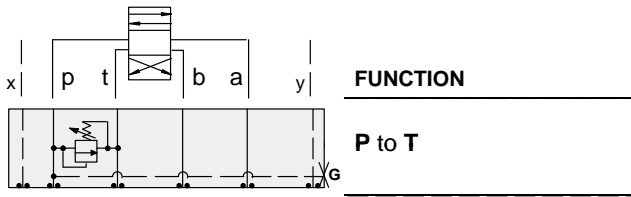




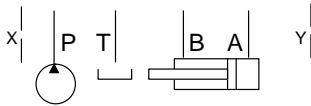
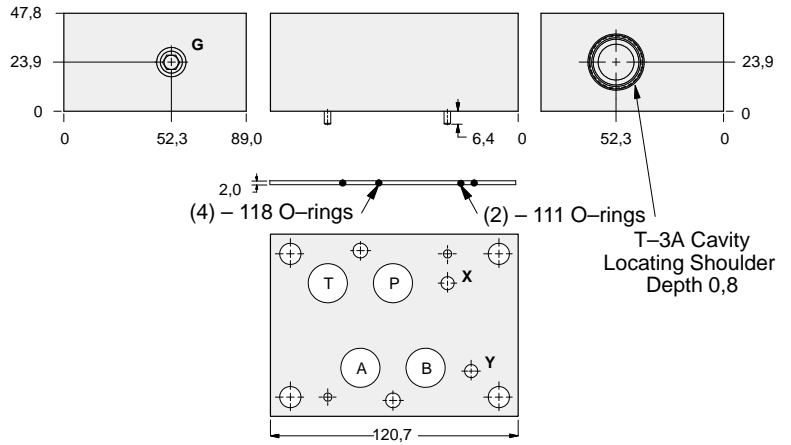
# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CKP</b>   |            | <b>CKP/S</b> |            |
| .25 BSPP                | <b>CKP/M</b> |            | <b>CKP/T</b> |            |

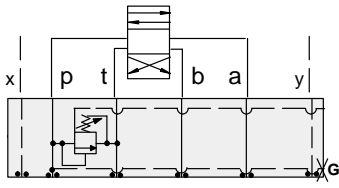
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|   | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|   | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|   | <i>Direct Acting Relief Valve</i>                  |  |  |
|   | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 07 SANDWICH BODIES



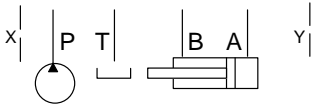
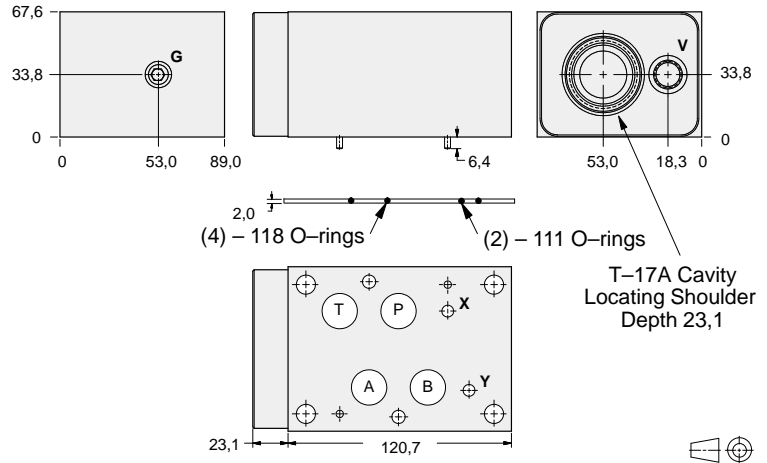
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**P to T**  
Externally Vented

### Relief Valves



| Vent Port | Gauge Port (Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-----------|----------------------|--------------|------------|--------------|------------|
|           |                      | Model Code   | List Price | Model Code   | List Price |
| SAE-6     | .25 NPTF             | <b>CKQ</b>   |            | <b>CKQ/S</b> |            |
| .25 BSPP  | .25 BSPP             | <b>CKQ/M</b> |            | <b>CKQ/T</b> |            |

07 RELIEF

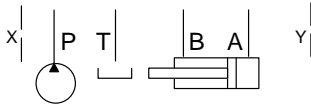
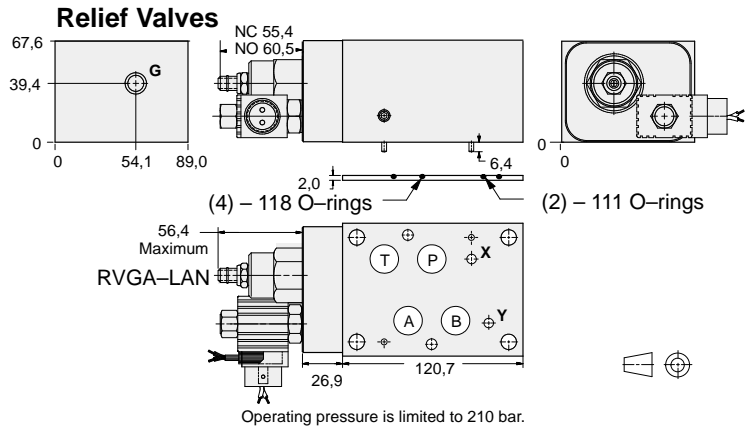
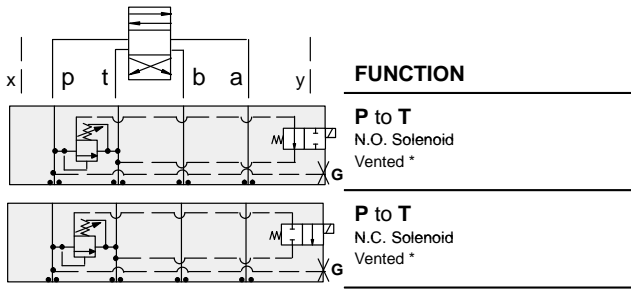
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | <i>Pilot Operated Vented Relief Valve</i> |  |  |
|   | <b>RVGA Page 1.19</b>                     |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



| Solenoid Type | Gauge Port (Plugged) | ALUMINIUM     |            | SG IRON       |            |
|---------------|----------------------|---------------|------------|---------------|------------|
|               |                      | Model Code    | List Price | Model Code    | List Price |
| N.O.          | .25 NPTF             | YRFI-LAN-*B   |            | YRFI-LAN-*B/S |            |
| N.O.          | .25 BSPP             | YRFI-LAN-*B/M |            | YRFI-LAN-*B/T |            |
| N.C.          | .25 NPTF             | YRFJ-LAN-*B   |            | YRFJ-LAN-*B/S |            |
| N.C.          | .25 BSPP             | YRFJ-LAN-*B/M |            | YRFJ-LAN-*B/T |            |

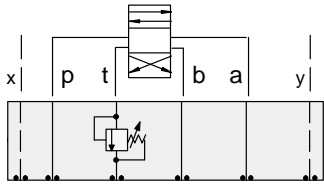
\* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.



# ISO 07 SANDWICH BODIES



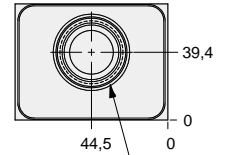
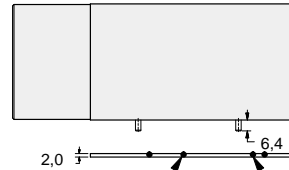
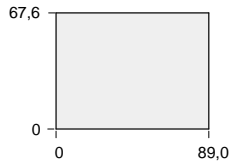
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



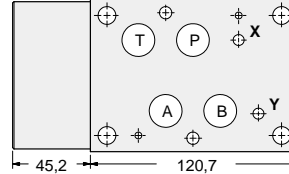
## FUNCTION

Out of T

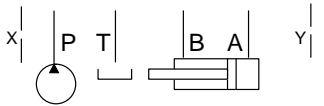
## Relief Valves



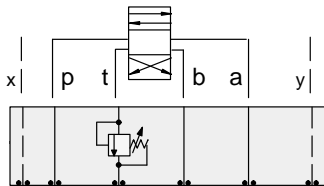
(4) – 118 O-rings (2) – 111 O-rings



T-16A Cavity Locating Shoulder Depth 0,8



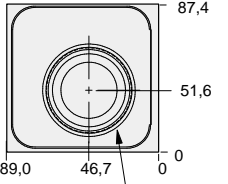
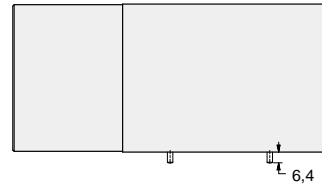
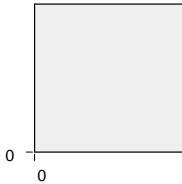
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKT</b> |            | <b>DKT/S</b> |            |



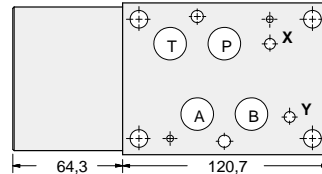
## FUNCTION

Out of T  
(High Capacity)

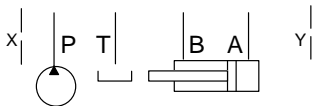
## Relief Valves



(4) – 118 O-rings (2) – 111 O-rings



T-18A Cavity Locating Shoulder Depth 0,8



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DKV</b> |            | <b>DKV/S</b> |            |

07 RELIEF

## TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

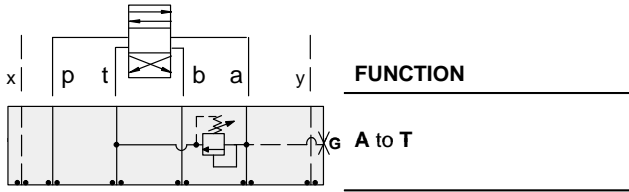
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RP*C Page 1.07</b>                              |  | <b>RQ*B Page 1.13</b>                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RP*E Page 1.09</b>                              |  | <b>RP*D Page 1.15</b>                              |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RD*A Page 1.11</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



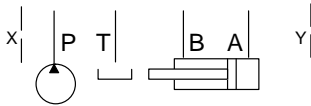
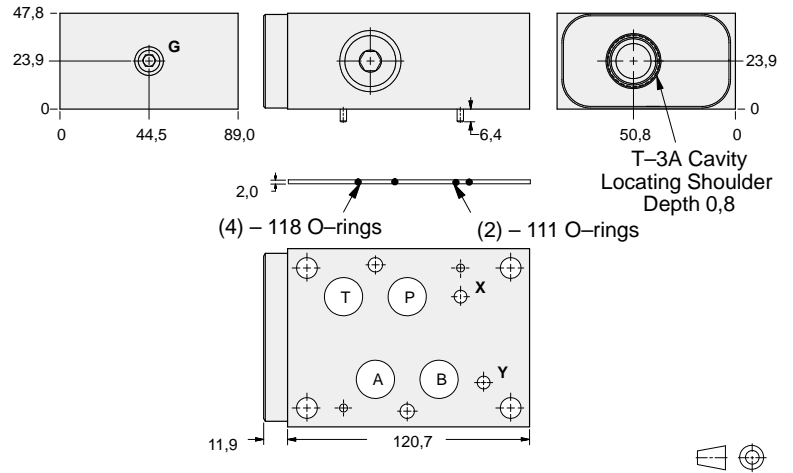
# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CKA</b>   |            | <b>CKA/S</b> |            |
| .25 BSPP                | <b>CKA/M</b> |            | <b>CKA/T</b> |            |

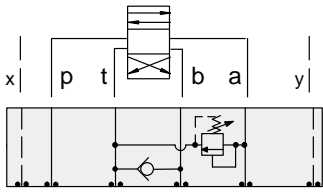
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|   | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|   | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|   | <i>Direct Acting Relief Valve</i>                  |  |  |
|   | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 07 SANDWICH BODIES



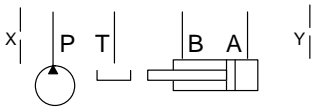
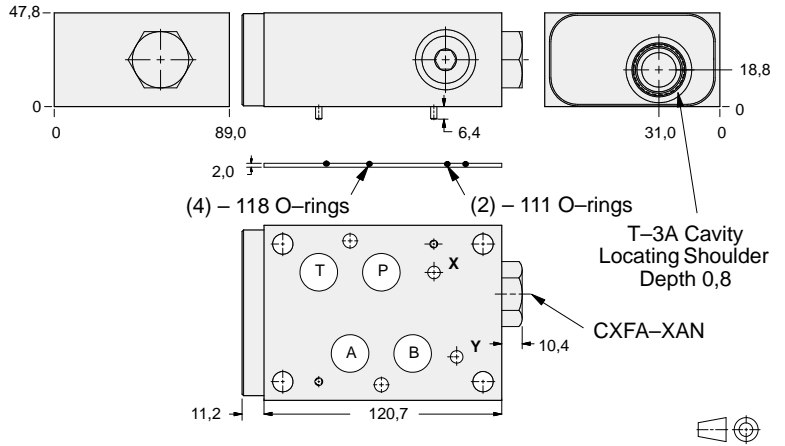
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**A to T**  
FF Check T to B

### Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CKJ</b> |            | <b>CKJ/S</b> |            |

07 RELIEF

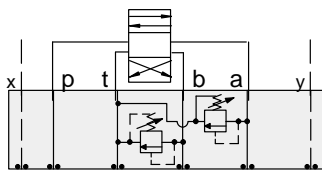
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|   | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|   | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|   | <i>Direct Acting Relief Valve</i>                  |  |  |
|   | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 07 SANDWICH BODIES



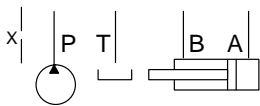
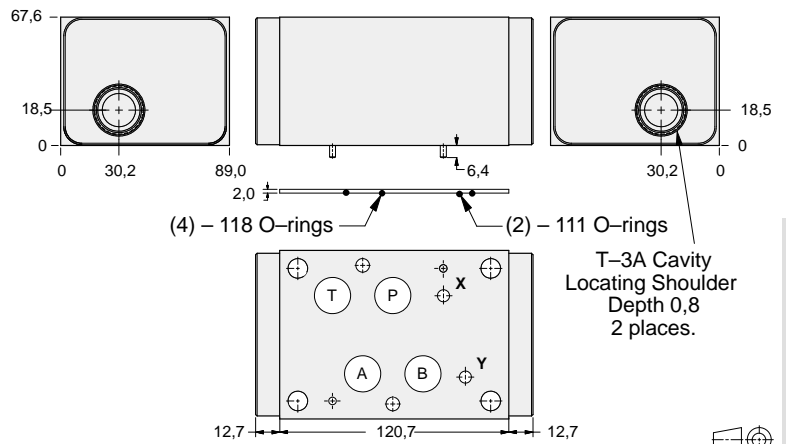
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**A and B to T**  
(High Capacity)

### Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CKX</b> |            | <b>CKX/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

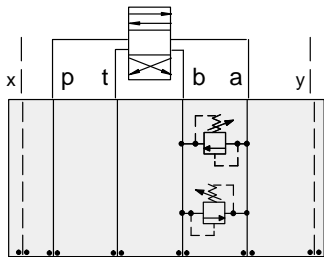
|               |   |  |   |
|---------------|---|--|---|
|               | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve     |
|               | RPGC Page 1.06                              |  | RQGB Page 1.12                              |
|               | Pilot Operated, Rapid Response Relief Valve |  | Air Controlled, Pilot Operated Relief Valve |
|               | RPGE Page 1.08                              |  | RPGD Page 1.14                              |
|               | Direct Acting Relief Valve                  |  |   |
|               | RDFA Page 1.10                              |  |   |
| OTHER VALVES: |   |  |   |



# ISO 07 SANDWICH BODIES



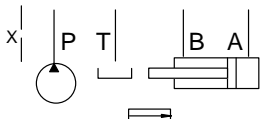
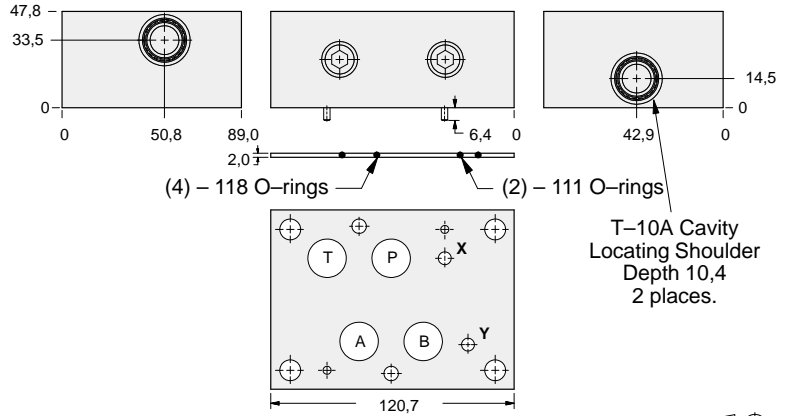
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## FUNCTION

**A to B and  
B to A**  
(Cross Port)

## Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CKY</b> |            | <b>CKY/S</b> |            |

07 RELIEF

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i> |
|   | <b>RPEC Page 1.06</b>                              |  | <b>RQEB Page 1.12</b>                          |
|   | <i>Pilot Operated, Rapid Response Relief Valve</i> |  |  |
|   | <b>RPEE Page 1.08</b>                              |  |  |
|   | <i>Direct Acting Relief Valve</i>                  |  |  |
|   | <b>RDDA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

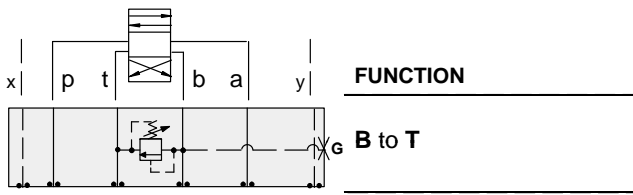




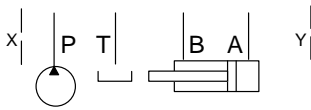
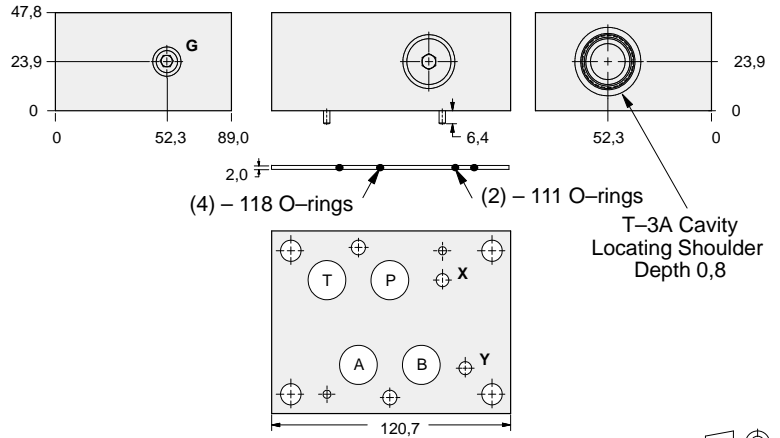
# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CKB</b>   |            | <b>CKB/S</b> |            |
| .25 BSPP                | <b>CKB/M</b> |            | <b>CKB/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

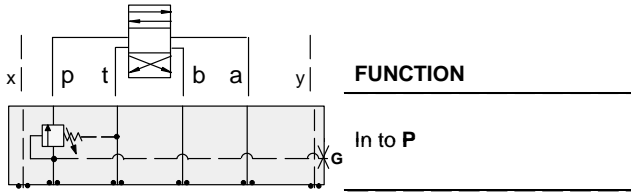
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Relief Valve</i>                 |  | <i>Pilot Operated "Kick-Down" Relief Valve</i>     |
|                      | <b>RPGC Page 1.06</b>                              |  | <b>RQGB Page 1.12</b>                              |
|                      | <i>Pilot Operated, Rapid Response Relief Valve</i> |  | <i>Air Controlled, Pilot Operated Relief Valve</i> |
|                      | <b>RPGE Page 1.08</b>                              |  | <b>RPGD Page 1.14</b>                              |
|                      | <i>Direct Acting Relief Valve</i>                  |  |  |
|                      | <b>RDFA Page 1.10</b>                              |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



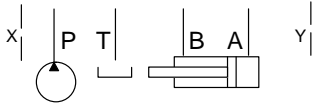
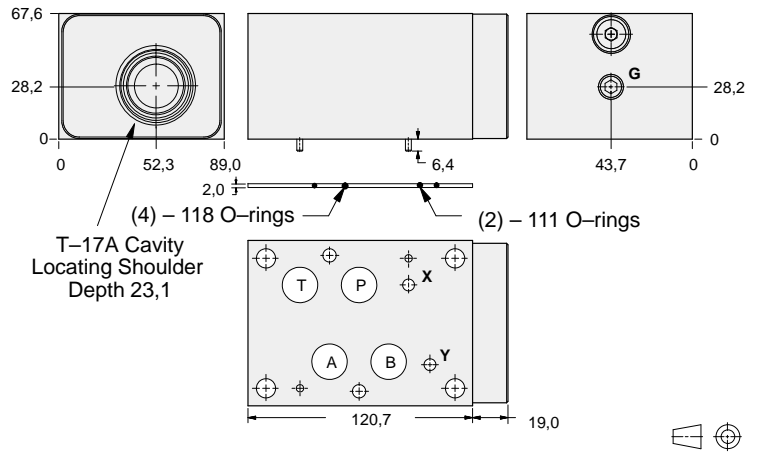
# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Sequence Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BKW</b>   |            | <b>BKW/S</b> |            |
| .25 BSPP                | <b>BKW/M</b> |            | <b>BKW/T</b> |            |

07 SEQUENCE

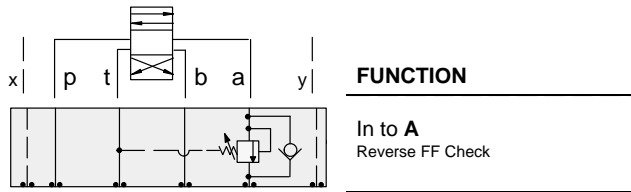
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Sequence Valve                 |  |  |
|   | <b>RSHC Page 2.07</b>                         |  |  |
|   | Pilot Operated "Kick-Down" Sequence Valve     |  |  |
|   | <b>SQHB Page 2.09</b>                         |  |  |
|   | Air Controlled, Pilot Operated Sequence Valve |  |  |
|   | <b>RSHE Page 2.11</b>                         |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



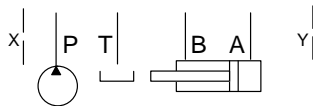
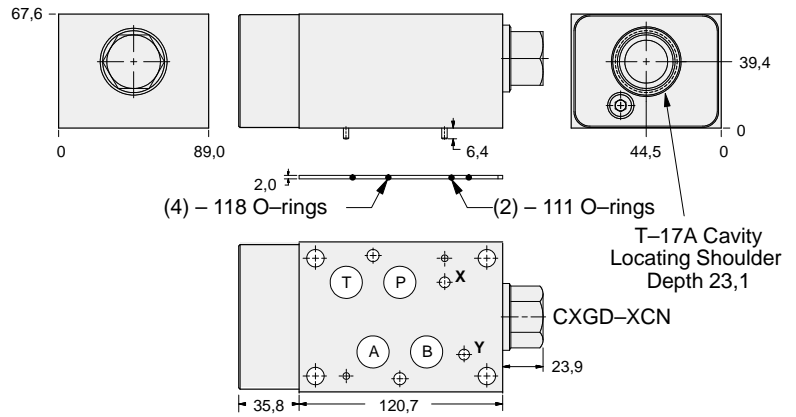
# ISO 07 SANDWICH BODIES



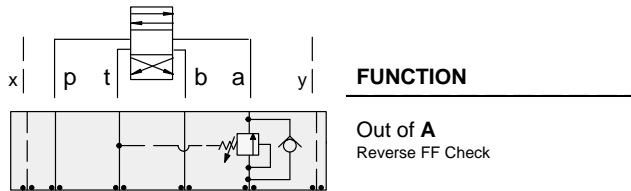
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



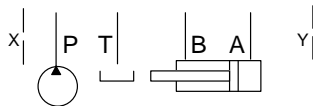
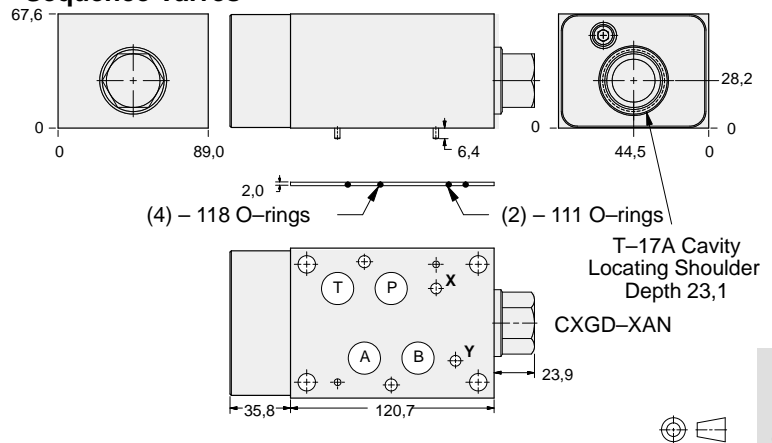
## Sequence Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BK4</b> |            | <b>BK4/S</b> |            |



## Sequence Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BK6</b> |            | <b>BK6/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

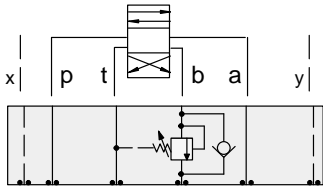
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Sequence Valve                 |  |  |
|                      | <b>RSHC Page 2.07</b>                         |  |  |
|                      | Pilot Operated "Kick-Down" Sequence Valve     |  |  |
|                      | <b>SQHB Page 2.09</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Sequence Valve |  |  |
|                      | <b>RSHE Page 2.11</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 07 SANDWICH BODIES



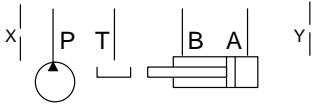
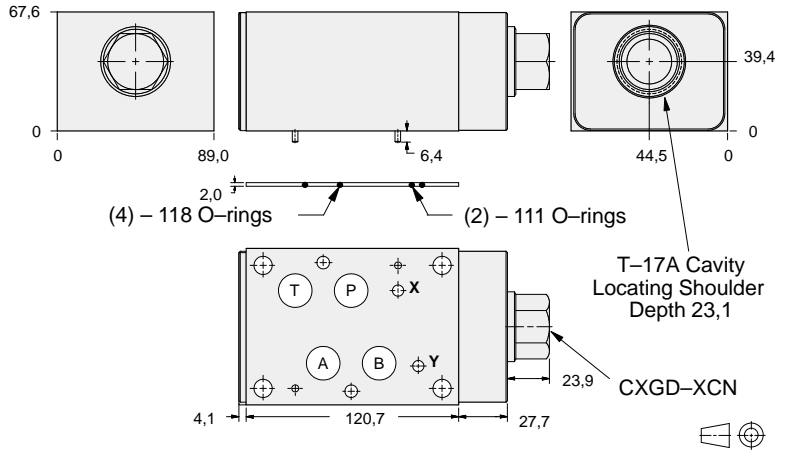
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



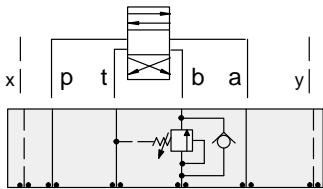
### FUNCTION

In to B  
Reverse FF Check

### Sequence Valves



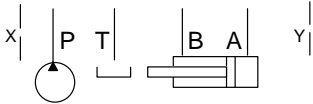
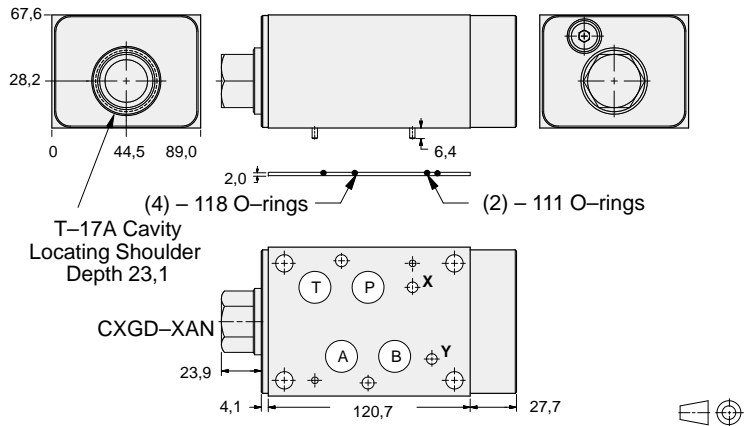
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BK5</b> |            | <b>BK5/S</b> |            |



### FUNCTION

Out of B  
Reverse FF Check

### Sequence Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BK7</b> |            | <b>BK7/S</b> |            |

07 REDUCING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

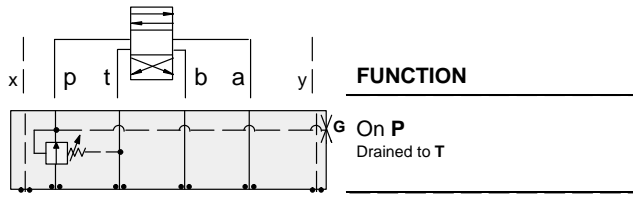
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Sequence Valve                 |  |  |
|                      | <b>RSHC Page 2.07</b>                         |  |  |
|                      | Pilot Operated "Kick-Down" Sequence Valve     |  |  |
|                      | <b>SQHB Page 2.09</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Sequence Valve |  |  |
|                      | <b>RSHE Page 2.11</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



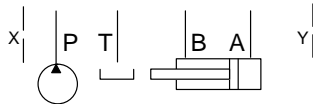
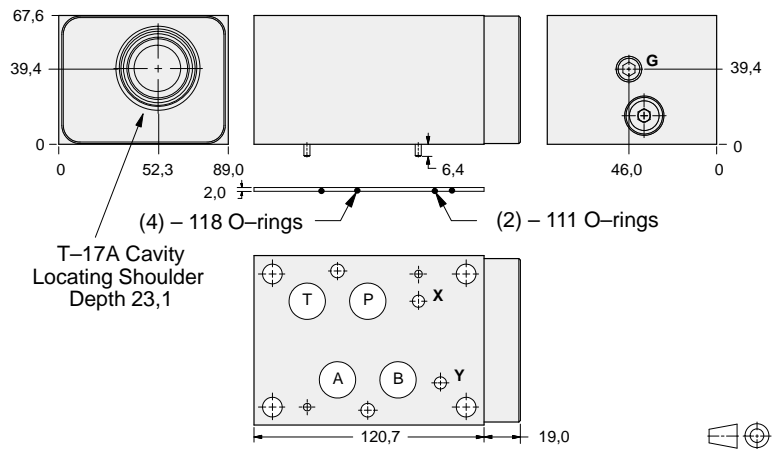
# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BKP</b>   |            | <b>BKP/S</b> |            |
| .25 BSPP                | <b>BKP/M</b> |            | <b>BKP/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

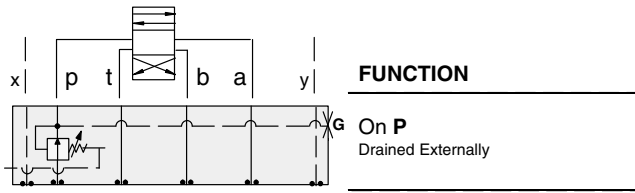
|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing Valve                 |  |  |
|               | PBHB Page 3.07                                |  |  |
|               | Air Controlled, Pilot Operated Reducing Valve |  |  |
|               | PBHC Page 3.09                                |  |  |
| OTHER VALVES: |   |  |  |



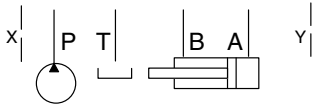
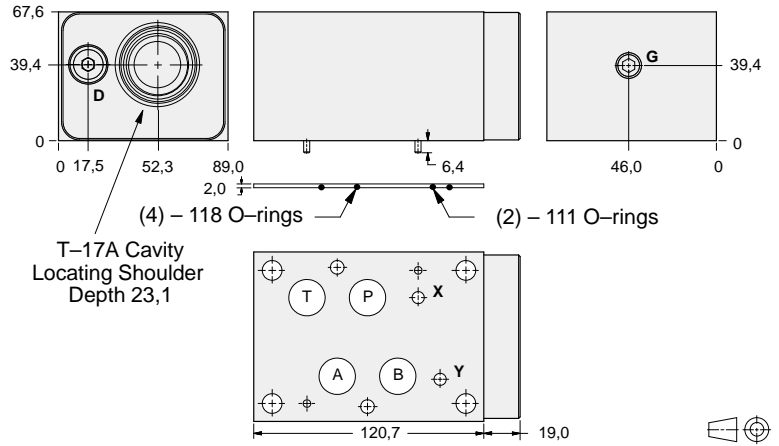
# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Reducing Valves



| Gauge Port<br>(Plugged) | Drain Port | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|------------|--------------|------------|--------------|------------|
|                         |            | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | SAE-6      | <b>BKQ</b>   |            | <b>BKQ/S</b> |            |
| .25 BSPP                | .25 BSPP   | <b>BKQ/M</b> |            | <b>BKQ/T</b> |            |

07 REDUCING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

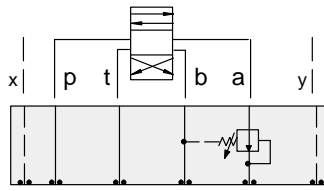
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Reducing Valve</i>                 |  |  |
|                      | <b>PBHB Page 3.07</b>                                |  |  |
|                      | <i>Air Controlled, Pilot Operated Reducing Valve</i> |  |  |
|                      | <b>PBHC Page 3.09</b>                                |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 07 SANDWICH BODIES



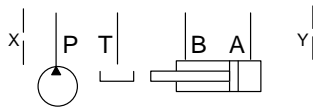
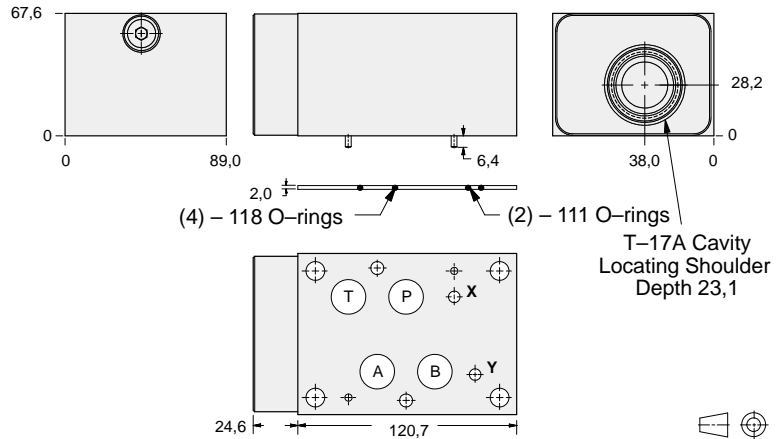
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On A  
Drained to B

### Reducing Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BAK</b> |            | <b>BAK/S</b> |            |

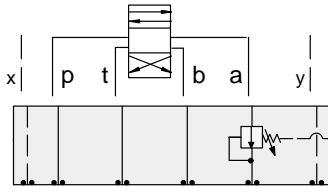
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                               |  |  |
|---|-------------------------------|--|--|
|   | Pilot Operated Reducing Valve |  |  |
|   | PBHB Page 3.07                |  |  |
|   |                               |  |  |
|   |                               |  |  |
| <b>OTHER VALVES:</b>                            |                               |  |  |



# ISO 07 SANDWICH BODIES



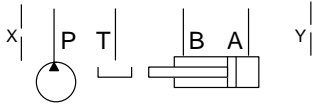
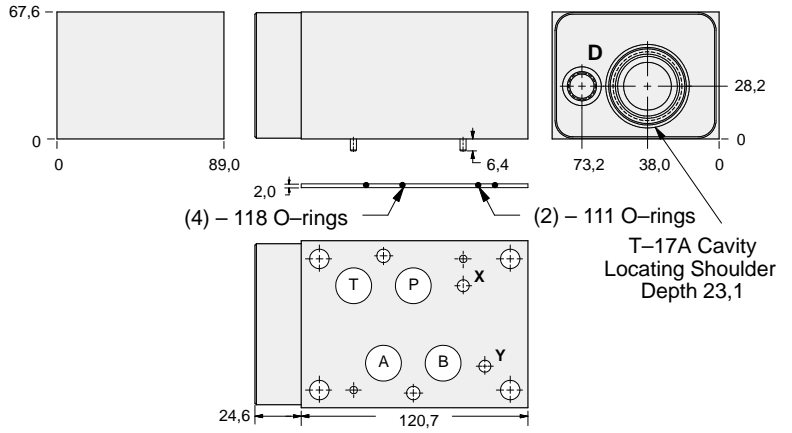
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## FUNCTION

On A  
Drained Externally

## Reducing Valves



| Drain Port | ALUMINIUM    |            | SG IRON      |            |
|------------|--------------|------------|--------------|------------|
|            | Model Code   | List Price | Model Code   | List Price |
| SAE-6      | <b>BKC</b>   |            | <b>BKC/S</b> |            |
| .25 BSPP   | <b>BKC/M</b> |            | <b>BKC/T</b> |            |

07 REDUCING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing Valve                 |  |  |
|                      | <b>PBHB Page 3.07</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Reducing Valve |  |  |
|                      | <b>PBHC Page 3.09</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

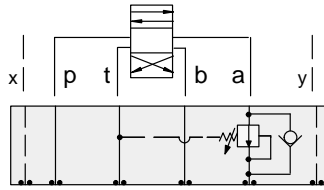




# ISO 07 SANDWICH BODIES



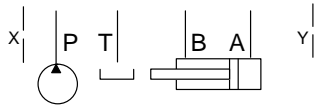
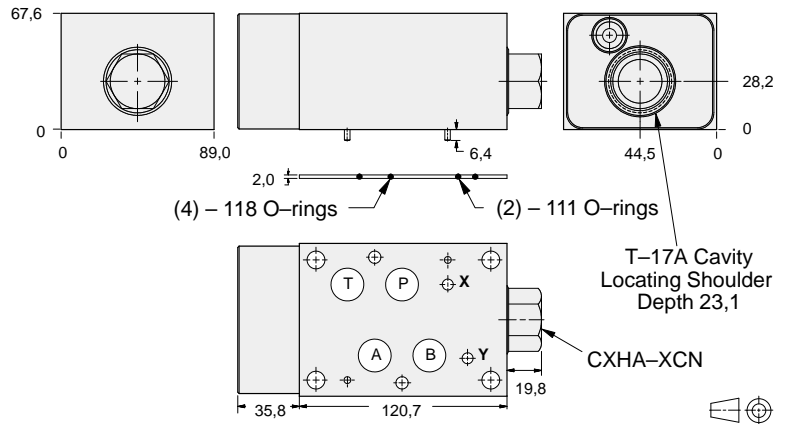
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



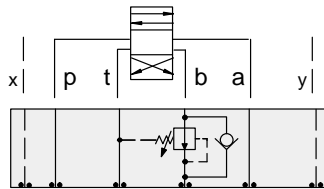
### FUNCTION

On A Drain to T  
Reverse FF Check

### Reducing Valves



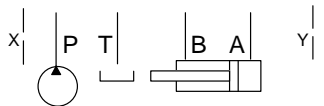
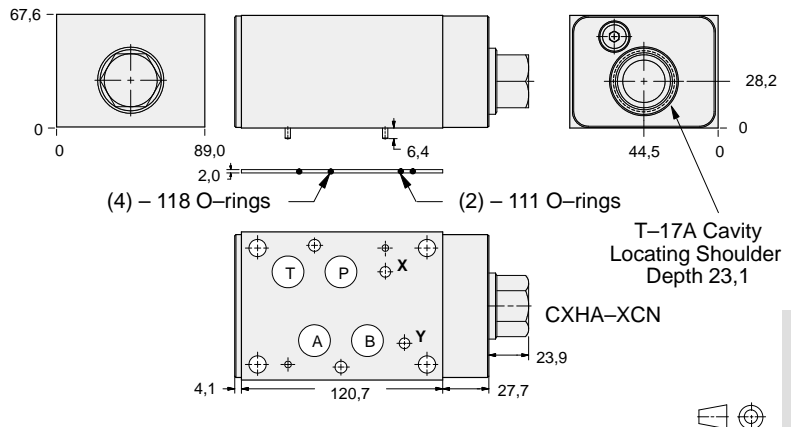
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BK2</b> |            | <b>BK2/S</b> |            |



### FUNCTION

On B Drain to T  
Reverse FF Check

### Reducing Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BKJ</b> |            | <b>BKJ/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

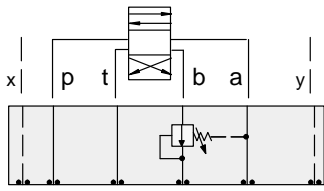
|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing Valve                 |  |  |
|               | PBHB Page 3.07                                |  |  |
|               | Air Controlled, Pilot Operated Reducing Valve |  |  |
|               | PBHC Page 3.09                                |  |  |
| OTHER VALVES: |   |  |  |



# ISO 07 SANDWICH BODIES



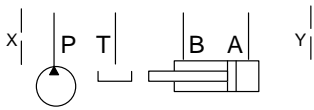
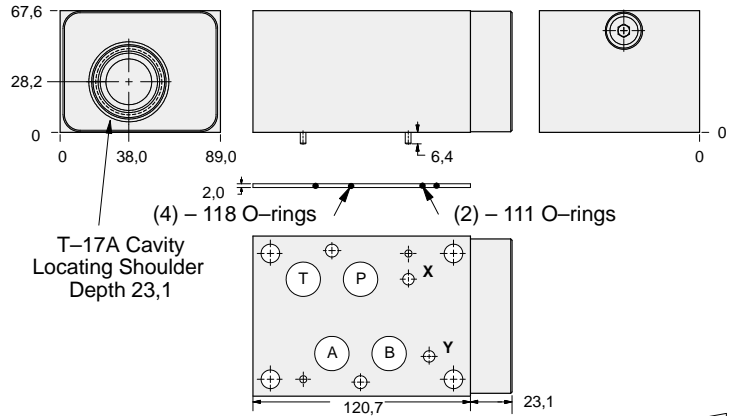
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On B  
Drained to A

### Reducing Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKB</b> |            | <b>BKB/S</b> |            |

07 REDUCING

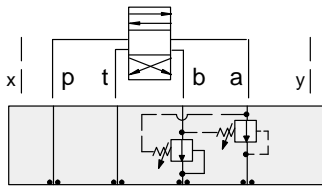
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                                      |  |  |
|---|--------------------------------------|--|--|
|   | <i>Pilot Operated Reducing Valve</i> |  |  |
|   | <b>PBHB Page 3.07</b>                |  |  |
|   |                                      |  |  |
|   |                                      |  |  |
| <b>OTHER VALVES:</b>                            |                                      |  |  |



# ISO 07 SANDWICH BODIES



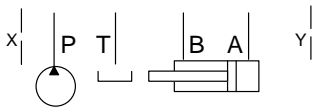
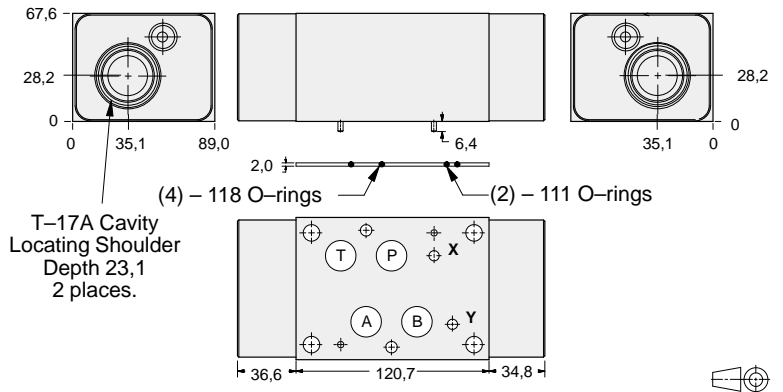
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Drains to Opposite Port

### Reducing Valves



| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>BKY</b>        |                   | <b>BKY/S</b>      |                   |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

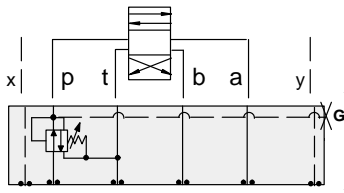
|                      |                                      |  |  |
|----------------------|--------------------------------------|--|--|
|                      | <i>Pilot Operated Reducing Valve</i> |  |  |
|                      | <b>PBHB Page 3.07</b>                |  |  |
|                      |                                      |  |  |
|                      |                                      |  |  |
| <b>OTHER VALVES:</b> |                                      |  |  |



# ISO 07 SANDWICH BODIES



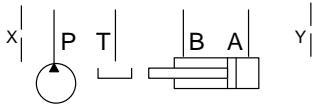
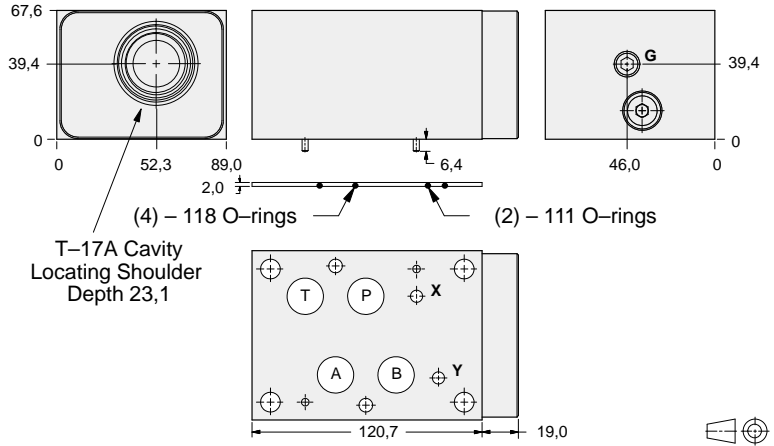
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On P Tank to T  
Drained to T

### Reducing/Relieving Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>BKP</b>   |            | <b>BKP/S</b> |            |
| .25 BSPP                | <b>BKP/M</b> |            | <b>BKP/T</b> |            |

07 REDUCING/RELIEVING

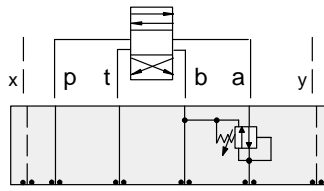
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing/Relieving Valve                 |  |  |
|   | <b>PPHB Page 3.11</b>                                   |  |  |
|   | Air Controlled, Pilot Operated Reducing/Relieving Valve |  |  |
|   | <b>PPHC Page 3.13</b>                                   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 07 SANDWICH BODIES



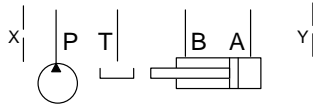
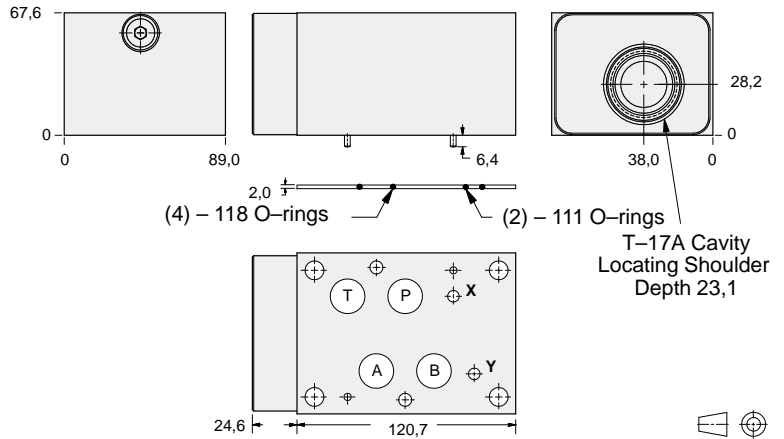
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** Tank to **B**  
Drained to **B**

### Reducing/Relieving Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKA</b> |            | <b>BKA/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|                      | <b>PPHB Page 3.11</b>                          |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

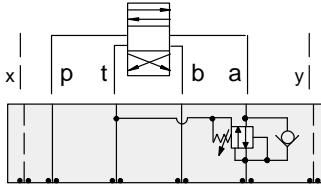


# ISO 07 SANDWICH BODIES



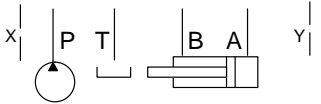
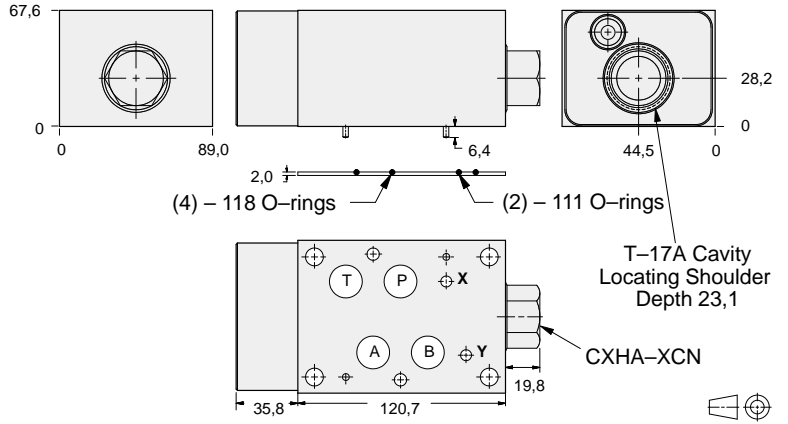
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Reducing/Relieving Valves



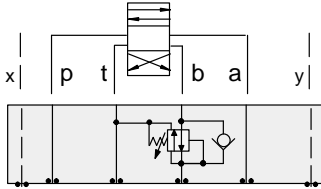
### FUNCTION

On A Tank to T  
Drained to T  
Reverse FF Check



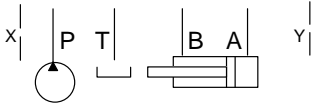
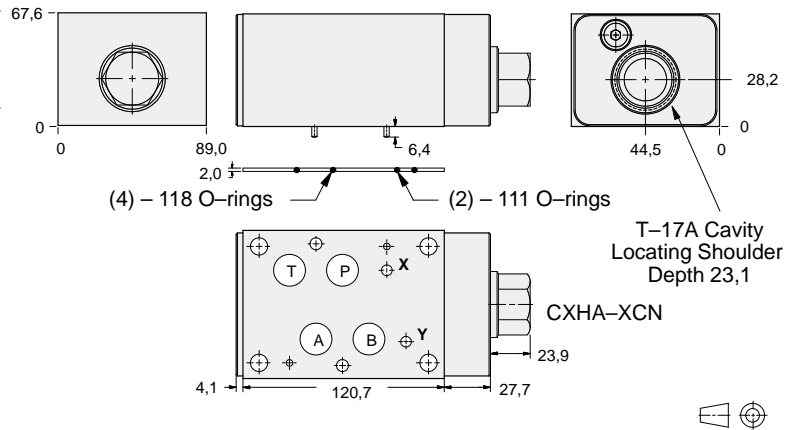
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BK2</b> |            | <b>BK2/S</b> |            |

## Reducing/Relieving Valves



### FUNCTION

On B Tank to T  
Drained to T  
Reverse FF Check



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BKJ</b> |            | <b>BKJ/S</b> |            |

07 REDUCING/RELIEVING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

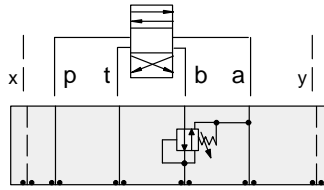
|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing/Relieving Valve                 |  |  |
|               | PPHB Page 3.11  |  |  |
|               | Air Controlled, Pilot Operated Reducing/Relieving Valve |  |  |
|               | PPHC Page 3.13  |  |  |
| OTHER VALVES: |   |  |  |



# ISO 07 SANDWICH BODIES



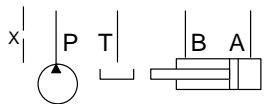
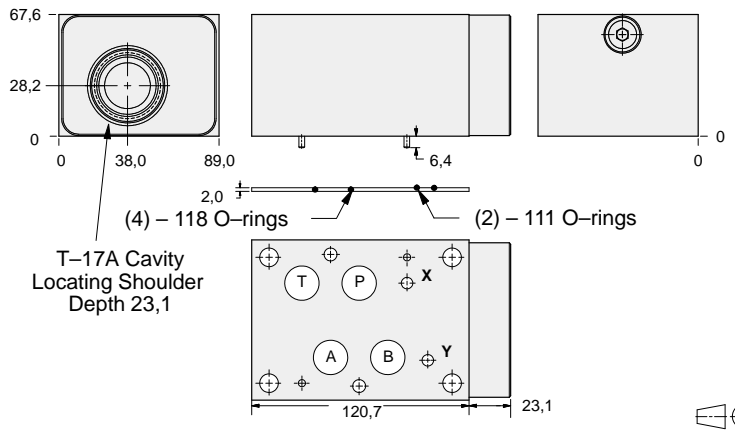
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **B** Tank to **A**  
Drained to **A**

### Reducing/Relieving Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKB</b> |            | <b>BKB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

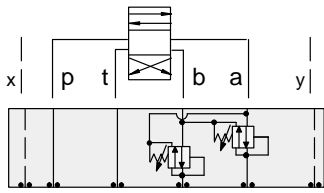
|                      |  |  |  |
|----------------------|--|--|--|
|                      | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|                      | <b>PPHB Page 3.11</b>                          |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 07 SANDWICH BODIES



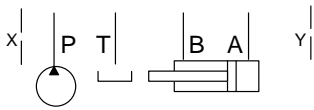
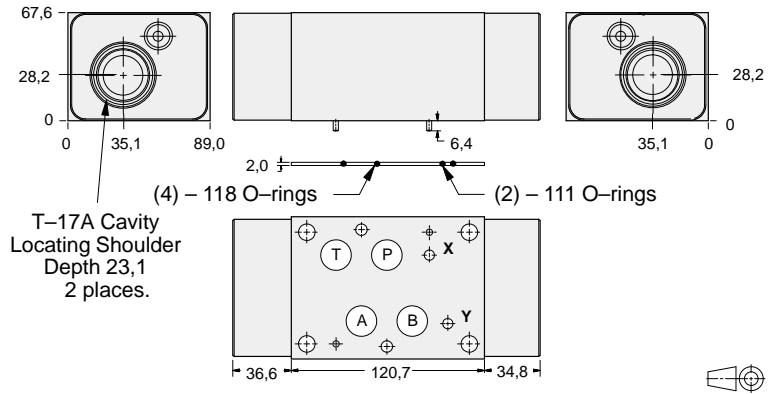
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Tanks and Drains to  
Opposite Port

### Reducing/Relieving Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKY</b> |            | <b>BKY/S</b> |            |

07 REDUCING/RELIEVING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing/Relieving Valve |  |  |
|               | PPHB Page 3.11                          |  |  |
|               |   |  |  |
|               |   |  |  |
| OTHER VALVES: |   |  |  |

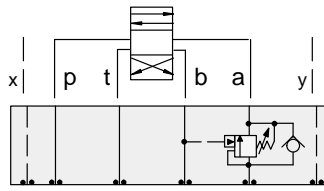




# ISO 07 SANDWICH BODIES



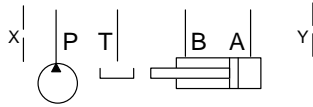
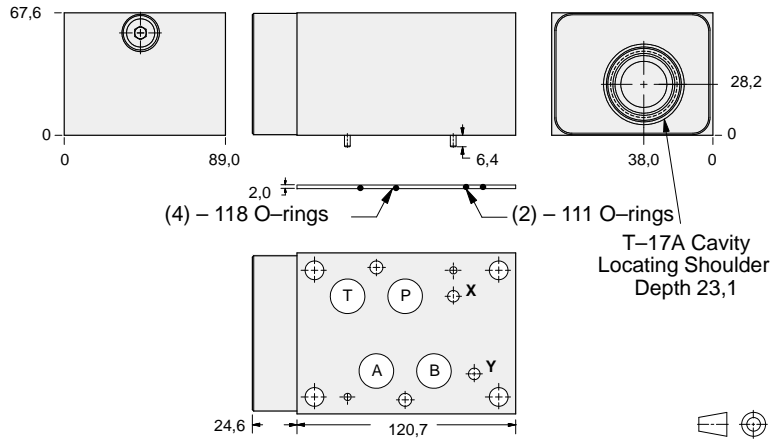
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On A Pilot from B

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKA</b> |            | <b>BKA/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|                      | <b>CBGAP</b> Page 4.11                  |  |  |
|                      | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|                      | <b>CBGG</b> Page 4.13                   |  |  |
|                      | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|                      | <b>CBGHP</b> Page 4.15                  |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

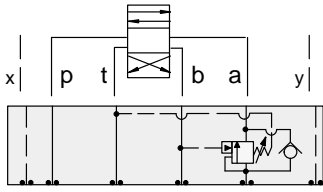


# ISO 07 SANDWICH BODIES



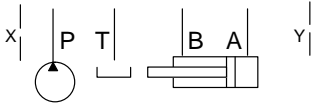
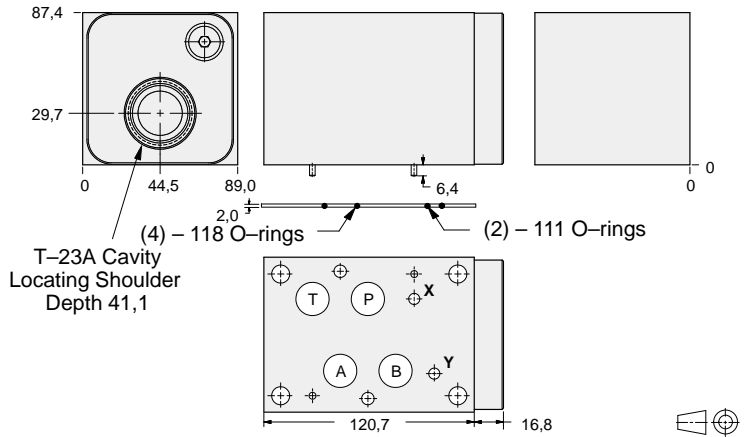
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Counterbalance Valves



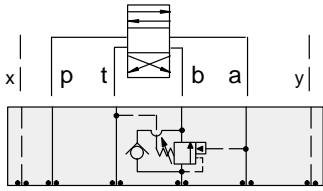
### FUNCTION

On **A** Pilot  
from **B**  
Vent to **T**



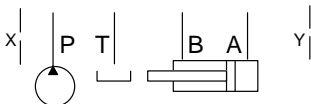
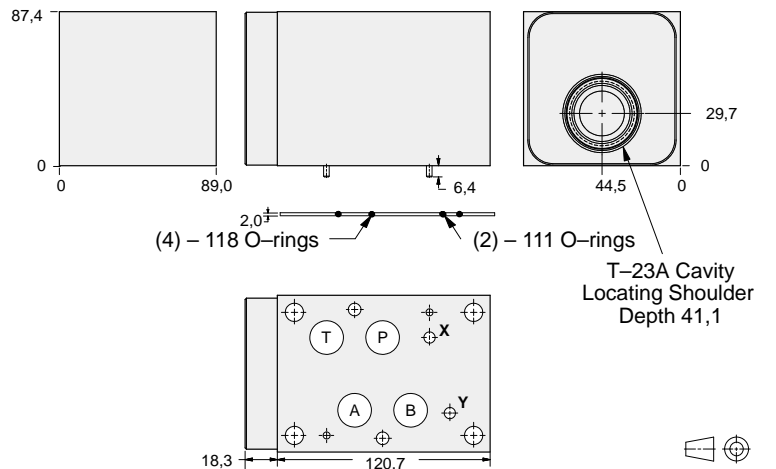
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NKA</b> |            | <b>NKA/S</b> |            |

## Counterbalance Valves



### FUNCTION

On **B**  
Pilot from **A**  
Vent to **T**



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>NKB</b> |            | <b>NKB/S</b> |            |

07 COUNTERBALANCE

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

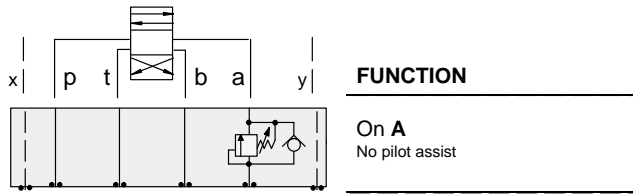
|               |  |  |  |
|---------------|--|--|--|
|               | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|               | CWGA Page 4.19                               |  |  |
|               | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|               | CWGG Page 4.21                               |  |  |
| OTHER VALVES: |  |  |  |



# ISO 07 SANDWICH BODIES



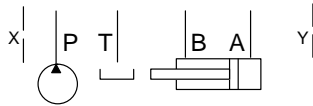
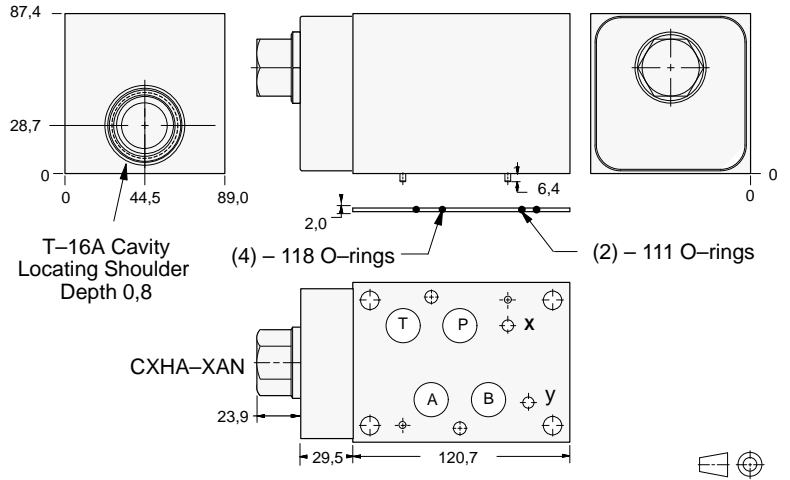
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



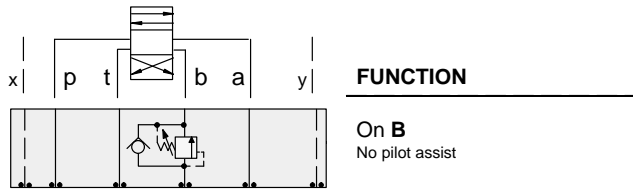
### FUNCTION

**On A**  
No pilot assist

### Counterbalance Valves



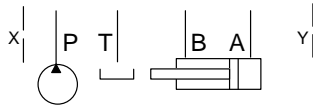
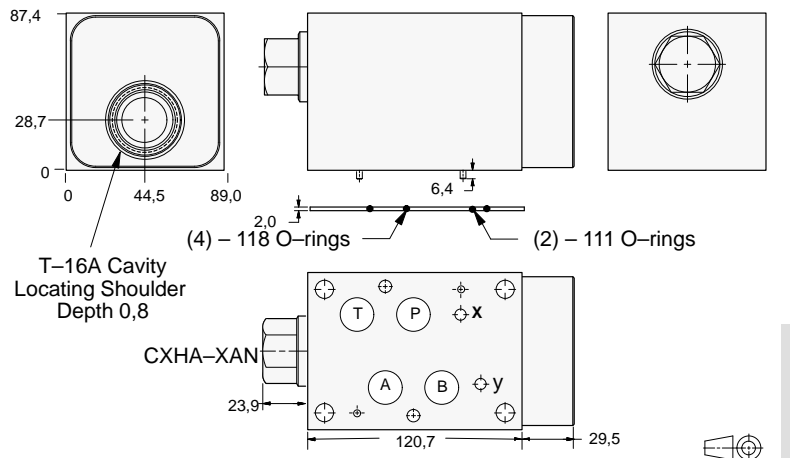
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CK4</b> |            | <b>CK4/S</b> |            |



### FUNCTION

**On B**  
No pilot assist

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CK5</b> |            | <b>CK5/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

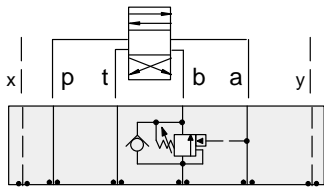
|                      |                            |  |  |
|----------------------|----------------------------|--|--|
|                      | Direct Acting Relief Valve |  |  |
|                      | RDHA Page 1.11             |  |  |
|                      |                            |  |  |
|                      |                            |  |  |
| <b>OTHER VALVES:</b> |                            |  |  |



# ISO 07 SANDWICH BODIES



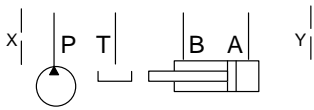
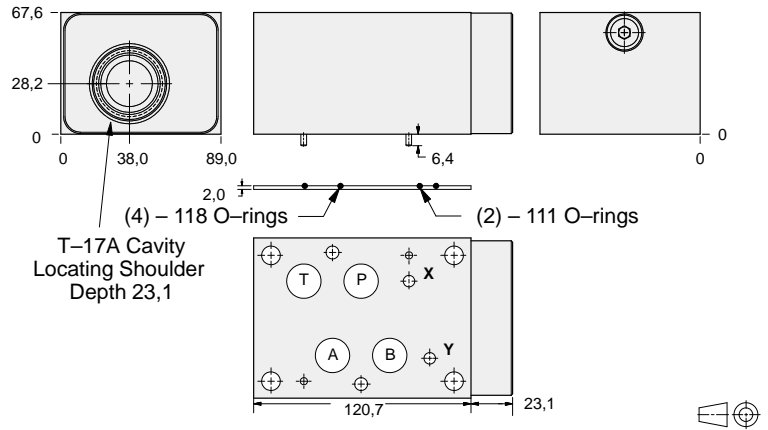
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On B  
Pilot from A

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKB</b> |            | <b>BKB/S</b> |            |

07 COUNTERBALANCE

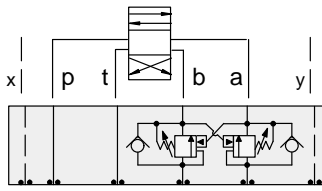
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | <b>CBGAP</b> Page 4.11                  |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | <b>CBGG</b> Page 4.13                   |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | <b>CBGHP</b> Page 4.15                  |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 07 SANDWICH BODIES



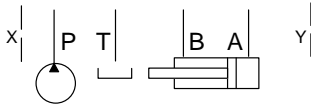
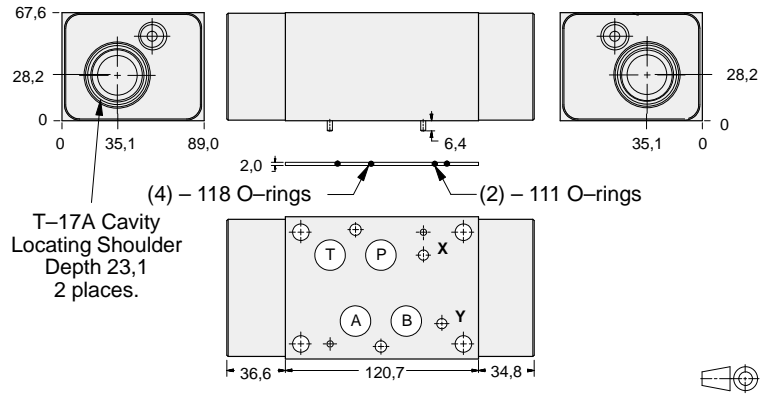
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Cross-Piloted

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKY</b> |            | <b>BKY/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

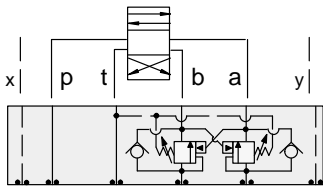
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|                      | <b>CBGAP</b> Page 4.11                  |  |  |
|                      | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|                      | <b>CBGG</b> Page 4.13                   |  |  |
|                      | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|                      | <b>CBGHP</b> Page 4.15                  |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 07 SANDWICH BODIES



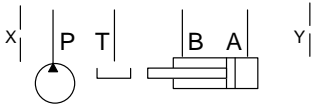
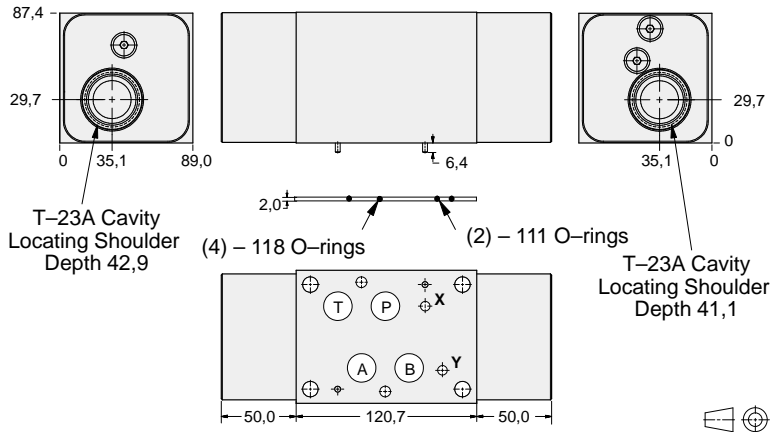
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NKY</b> |            | <b>NKY/S</b> |            |

07 COUNTERBALANCE

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|   | <b>CWGA Page 4.19</b>                        |  |  |
|   | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|   | <b>CWGG Page 4.21</b>                        |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

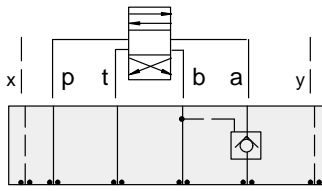


# ISO 07 SANDWICH BODIES



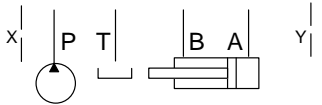
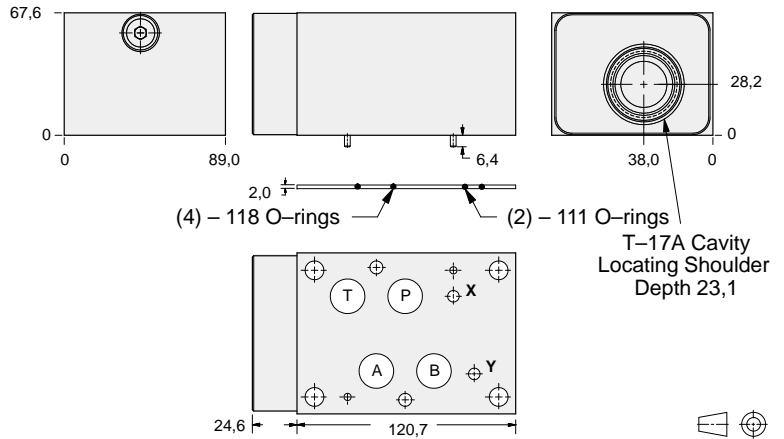
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



### FUNCTION

On A  
Pilot from B



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| BKA        |            | BKA/S      |            |

07 P.O. CHECK

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|   | CKGBP Page 4.17                            |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |

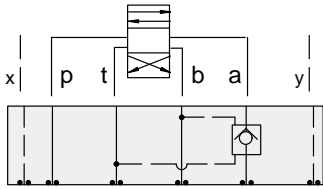


# ISO 07 SANDWICH BODIES



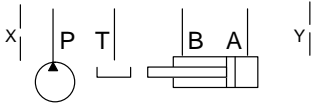
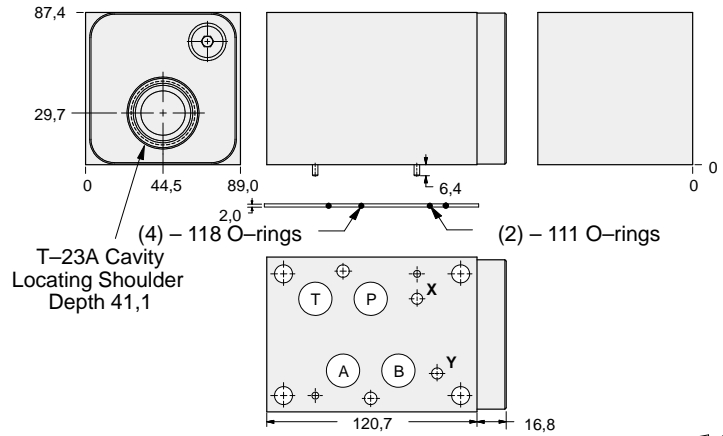
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



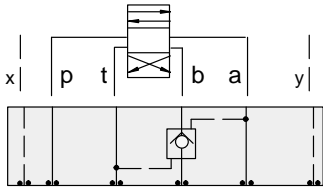
### FUNCTION

On A  
Pilot from B  
Vent to T



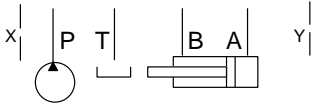
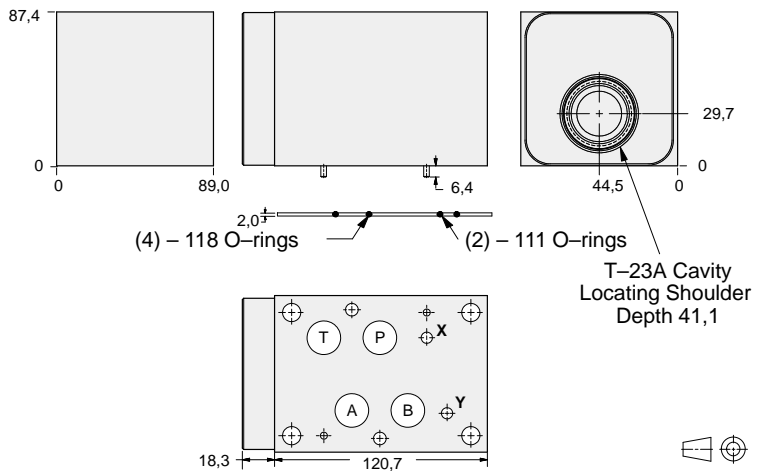
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NKA</b> |            | <b>NKA/S</b> |            |

## Pilot Operated Check Valves



### FUNCTION

On B  
Pilot from A  
Vent to T



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>NKB</b> |            | <b>NKB/S</b> |            |

07 P.O. CHECK

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|                      | <b>CVGV Page 4.23</b>                                |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



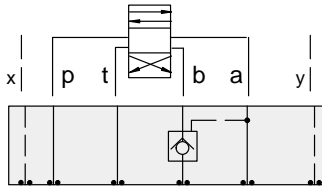


# ISO 07 SANDWICH BODIES



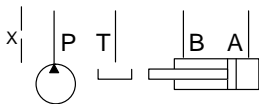
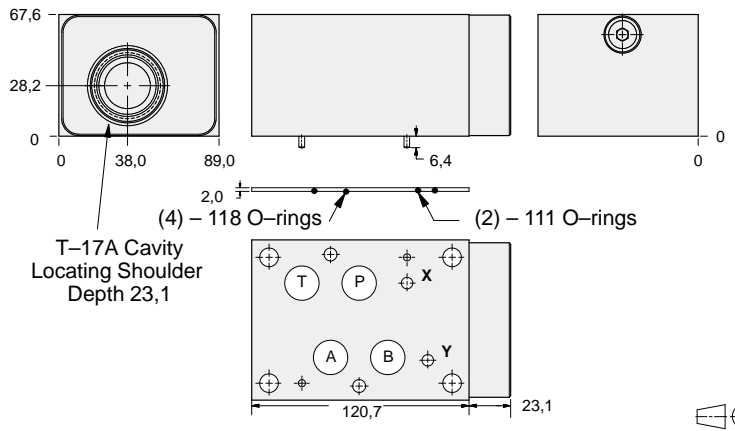
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



### FUNCTION

On B  
Pilot from A



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKB</b> |            | <b>BKB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|                      | CKGB Page 4.17                             |  |  |
|                      |  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

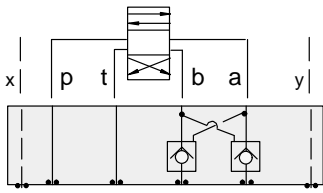


# ISO 07 SANDWICH BODIES



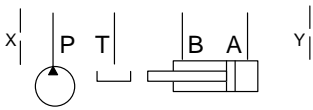
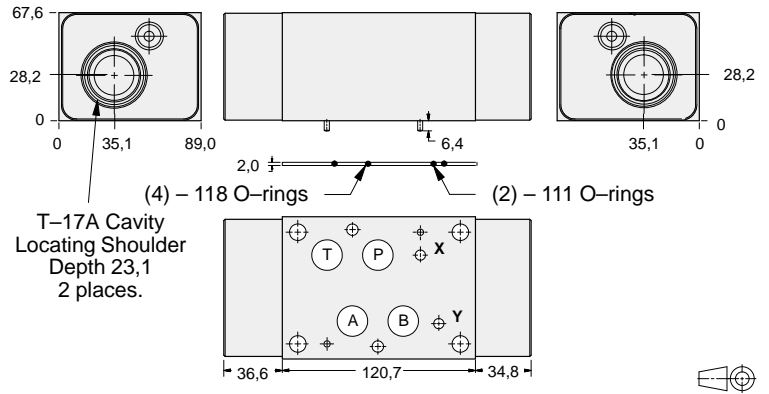
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



### FUNCTION

On A and B  
Cross-Piloted



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>BKY</b> |            | <b>BKY/S</b> |            |

07 P.O. CHECK

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|   | CKGB Page 4.17                             |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |

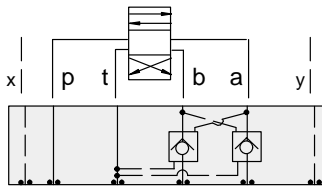


# ISO 07 SANDWICH BODIES



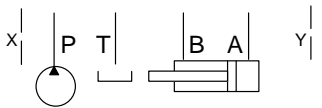
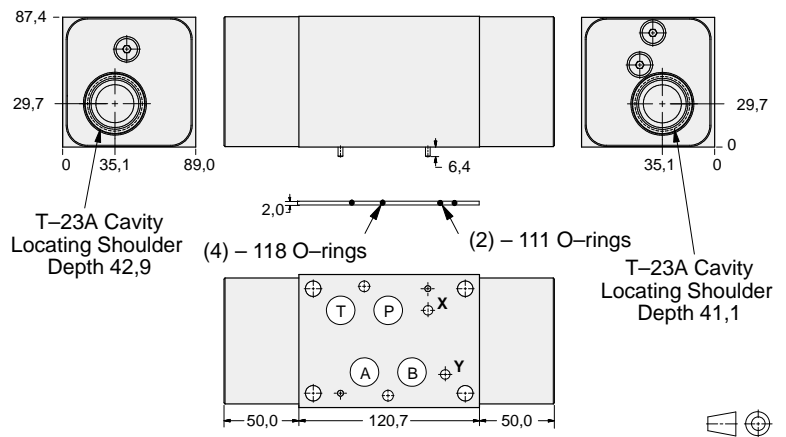
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>NKY</b> |            | <b>NKY/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

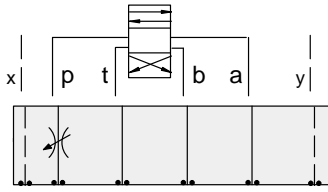
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|                      | <b>CVGV Page 4.23</b>                                |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 07 SANDWICH BODIES



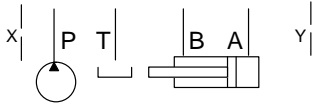
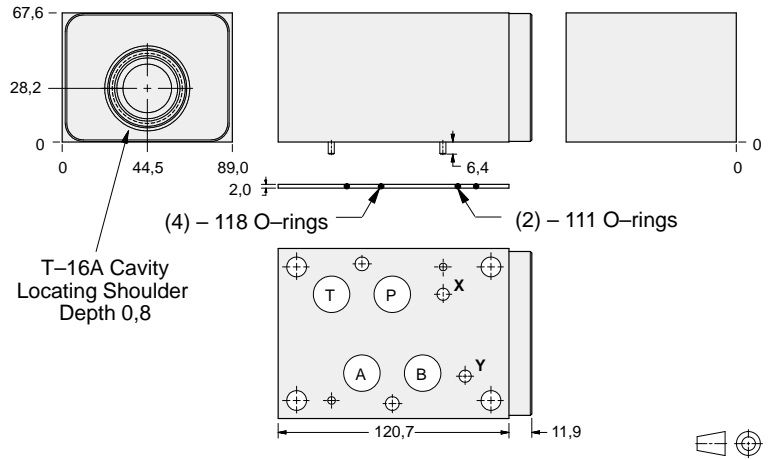
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



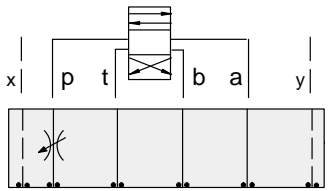
## FUNCTION

Meter-In P

## Flow Control Valves



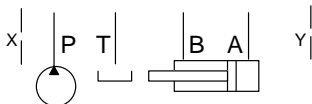
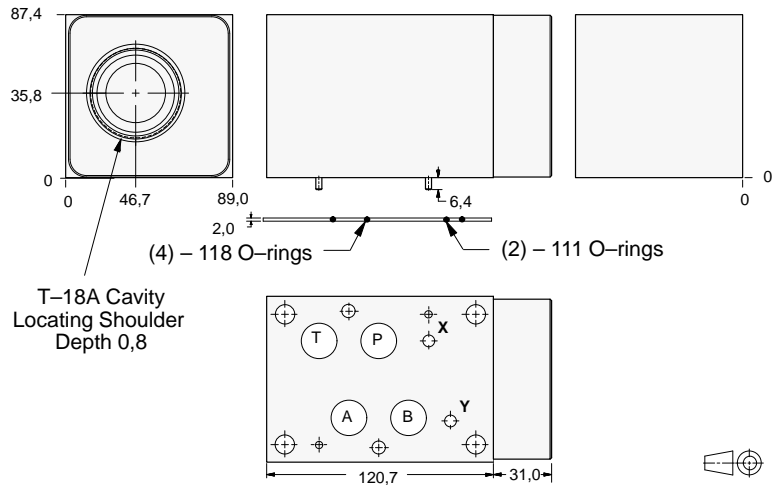
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>DKP</b>        |                   | <b>DKP/S</b>      |                   |



## FUNCTION

Meter-In P  
(High Capacity)

## Flow Control Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>DKO</b>        |                   | <b>DKO/S</b>       |                   |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Fully Adjustable Needle Valve                    |  |  |
|                      | <b>NF*C Page 5.13</b>                            |  |  |
|                      | Fixed Orifice, Pressure-Compensated Flow Control |  |  |
|                      | <b>FX*A Page 5.21</b>                            |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

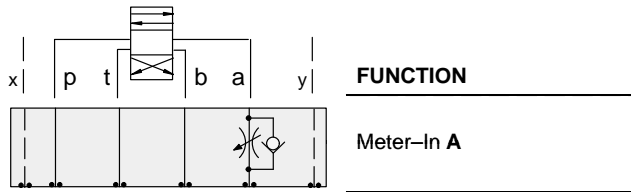
07 FLOW CONTROL



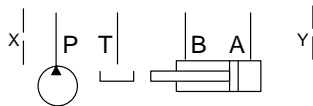
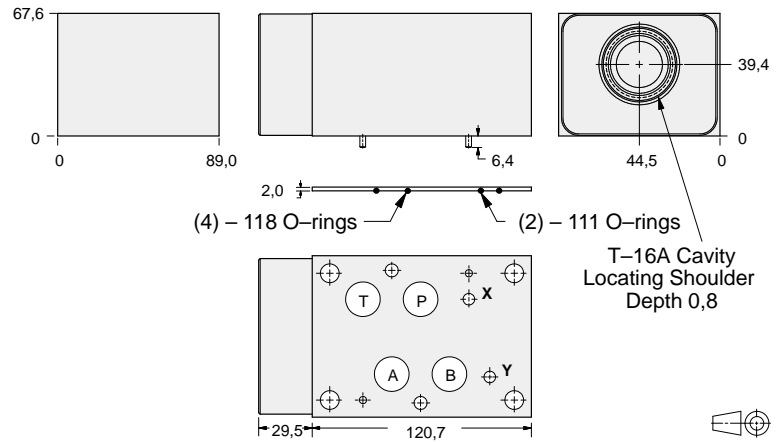
# ISO 07 SANDWICH BODIES



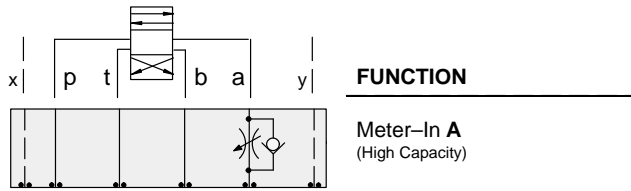
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



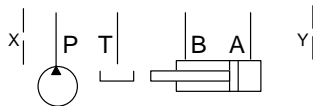
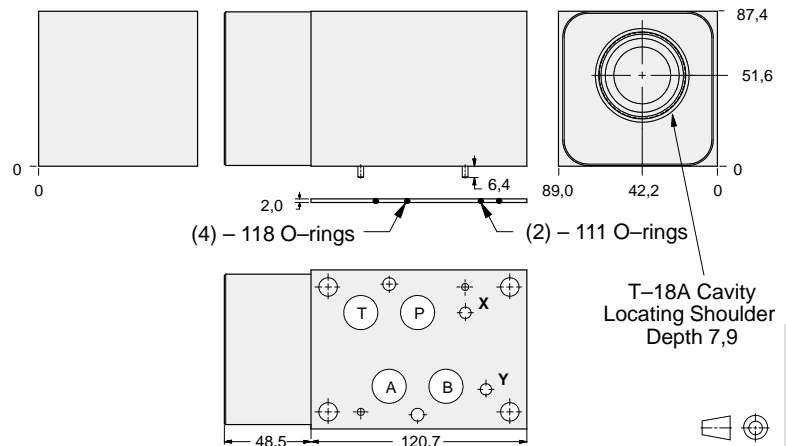
## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKC</b> |            | <b>DKC/S</b> |            |



## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DKG</b> |            | <b>DKG/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

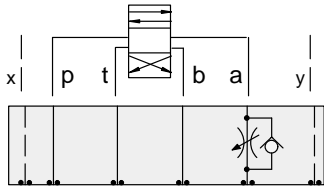
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CN*C   |  |  |



# ISO 07 SANDWICH BODIES



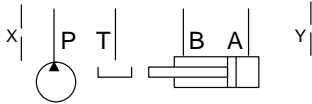
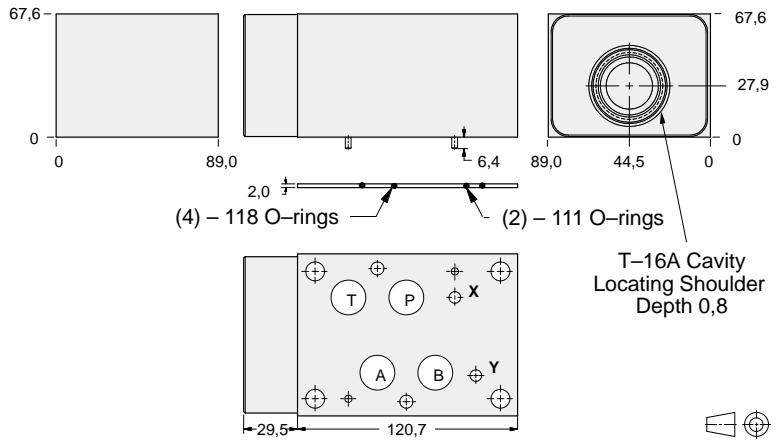
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



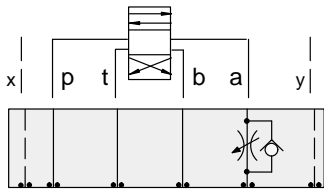
### FUNCTION

Meter-Out A

### Flow Control Valves



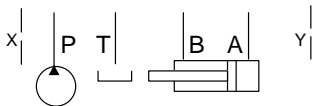
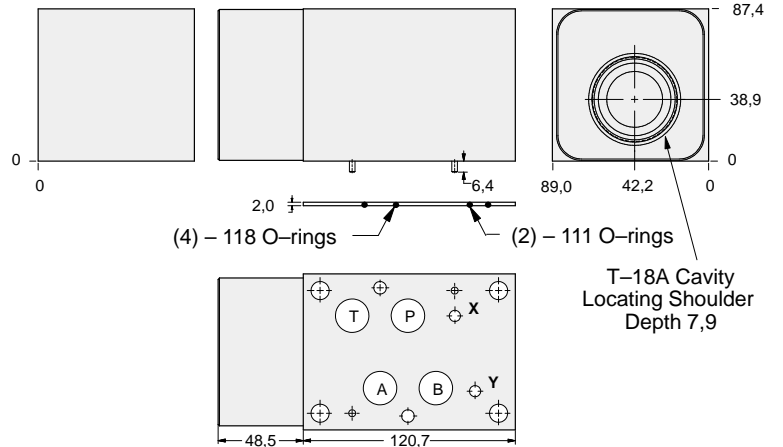
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKA</b> |            | <b>DKA/S</b> |            |



### FUNCTION

Meter-Out A  
(High Capacity)

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DKE</b> |            | <b>DKE/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|                      | <b>NF*C Page 5.13</b>  |  | <b>FX*A Page 5.21</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|                      | <b>NC*B Page 5.17</b>  |  | <b>FC*B Page 5.23</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|                      | <b>NC*C Page 5.19</b>  |  | <b>FD*A Page 5.25</b>  |
| <b>OTHER VALVES:</b> | <b>CN*C</b>  |  |  |

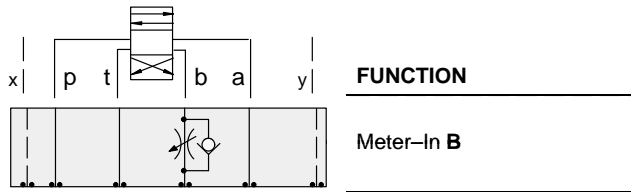
07 FLOW CONTROL



# ISO 07 SANDWICH BODIES



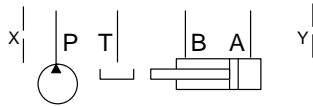
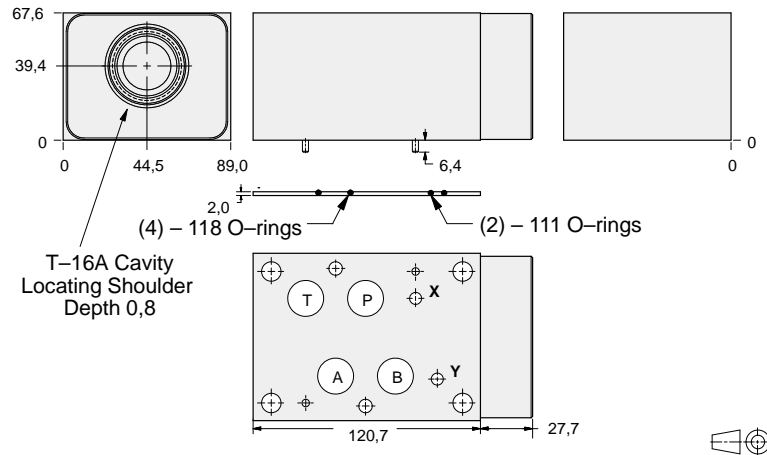
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



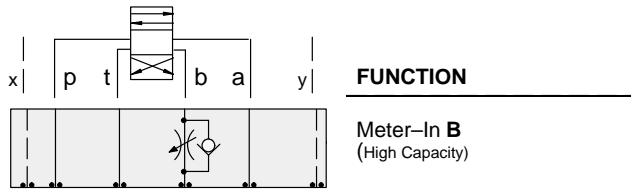
## FUNCTION

Meter-In B

## Flow Control Valves



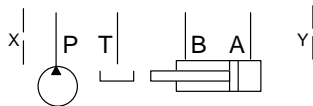
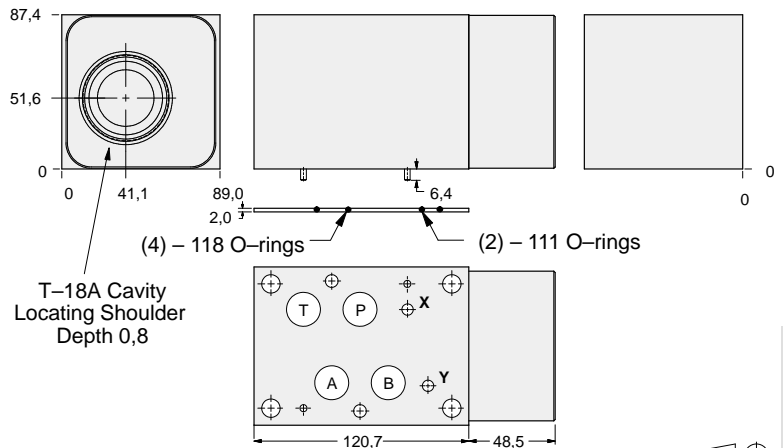
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DKD        |            | DKD/S      |            |



## FUNCTION

Meter-In B  
(High Capacity)

## Flow Control Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DKI        |            | DKI/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

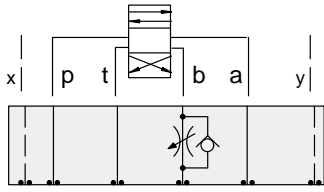
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CN*C   |  |  |



# ISO 07 SANDWICH BODIES



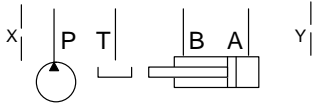
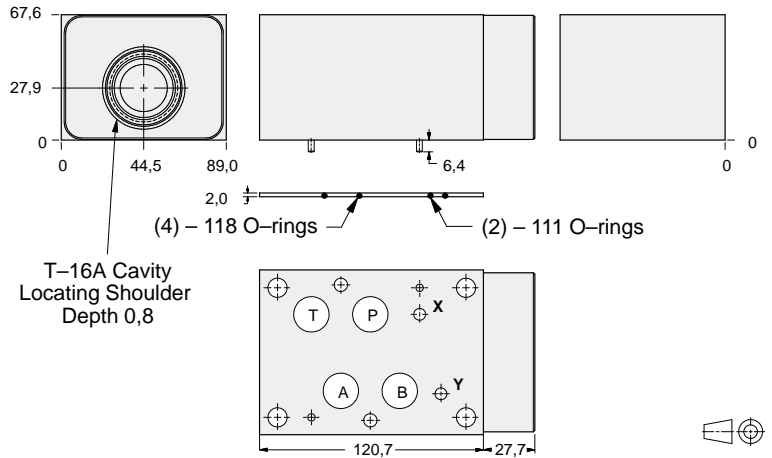
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



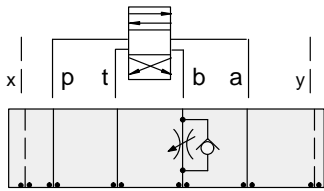
## FUNCTION

Meter-Out B

## Flow Control Valves



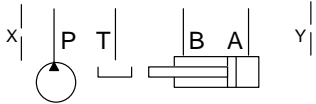
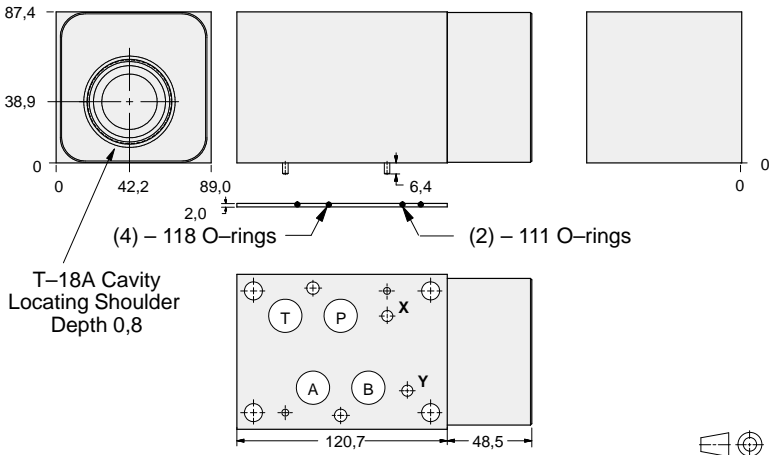
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKB</b> |            | <b>DKB/S</b> |            |



## FUNCTION

Meter-Out B  
(High Capacity)

## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DKF</b> |            | <b>DKF/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|                      | <b>NF*C Page 5.13</b>  |  | <b>FX*A Page 5.21</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|                      | <b>NC*B Page 5.17</b>  |  | <b>FC*B Page 5.23</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|                      | <b>NC*C Page 5.19</b>  |  | <b>FD*A Page 5.25</b>  |
| <b>OTHER VALVES:</b> | <b>CN*C</b>  |  |  |

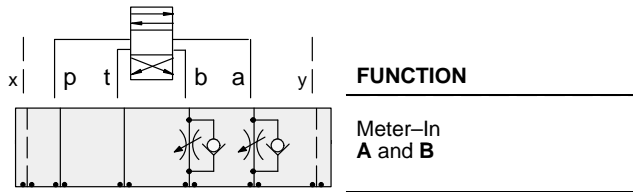




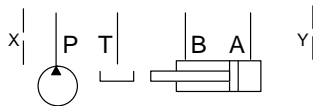
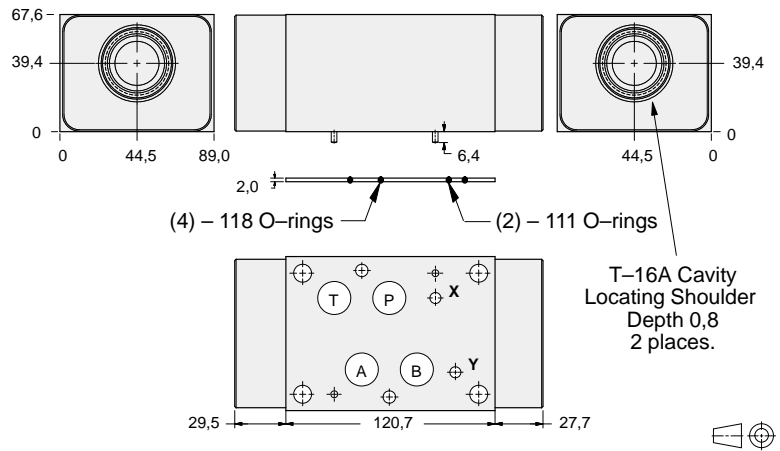
# ISO 07 SANDWICH BODIES



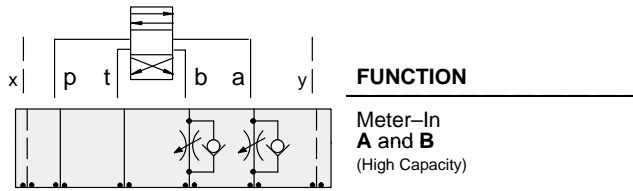
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



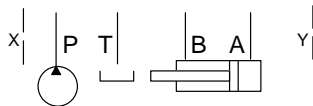
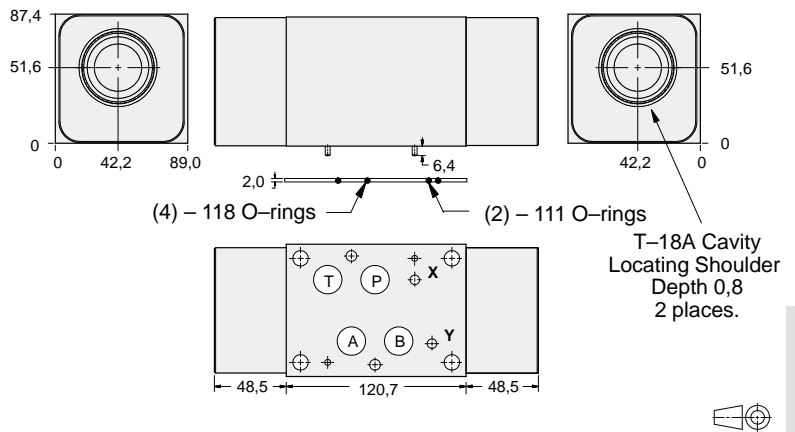
## Flow Control Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DKZ        |            | DKZ/S      |            |



## Flow Control Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DKU        |            | DKU/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

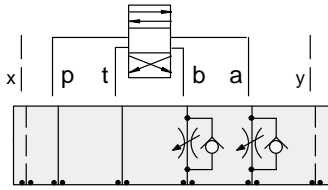
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CNGC, CNIC   |  |  |



# ISO 07 SANDWICH BODIES



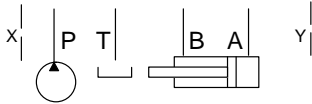
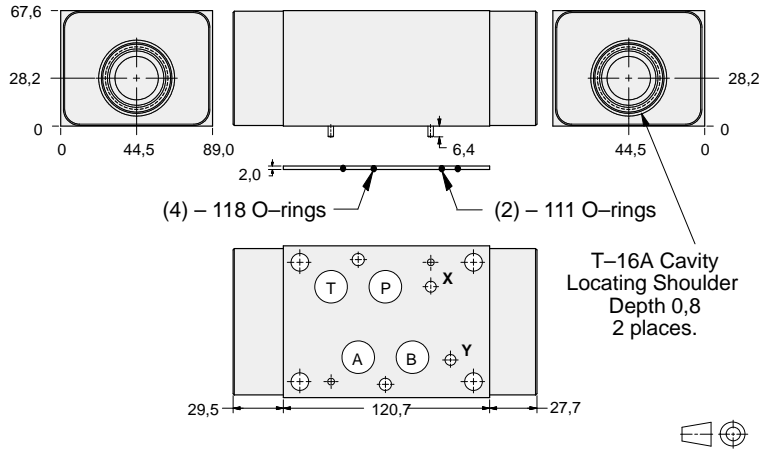
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



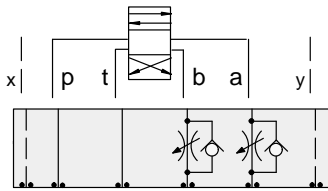
## FUNCTION

Meter-Out  
A and B

## Flow Control Valves



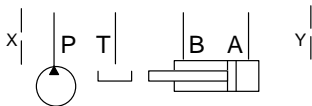
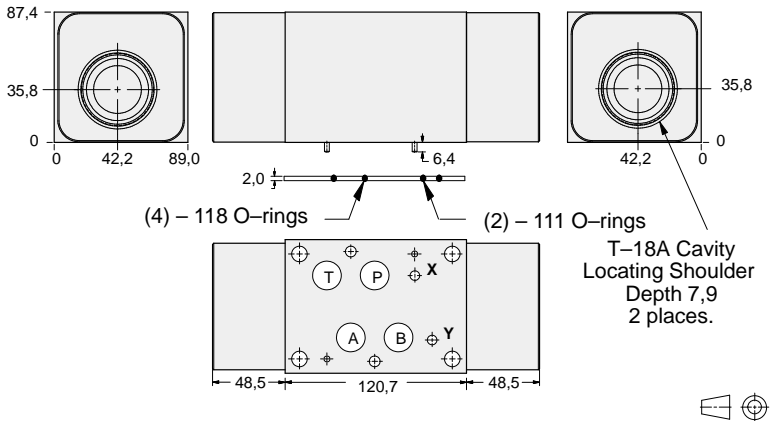
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>DKY</b>        |                   | <b>DKY/S</b>      |                   |



## FUNCTION

Meter-Out  
A and B  
(High Capacity)

## Flow Control Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>DKW</b>        |                   | <b>DKW/S</b>       |                   |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|                      | <b>NF*C Page 5.13</b>  |  | <b>FX*A Page 5.21</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|                      | <b>NC*B Page 5.17</b>  |  | <b>FC*B Page 5.23</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|                      | <b>NC*C Page 5.19</b>  |  | <b>FD*A Page 5.25</b>  |
| <b>OTHER VALVES:</b> | <b>CN*C</b>  |  |  |



# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

**Flow Control Valves**

**FUNCTION**

Meter-Out T

(4) - 118 O-rings (2) - 111 O-rings

T-16A Cavity  
Locating Shoulder  
Depth 0,8

| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DKT        |            | DKT/S      |            |

**Flow Control Valves**

**FUNCTION**

Meter-Out T  
(High Capacity)

(4) - 118 O-rings (2) - 111 O-rings

T-18A Cavity  
Locating Shoulder  
Depth 0,8

| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DKV        |            | DKV/S       |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|   | NF*C Page 5.13   |  | FX*A Page 5.21   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|   | NC*B Page 5.17   |  | FC*B Page 5.23   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|   | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES:                                   | CN*C   |  |  |

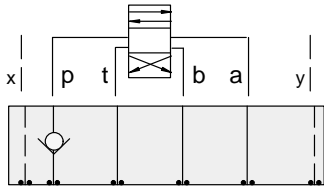
07 FLOW CONTROL



# ISO 07 SANDWICH BODIES



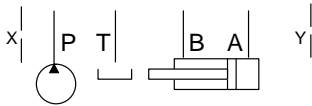
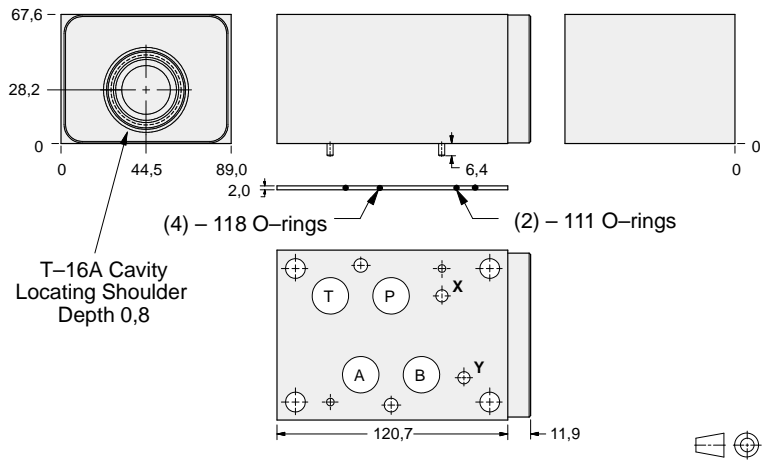
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## FUNCTION

On P

## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKP</b> |            | <b>DKP/S</b> |            |

07 CHECK

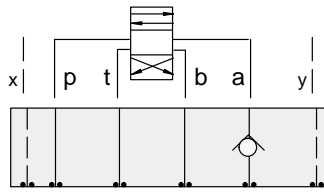
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | CXHA Page 5.09   |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |



# ISO 07 SANDWICH BODIES



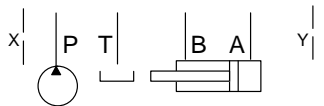
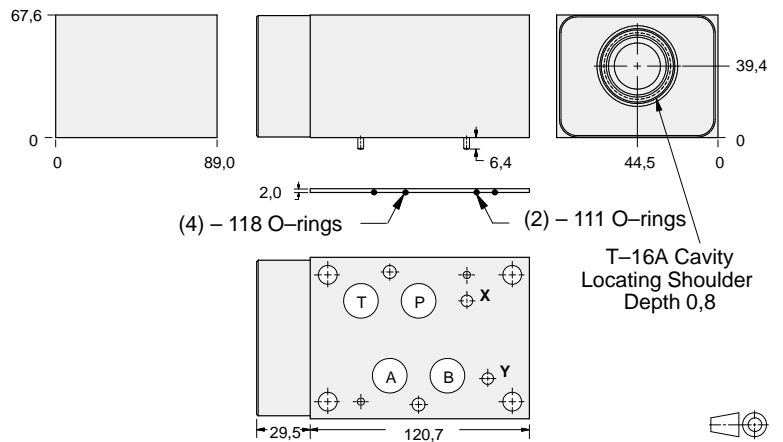
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



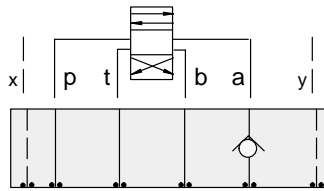
### FUNCTION

**On A**  
Free Flow Out  
of Valve

### Check Valves



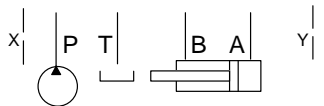
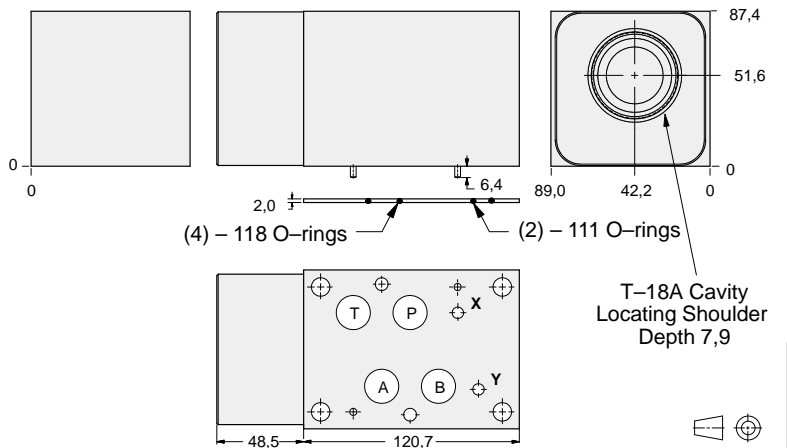
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKC</b> |            | <b>DKC/S</b> |            |



### FUNCTION

**On A**  
Free Flow Out  
of Valve (High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DKG</b> |            | <b>DKG/S</b> |            |

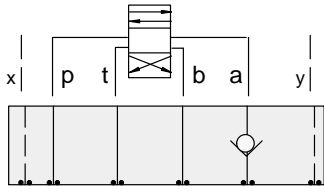
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CX*A Page 5.09</b>                                  |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 07 SANDWICH BODIES



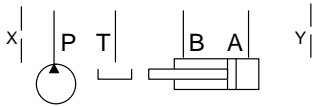
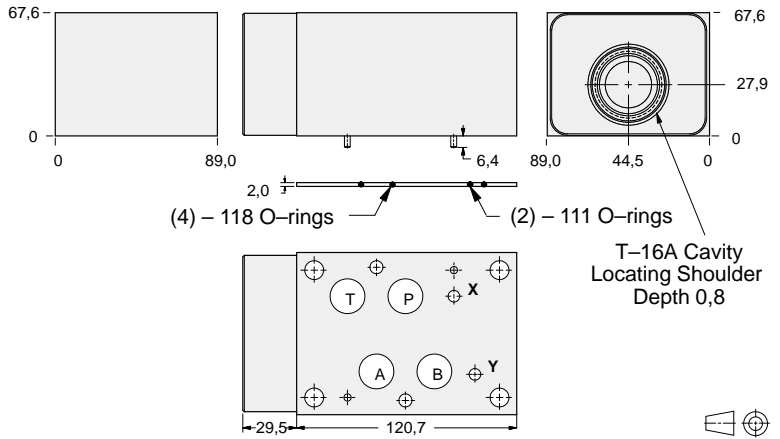
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



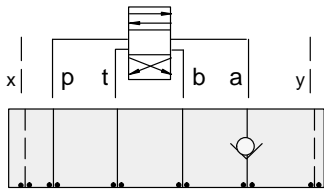
### FUNCTION

**On A**  
Free Flow Into Valve

### Check Valves



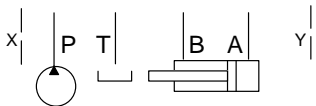
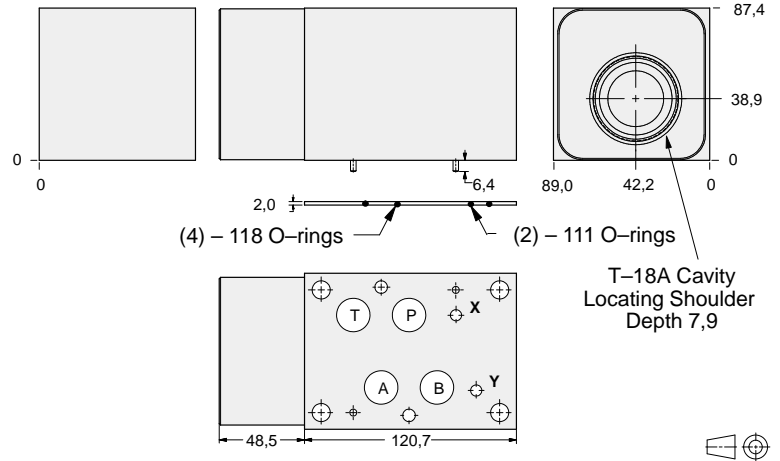
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>DKA</b>        |                   | <b>DKA/S</b>      |                   |



### FUNCTION

**On A**  
Free Flow Into Valve  
(High Capacity)

### Check Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>DKE</b>        |                   | <b>DKE/S</b>       |                   |

07 CHECK

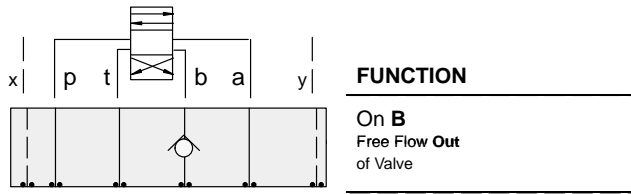
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CX*A</b> Page 5.09                                  |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 07 SANDWICH BODIES



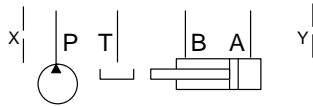
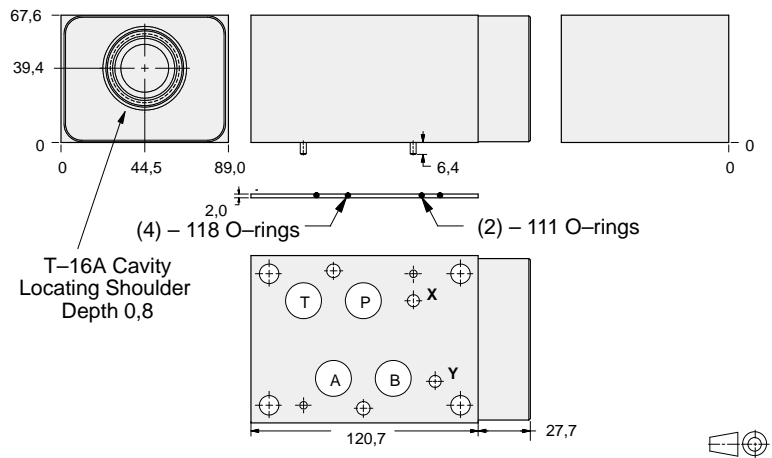
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



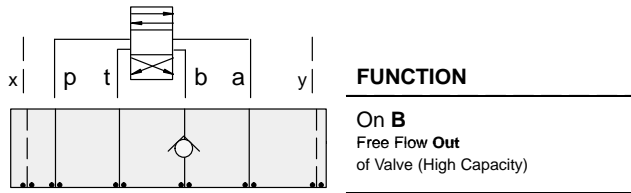
### FUNCTION

On **B**  
Free Flow Out  
of Valve

### Check Valves



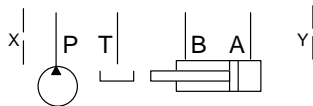
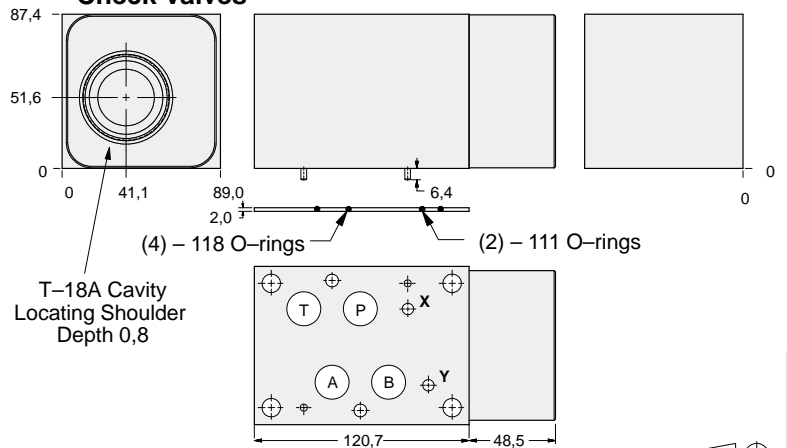
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DKD        |            | DKD/S      |            |



### FUNCTION

On **B**  
Free Flow Out  
of Valve (High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| DKI        |            | DKI/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

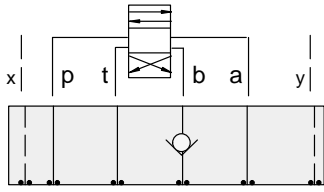
|               |   |  |  |
|---------------|---|--|--|
|               | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|               | CX*A Page 5.09  |  |  |
|               |   |  |  |
|               |   |  |  |
| OTHER VALVES: |   |  |  |



# ISO 07 SANDWICH BODIES



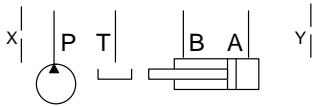
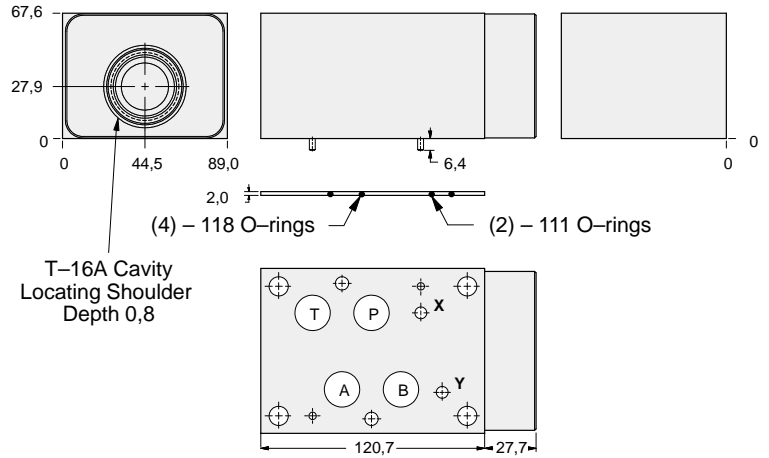
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



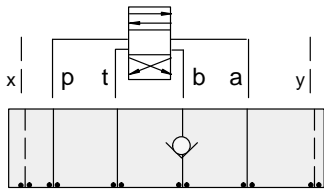
## FUNCTION

**On B**  
Free Flow Into Valve

## Check Valves



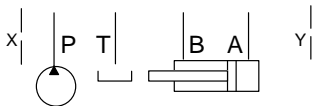
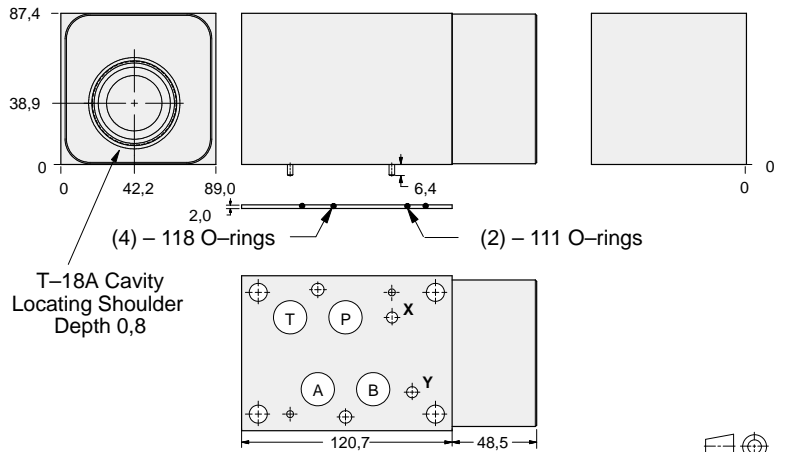
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>DKB</b>        |                   | <b>DKB/S</b>      |                   |



## FUNCTION

**On B**  
Free Flow Into Valve  
(High Capacity)

## Check Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>DKF</b>        |                   | <b>DKF/S</b>       |                   |

07 CHECK

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | <b>CX*A</b> Page 5.09                                  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

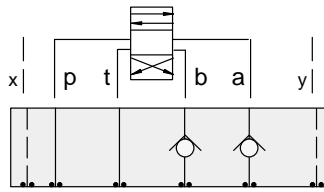




# ISO 07 SANDWICH BODIES



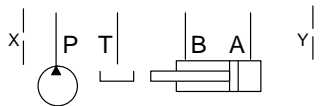
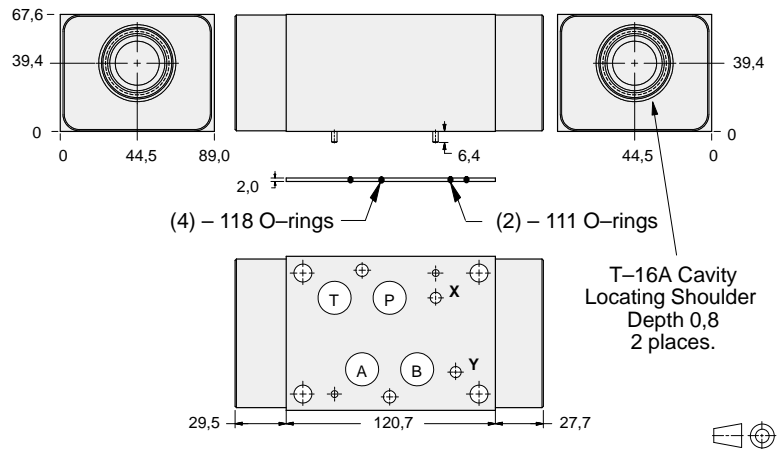
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



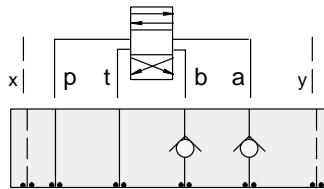
### FUNCTION

On **A** and **B**  
Free Flow Out  
of Valve

### Check Valves



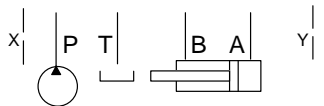
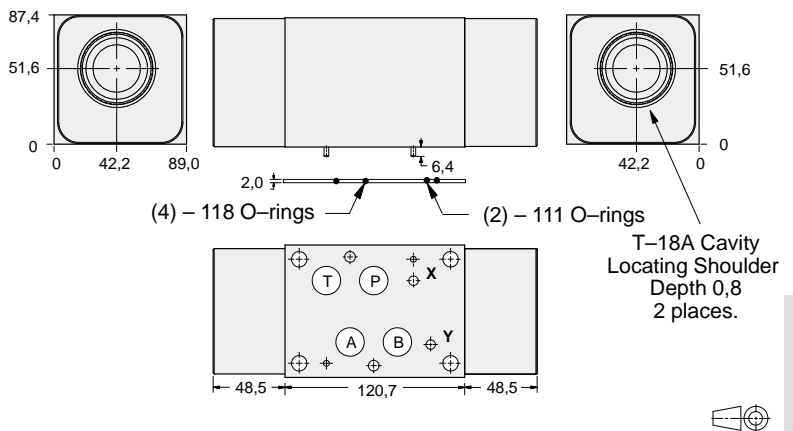
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKZ</b> |            | <b>DKZ/S</b> |            |



### FUNCTION

On **A** and **B**  
Free Flow Out  
of Valve (High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DKU</b> |            | <b>DKU/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

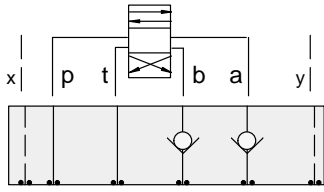
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | <b>CX*A Page 5.09</b>                                  |  |  |
|                      |  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 07 SANDWICH BODIES



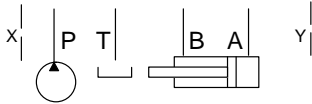
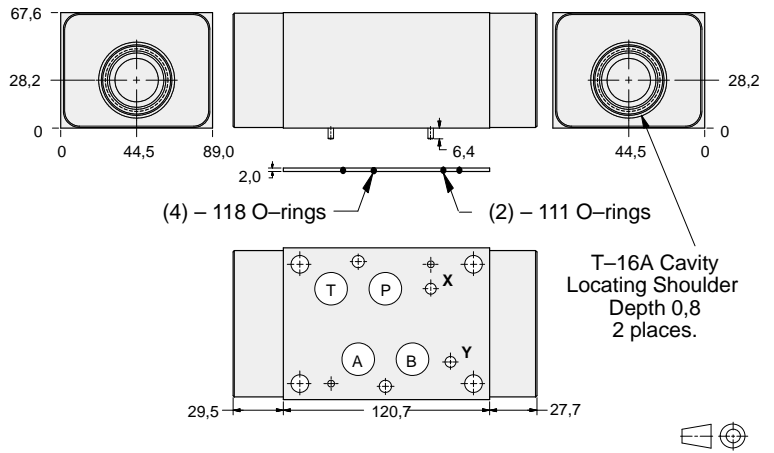
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



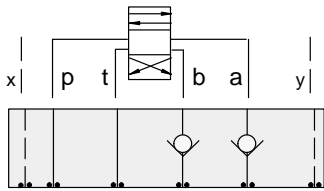
### FUNCTION

On **A** and **B**  
Free Flow Into Valve

### Check Valves



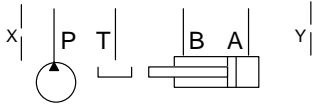
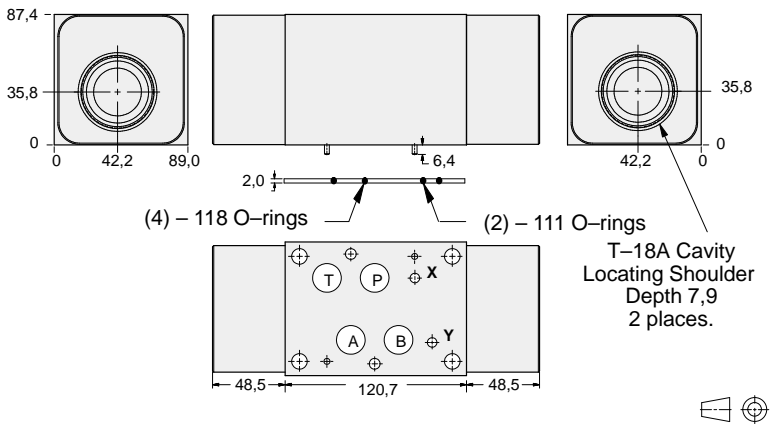
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKY</b> |            | <b>DKY/S</b> |            |



### FUNCTION

On **A** and **B**  
Free Flow Into Valve  
(High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>DKW</b> |            | <b>DKW/S</b> |            |

07 CHECK

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CX*A</b> Page 5.09                                  |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

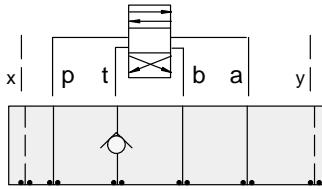


# ISO 07 SANDWICH BODIES



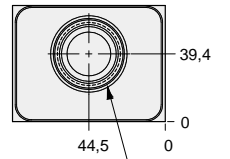
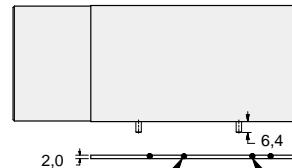
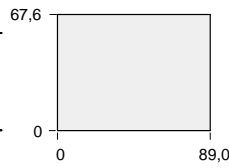
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Check Valves

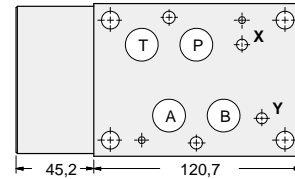


### FUNCTION

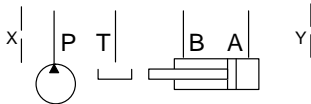
On T



(4) – 118 O-rings (2) – 111 O-rings



T-16A Cavity Locating Shoulder Depth 0,8



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| DKT        |            | DKT/S      |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

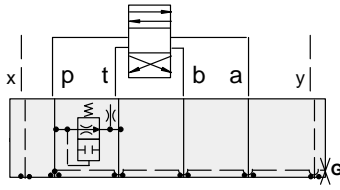
|               |  |  |  |
|---------------|--|--|--|
|               | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|               | CXHA Page 5.09   |  |  |
|               |  |  |  |
|               |  |  |  |
| OTHER VALVES: |  |  |  |



# ISO 07 SANDWICH BODIES



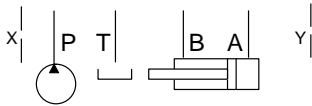
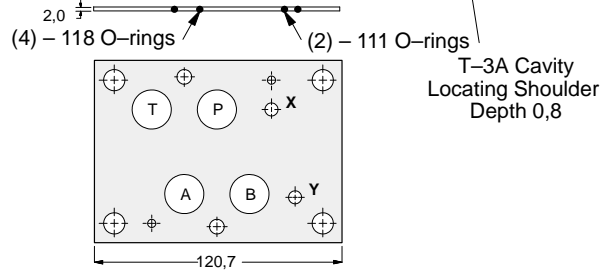
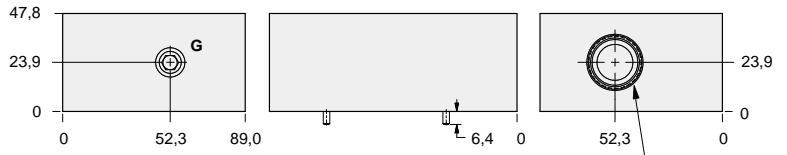
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## FUNCTION

Air-Bleed and Start-Up

## Circuit Savers



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CKP</b>   |            | <b>CKP/S</b> |            |
| .25 BSPP                | <b>CKP/M</b> |            | <b>CKP/T</b> |            |

07 CIRCUIT SAVER

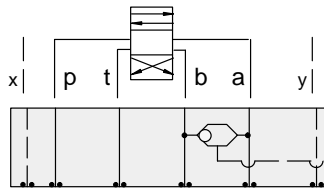
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                              |  |  |
|---|------------------------------|--|--|
|   | Air Bleed and Start-up Valve |  |  |
|   | NQEB Page 10.16              |  |  |
|   |                              |  |  |
|   |                              |  |  |
| OTHER VALVES:                                   |                              |  |  |



# ISO 07 SANDWICH BODIES



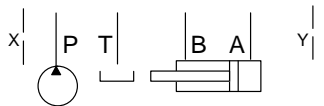
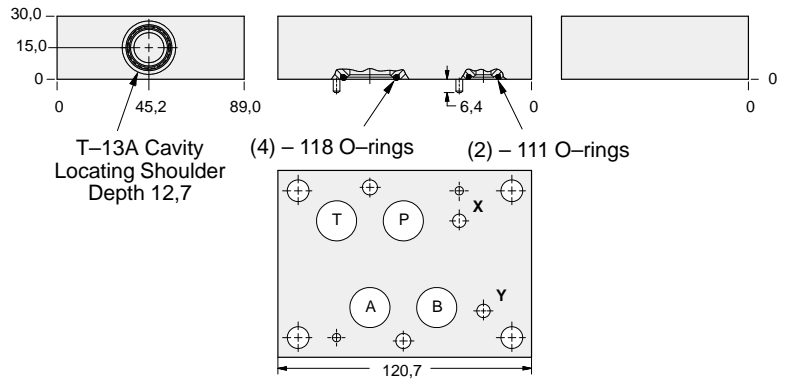
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



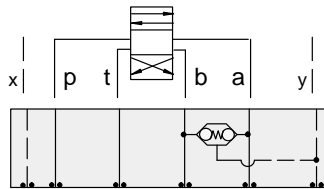
### FUNCTION

Shuttle  
A and B  
Output External

### Circuit Savers



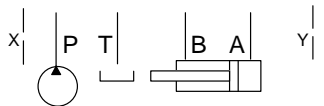
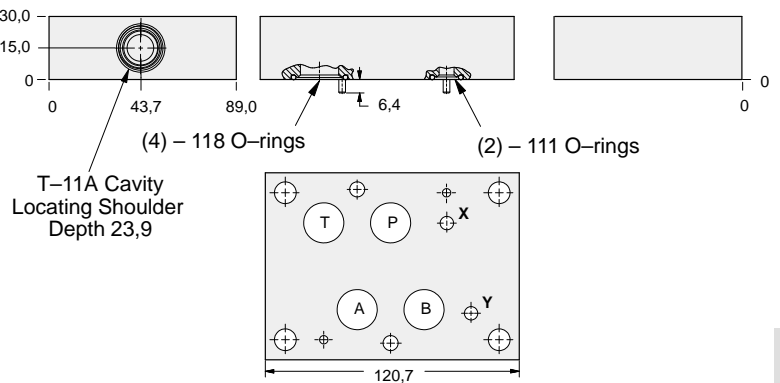
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>DKS</b> |            | <b>DKS/S</b> |            |



### FUNCTION

Checks from  
A and B  
Output to Y Port

### Circuit Savers



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>BKS</b> |            | <b>BKS/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | 2 Port Shuttle Valve, Signal External             |  |  |
|   | CSAA Page 10.09 (use with DKS)                    |  |  |
|   | 3 Port Back-to-Back Check Valve, Signal at Port 3 |  |  |
|   | CDAB Page 10.10 (use with BKS)                    |  |  |
| OTHER VALVES:                                   |   |  |  |

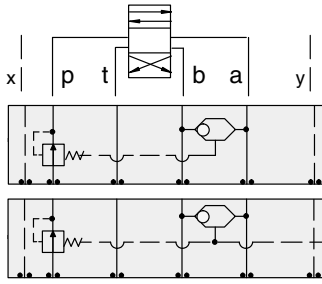
07 CIRCUIT SAVER



# ISO 07 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

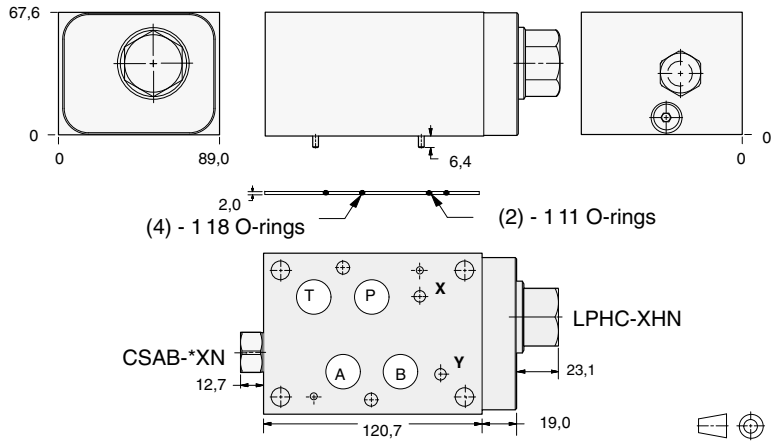


### FUNCTION

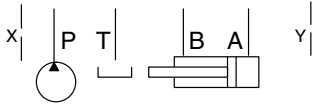
Pressure Compensator (Restrictive)

Pressure Compensator (Restrictive) w/Load-Sensing Port

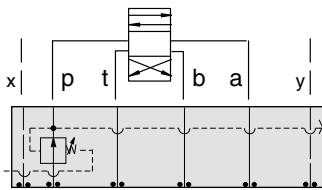
### Circuit Savers



| Shuttle Cartridge | External Shuttle Port | ALUMINIUM     |            | SG IRON       |            |
|-------------------|-----------------------|---------------|------------|---------------|------------|
|                   |                       | Model Code    | List Price | Model Code    | List Price |
| CSAB-XXN          | None                  | YFFE-XHN-AB   |            | YFFE-XHN-AB/S |            |
| CSAB-AXN          | SAE-4                 | YFFF-XHN-AB   |            | YFFF-XHN-AB/S |            |
| CSAB-BXN          | .25 BSPP              | YFFF-XHN-AB/M |            | YFFF-XHN-AB/T |            |

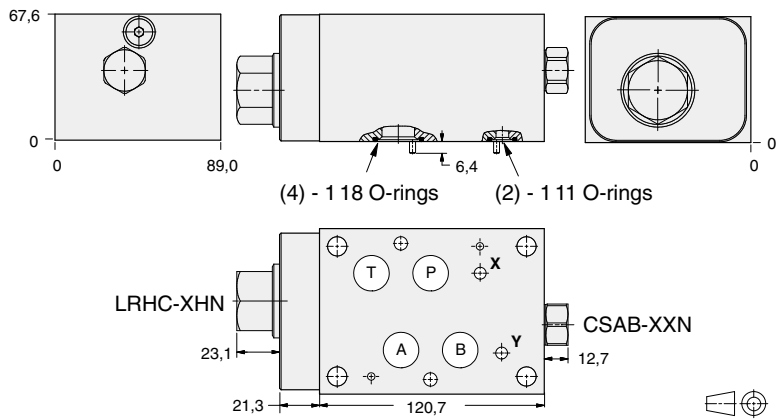


### Circuit Savers

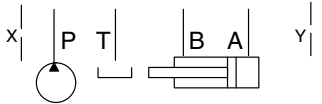


### FUNCTION

Pressure Compensator (Bypass)



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YFFG-XHN-AB |            | YFFG-XHN-AB/S |            |



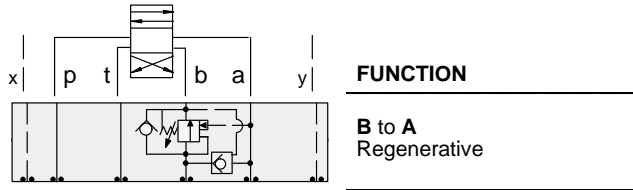
07 CIRCUIT SAVER



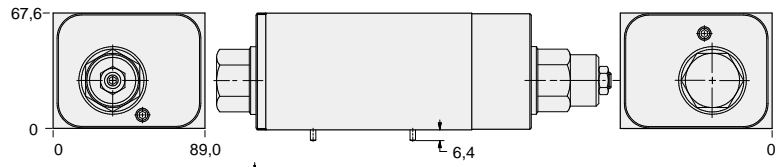
# ISO 07 SANDWICH BODIES



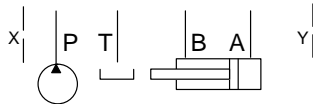
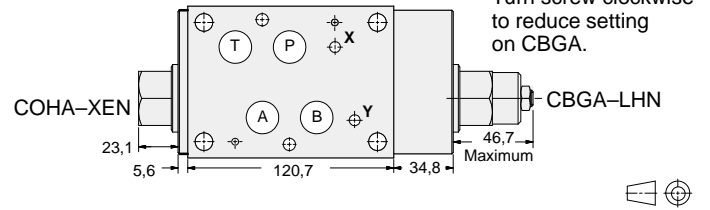
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Circuit Savers



(4) – 118 O-rings (2) – 111 O-rings



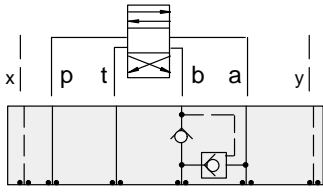
| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDFG-LHN-AB |            | YDFG-LHN-AB/S |            |



# ISO 07 SANDWICH BODIES



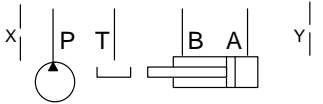
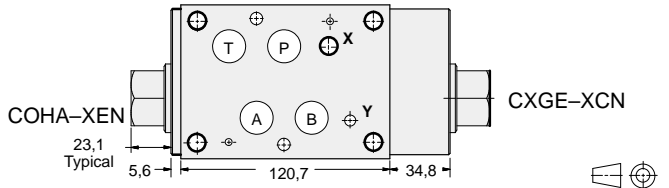
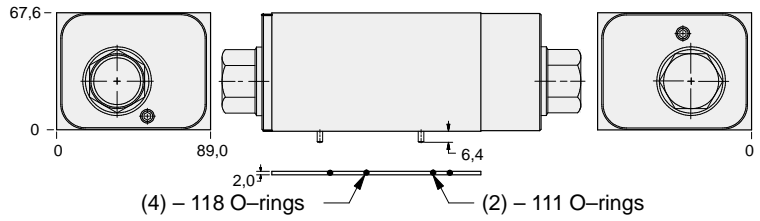
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



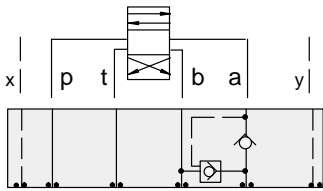
## FUNCTION

**B to A  
Regenerative  
(Full Time)**

## Circuit Savers



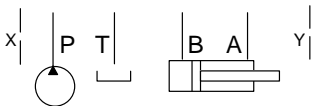
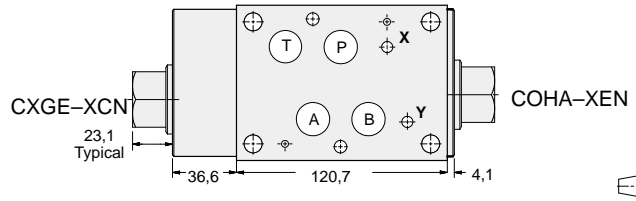
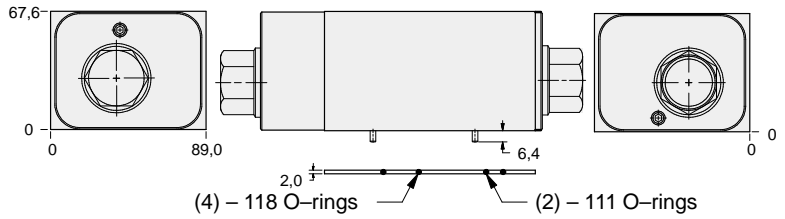
| ALUMINIUM          |            | SG IRON              |            |
|--------------------|------------|----------------------|------------|
| Model Code         | List Price | Model Code           | List Price |
| <b>YDFH-XCN-AB</b> |            | <b>YDFH-XCN-AB/S</b> |            |



## FUNCTION

**A to B  
Regenerative  
(Full Time)**

## Circuit Savers



| ALUMINIUM          |            | SG IRON              |            |
|--------------------|------------|----------------------|------------|
| Model Code         | List Price | Part Number          | List Price |
| <b>YDFI-XCN-AB</b> |            | <b>YDFI-XCN-AB/S</b> |            |

07 CIRCUIT SAVER

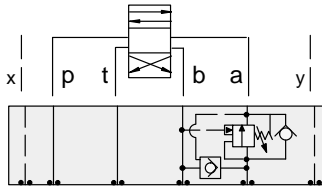




# ISO 07 SANDWICH BODIES



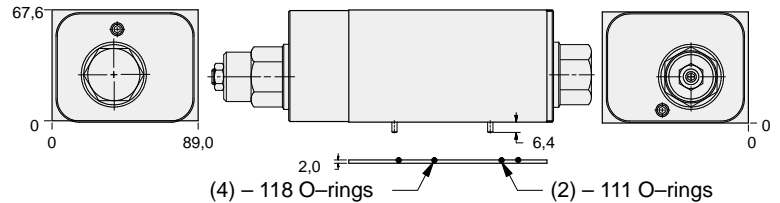
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



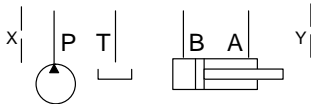
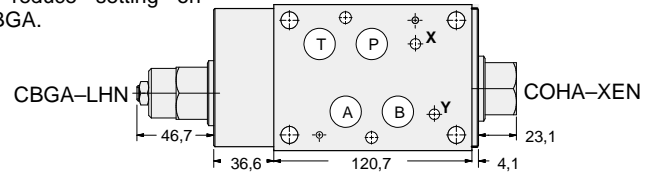
### FUNCTION

A to B  
Regenerative

### Circuit Savers



Turn screw clockwise to reduce setting on CBGA.



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDFE-LHN-AB |            | YDFE-LHN-AB/S |            |



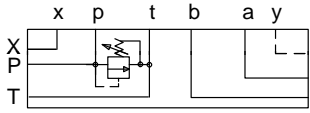
# ISO 07 SANDWICH BODIES



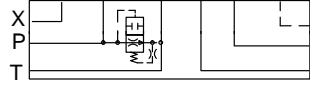
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates

### FUNCTION



Y Relief P to T  
A  
B

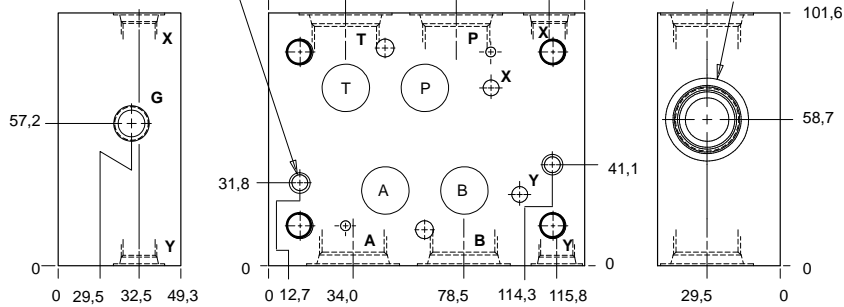


Y Air - B l e e d  
A and Start-Up  
B

Mounting Holes:  
10,4 diameter through hole.  
Counterbore 15,0 diameter  
x 14,2 deep.  
2 places.

T-3A Cavity  
Locating Shoulder  
Depth 4,1

6 Interface Bolt Holes  
x 14,2 deep  
Inch: (4)-.375-16 UNC  
(2)-.250-20 UNC  
Metric: (4)-M20 x 1.5  
(2)-M6 x 1.0



| Bolt Hole Interface | Gauge Port | Port P,T,A,B | Port X,Y | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|--------------|----------|------------|------------|------------|------------|
|                     |            |              |          | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | SAE-12       | SAE-6    | ZLX        |            | ZLX/S      |            |
| Inch                | .25 NPTF   | .75 NPTF     | .25 NFPT | ZLW        |            | ZLW/S      |            |
| Metric              | .25 BSPP   | .75 BSPP     | .25 BSPP | ZLZ        |            | ZLZ/S      |            |

07 SUBPLATE

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

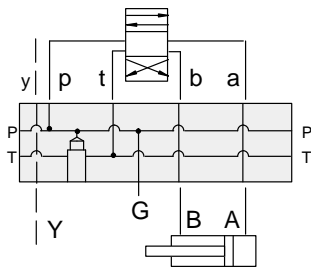
|               |   |  |   |
|---------------|---|--|---|
|               | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve     |
|               | RPGC Page 1.06                              |  | RQGB Page 1.12                              |
|               | Pilot Operated, Rapid Response Relief Valve |  | Air Controlled, Pilot Operated Relief Valve |
|               | RPGE Page 1.08                              |  | RPGD Page 1.14                              |
|               | Direct Acting Relief Valve                  |  | Air Bleed and Start-up Valve                |
|               | RDFA Page 1.10                              |  | NQEB Page 10.16                             |
| OTHER VALVES: |   |  |   |



# BAR MANIFOLDS

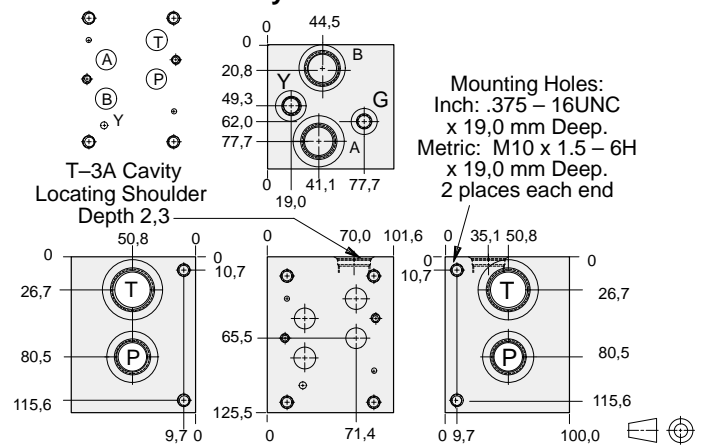


- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## ISO 07 Parallel Circuit with Relief Cavity and Y Port

**FUNCTION**  
One Station



| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|----------|------------|------------|------------|------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | VLA        |            | VLA/S      |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | VLE        |            | VLE/S      |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | VLJ        |            | VLJ/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                             |  |                            |
|---|-----------------------------|--|----------------------------|
|   | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|   | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES:                                   |                             |  |                            |

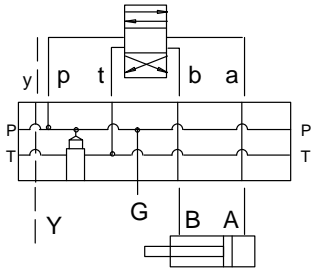


# BAR MANIFOLDS



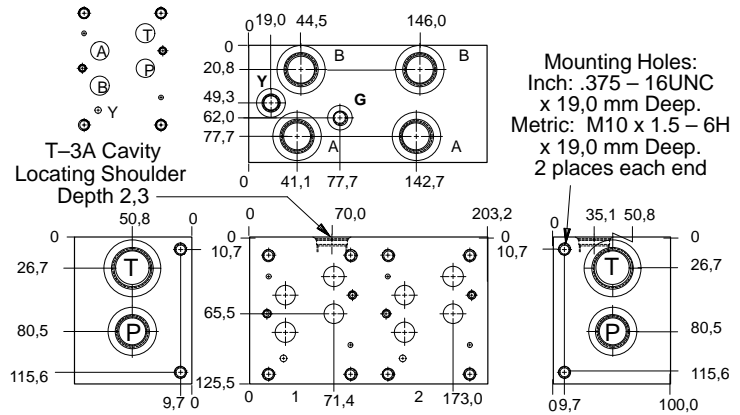
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 07 Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

Two Station

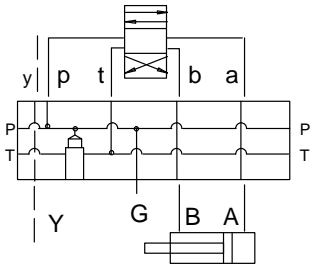


Mounting Holes:  
Inch: .375 – 16UNC  
x 19,0 mm Deep.  
Metric: M10 x 1.5 – 6H  
x 19,0 mm Deep.  
2 places each end

| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON      |            |
|----------------|-----------|---------------|----------|------------|------------|------------|--------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code   | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | <b>VLB</b> |            | <b>VLB/S</b> |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | <b>VLF</b> |            | <b>VLF/S</b> |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | <b>VLK</b> |            | <b>VLK/S</b> |            |

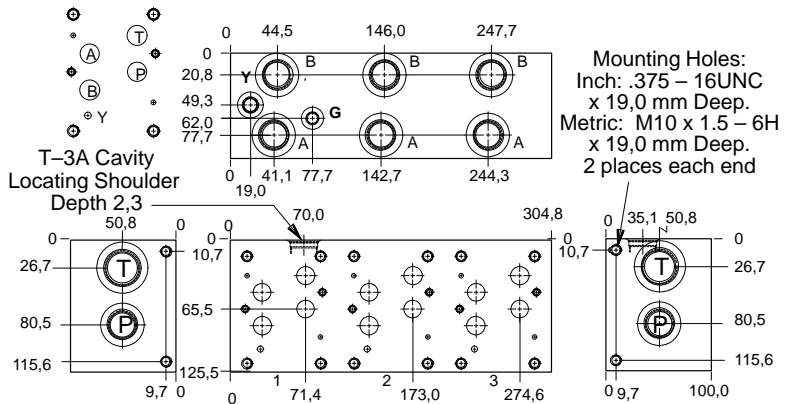
Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 07 Parallel Circuit with Relief Cavity and Y Port



### FUNCTION

Three Station



Mounting Holes:  
Inch: .375 – 16UNC  
x 19,0 mm Deep.  
Metric: M10 x 1.5 – 6H  
x 19,0 mm Deep.  
2 places each end

| Mounting Holes | Port T    | Ports A, B, P | Port Y   | Gauge Port | ALUMINIUM  |            | SG IRON      |            |
|----------------|-----------|---------------|----------|------------|------------|------------|--------------|------------|
|                |           |               |          |            | Model Code | List Price | Model Code   | List Price |
| inch           | 1.00 NPTF | .75 NPTF      | .25 NPTF | .25 NPTF   | <b>VLC</b> |            | <b>VLC/S</b> |            |
| inch           | SAE-16    | SAE-12        | SAE-6    | SAE-4      | <b>VLG</b> |            | <b>VLG/S</b> |            |
| metric         | 1.00 BSPP | .75 BSPP      | .25 BSPP | .25 BSPP   | <b>VLL</b> |            | <b>VLL/S</b> |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

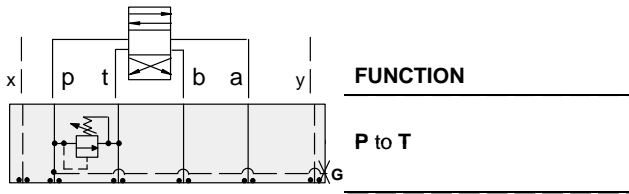
|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |



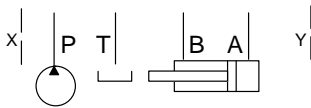
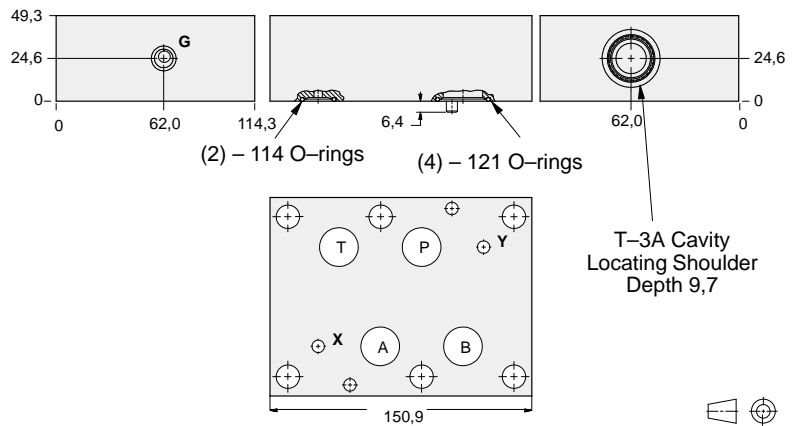
# ISO 08 SANDWICH BODIES



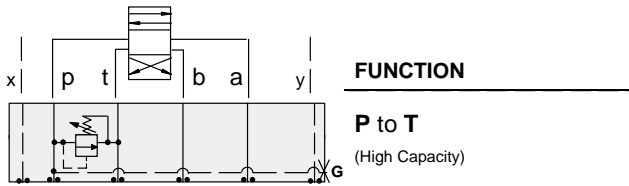
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



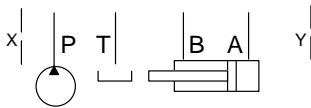
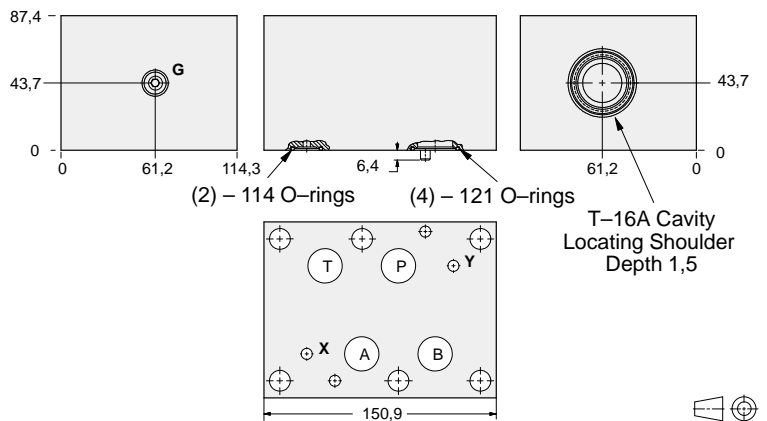
## Relief Valves



| Gauge Port (Plugged) | ALUMINIUM    |            | SG IRON      |            |
|----------------------|--------------|------------|--------------|------------|
|                      | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF             | <b>CDP</b>   |            | <b>CDP/S</b> |            |
| .25 BSPP             | <b>CDP/M</b> |            | <b>CDP/T</b> |            |



## Relief Valves



| Gauge Port (Plugged) | ALUMINIUM    |            | SG IRON      |            |
|----------------------|--------------|------------|--------------|------------|
|                      | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF             | <b>CDO</b>   |            | <b>CDO/S</b> |            |
| .25 BSPP             | <b>CDO/M</b> |            | <b>CDO/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

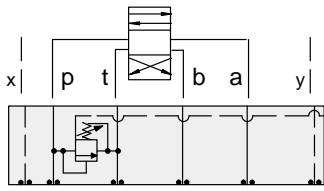
|  |  |  |  |
|--|--|--|--|
|  | Pilot Operated Relief Valve<br><b>RP*C</b> Page 1.06, 1.07                 |  | Pilot Operated "Kick-Down" Relief Valve<br><b>RQ*B</b> Page 1.12, 1.13     |
|  | Pilot Operated, Rapid Response Relief Valve<br><b>RP*E</b> Page 1.08, 1.09 |  | Air Controlled, Pilot Operated Relief Valve<br><b>RP*D</b> Page 1.14, 1.15 |
|  | Direct Acting Relief Valve<br><b>RD*A</b> Page 1.10, 1.11                  |  |  |
|  | <b>OTHER VALVES:</b>   |  |  |



# ISO 08 SANDWICH BODIES



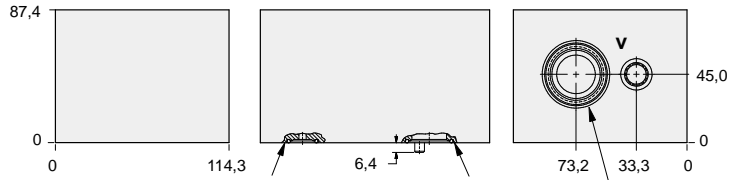
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**P to T**  
Externally Vented

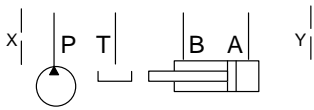
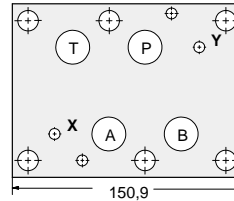
### Relief Valves



(2) – 114 O-rings

(4) – 121 O-rings

T-17A Cavity  
Locating Shoulder  
Depth 23,1



| Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-----------|--------------|------------|--------------|------------|
|           | Model Code   | List Price | Model Code   | List Price |
| SAE-6     | <b>HBV</b>   |            | <b>HBV/S</b> |            |
| .25 BSPP  | <b>HBV/M</b> |            | <b>HBV/T</b> |            |

08 RELIEF

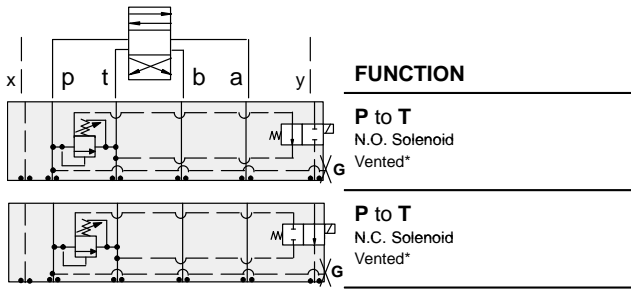
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | <i>Pilot Operated Vented Relief Valve</i> |  |  |
|   | <b>RVGA Page 1.19</b>                     |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



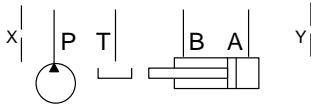
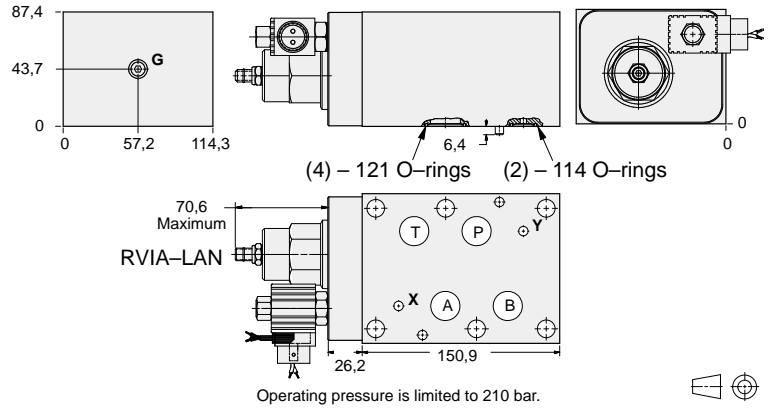
# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Relief Valves



| Solenoid Type | Gauge Port (Plugged) | ALUMINIUM     |            | SG IRON       |            |
|---------------|----------------------|---------------|------------|---------------|------------|
|               |                      | Model Code    | List Price | Model Code    | List Price |
| N.O.          | .25 NPTF             | YRHI-LAN-*A   |            | YRHI-LAN-*A/S |            |
| N.O.          | .25 BSPP             | YRHI-LAN-*A/M |            | YRHI-LAN-*A/T |            |
| N.C.          | .25 NPTF             | YRHJ-LAN-*A   |            | YRHJ-LAN-*A/S |            |
| N.C.          | .25 BSPP             | YRHJ-LAN-*A/M |            | YRHJ-LAN-*A/T |            |

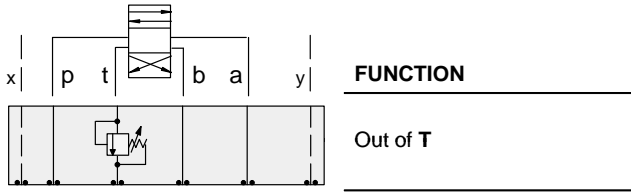
\* Select solenoid connection/voltage option from page 14.16 and add option price to List Price.



# ISO 08 SANDWICH BODIES



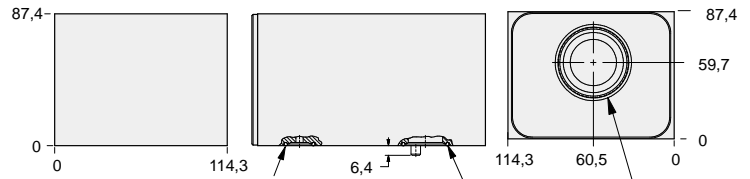
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

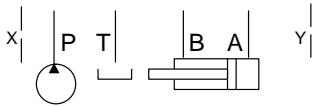
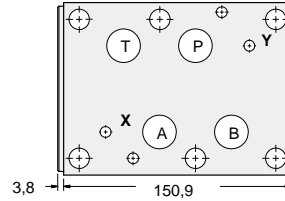
Out of T

### Relief Valves

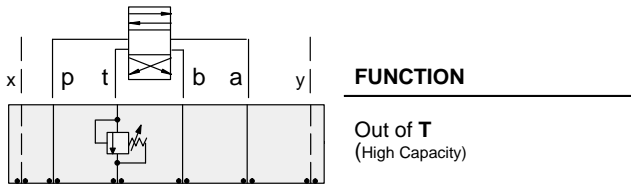


(2) -114 O-rings (4) -121 O-rings

T-16A Cavity Locating Shoulder Depth 1,5



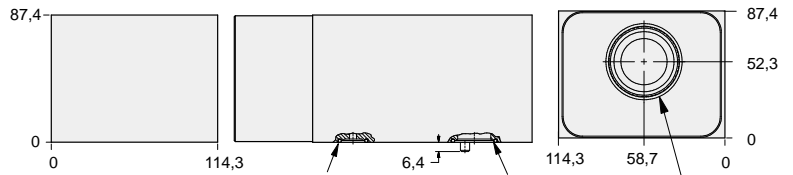
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBT</b> |            | <b>IBT/S</b> |            |



### FUNCTION

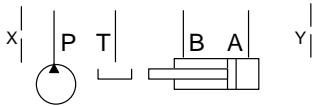
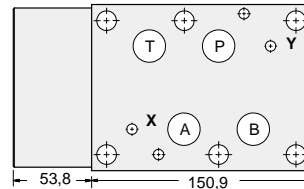
Out of T  
(High Capacity)

### Relief Valves



(2) -114 O-rings (4) -121 O-rings

T-18A Cavity Locating Shoulder Depth 0,8



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBV</b> |            | <b>IBV/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |                         |   |
|---------------|---|-------------------------|---|
| <br>2<br>1    | Pilot Operated Relief Valve                 | <br>2<br>1              | Pilot Operated "Kick-Down" Relief Valve     |
|               | RP*C Page 1.07                              |                         | RQ*B Page 1.13                              |
| <br>2<br>1    | Pilot Operated, Rapid Response Relief Valve | <br>Air Pilot<br>2<br>1 | Air Controlled, Pilot Operated Relief Valve |
|               | RP*E Page 1.09                              |                         | RP*D Page 1.15                              |
| <br>2<br>1    | Direct Acting Relief Valve                  |                         |   |
|               | RD*A Page 1.11                              |                         |   |
| OTHER VALVES: |   |                         |   |

08 RELIEF

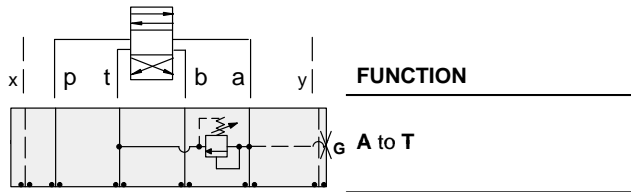




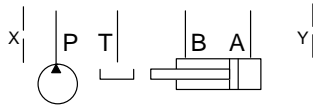
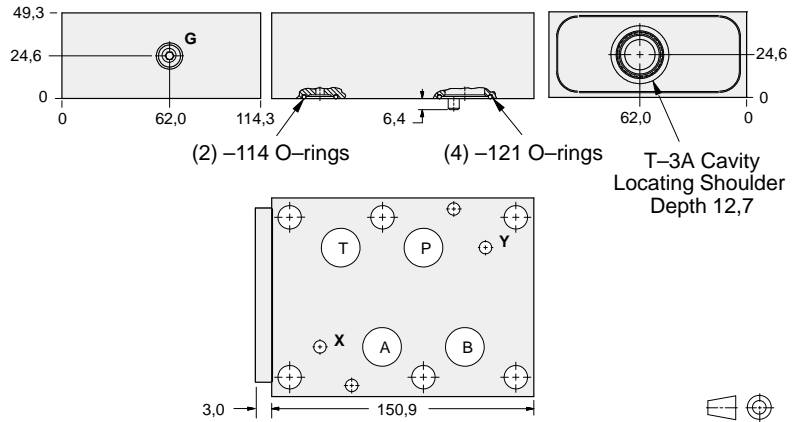
# ISO 08 SANDWICH BODIES



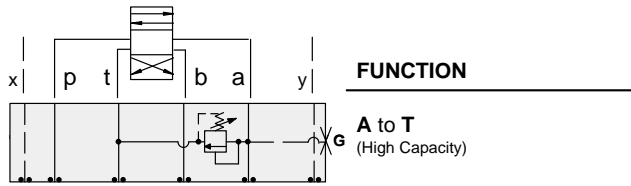
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



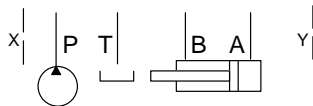
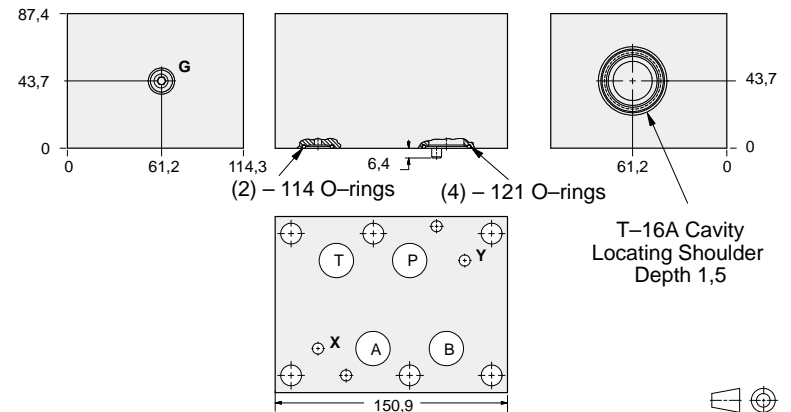
## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CDA</b>   |            | <b>CDA/S</b> |            |
| .25 BSPP                | <b>CDA/M</b> |            | <b>CDA/T</b> |            |



## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>CDC</b>   |            | <b>CDC/S</b> |            |
| .25 BSPP                | <b>CDC/M</b> |            | <b>CDC/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

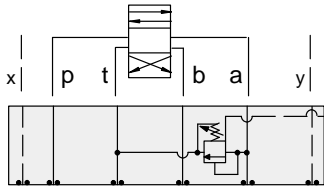
|  |  |  |  |
|--|--|--|--|
|  | Pilot Operated Relief Valve<br><b>RP*C Page 1.06, 1.07</b>                 |  | Pilot Operated "Kick-Down" Relief Valve<br><b>RQ*B Page 1.12, 1.13</b>     |
|  | Pilot Operated, Rapid Response Relief Valve<br><b>RP*E Page 1.08, 1.09</b> |  | Air Controlled, Pilot Operated Relief Valve<br><b>RP*D Page 1.14, 1.15</b> |
|  | Direct Acting Relief Valve<br><b>RD*A Page 1.10, 1.11</b>                  |  |  |
|  | <b>OTHER VALVES:</b>   |  |  |



# ISO 08 SANDWICH BODIES



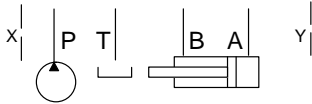
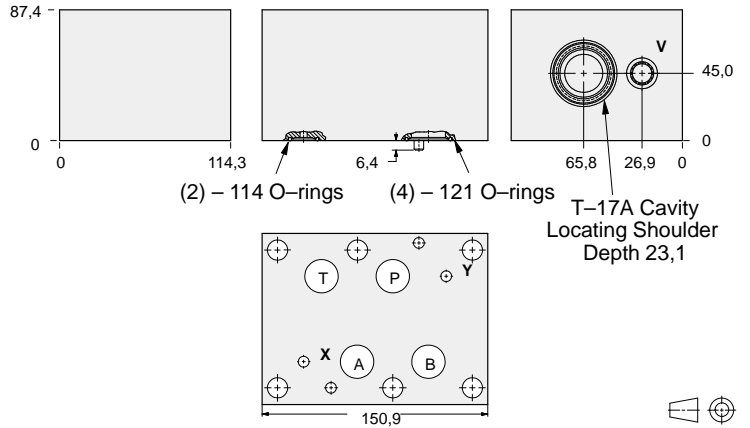
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



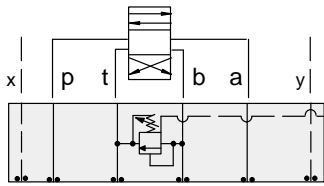
### FUNCTION

**A to T**  
Externally Vented

### Relief Valves



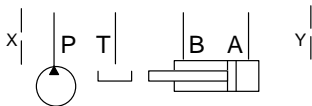
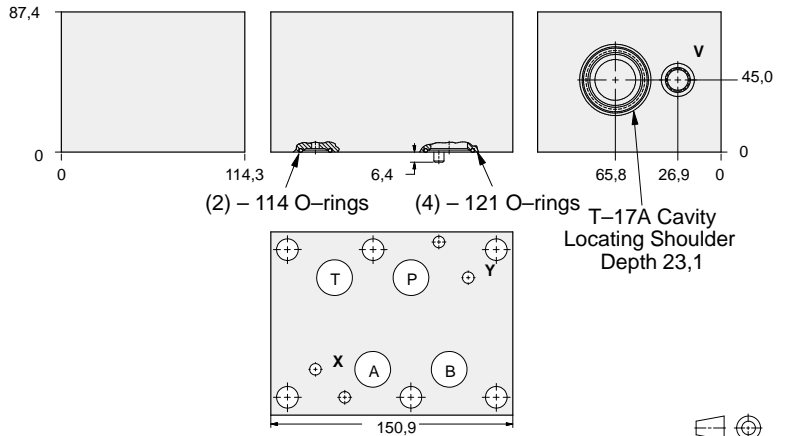
| Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-----------|--------------|------------|--------------|------------|
|           | Model Code   | List Price | Model Code   | List Price |
| SAE-6     | <b>HBE</b>   |            | <b>HBE/S</b> |            |
| .25 BSPP  | <b>HBE/M</b> |            | <b>HBE/T</b> |            |



### FUNCTION

**B to T**  
Externally Vented

### Relief Valves



| Vent Port | ALUMINIUM    |            | SG IRON      |            |
|-----------|--------------|------------|--------------|------------|
|           | Model Code   | List Price | Part Number  | List Price |
| SAE-6     | <b>HBF</b>   |            | <b>HBF/S</b> |            |
| .25 BSPP  | <b>HBF/M</b> |            | <b>HBF/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

| Cartridge Diagram    | Cartridge Name                     | Material | Part Number | List Price |
|----------------------|------------------------------------|----------|-------------|------------|
|                      | Pilot Operated Vented Relief Valve |          |             |            |
|                      | RVGA Page 1.19                     |          |             |            |
|                      |                                    |          |             |            |
|                      |                                    |          |             |            |
| <b>OTHER VALVES:</b> |                                    |          |             |            |

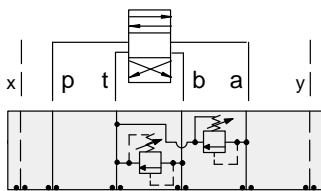
08 RELIEF



# ISO 08 SANDWICH BODIES



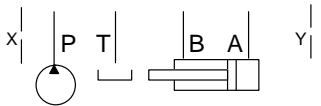
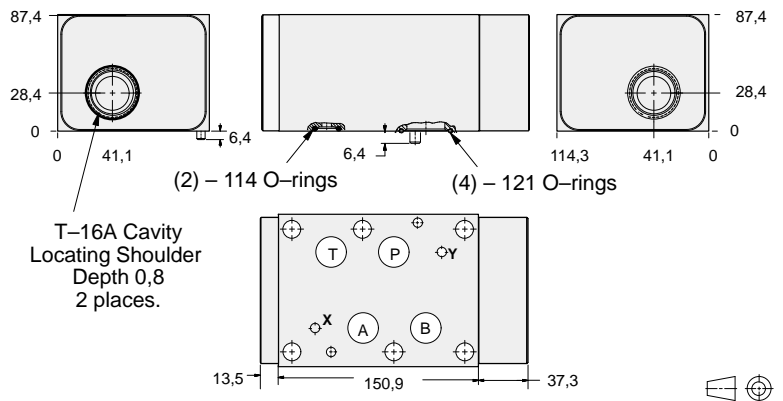
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**A and B to T**  
(High Capacity)

### Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CDZ</b> |            | <b>CDZ/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |   |
|---|---|--|---|
|   | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve     |
|   | <b>RPIC Page 1.07</b>                       |  | <b>RQIB Page 1.13</b>                       |
|   | Pilot Operated, Rapid Response Relief Valve |  | Air Controlled, Pilot Operated Relief Valve |
|   | <b>RPIE Page 1.09</b>                       |  | <b>RPID Page 1.15</b>                       |
|   | Direct Acting Relief Valve                  |  |   |
|   | <b>RDHA Page 1.11</b>                       |  |   |
| <b>OTHER VALVES:</b>                            |   |  |   |

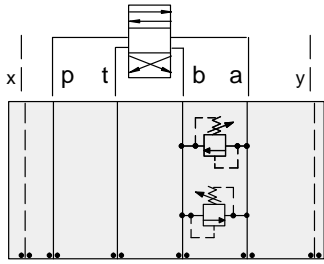
08 RELIEF



# ISO 08 SANDWICH BODIES



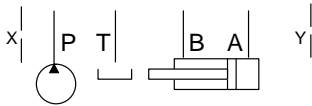
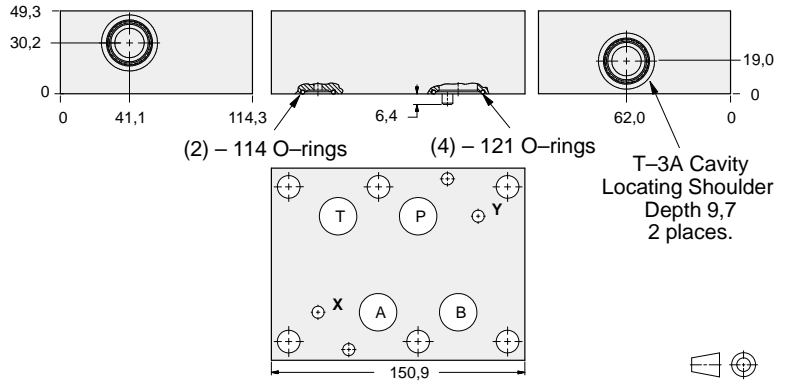
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



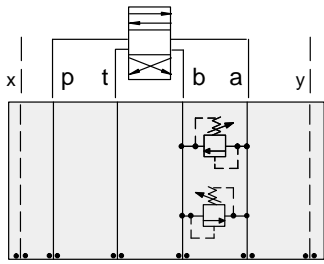
## FUNCTION

**A to B and B to A**  
(Cross Port)

## Relief Valves



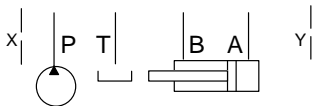
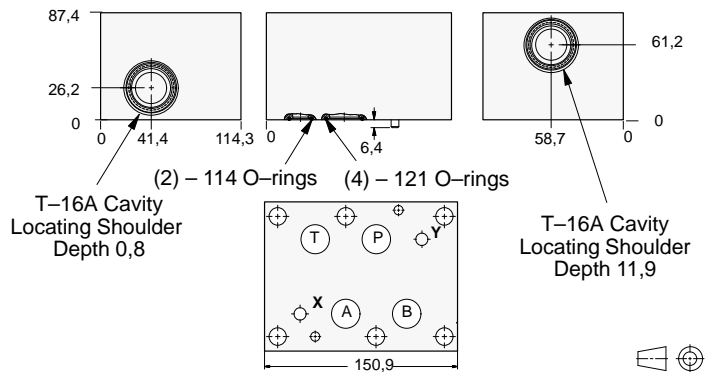
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CDY</b> |            | <b>CDY/S</b> |            |



## FUNCTION

**A to B and B to A**  
(High Capacity)  
(Cross Port)

## Relief Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>CDW</b> |            | <b>CDW/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

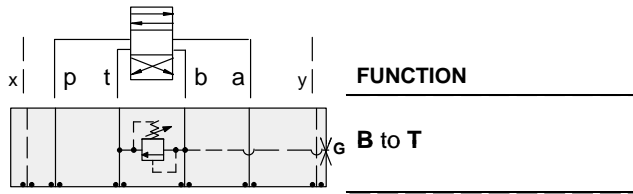
|               |   |  |   |
|---------------|---|--|---|
|               | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve     |
|               | RP*C Page 1.06, 1.07                        |  | RQ*B Page 1.12, 1.13                        |
|               | Pilot Operated, Rapid Response Relief Valve |  | Air Controlled, Pilot Operated Relief Valve |
|               | RP*E Page 1.08, 1.09                        |  | RP*D Page 1.14, 1.15                        |
|               | Direct Acting Relief Valve                  |  |   |
|               | RD*A Page 1.10, 1.11                        |  |   |
| OTHER VALVES: |   |  |   |



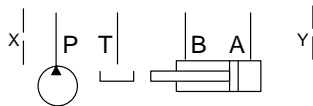
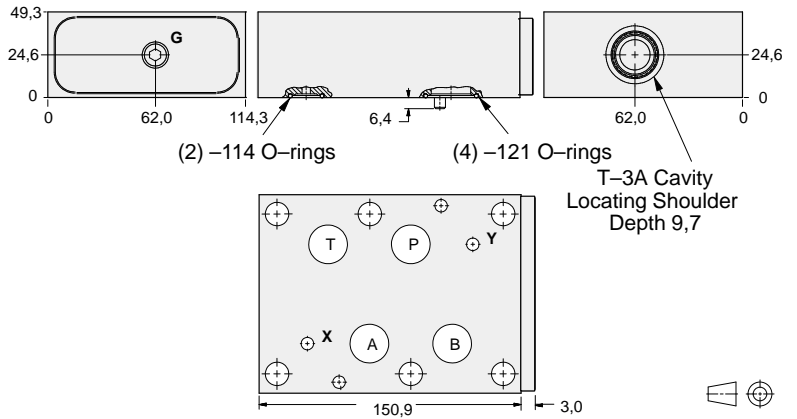
# ISO 08 SANDWICH BODIES



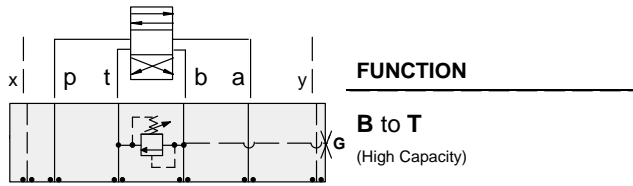
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



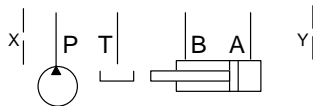
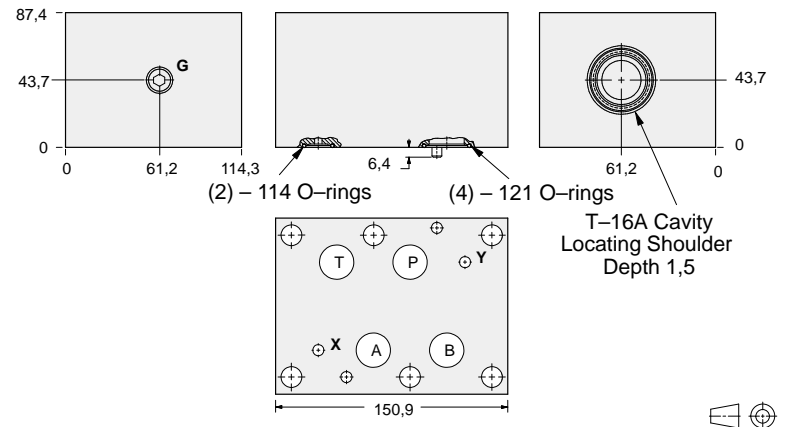
## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CDB</b>   |            | <b>CDB/S</b> |            |
| .25 BSPP                | <b>CDB/M</b> |            | <b>CDB/T</b> |            |



## Relief Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>CDD</b>   |            | <b>CDD/S</b> |            |
| .25 BSPP                | <b>CDD/M</b> |            | <b>CDD/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

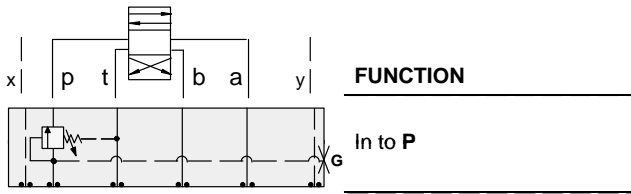
|               |   |  |   |
|---------------|---|--|---|
|               | Pilot Operated Relief Valve                 |  | Pilot Operated "Kick-Down" Relief Valve     |
|               | RP*C Page 1.06, 1.07                        |  | RQ*B Page 1.12, 1.13                        |
|               | Pilot Operated, Rapid Response Relief Valve |  | Air Controlled, Pilot Operated Relief Valve |
|               | RP*E Page 1.08, 1.09                        |  | RP*D Page 1.14, 1.15                        |
|               | Direct Acting Relief Valve                  |  |   |
|               | RD*A Page 1.10, 1.11                        |  |   |
| OTHER VALVES: |   |  |   |



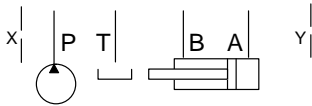
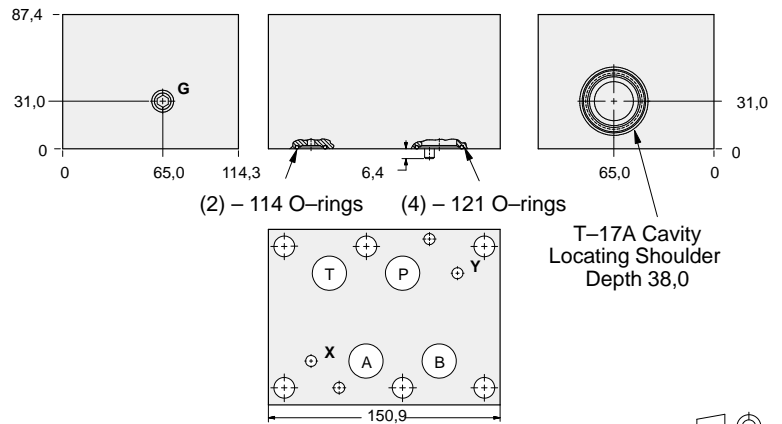
# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Sequence Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>HBW</b>   |            | <b>HBW/S</b> |            |
| .25 BSPP                | <b>HBW/M</b> |            | <b>HBW/T</b> |            |

08 SEQUENCE

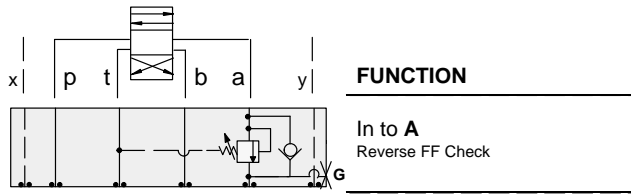
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Sequence Valve</i>                 |  | <i>Direct Acting Sequence Valve with Reverse Free Flow Check</i> |
|   | <b>RSHC Page 2.07</b>                                |  | <b>SCGA Page 2.13</b>  |
|   | <i>Pilot Operated "Kick-Down" Sequence Valve</i>     |  |  |
|   | <b>SQHB Page 2.09</b>                                |  |  |
|   | <i>Air Controlled, Pilot Operated Sequence Valve</i> |  |  |
|   | <b>RSHE Page 2.11</b>                                |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



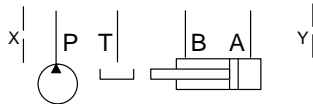
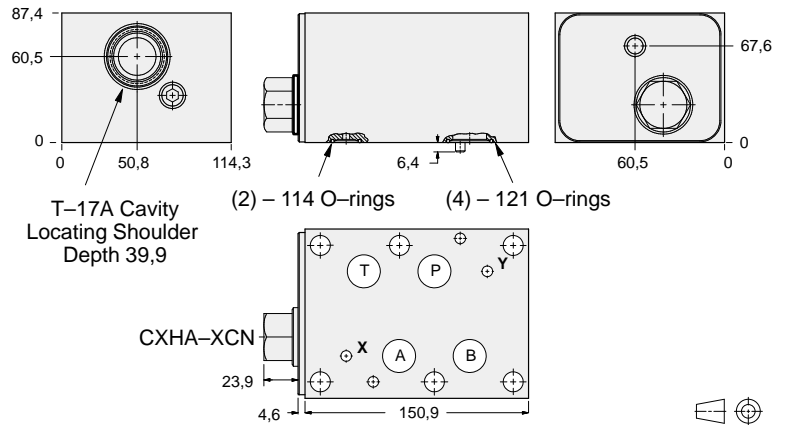
# ISO 08 SANDWICH BODIES



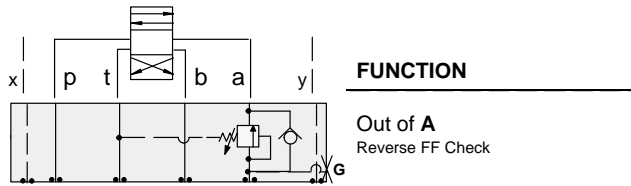
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



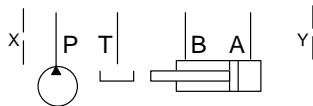
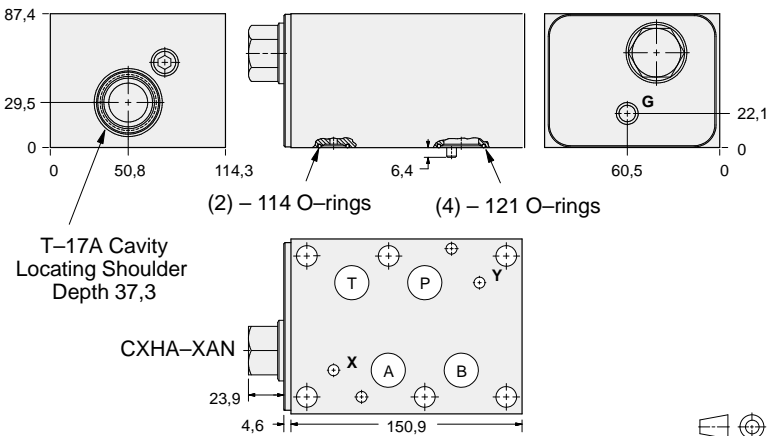
## Sequence Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>HB4</b>   |            | <b>HB4/S</b> |            |
| .25 BSPP                | <b>HB4/M</b> |            | <b>HB4/T</b> |            |



## Sequence Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>HB6</b>   |            | <b>HB6/S</b> |            |
| .25 BSPP                | <b>HB6/M</b> |            | <b>HB6/T</b> |            |

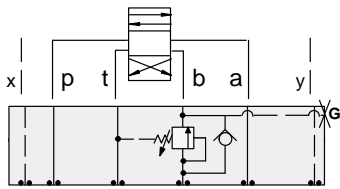
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Sequence Valve                 |  |  |
|   | <b>RSHC</b> Page 2.07                         |  |  |
|   | Pilot Operated "Kick-Down" Sequence Valve     |  |  |
|   | <b>SQHB</b> Page 2.09                         |  |  |
|   | Air Controlled, Pilot Operated Sequence Valve |  |  |
|   | <b>RSHE</b> Page 2.11                         |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 08 SANDWICH BODIES



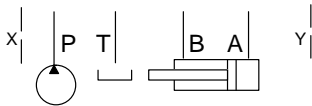
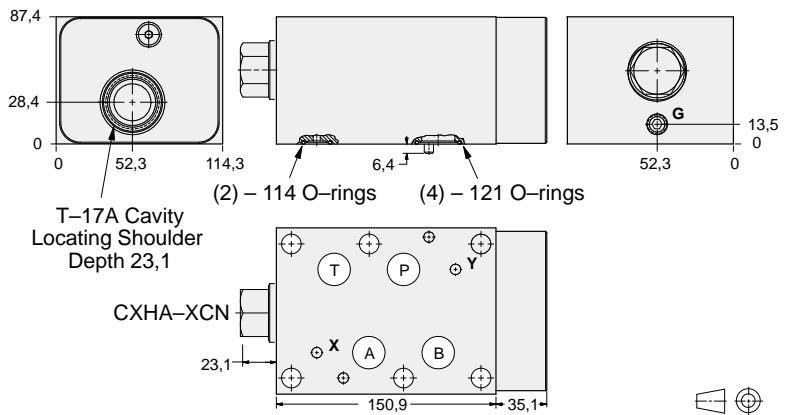
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

Out of B  
Reverse FF Check

### Sequence Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>HB7</b>   |            | <b>HB7/S</b> |            |
| .25 BSPP                | <b>HB7/M</b> |            | <b>HB7/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Sequence Valve                 |  |  |
|                      | <b>RSHC Page 2.07</b>                         |  |  |
|                      | Pilot Operated "Kick-Down" Sequence Valve     |  |  |
|                      | <b>SQHB Page 2.09</b>                         |  |  |
|                      | Air Controlled, Pilot Operated Sequence Valve |  |  |
|                      | <b>RSHE Page 2.11</b>                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

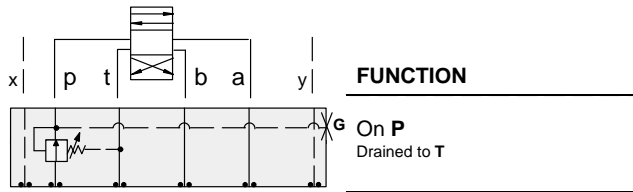




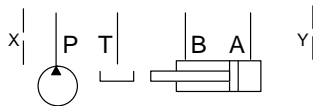
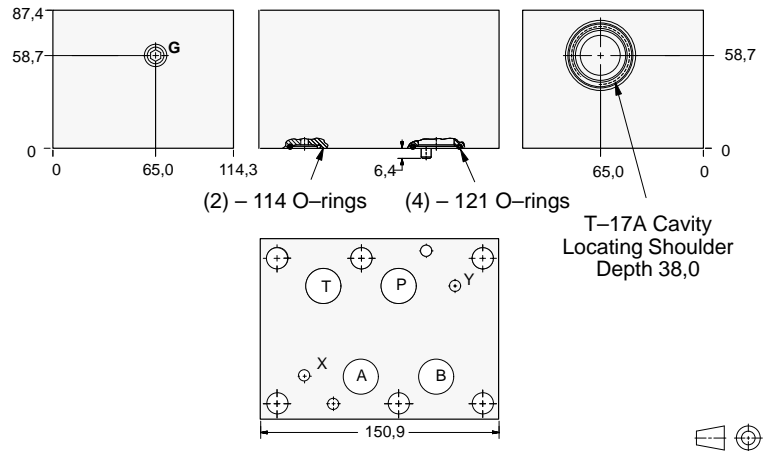
# ISO 08 SANDWICH BODIES



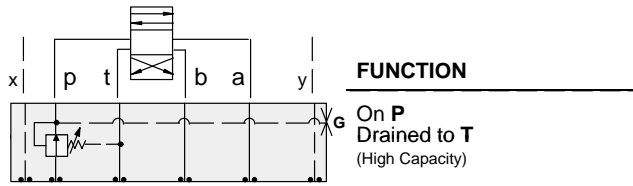
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



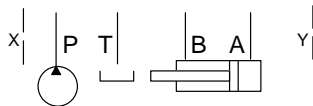
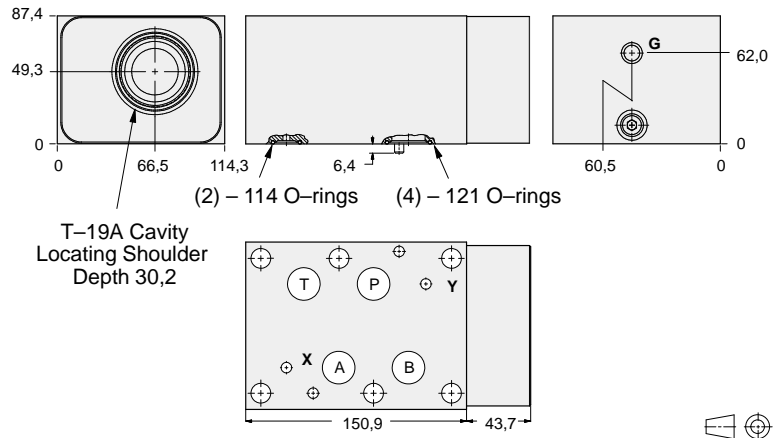
## Reducing Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>HBP</b>   |            | <b>HBP/S</b> |            |
| .25 BSPP                | <b>HBP/M</b> |            | <b>HBP/T</b> |            |



## Reducing Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>HBO</b>   |            | <b>HBO/S</b> |            |
| .25 BSPP                | <b>HBO/M</b> |            | <b>HBO/T</b> |            |

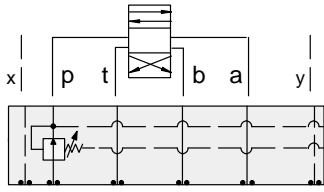
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing Valve                 |  |  |
|   | PB*B Page 3.07                                |  |  |
|   | Air Controlled, Pilot Operated Reducing Valve |  |  |
|   | PB*C Page 3.09                                |  |  |
| OTHER VALVES:                                   |   |  |  |



# ISO 08 SANDWICH BODIES



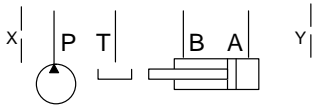
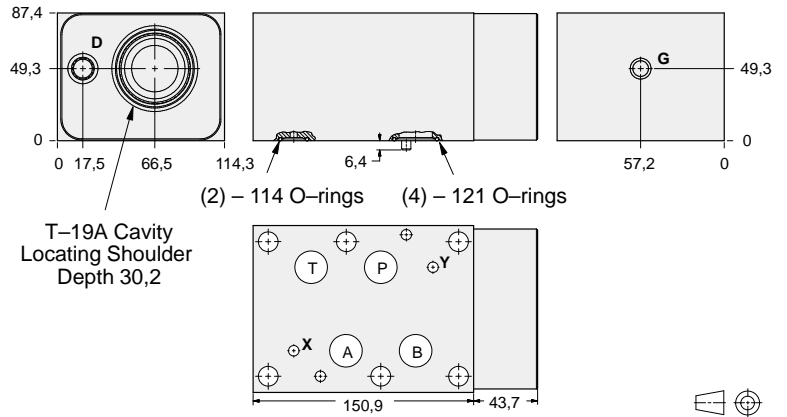
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

On P  
Drained Externally

### Reducing Valves



| Drain Port | Gauge Port | ALUMINIUM    |            | SG IRON      |            |
|------------|------------|--------------|------------|--------------|------------|
|            |            | Model Code   | List Price | Model Code   | List Price |
| SAE-6      | .25 NPTF   | <b>HBQ</b>   |            | <b>HBQ/S</b> |            |
| .25 BSPP   | .25 BSPP   | <b>HBQ/M</b> |            | <b>HBQ/T</b> |            |

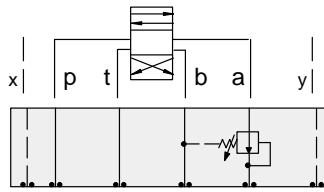
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing Valve                 |  |  |
|   | <b>PBJB Page 3.07</b>                         |  |  |
|   | Air Controlled, Pilot Operated Reducing Valve |  |  |
|   | <b>PBJC Page 3.09</b>                         |  |  |
| OTHER VALVES:                                   |   |  |  |



# ISO 08 SANDWICH BODIES



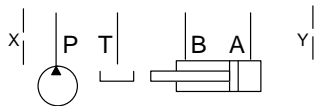
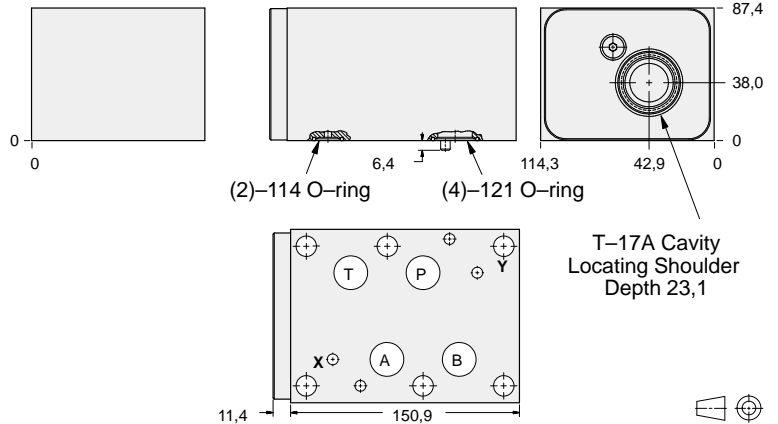
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



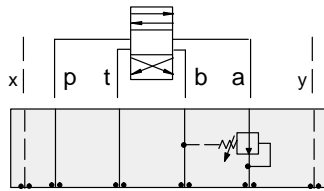
### FUNCTION

On **A**  
Drained to **B**

### Reducing Valves



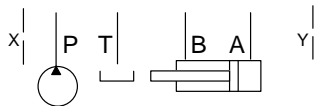
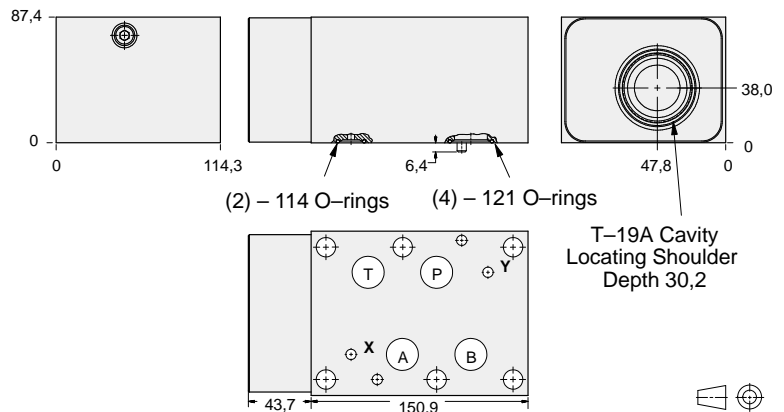
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>HBL</b> |            | <b>HBL/S</b> |            |



### FUNCTION

On **A**  
Drained to **B**  
(High Capacity)

### Reducing Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>HBA</b> |            | <b>HBA/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

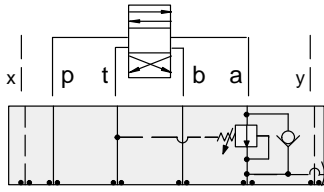
|               |                               |  |  |
|---------------|-------------------------------|--|--|
|               | Pilot Operated Reducing Valve |  |  |
|               | PB*B Page 3.07                |  |  |
|               |                               |  |  |
|               |                               |  |  |
| OTHER VALVES: |                               |  |  |



# ISO 08 SANDWICH BODIES



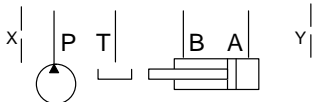
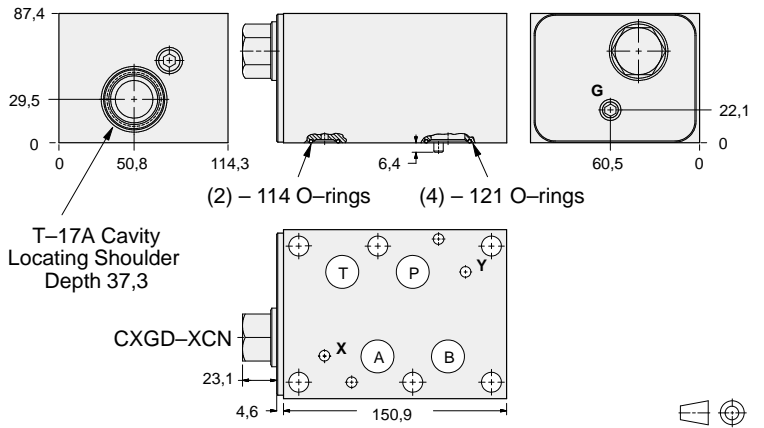
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



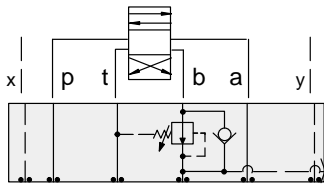
### FUNCTION

On A Drain to T  
Reverse FF Check

### Reducing Valves



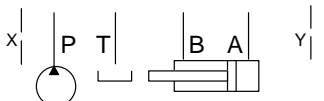
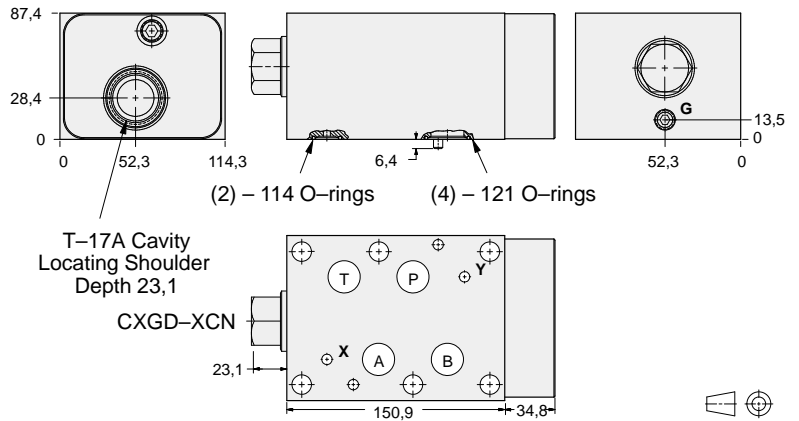
| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>HBK</b>   |            | <b>HBK/S</b> |            |
| .25 BSPP                | <b>HBK/M</b> |            | <b>HBK/T</b> |            |



### FUNCTION

On B Drain to T  
Reverse FF Check

### Reducing Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>HBJ</b>   |            | <b>HBJ/S</b> |            |
| .25 BSPP                | <b>HBJ/M</b> |            | <b>HBJ/T</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

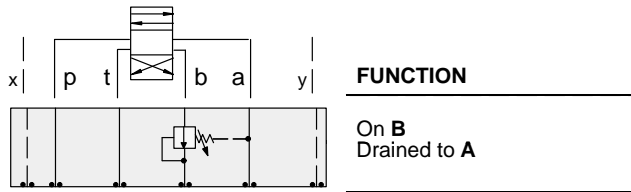
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing Valve                 |  |  |
|                      | <b>PBHB</b> Page 3.07                         |  |  |
|                      | Air Controlled, Pilot Operated Reducing Valve |  |  |
|                      | <b>PBHC</b> Page 3.09                         |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 08 SANDWICH BODIES



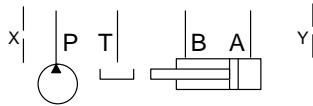
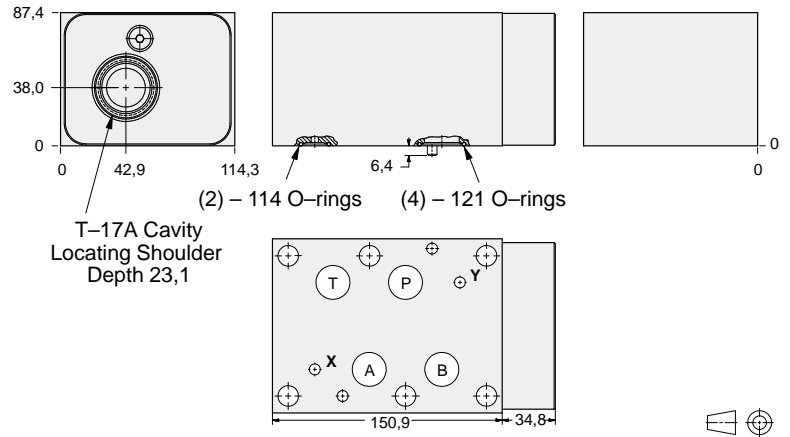
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



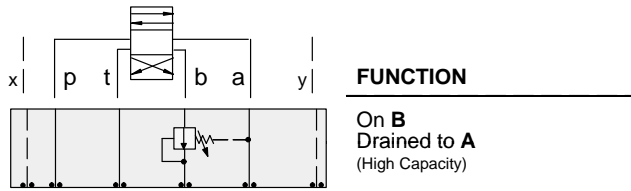
### FUNCTION

On **B**  
Drained to **A**

### Reducing Valves



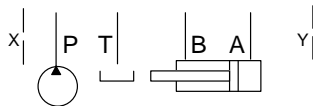
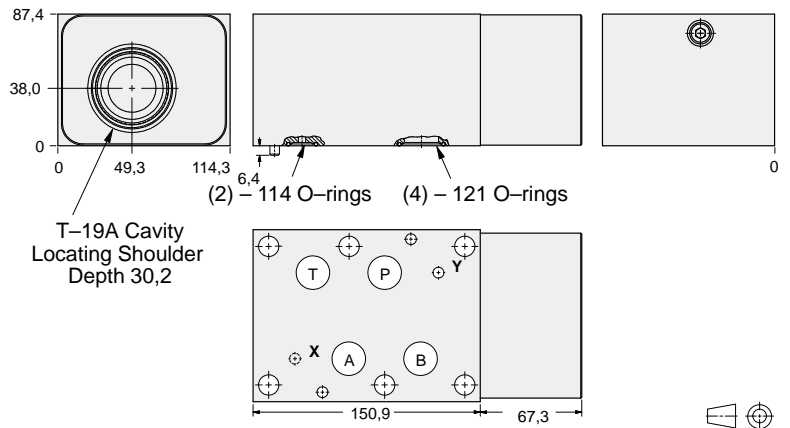
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>HBM</b> |            | <b>HBM/S</b> |            |



### FUNCTION

On **B**  
Drained to **A**  
(High Capacity)

### Reducing Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>HBB</b> |            | <b>HBB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

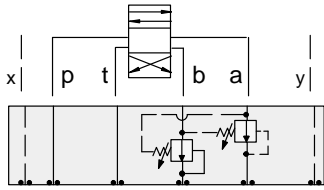
|                      |                               |  |  |
|----------------------|-------------------------------|--|--|
|                      | Pilot Operated Reducing Valve |  |  |
|                      | PB*B Page 3.07                |  |  |
|                      |                               |  |  |
|                      |                               |  |  |
|                      |                               |  |  |
| <b>OTHER VALVES:</b> |                               |  |  |



# ISO 08 SANDWICH BODIES



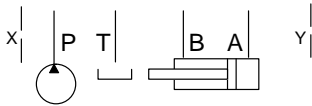
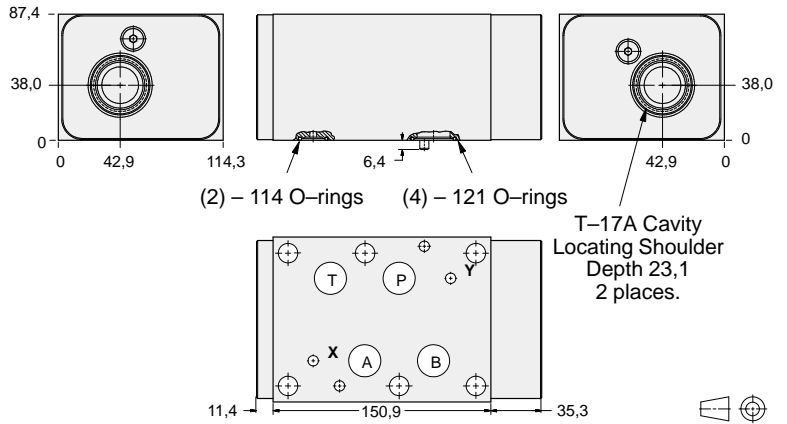
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



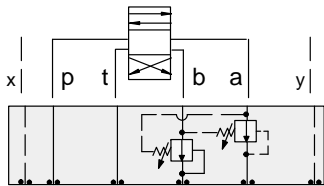
### FUNCTION

On **A** and **B**  
Drains to Opposite Port

### Reducing Valves



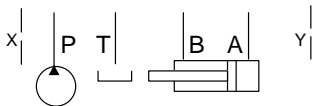
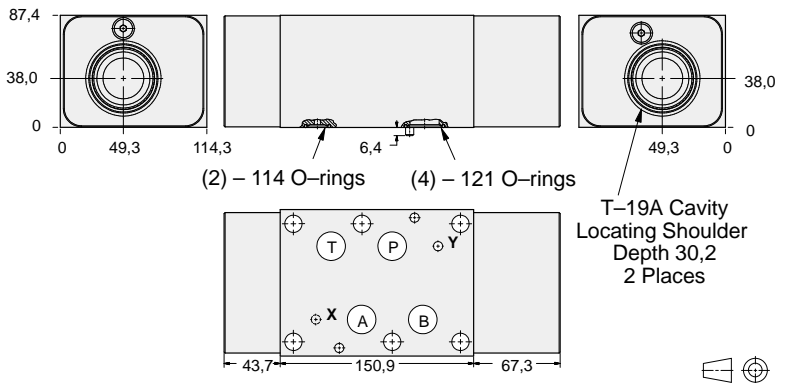
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>HBN</b>        |                   | <b>HBNS</b>       |                   |



### FUNCTION

On **A** and **B**  
Drains to Opposite Port  
(High Capacity)

### Reducing Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>HBV</b>        |                   | <b>HBV/S</b>       |                   |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

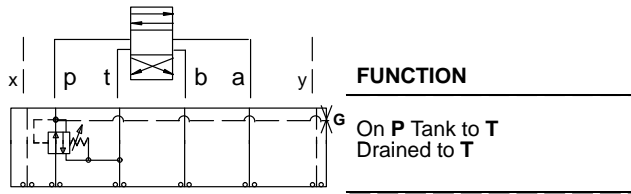
|                      |                                      |  |  |
|----------------------|--------------------------------------|--|--|
|                      | <i>Pilot Operated Reducing Valve</i> |  |  |
|                      | <b>PB*B Page 3.07</b>                |  |  |
|                      |                                      |  |  |
|                      |                                      |  |  |
| <b>OTHER VALVES:</b> |                                      |  |  |



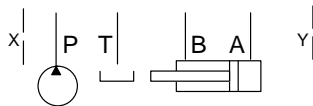
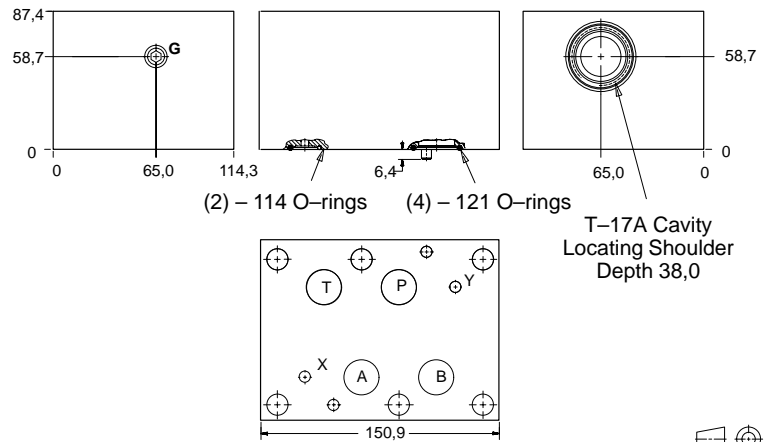
# ISO 08 SANDWICH BODIES



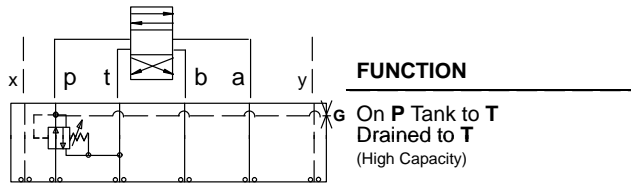
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



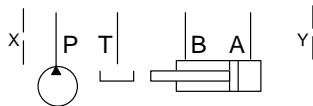
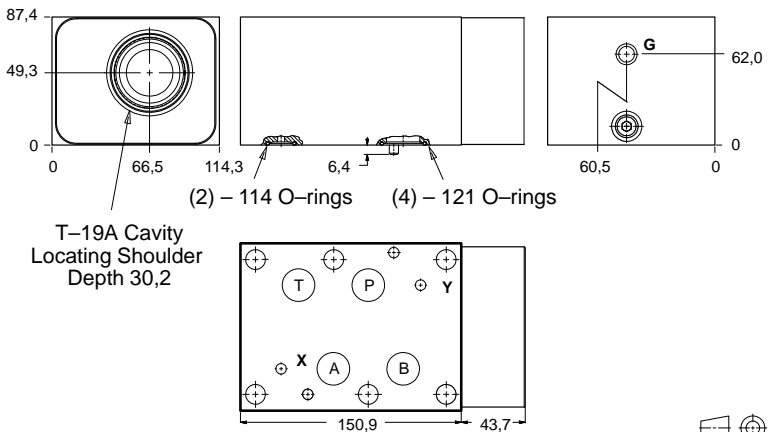
## Reducing/Relieving Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>HBP</b>   |            | <b>HBP/S</b> |            |
| .25 BSPP                | <b>HBP/M</b> |            | <b>HBP/T</b> |            |



## Reducing/Relieving Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>HBO</b>   |            | <b>HBO/S</b> |            |
| .25 BSPP                | <b>HBO/M</b> |            | <b>HBO/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i>                 |  |  |
|   | <b>PP*B</b> Page 3.11  |  |  |
|   | <i>Air Controlled, Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PP*C</b> Page 3.13  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

08 REDUCING/RELIEVING

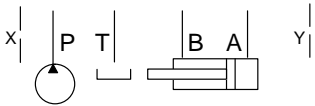
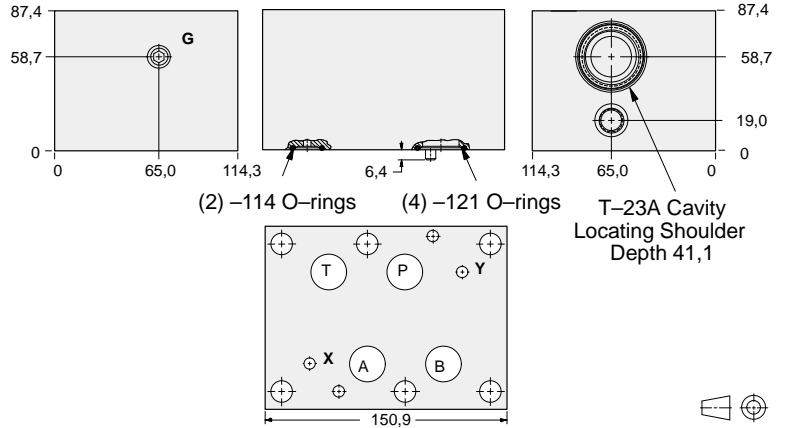
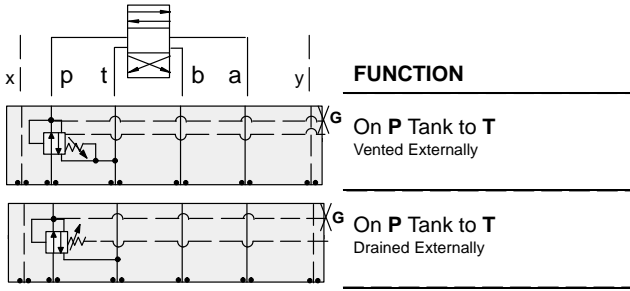


# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Reducing/Relieving Valves



| External Port | Gauge Port<br>(Plugged) | ALUMINIUM  |            | SG IRON    |            |
|---------------|-------------------------|------------|------------|------------|------------|
|               |                         | Model Code | List Price | Model Code | List Price |
| SAE-6         | .25 NPTF                | PBP        |            | PBP/S      |            |
| .25 BSPP      | .25 BSPP                |            |            | PBP/T      |            |

08 REDUCING/RELIEVING

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing/Relieving Valve with Drain Port |  |  |
|   | PVHA Page 3.15  |  |  |
|   | Pilot Operated Reducing/Relieving Valve with Vent Port  |  |  |
|   | PVHB Page 3.17  |  |  |
| OTHER VALVES:                                   |   |  |  |

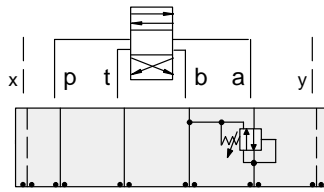




# ISO 08 SANDWICH BODIES



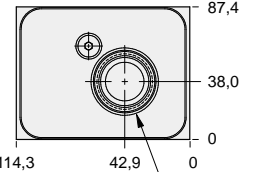
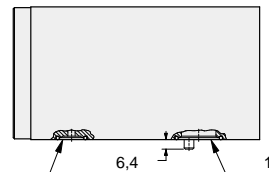
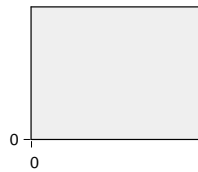
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



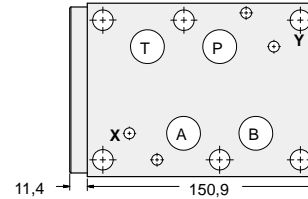
## FUNCTION

On **A** Tank to **B**  
Drained to **B**

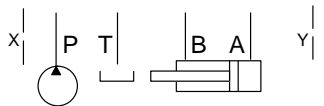
## Reducing/Relieving Valves



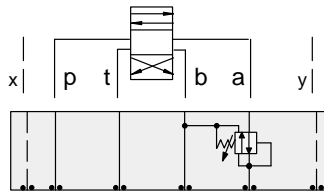
(2)-114 O-ring (4)-121 O-ring



T-17A Cavity  
Locating Shoulder  
Depth 23,1



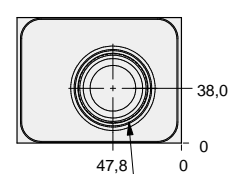
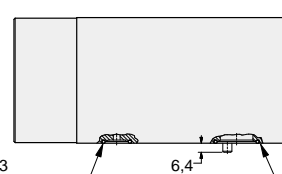
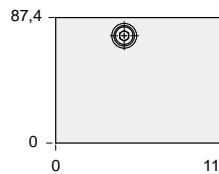
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| HBL        |            | HBL/S      |            |



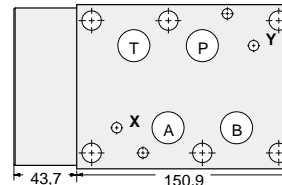
## FUNCTION

On **A** Tank to **B**  
Drained to **B**  
(High Capacity)

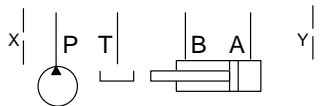
## Reducing/Relieving Valves



(2) - 114 O-rings (4) - 121 O-rings



T-19A Cavity  
Locating Shoulder  
Depth 30,2



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| HBA        |            | HBA/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

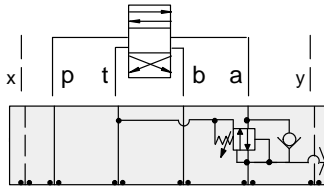
|               |   |  |  |
|---------------|---|--|--|
|               | Pilot Operated Reducing/Relieving Valve |  |  |
|               | PP*B Page 3.11                          |  |  |
|               |   |  |  |
|               |   |  |  |
|               |   |  |  |
| OTHER VALVES: |   |  |  |



# ISO 08 SANDWICH BODIES



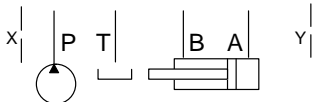
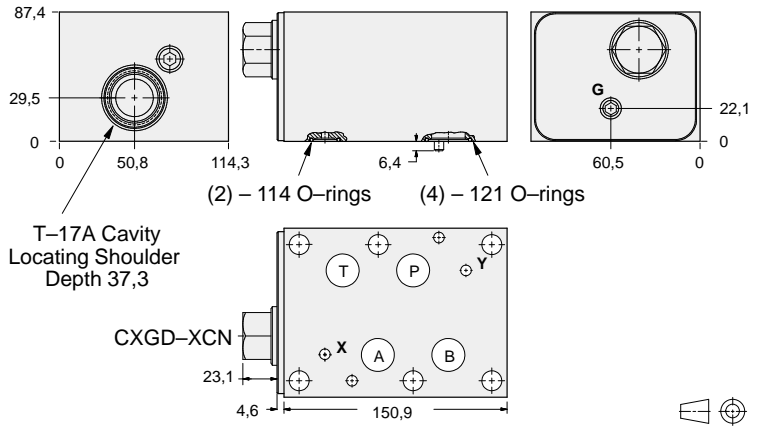
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



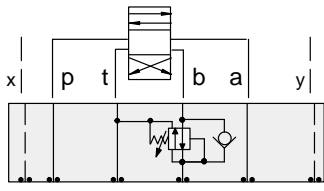
### FUNCTION

On A Tank to T  
Drained to T  
Reverse FF Check

### Reducing/Relieving Valves



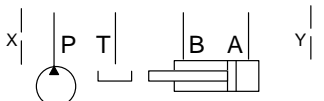
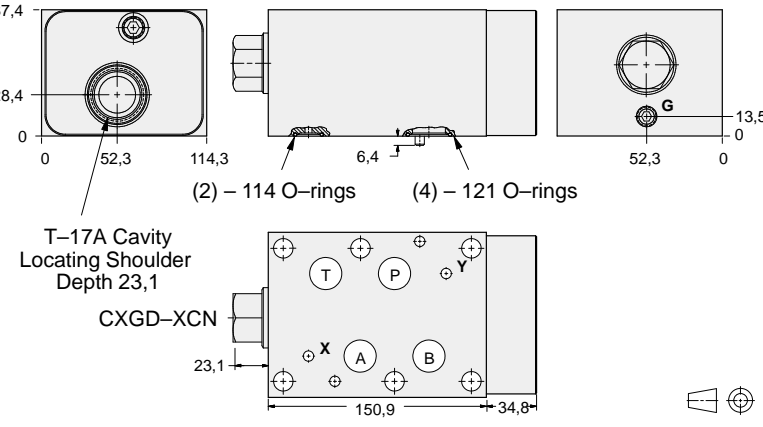
| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>HBK</b>   |            | <b>HBK/S</b> |            |
| .25 BSPP                | <b>HBK/M</b> |            | <b>HBK/T</b> |            |



### FUNCTION

On B Tank to T  
Drained to T  
Reverse FF Check

### Reducing/Relieving Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>HBJ</b>   |            | <b>HBJ/S</b> |            |
| .25 BSPP                | <b>HBJ/M</b> |            | <b>HBJ/T</b> |            |

08 REDUCING/RELIEVING

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

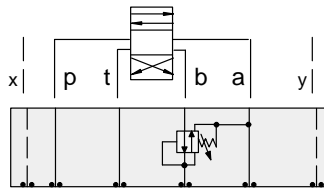
|                      |   |  |  |
|----------------------|---|--|--|
|                      | Pilot Operated Reducing/Relieving Valve                 |  |  |
|                      | <b>PPHB</b> Page 3.11                                   |  |  |
|                      | Air Controlled, Pilot Operated Reducing/Relieving Valve |  |  |
|                      | <b>PPHC</b> Page 3.13                                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |



# ISO 08 SANDWICH BODIES



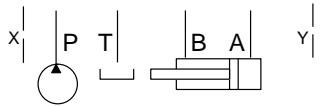
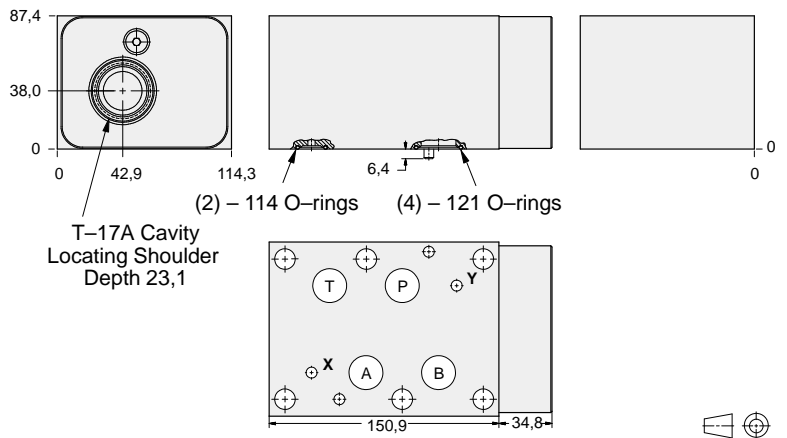
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



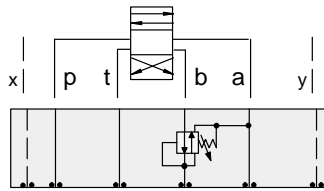
### FUNCTION

On **B** Tank to **A**  
Drained to **A**

### Reducing/Relieving Valves



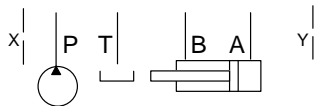
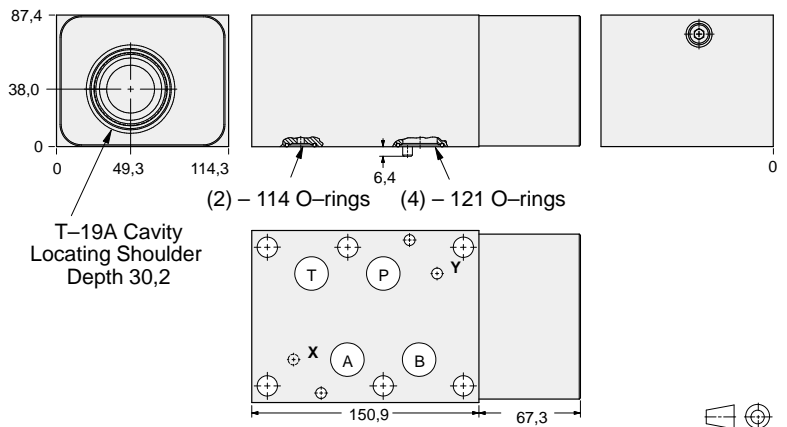
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>HBM</b>        |                   | <b>HBM/S</b>      |                   |



### FUNCTION

On **B** Tank to **A**  
Drained to **A**  
(High Capacity)

### Reducing/Relieving Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>HBB</b>        |                   | <b>HBB/S</b>       |                   |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | <i>Pilot Operated Reducing/Relieving Valve</i> |  |  |
|   | <b>PP*B Page 3.11</b>                          |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

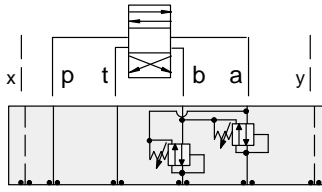
08 REDUCING/RELIEVING



# ISO 08 SANDWICH BODIES



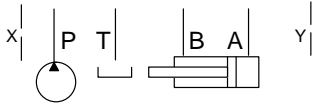
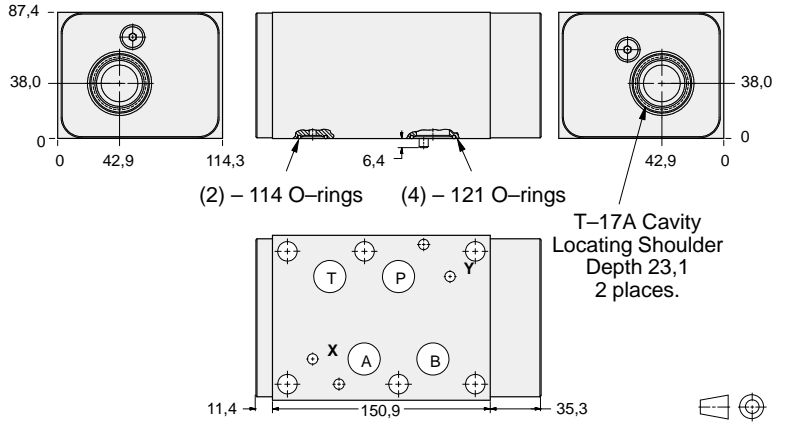
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



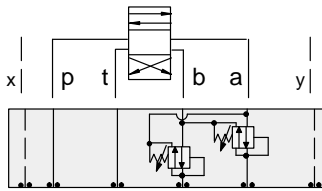
### FUNCTION

On **A** and **B**  
Tanks and Drains to  
Opposite Port

### Reducing/Relieving Valves



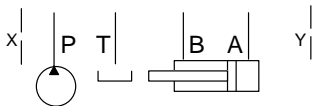
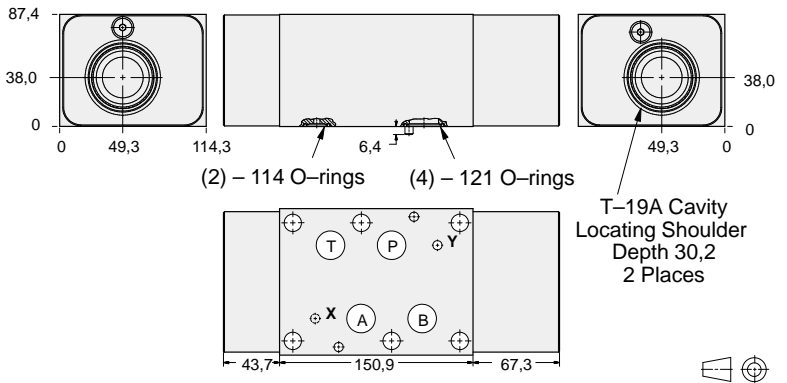
| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Model Code  | List Price |
| <b>HBN</b> |            | <b>HBNS</b> |            |



### FUNCTION

On **A** and **B**  
Tanks and Drains to  
Opposite Port  
(High Capacity)

### Reducing/Relieving Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>HBV</b> |            | <b>HBV/S</b> |            |

08 REDUCING/RELIEVING

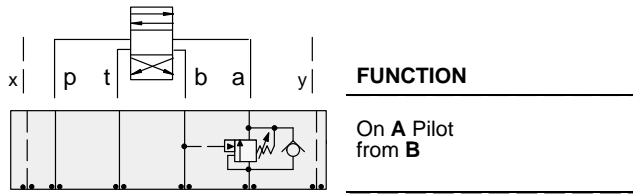
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Pilot Operated Reducing/Relieving Valve |  |  |
|   | PP*B Page 3.11                          |  |  |
|   |   |  |  |
|   |   |  |  |
| OTHER VALVES:                                   |   |  |  |



# ISO 08 SANDWICH BODIES



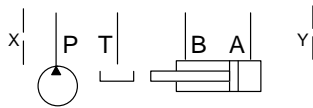
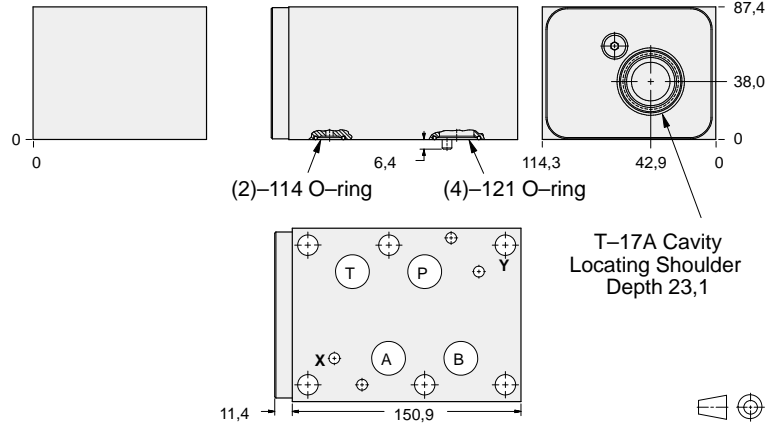
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



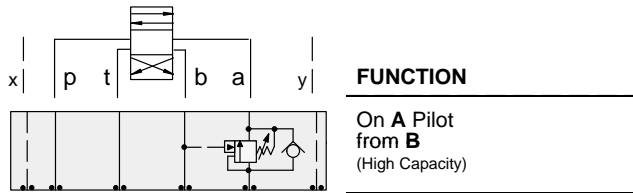
### FUNCTION

On A Pilot from B

### Counterbalance Valves



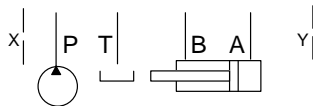
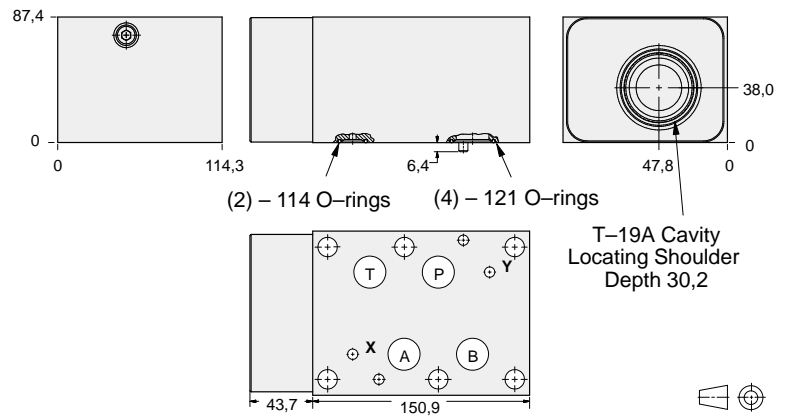
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| HBL        |            | HBL/S      |            |



### FUNCTION

On A Pilot from B  
(High Capacity)

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| HBA        |            | HBA/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |  |  |
|---------------|---|--|--|
|               | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|               | CB*A Page 4.11                          |  |  |
|               | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|               | CB*G Page 4.13                          |  |  |
|               | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|               | CB*H Page 4.15                          |  |  |
| OTHER VALVES: |   |  |  |

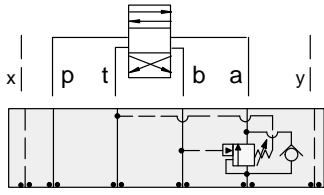
08 COUNTERBALANCE



# ISO 08 SANDWICH BODIES



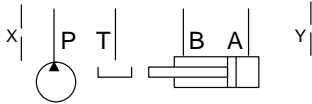
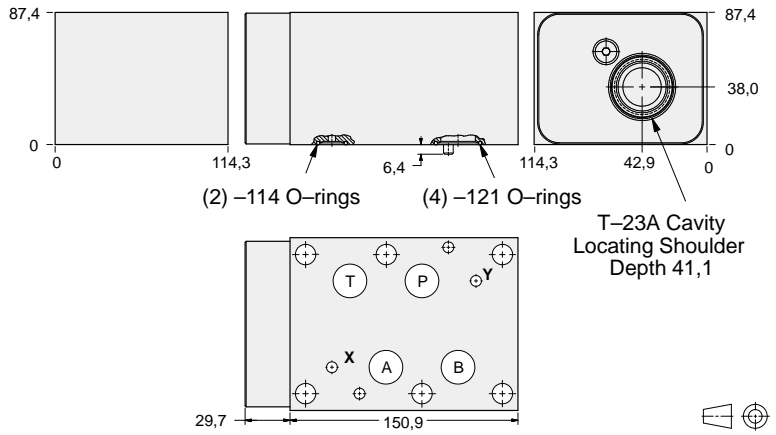
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



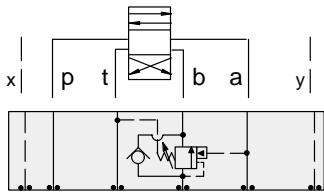
### FUNCTION

On A Pilot from B  
Vent to T

### Counterbalance Valves



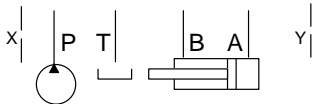
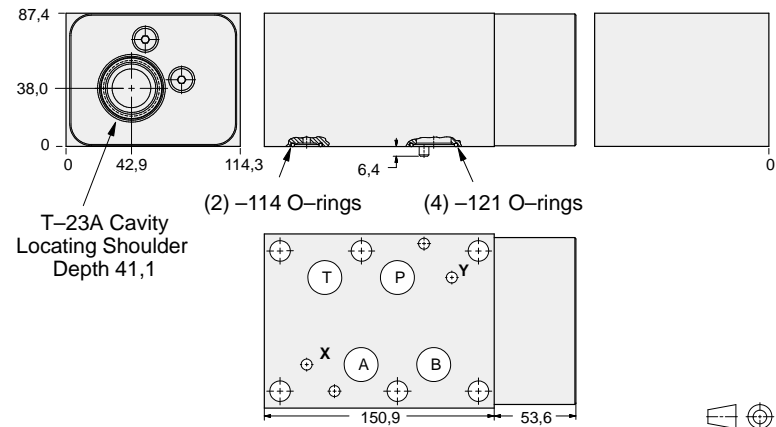
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>PBA</b> |            | <b>PBA/S</b> |            |



### FUNCTION

On B Pilot from A  
Vent to T

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>PBB</b> |            | <b>PBB/S</b> |            |

08 COUNTERBALANCE

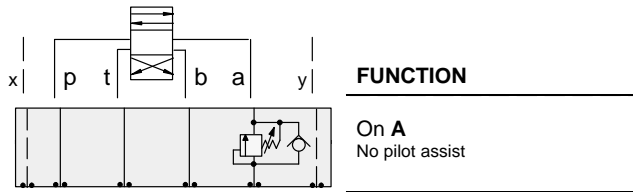
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|   | CWGA Page 4.19                               |  |  |
|   | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|   | CWGG Page 4.21                               |  |  |
| OTHER VALVES:                                   |  |  |  |



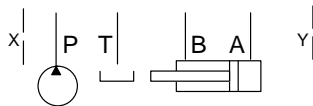
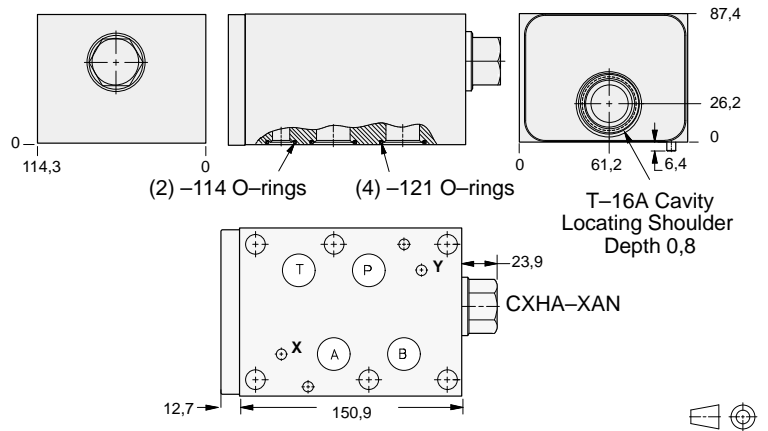
# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>CD4</b> |            | <b>CD4/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                            |  |  |
|---|----------------------------|--|--|
|   | Direct Acting Relief Valve |  |  |
|   | RDHA Page 1.09             |  |  |
|   |                            |  |  |
|   |                            |  |  |
| <b>OTHER VALVES:</b>                            |                            |  |  |

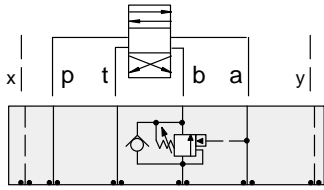
08 COUNTERBALANCE



# ISO 08 SANDWICH BODIES



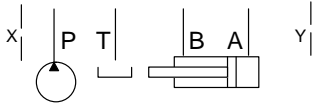
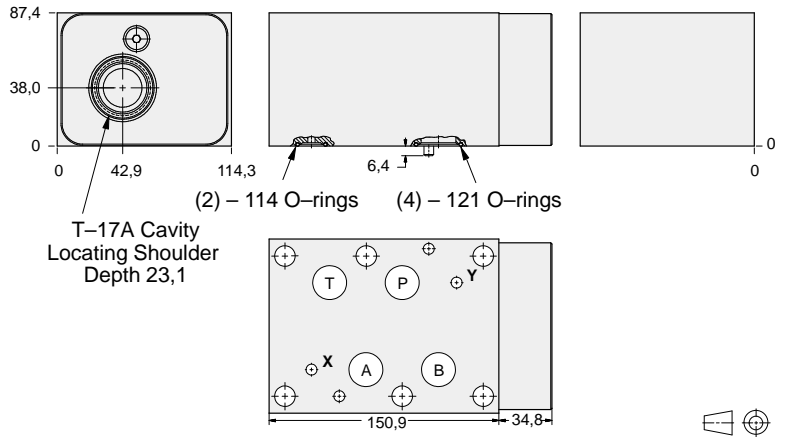
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



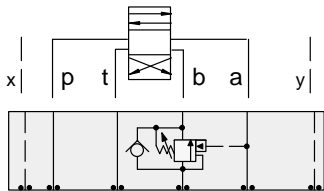
### FUNCTION

On B  
Pilot from A

### Counterbalance Valves



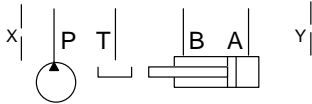
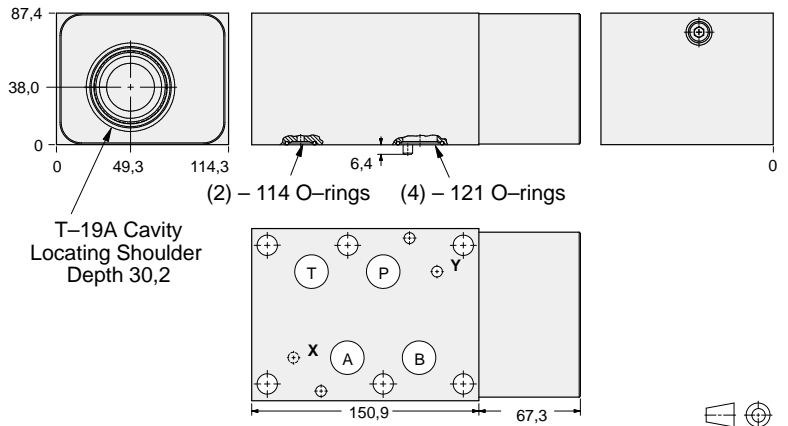
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>HBM</b>        |                   | <b>HBM/S</b>      |                   |



### FUNCTION

On B  
Pilot from A  
(High Capacity)

### Counterbalance Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>HBB</b>        |                   | <b>HBB/S</b>       |                   |

08 COUNTERBALANCE

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|   | CB*A Page 4.11                          |  |  |
|   | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|   | CB*G Page 4.13                          |  |  |
|   | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|   | CB*H Page 4.15                          |  |  |
| OTHER VALVES:                                   |   |  |  |

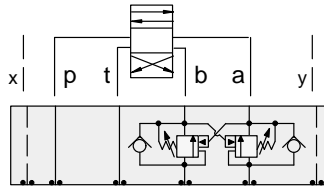




# ISO 08 SANDWICH BODIES



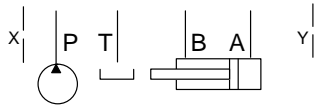
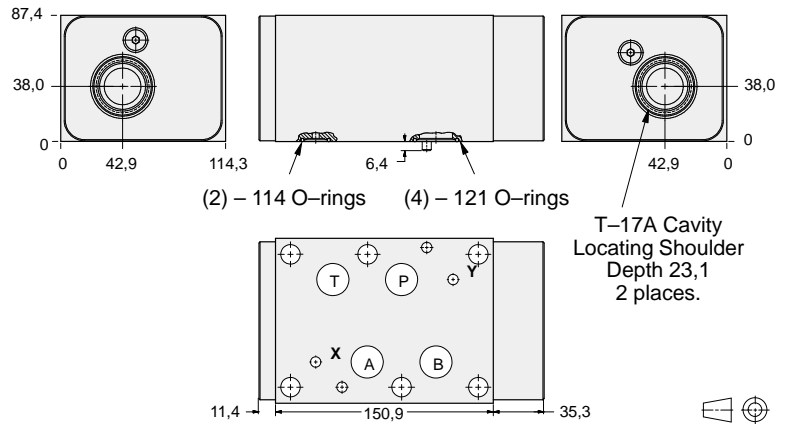
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



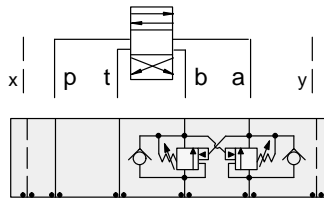
### FUNCTION

On A and B  
Cross-Piloted

### Counterbalance Valves



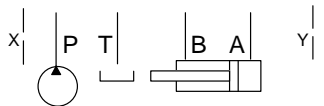
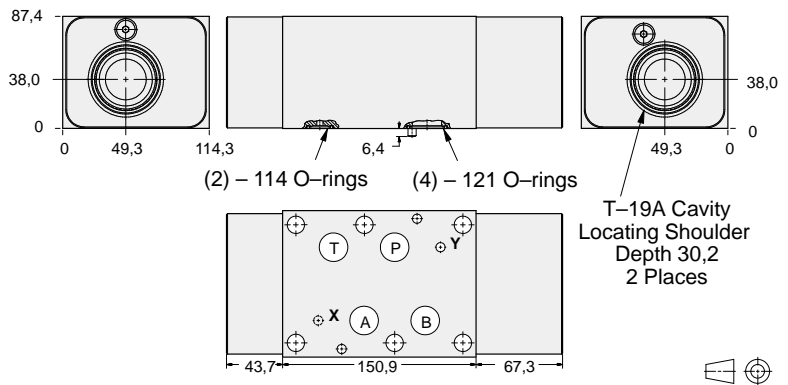
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| HBN        |            | HBN/S      |            |



### FUNCTION

On A and B  
Cross-Piloted  
(High Capacity)

### Counterbalance Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| HBV        |            | HBV/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |  |  |
|---------------|---|--|--|
|               | Counterbalance Valve, 3:1 Pilot Ratio   |  |  |
|               | CB*A Page 4.11                          |  |  |
|               | Counterbalance Valve, 4.5:1 Pilot Ratio |  |  |
|               | CB*G Page 4.13                          |  |  |
|               | Counterbalance Valve, 10:1 Pilot Ratio  |  |  |
|               | CB*H Page 4.15                          |  |  |
| OTHER VALVES: |   |  |  |

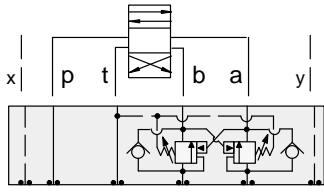
08 COUNTERBALANCE



# ISO 08 SANDWICH BODIES



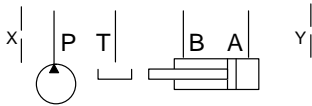
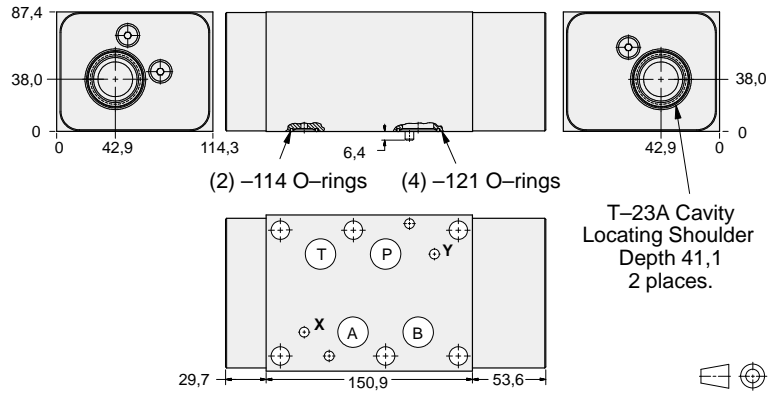
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**

## Counterbalance Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>PBY</b> |            | <b>PBY/S</b> |            |

08 COUNTERBALANCE

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Counterbalance Valve, 3:1 Pilot Ratio |  |  |
|   | <b>CWGA Page 4.19</b>                        |  |  |
|   | Vented Counterbalance Valve, 5:1 Pilot Ratio |  |  |
|   | <b>CWGG Page 4.21</b>                        |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |

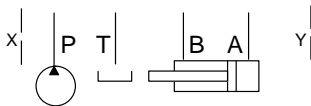
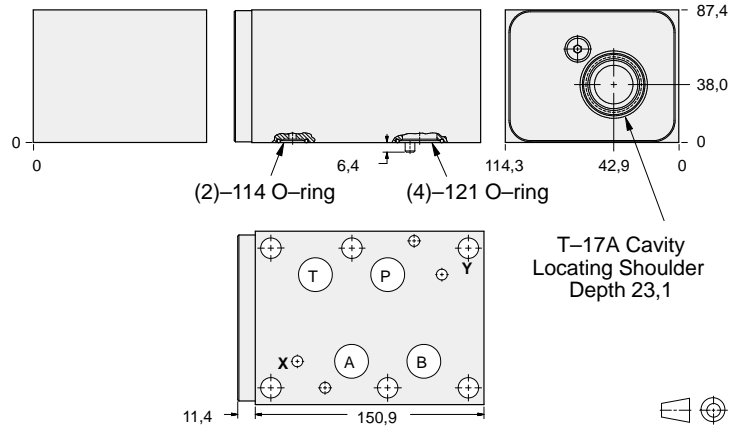
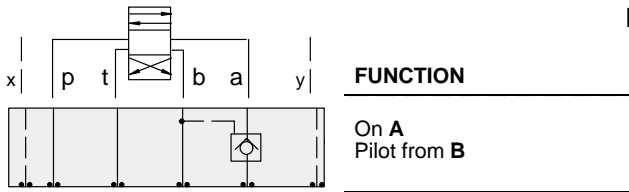


# ISO 08 SANDWICH BODIES



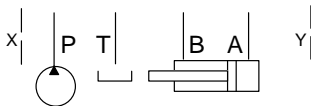
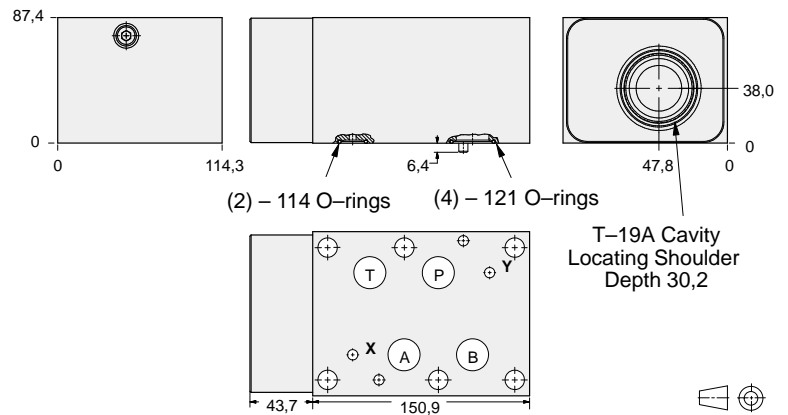
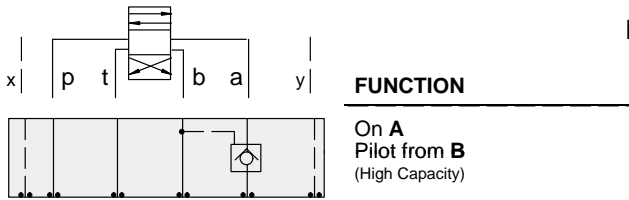
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| HBL        |            | HBL/S      |            |

## Pilot Operated Check Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| HBA        |            | HBA/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|               | CK*B Page 4.17                             |  |  |
|               |  |  |  |
|               |  |  |  |
| OTHER VALVES: |  |  |  |

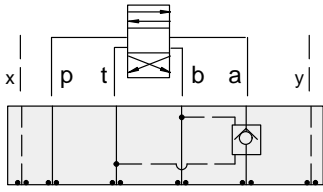


# ISO 08 SANDWICH BODIES



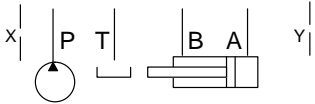
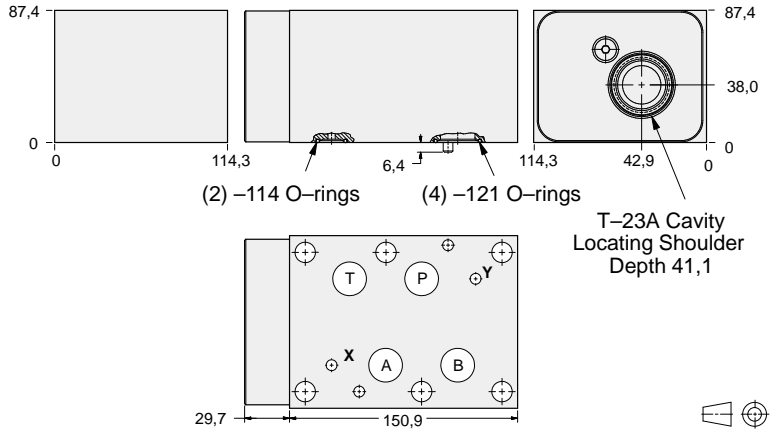
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



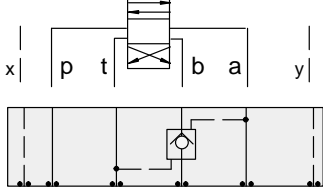
### FUNCTION

On A  
Pilot from B  
Vent to T



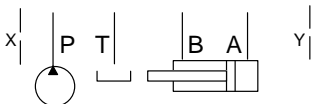
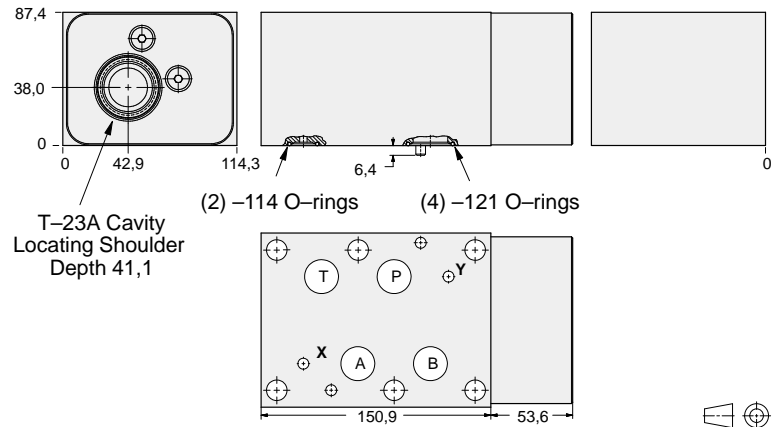
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>PBA</b> |            | <b>PBA/S</b> |            |

## Pilot Operated Check Valves



### FUNCTION

On B  
Pilot from A  
Vent to T



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>PBB</b> |            | <b>PBB/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|                      | <b>CVGV Page 4.23</b>                                |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

08 P.O. CHECK

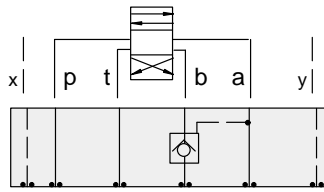


# ISO 08 SANDWICH BODIES



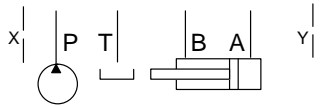
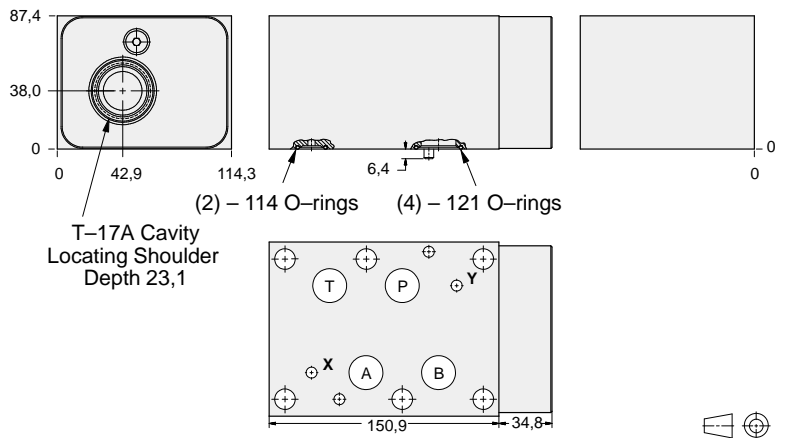
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



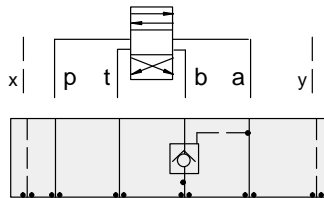
### FUNCTION

On B  
Pilot from A



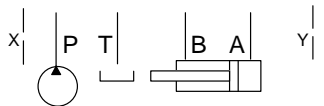
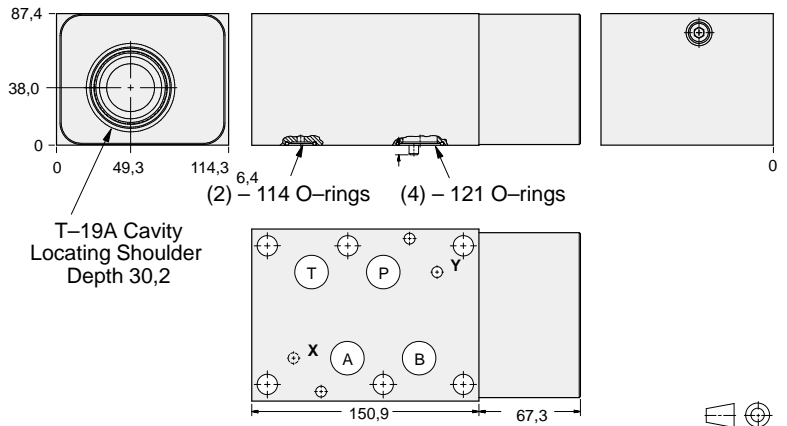
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>HBM</b> |            | <b>HBM/S</b> |            |

## Pilot Operated Check Valves



### FUNCTION

On B  
Pilot from A  
(High Capacity)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>HBB</b> |            | <b>HBB/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Pilot-to-Open Check Valve, 3:1 Pilot Ratio |  |  |
|   | CK*B Page 4.17                             |  |  |
|   |  |  |  |
|   |  |  |  |
| OTHER VALVES:                                   |  |  |  |

08 P.O. CHECK

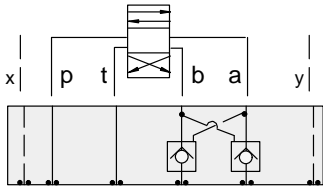


# ISO 08 SANDWICH BODIES



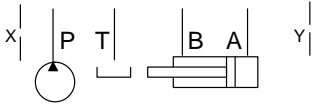
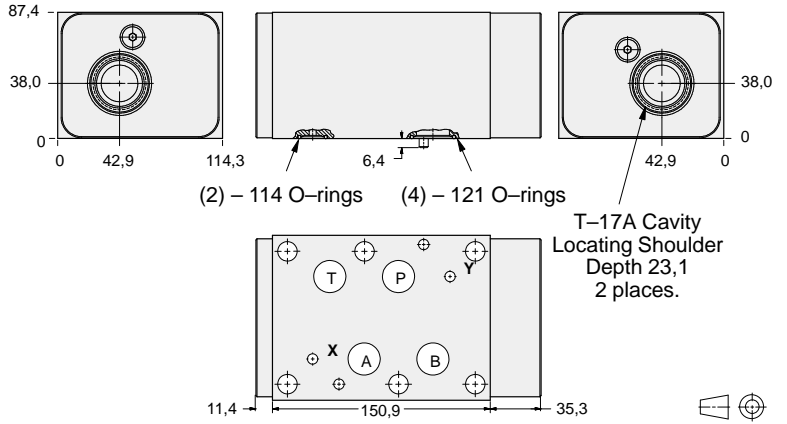
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



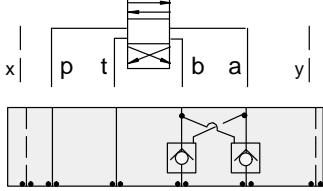
### FUNCTION

**On A and B**  
Cross-Piloted



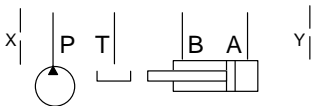
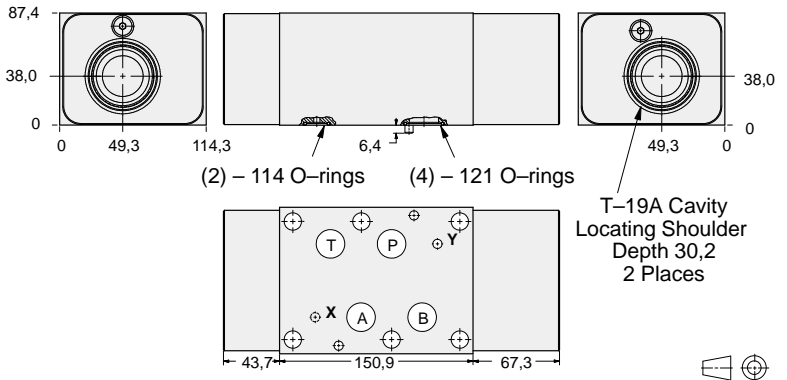
| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Model Code  | List Price |
| <b>HBN</b> |            | <b>HBNS</b> |            |

## Pilot Operated Check Valves



### FUNCTION

**On A and B**  
Cross-Piloted  
(High Capacity)



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>HBY</b> |            | <b>HBY/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | <i>Pilot-to-Open Check Valve, 3:1 Pilot Ratio</i> |  |  |
|                      | <b>CK*B Page 4.17</b>                             |  |  |
|                      |   |  |  |
|                      |   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

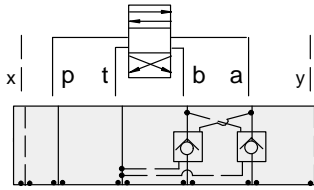


# ISO 08 SANDWICH BODIES



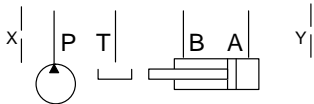
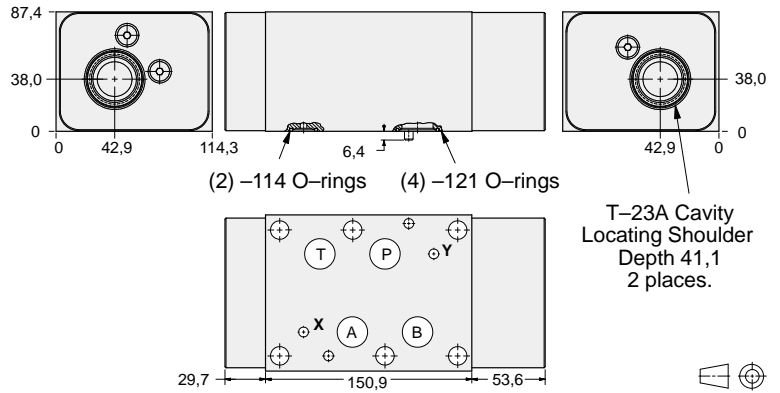
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Pilot Operated Check Valves



### FUNCTION

On **A** and **B**  
Cross-Piloted  
Vents to **T**



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>PBY</b> |            | <b>PBY/S</b> |            |

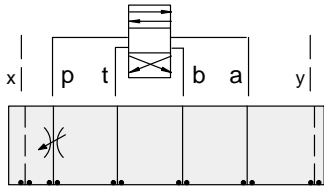
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Vented Pilot-to-Open Check Valve,<br>3:1 Pilot Ratio |  |  |
|   | <b>CVGV Page 4.23</b>                                |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 08 SANDWICH BODIES



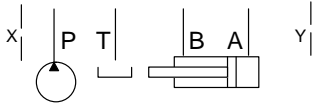
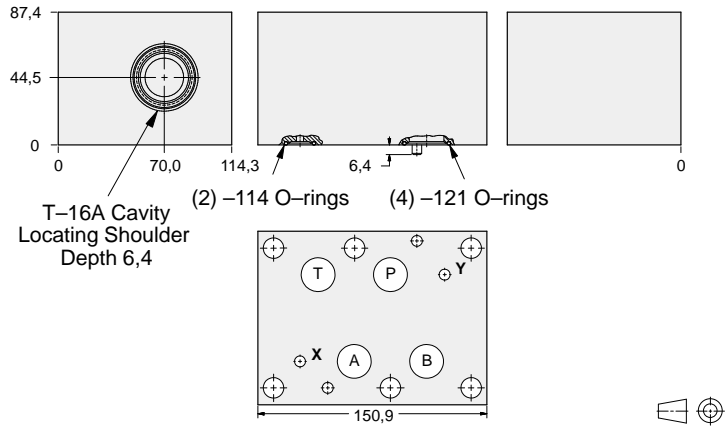
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



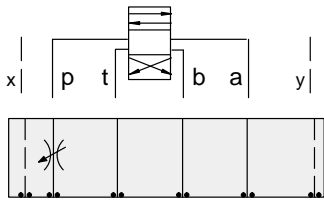
### FUNCTION

Meter-In P

### Flow Control Valves



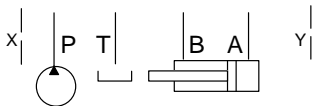
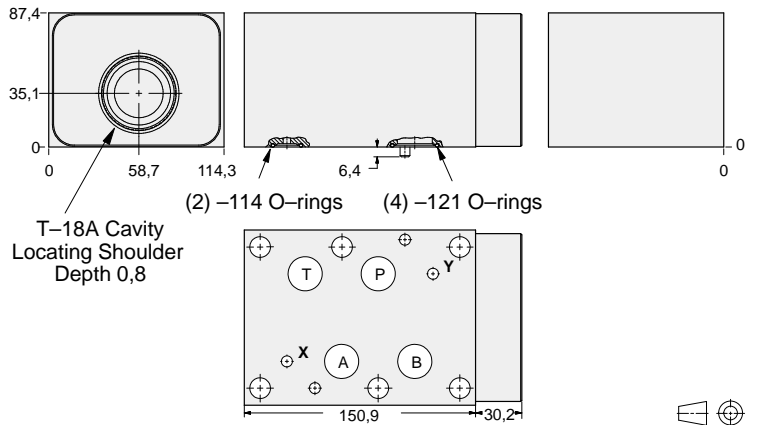
| ALUMINIUM         |                   | SG IRON           |                   |
|-------------------|-------------------|-------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Model Code</i> | <i>List Price</i> |
| <b>IBP</b>        |                   | <b>IBP/S</b>      |                   |



### FUNCTION

Meter-In P  
(High Capacity)

### Flow Control Valves



| ALUMINIUM         |                   | SG IRON            |                   |
|-------------------|-------------------|--------------------|-------------------|
| <i>Model Code</i> | <i>List Price</i> | <i>Part Number</i> | <i>List Price</i> |
| <b>IBO</b>        |                   | <b>IBO/S</b>       |                   |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |   |  |  |
|----------------------|---|--|--|
|                      | <i>Fully Adjustable Needle Valve</i>                    |  |  |
|                      | <b>NF*C Page 5.13</b>                                   |  |  |
|                      | <i>Fixed Orifice, Pressure-Compensated Flow Control</i> |  |  |
|                      | <b>FX*A Page 5.21</b>                                   |  |  |
| <b>OTHER VALVES:</b> |   |  |  |

08 FLOW CONTROL

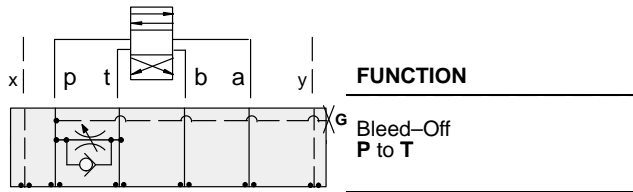




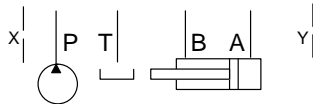
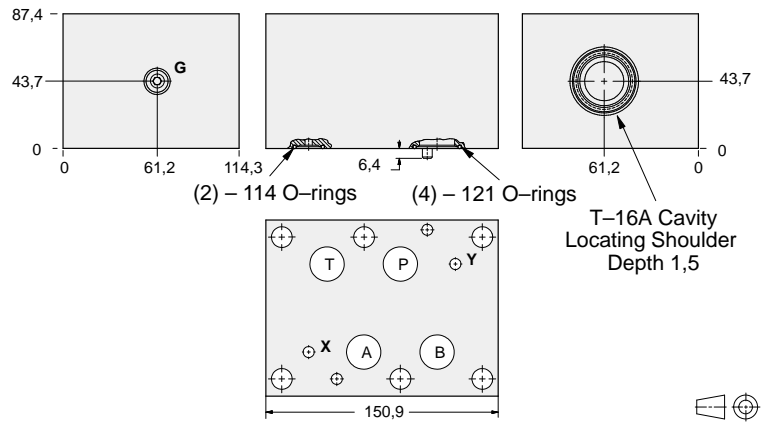
# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



## Flow Control Valves



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CDO</b>   |            | <b>CDO/S</b> |            |
| .25 BSPP                | <b>CDO/M</b> |            | <b>CDO/T</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|   | NFEC Page 5.13   |  | FXEA Page 5.21   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|   | NCFB Page 5.17   |  | FCEB Page 5.23   |
|   | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|   | NCFC Page 5.19   |  | FDEA Page 5.25   |
| OTHER VALVES:                                   | CNGC   |  |  |

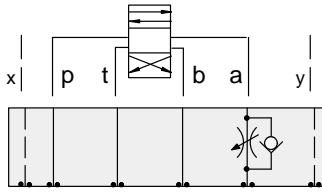
08 FLOW CONTROL



# ISO 08 SANDWICH BODIES



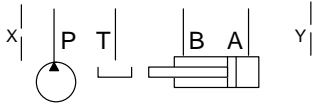
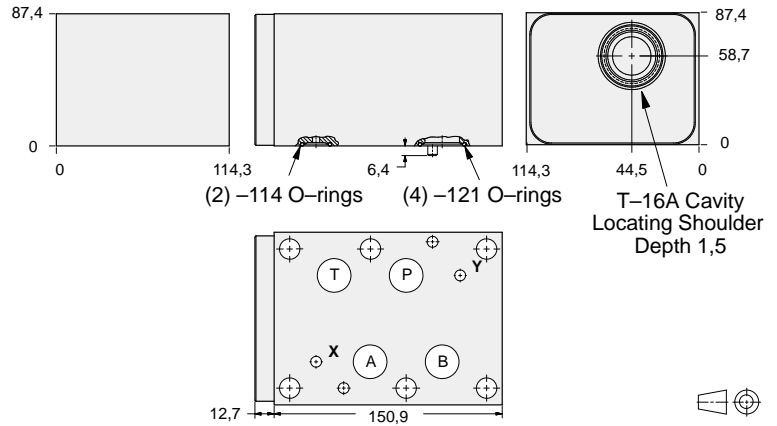
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



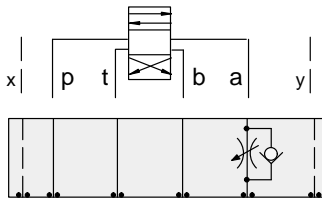
## FUNCTION

Meter-In A

## Flow Control Valves



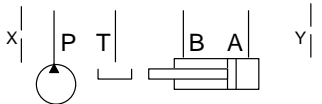
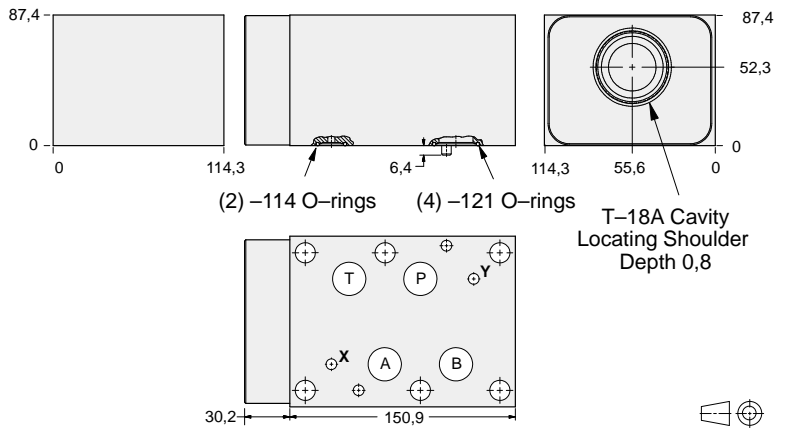
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBC</b> |            | <b>IBC/S</b> |            |



## FUNCTION

Meter-In A  
(High Capacity)

## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBG</b> |            | <b>IBG/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

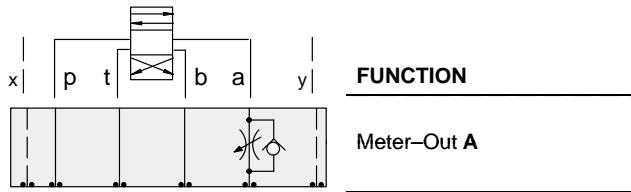
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|                      | <b>NF*C Page 5.13</b>  |  | <b>FX*A Page 5.21</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|                      | <b>NC*B Page 5.17</b>  |  | <b>FC*B Page 5.23</b>  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|                      | <b>NC*C Page 5.19</b>  |  | <b>FD*A Page 5.25</b>  |
| <b>OTHER VALVES:</b> | <b>CN*C</b>  |  |  |



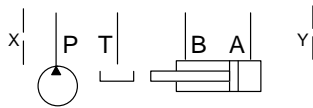
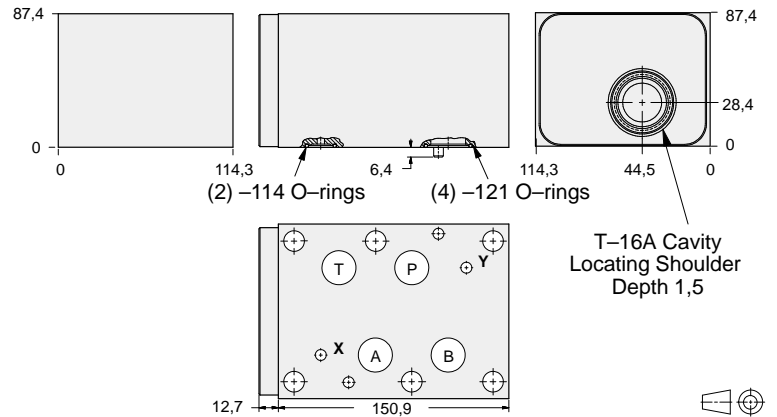
# ISO 08 SANDWICH BODIES



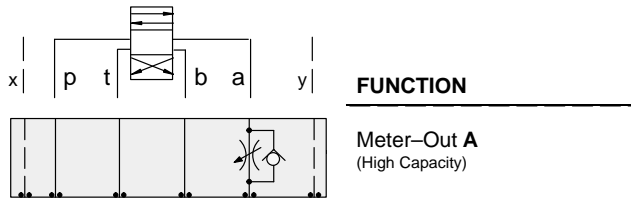
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



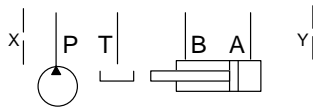
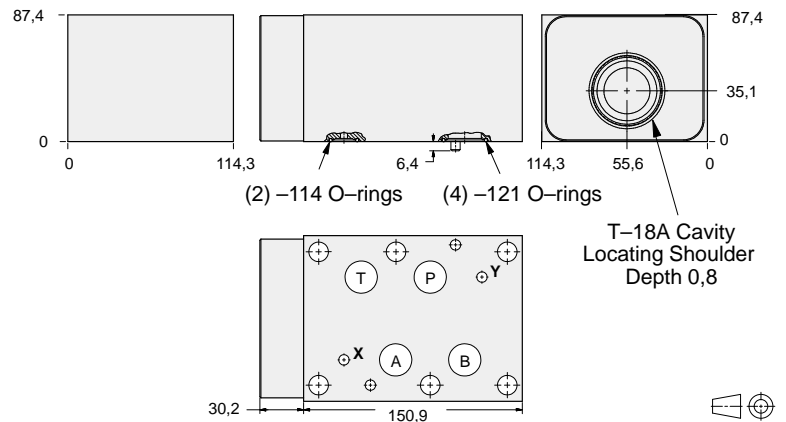
## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBA</b> |            | <b>IBA/S</b> |            |



## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBE</b> |            | <b>IBE/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CN*C   |  |  |

08 FLOW CONTROL

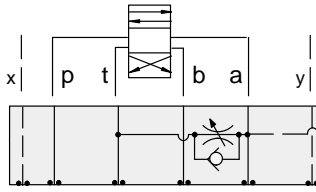


# ISO 08 SANDWICH BODIES



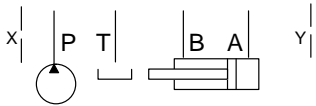
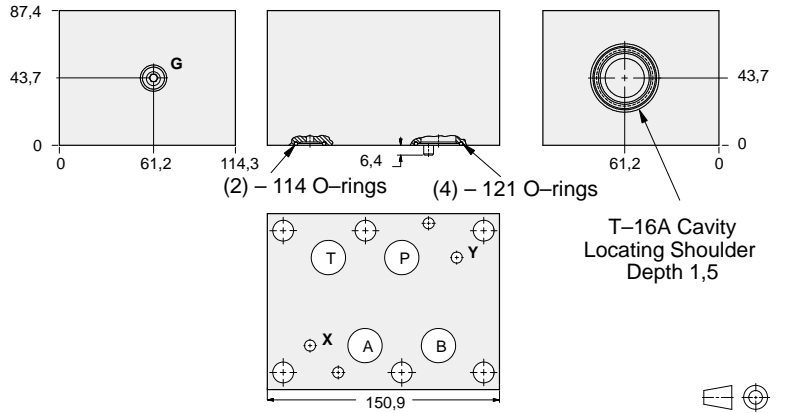
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Flow Control Valves



### FUNCTION

Bleed-Off  
A to T



| Gauge Port<br>(Plugged) | ALUMINIUM  |            | SG IRON    |            |
|-------------------------|------------|------------|------------|------------|
|                         | Model Code | List Price | Model Code | List Price |
| .25 NPTF                | CDC        |            | CDC/S      |            |
| .25 BSPP                | CDC/M      |            | CDC/T      |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

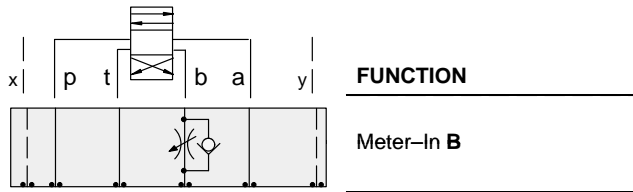
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFEC Page 5.13   |  | FXEA Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCFB Page 5.17   |  | FCEB Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NCFC Page 5.19   |  | FDEA Page 5.25   |
| OTHER VALVES: | CNGC   |  |  |



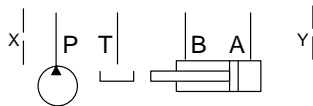
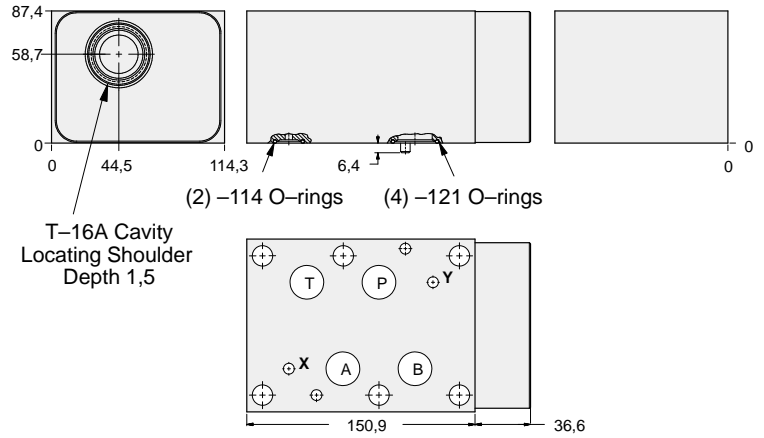
# ISO 08 SANDWICH BODIES



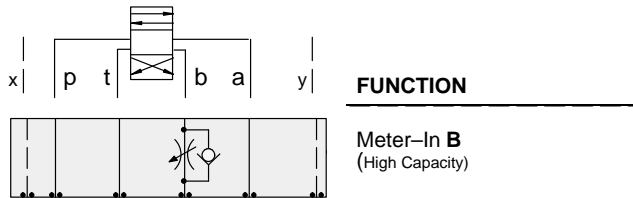
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



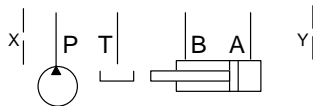
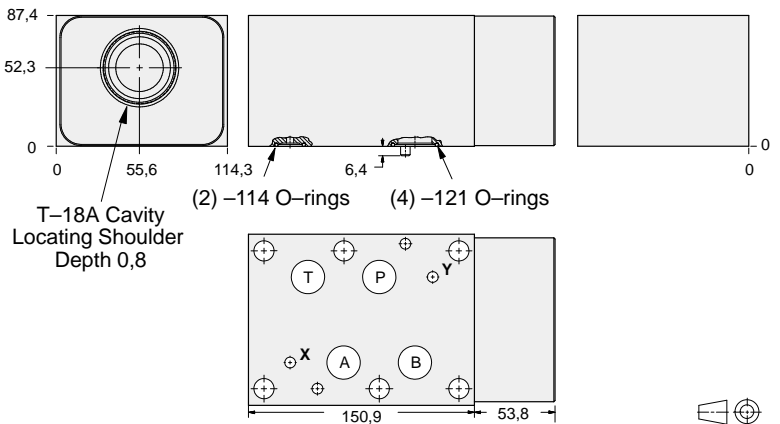
## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBD</b> |            | <b>IBD/S</b> |            |



## Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBH</b> |            | <b>IBH/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CN*C   |  |  |

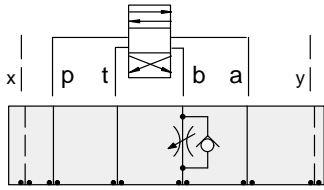
08 FLOW CONTROL



# ISO 08 SANDWICH BODIES



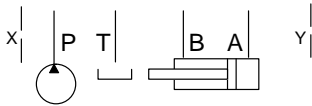
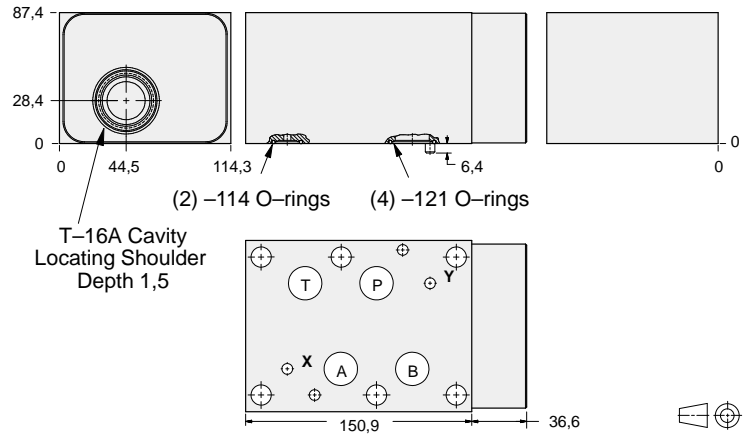
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



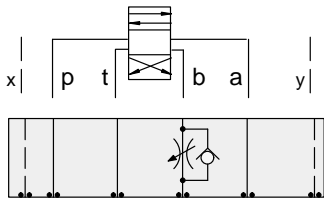
### FUNCTION

Meter-Out B

### Flow Control Valves



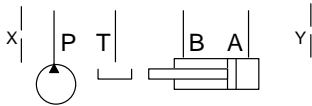
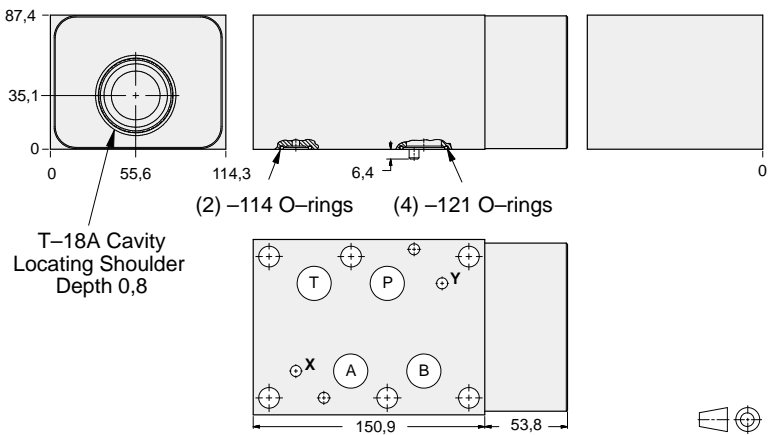
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBB</b> |            | <b>IBB/S</b> |            |



### FUNCTION

Meter-Out B  
(High Capacity)

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBF</b> |            | <b>IBF/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|                      | <b>NF*C</b> Page 5.13  |  | <b>FX*A</b> Page 5.21  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|                      | <b>NC*B</b> Page 5.17  |  | <b>FC*B</b> Page 5.23  |
|                      | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|                      | <b>NC*C</b> Page 5.19  |  | <b>FD*A</b> Page 5.25  |
| <b>OTHER VALVES:</b> | <b>CN*C</b>  |  |  |

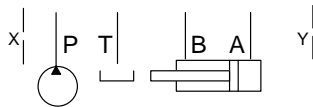
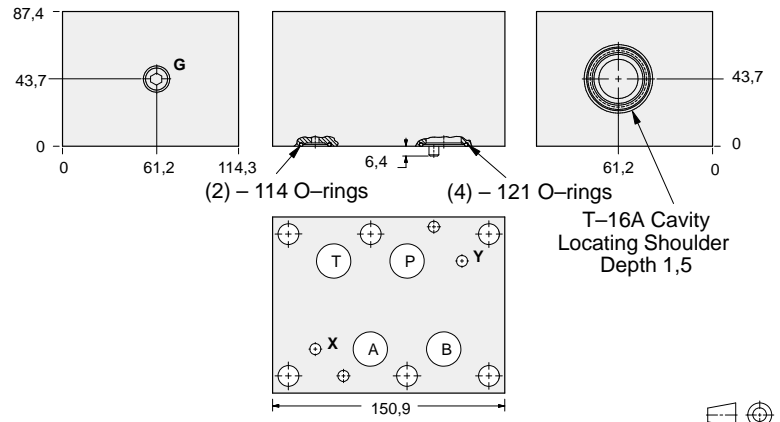
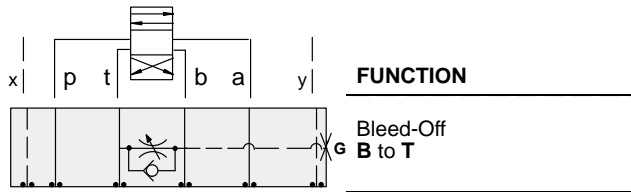
08 FLOW CONTROL



# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Part Number  | List Price |
| .25 NPTF                | <b>CDD</b>   |            | <b>CDD/S</b> |            |
| .25 BSPP                | <b>CDD/M</b> |            | <b>CDD/T</b> |            |

TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NFEC Page 5.13   |  | FXEA Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NCFB Page 5.17   |  | FCEB Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NCFC Page 5.19   |  | FDEA Page 5.25   |
| OTHER VALVES: | CNGC   |  |  |

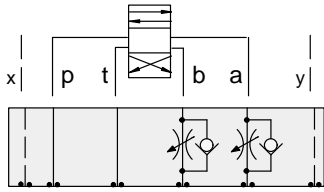
08 FLOW CONTROL



# ISO 08 SANDWICH BODIES



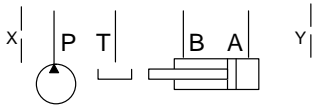
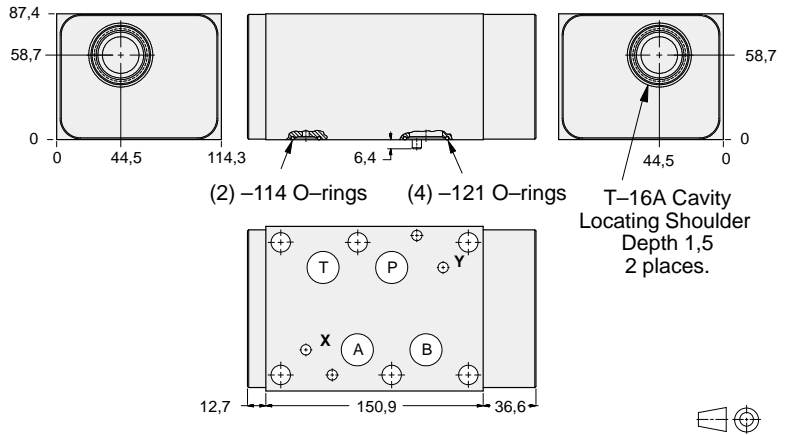
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



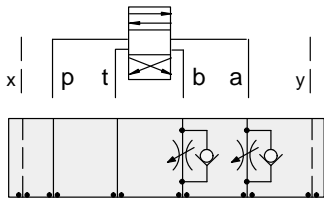
### FUNCTION

Meter-In  
A and B

### Flow Control Valves



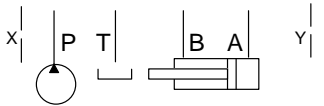
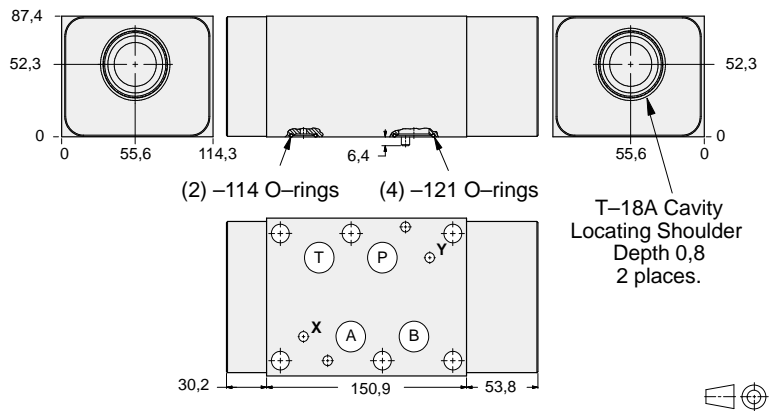
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBX</b> |            | <b>IBX/S</b> |            |



### FUNCTION

Meter-In  
A and B  
(High Capacity)

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBZ</b> |            | <b>IBZ/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CN*C   |  |  |

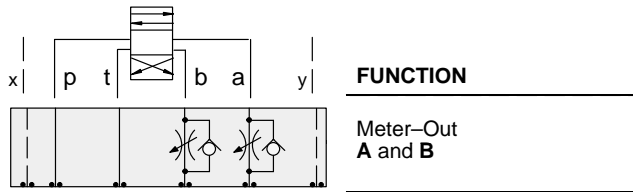




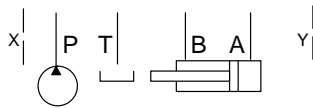
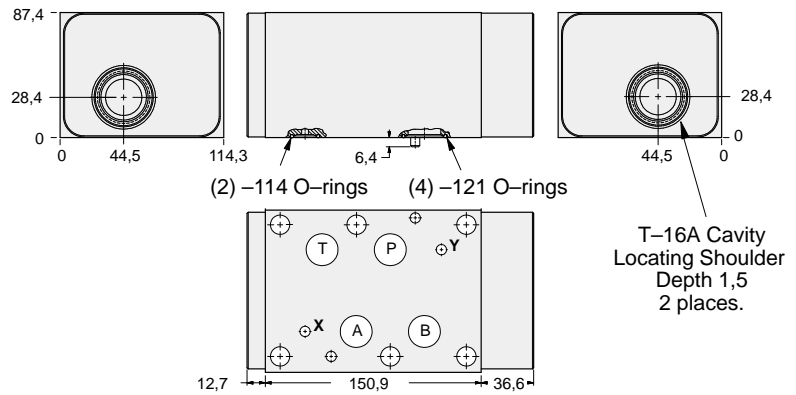
# ISO 08 SANDWICH BODIES



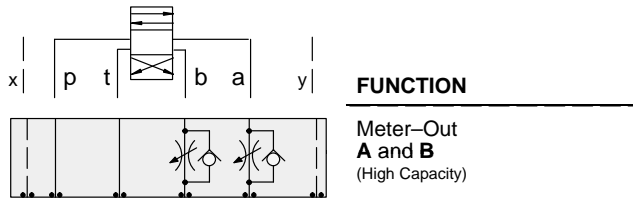
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



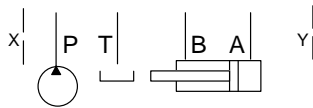
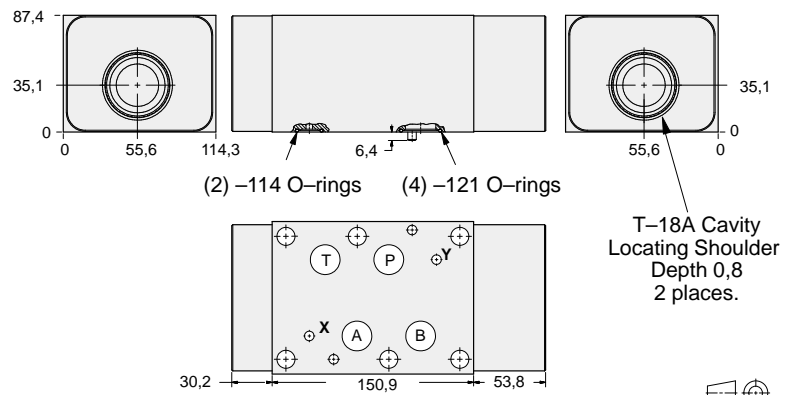
## Flow Control Valves



| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| IBW        |            | IBW/S      |            |



## Flow Control Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| IBY        |            | IBY/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CN*C   |  |  |

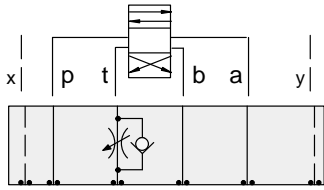
08 FLOW CONTROL



# ISO 08 SANDWICH BODIES



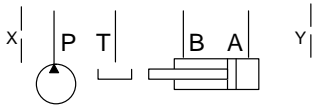
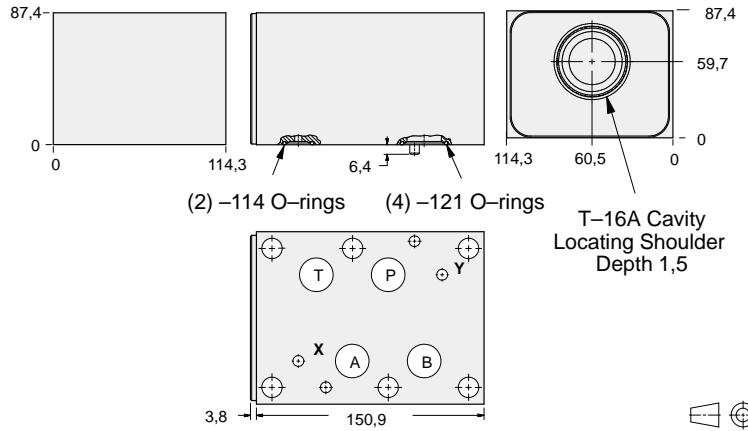
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



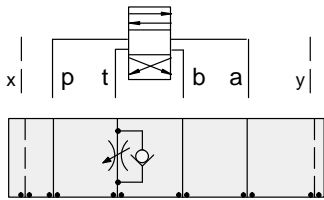
### FUNCTION

Meter-Out T

### Flow Control Valves



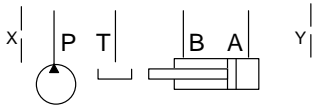
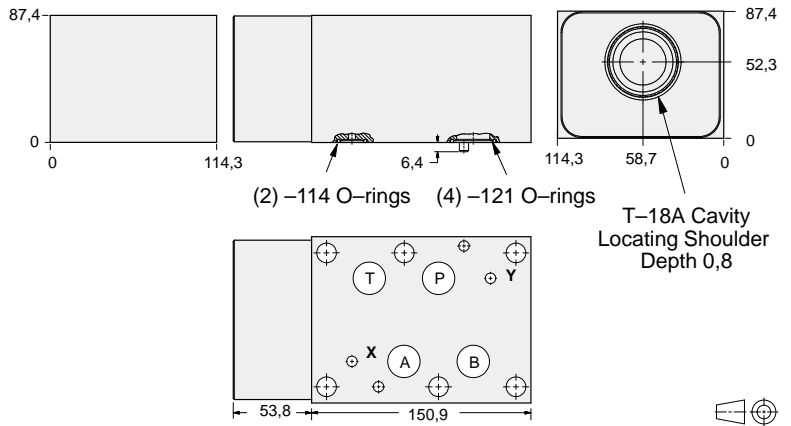
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBT</b> |            | <b>IBT/S</b> |            |



### FUNCTION

Meter-Out T  
(High Capacity)

### Flow Control Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBV</b> |            | <b>IBV/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

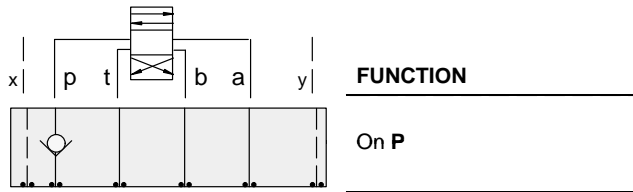
|               |  |  |  |
|---------------|--|--|--|
|               | Fully Adjustable Needle Valve  |  | Fixed Orifice, Pressure-Compensated Flow Control                                 |
|               | NF*C Page 5.13   |  | FX*A Page 5.21   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check           |  | Fixed Orifice, Pressure-Compensated Flow Control with Reverse Free Flow Check    |
|               | NC*B Page 5.17   |  | FC*B Page 5.23   |
|               | Fully Adjustable Needle Valve with Reverse Free Flow Check, Low Flow |  | Fully Adjustable, Pressure-Compensated Flow Control with Reverse Free Flow Check |
|               | NC*C Page 5.19   |  | FD*A Page 5.25   |
| OTHER VALVES: | CN*C   |  |  |



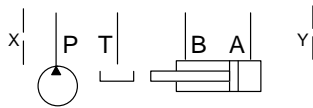
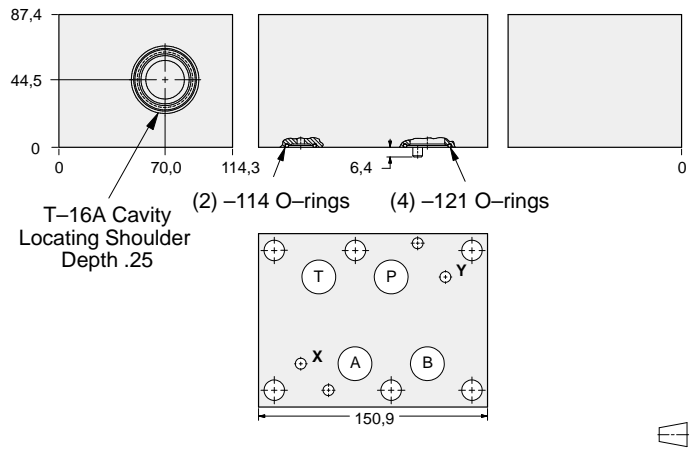
# ISO 08 SANDWICH BODIES



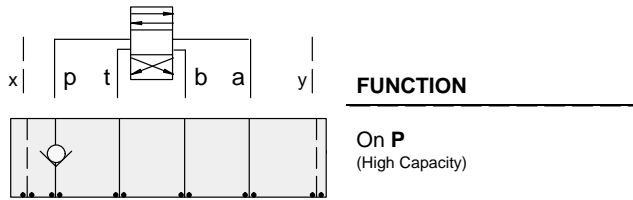
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



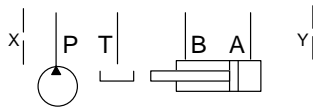
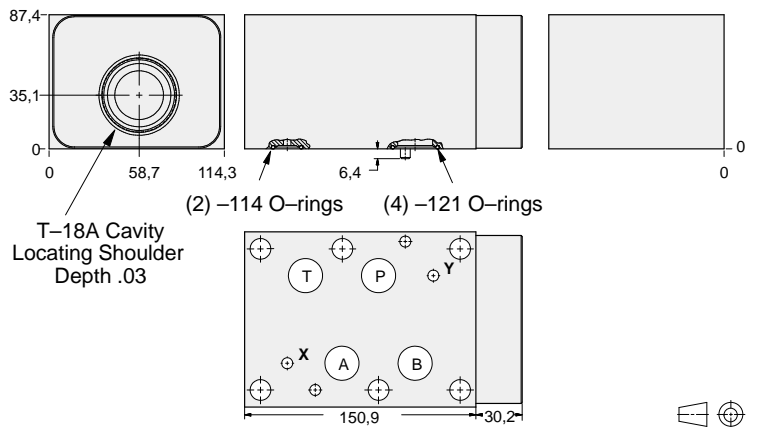
## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBP</b> |            | <b>IBP/S</b> |            |



## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBO</b> |            | <b>IBO/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

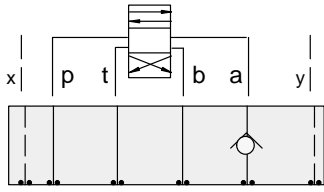
|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | CX*A Page 5.09   |  |  |
|                      |  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |



# ISO 08 SANDWICH BODIES



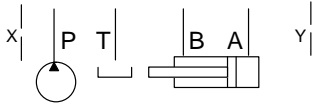
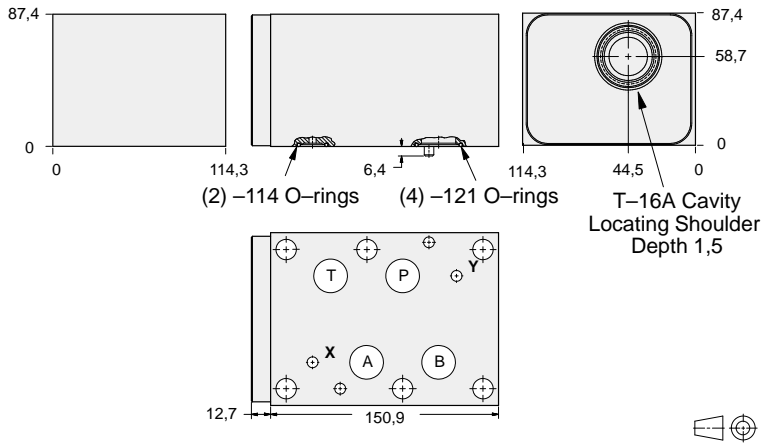
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



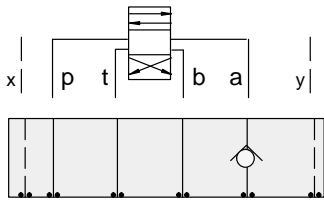
### FUNCTION

**On A**  
Free Flow Out  
of Valve

### Check Valves



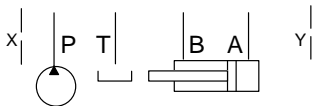
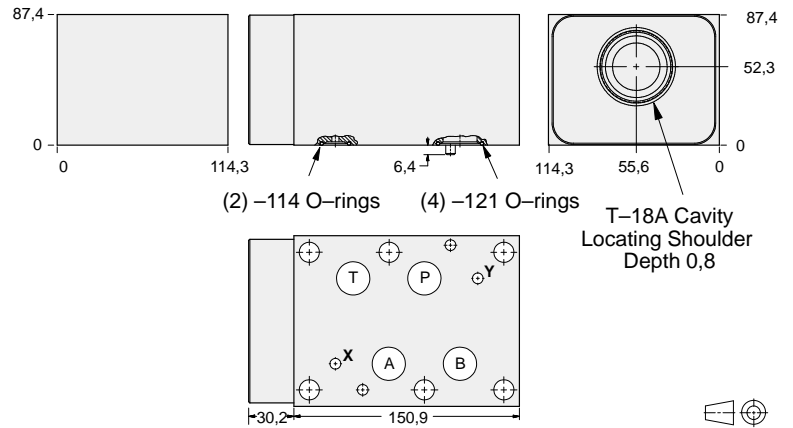
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBC</b> |            | <b>IBC/S</b> |            |



### FUNCTION

**On A**  
Free Flow Out  
of Valve (High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBG</b> |            | <b>IBG/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | <b>CX*A</b> Page 5.09                                  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

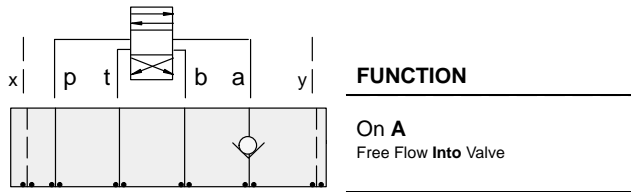
08 CHECK



# ISO 08 SANDWICH BODIES



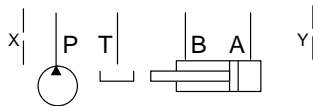
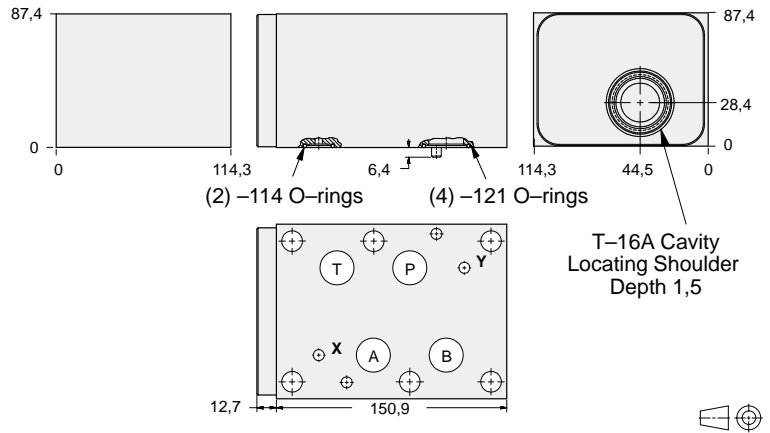
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



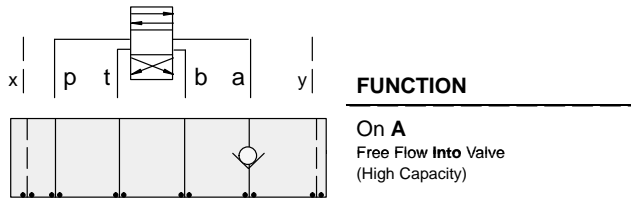
### FUNCTION

**On A**  
Free Flow Into Valve

### Check Valves



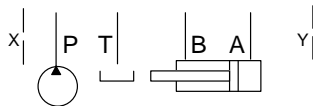
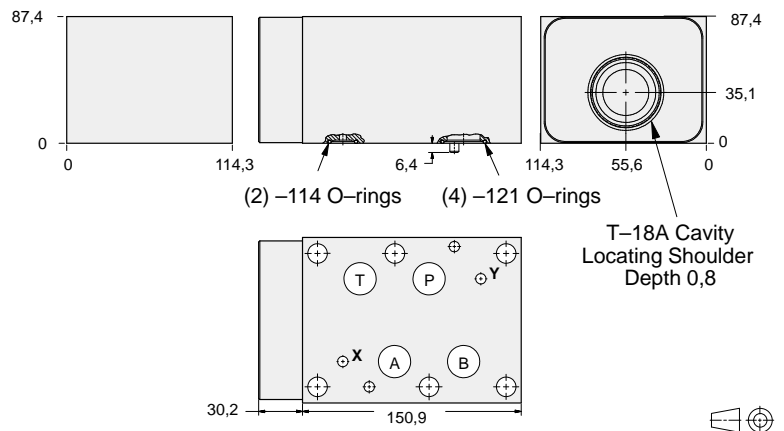
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBA</b> |            | <b>IBA/S</b> |            |



### FUNCTION

**On A**  
Free Flow Into Valve  
(High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBE</b> |            | <b>IBE/S</b> |            |

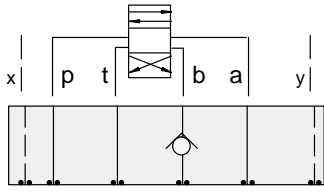
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |  |  |  |
|---|--|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|   | <b>CX*A Page 5.09</b>                                  |  |  |
|   |  |  |  |
|   |  |  |  |
| <b>OTHER VALVES:</b>                            |  |  |  |



# ISO 08 SANDWICH BODIES



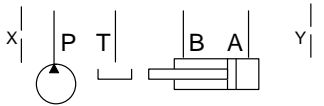
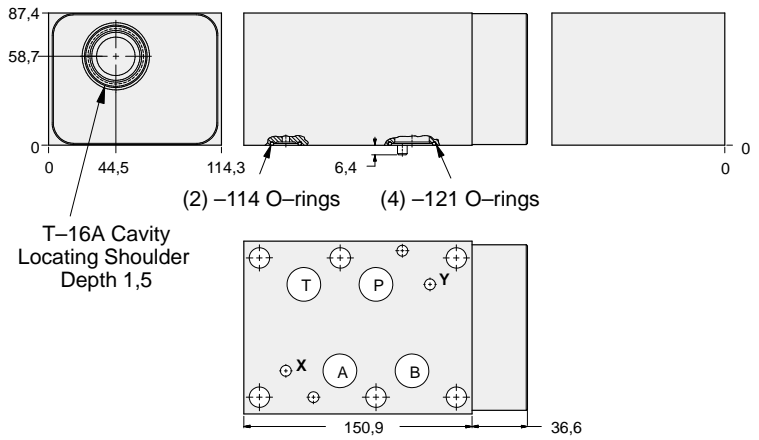
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



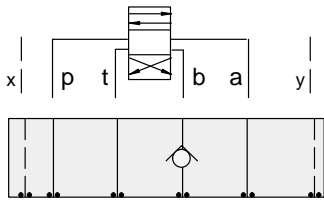
### FUNCTION

**On B**  
Free Flow Out  
of Valve

### Check Valves



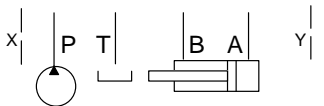
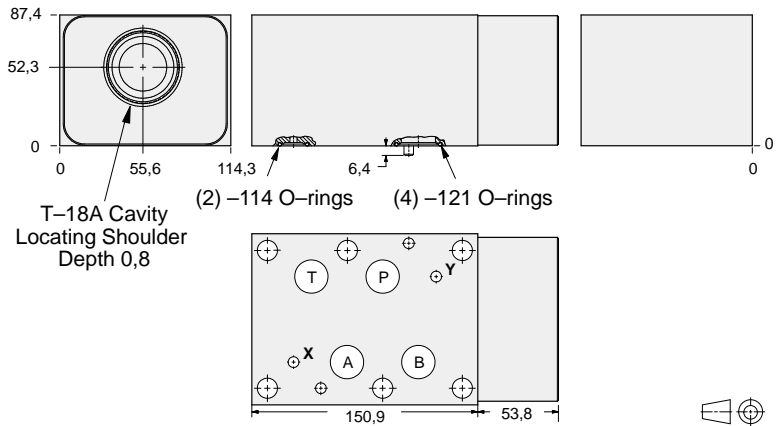
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBD</b> |            | <b>IBD/S</b> |            |



### FUNCTION

**On B**  
Free Flow Out  
of Valve (High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBH</b> |            | <b>IBH/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | <b>CX*A Page 5.09</b>                                  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

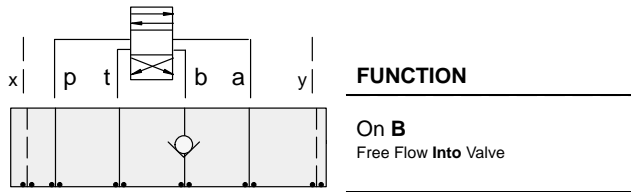
08 CHECK



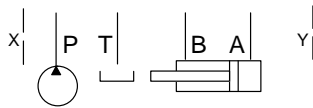
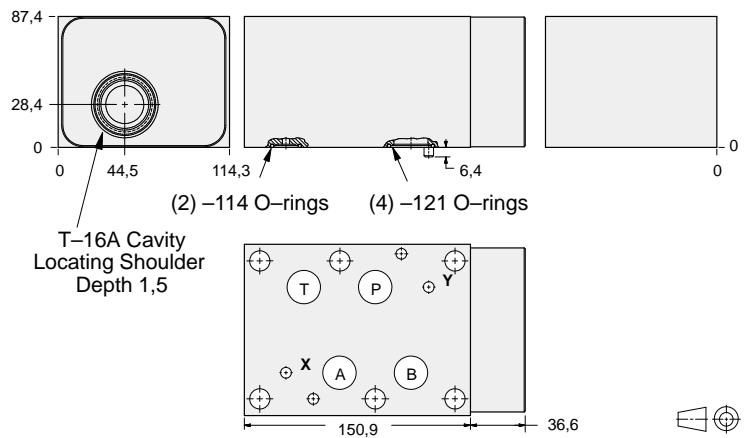
# ISO 08 SANDWICH BODIES



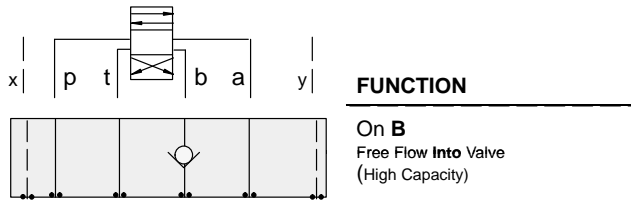
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



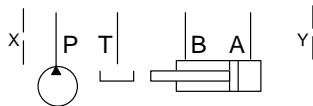
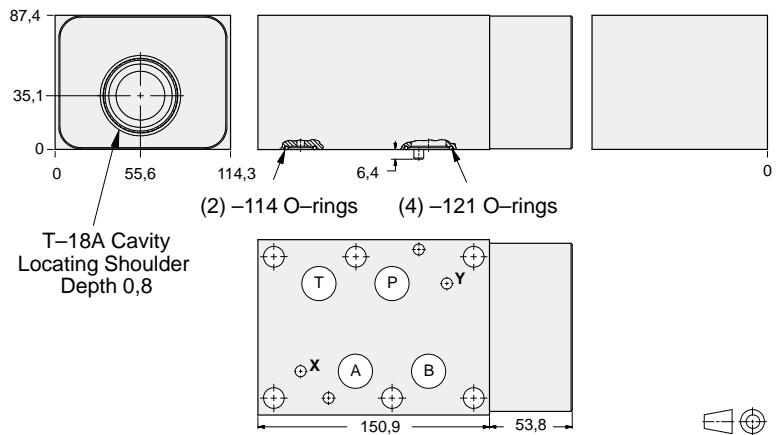
## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBB</b> |            | <b>IBB/S</b> |            |



## Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBF</b> |            | <b>IBF/S</b> |            |

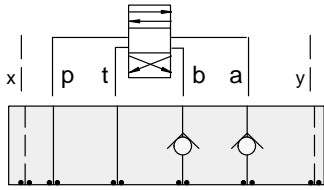
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | <b>CX*A Page 5.09</b>                                     |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 08 SANDWICH BODIES



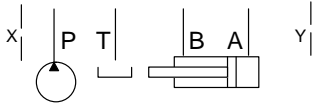
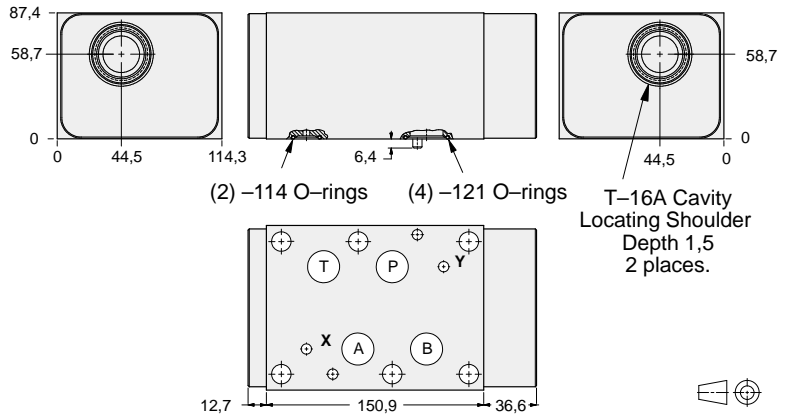
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



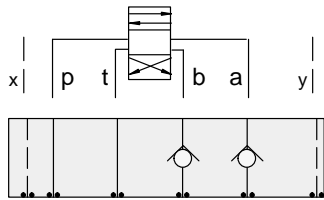
### FUNCTION

On **A** and **B**  
Free Flow **Out**  
of Valve

### Check Valves



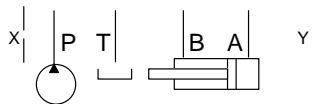
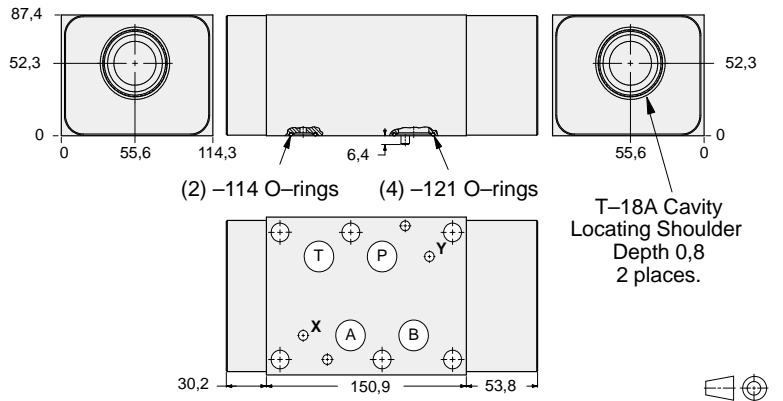
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBX</b> |            | <b>IBX/S</b> |            |



### FUNCTION

On **A** and **B**  
Free Flow **Out**  
of Valve (High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBZ</b> |            | <b>IBZ/S</b> |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|                      |  |  |  |
|----------------------|--|--|--|
|                      | Check Valve, Free Flow Port 1 to Port 2 (Nose-to-Side) |  |  |
|                      | <b>CX*A</b> Page 5.09                                  |  |  |
|                      |  |  |  |
|                      |  |  |  |
| <b>OTHER VALVES:</b> |  |  |  |

08 CHECK

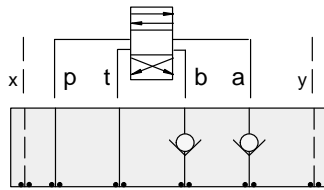




# ISO 08 SANDWICH BODIES



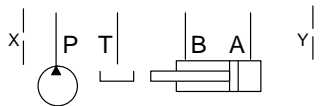
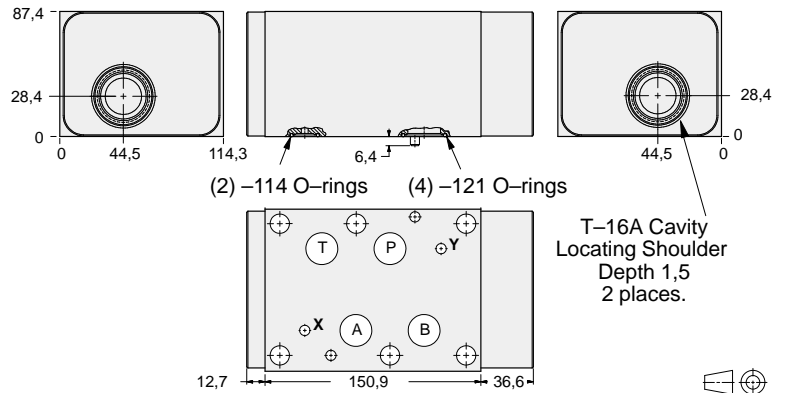
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



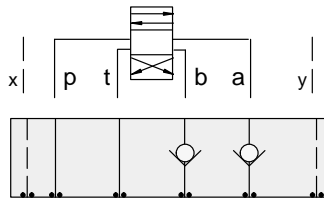
### FUNCTION

On **A** and **B**  
Free Flow Into Valve

### Check Valves



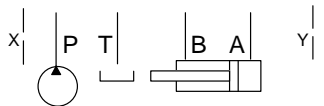
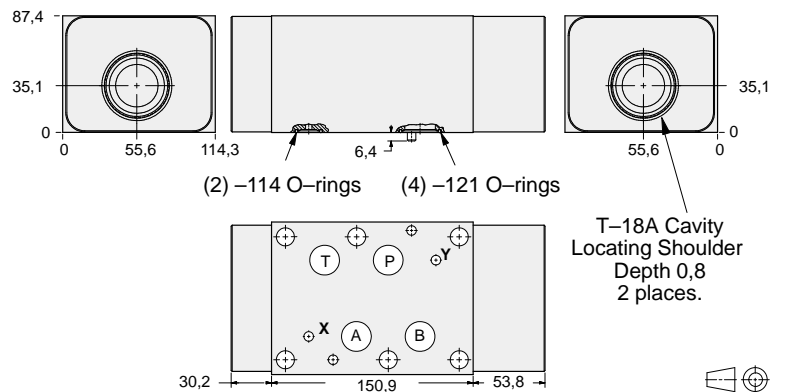
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBW</b> |            | <b>IBW/S</b> |            |



### FUNCTION

On **A**  
Free Flow Into Valve  
(High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>IBY</b> |            | <b>IBY/S</b> |            |

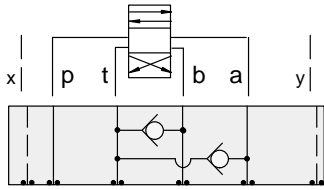
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | <b>CX*A</b> Page 5.09                                     |  |  |
|   |   |  |  |
|   |   |  |  |
| <b>OTHER VALVES:</b>                            |   |  |  |



# ISO 08 SANDWICH BODIES



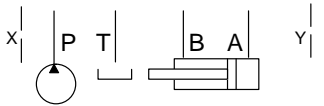
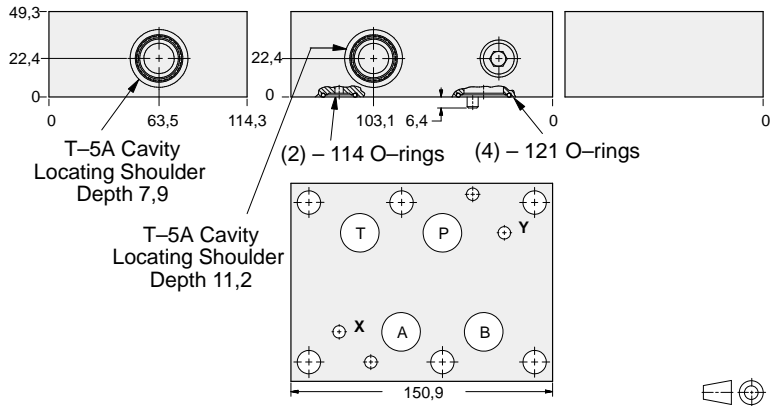
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



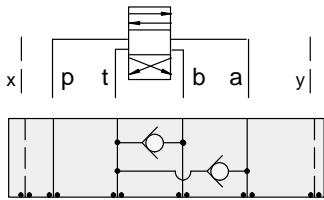
### FUNCTION

T to A and B

### Check Valves



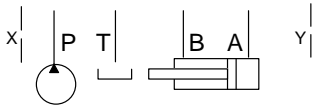
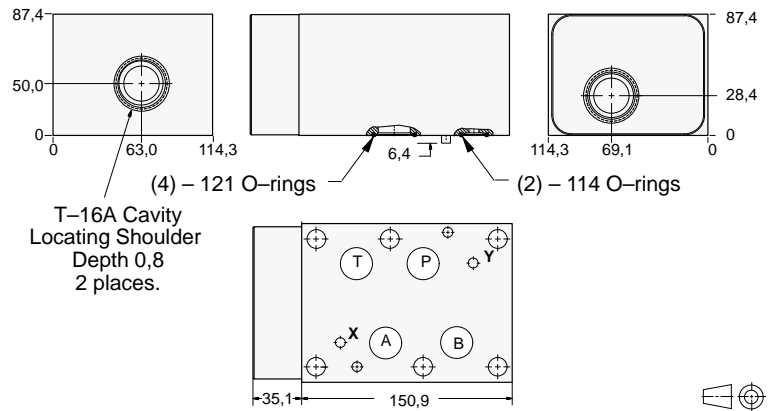
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| CDX        |            | CDX/S      |            |



### FUNCTION

T to A and B  
(High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| CDV        |            | CDV/S       |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |  |  |
|---------------|---|--|--|
|               | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|               | CX*A Page 5.08, 5.09                                      |  |  |
|               |   |  |  |
|               |   |  |  |
| OTHER VALVES: |   |  |  |

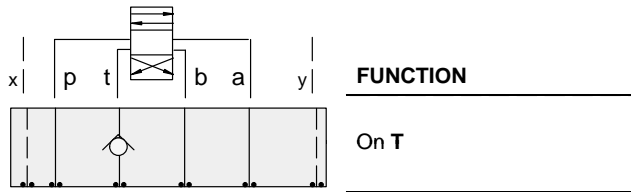
08 CHECK



# ISO 08 SANDWICH BODIES



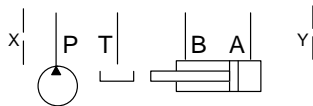
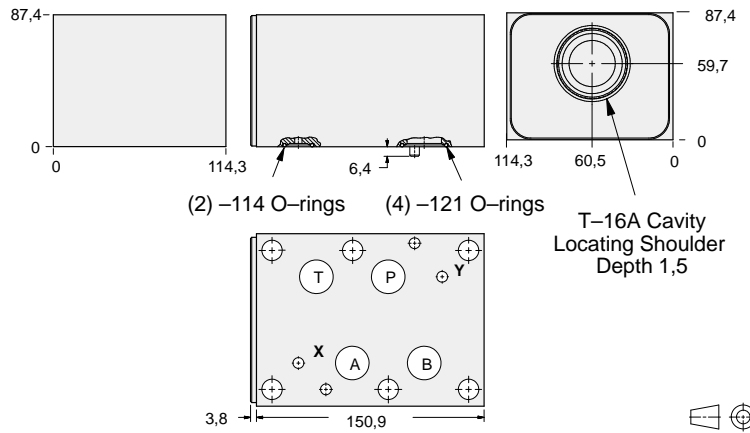
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



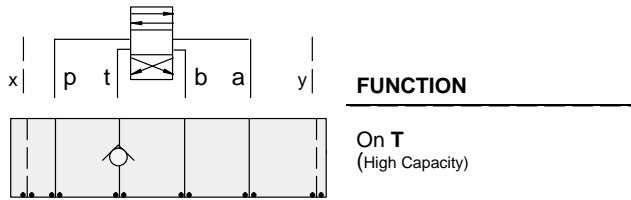
### FUNCTION

On T

### Check Valves



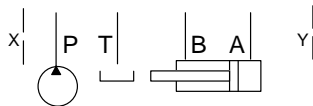
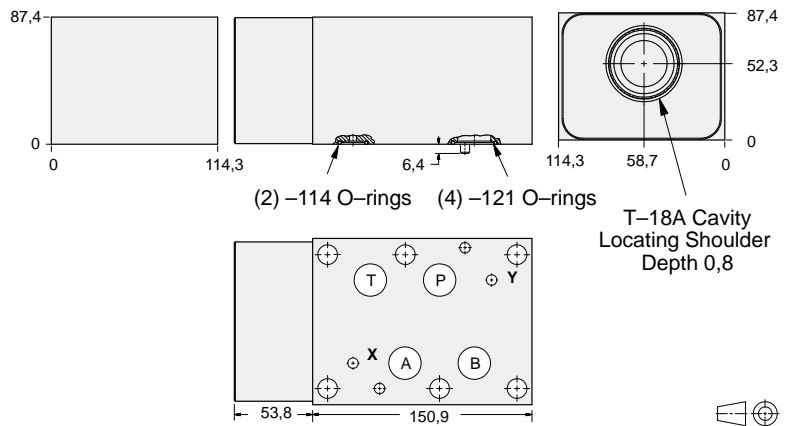
| ALUMINIUM  |            | SG IRON    |            |
|------------|------------|------------|------------|
| Model Code | List Price | Model Code | List Price |
| IBT        |            | IBT/S      |            |



### FUNCTION

On T  
(High Capacity)

### Check Valves



| ALUMINIUM  |            | SG IRON     |            |
|------------|------------|-------------|------------|
| Model Code | List Price | Part Number | List Price |
| IBV        |            | IBV/S       |            |

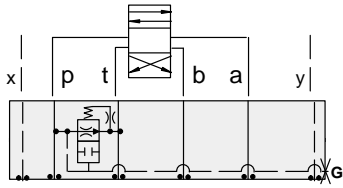
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | Check Valve, Free Flow Port 1 to Port 2<br>(Nose-to-Side) |  |  |
|   | CX*A Page 5.09  |  |  |
|   |   |  |  |
|   |   |  |  |
| OTHER VALVES:                                   |   |  |  |



# ISO 08 SANDWICH BODIES



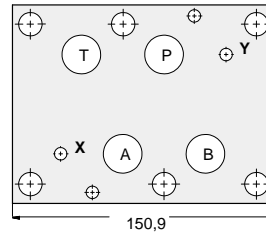
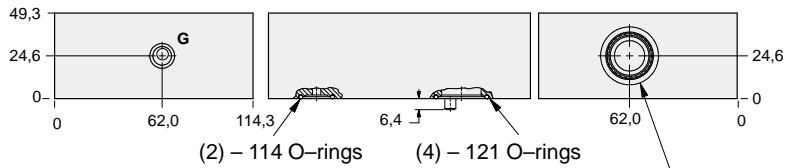
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



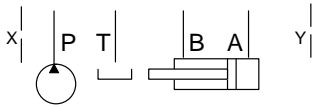
### FUNCTION

Air-Bleed and Start-Up

### Circuit Savers



T-3A Cavity Locating Shoulder Depth 9,7



| Gauge Port<br>(Plugged) | ALUMINIUM    |            | SG IRON      |            |
|-------------------------|--------------|------------|--------------|------------|
|                         | Model Code   | List Price | Model Code   | List Price |
| .25 NPTF                | <b>CDP</b>   |            | <b>CDP/S</b> |            |
| .25 BSPP                | <b>CDP/M</b> |            | <b>CDP/T</b> |            |

08 CIRCUIT SAVER

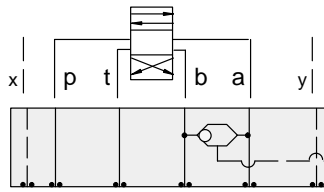
| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |                                     |  |  |
|---|-------------------------------------|--|--|
|   | <i>Air Bleed and Start-up Valve</i> |  |  |
|   | <b>NQEB Page 10.16</b>              |  |  |
|   |                                     |  |  |
|   |                                     |  |  |
| <b>OTHER VALVES:</b>                            |                                     |  |  |



# ISO 08 SANDWICH BODIES



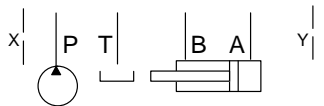
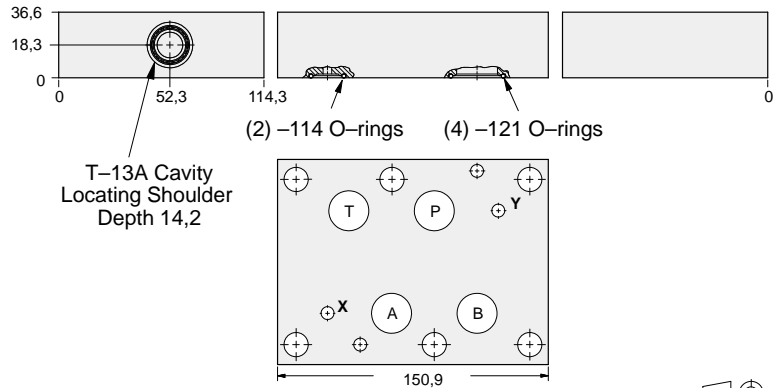
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



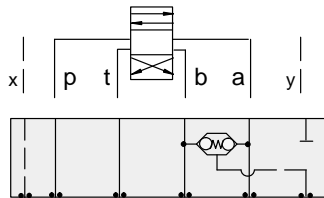
## FUNCTION

Shuttle  
A and B  
Output External

## Circuit Savers



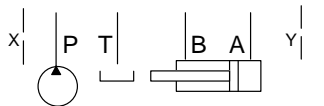
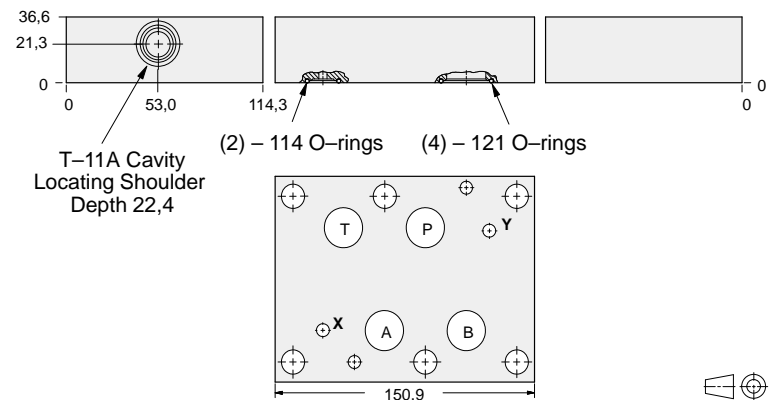
| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Model Code   | List Price |
| <b>IBS</b> |            | <b>IBS/S</b> |            |



## FUNCTION

Checks from  
A and B  
Output to Y Port

## Circuit Savers



| ALUMINIUM  |            | SG IRON      |            |
|------------|------------|--------------|------------|
| Model Code | List Price | Part Number  | List Price |
| <b>HBS</b> |            | <b>HBS/S</b> |            |

| TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE |   |  |  |
|---|---|--|--|
|   | 2 Port Shuttle Valve, Signal External             |  |  |
|   | CSAA Page 10.09, (use with IBS)                   |  |  |
|   | 3 Port Back-to-Back Check Valve, Signal at Port 3 |  |  |
|   | CDAB Page 10.10 (use with HBS)                    |  |  |
| OTHER VALVES:                                   |   |  |  |

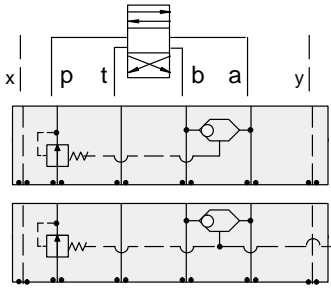
08 CIRCUIT SAVER



# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

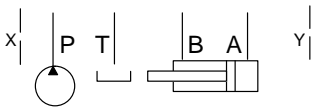
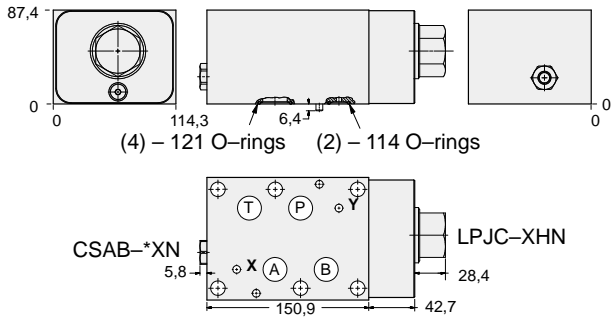


### FUNCTION

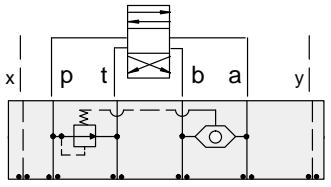
Pressure Compensator (Restrictive)

Pressure Compensator (Restrictive) w/Load-Sensing Port

### Circuit Savers



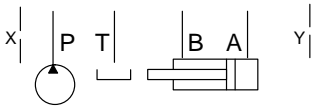
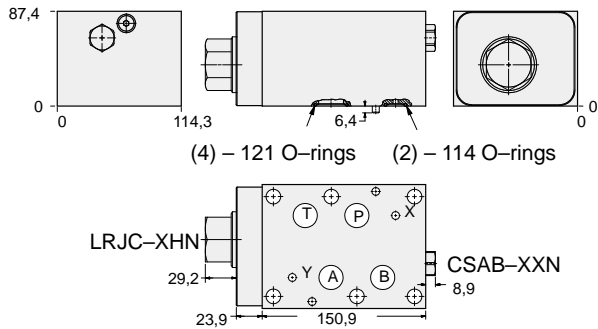
| Shuttle Cartridge | External Shuttle Port | ALUMINIUM     |            | SG IRON       |            |
|-------------------|-----------------------|---------------|------------|---------------|------------|
|                   |                       | Model Code    | List Price | Model Code    | List Price |
| CSAB-XXN          | None                  | YFIA-XHN-CA   |            | YFIA-XHN-CA/S |            |
| CSAB-AXN          | SAE-4                 | YFIB-XHN-CA   |            | YFIB-XHN-CA/S |            |
| CSAB-BXN          | .25 BSPP              | YFIB-XHN-CA/M |            | YFIB-XHN-CA/T |            |



### FUNCTION

Pressure Compensator (Bypass)

### Circuit Savers



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YFIC-XHN-CA |            | YFIC-XHN-CA/S |            |

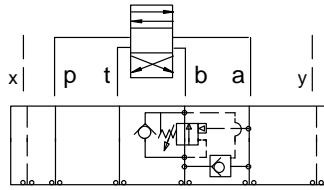
08 CIRCUIT SAVER



# ISO 08 SANDWICH BODIES



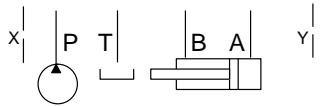
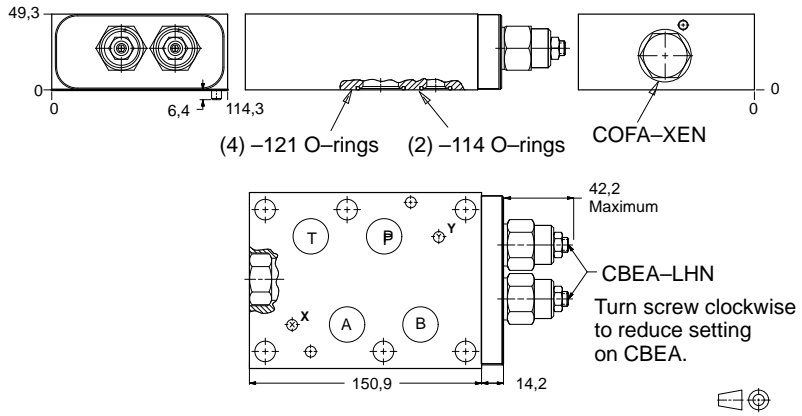
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



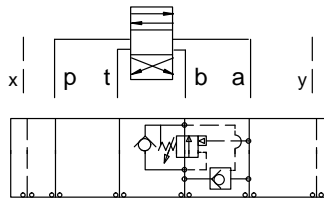
### FUNCTION

**B to A**  
Regenerative

### Circuit Savers



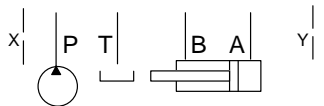
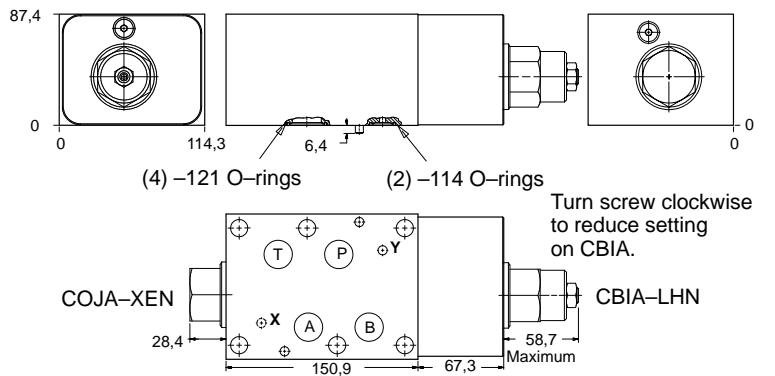
| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDFF-LHN-CA |            | YDFF-LHN-CA/S |            |



### FUNCTION

**B to A**  
Regenerative  
(High Capacity)

### Circuit Savers



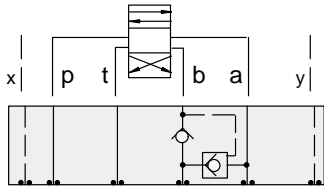
| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YDGF-LHN-CA |            | YDGF-LHN-CA/S |            |



# ISO 08 SANDWICH BODIES



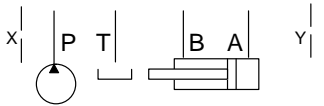
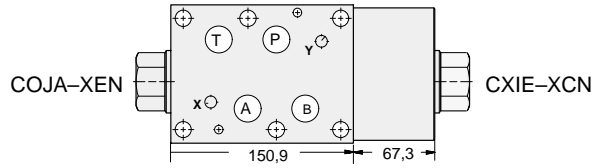
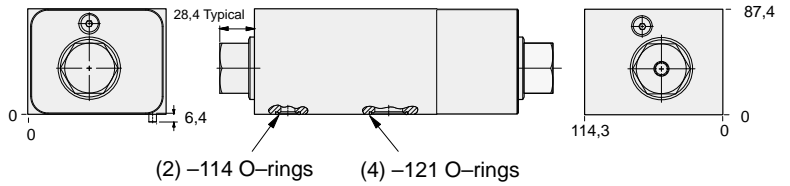
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



### FUNCTION

**B to A**  
Regenerative  
(Full Time)

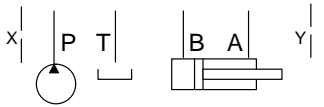
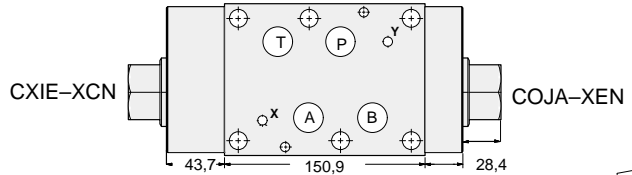
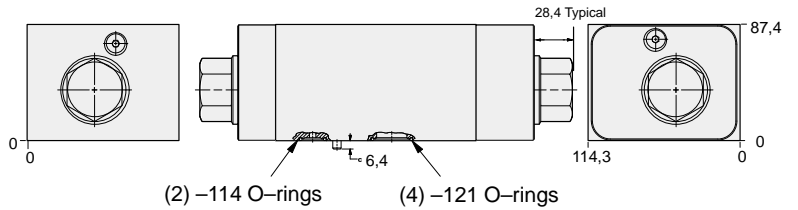
### Circuit Savers



### FUNCTION

**A to B**  
Regenerative  
(Full Time)

### Circuit Savers



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDGH-XCN-CA |            | YDGH-XCN-CA/S |            |

| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YDGI-XCN-CA |            | YDGI-XCN-CA/S |            |

08 CIRCUIT SAVER

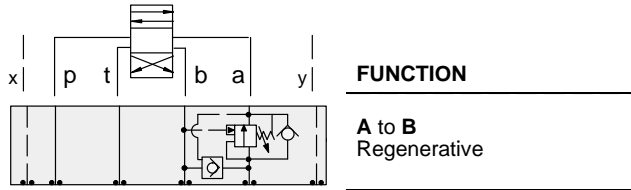




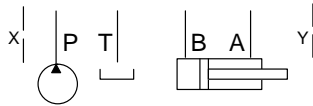
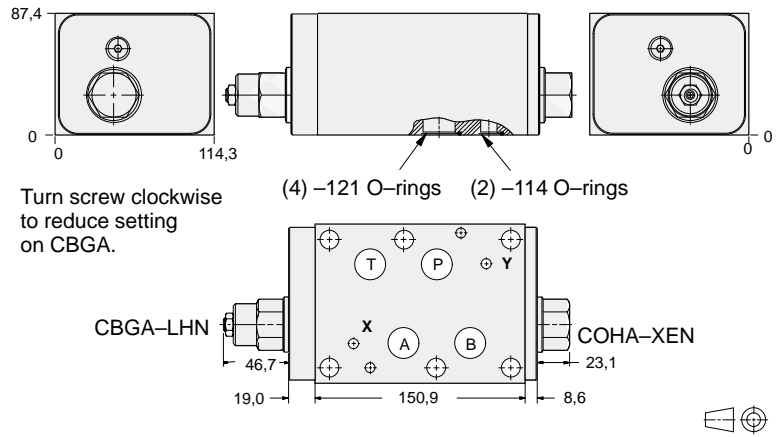
# ISO 08 SANDWICH BODIES



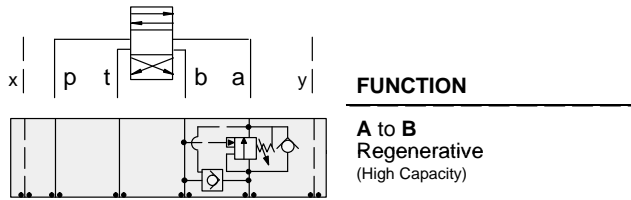
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.



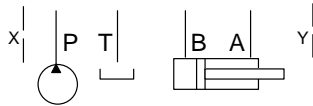
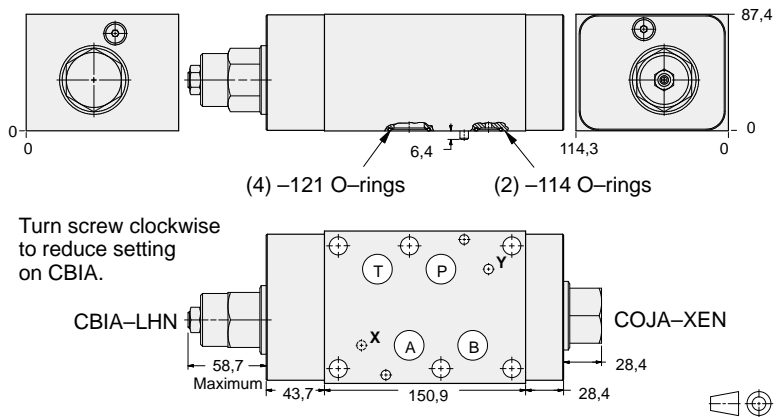
## Circuit Savers



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Model Code    | List Price |
| YDFJ-LHN-CA |            | YDFJ-LHN-CA/S |            |



## Circuit Savers



| ALUMINIUM   |            | SG IRON       |            |
|-------------|------------|---------------|------------|
| Model Code  | List Price | Part Number   | List Price |
| YDGE-LHN-CA |            | YDGE-LHN-CA/S |            |

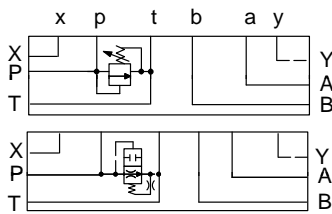


# ISO 08 SANDWICH BODIES



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

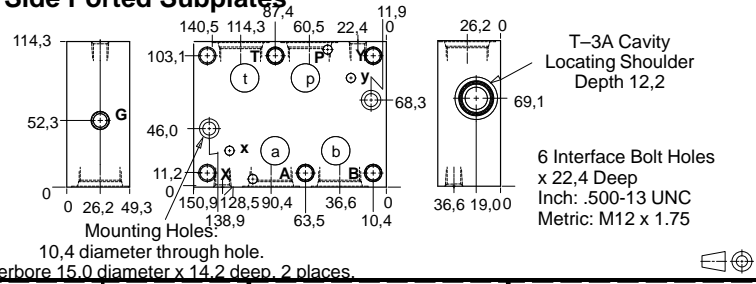
## Side Ported Subplates



### FUNCTION

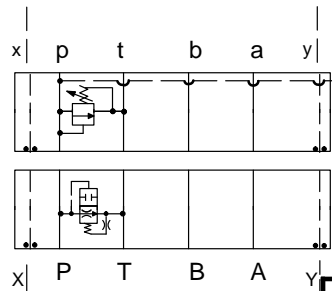
Relief P to T

Air-Bleed and Start-Up



| Interface Bolt Holes | Port P,T,A,B | Port X,Y | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------------|--------------|----------|------------|------------|------------|------------|------------|
|                      |              |          |            | Model Code | List Price | Model Code | List Price |
| Inch                 | 1.00 NPTF    | .25 NPTF | .25 NPTF   | CSE        |            | CSE/S      |            |
| Inch                 | SAE-16       | SAE-6    | .25 NPTF   | CSM        |            | CSM/S      |            |
| Metric               | 1.00 BSPP    | .25 BSPP | .25 BSPP   | CSX        |            | CSX/S      |            |

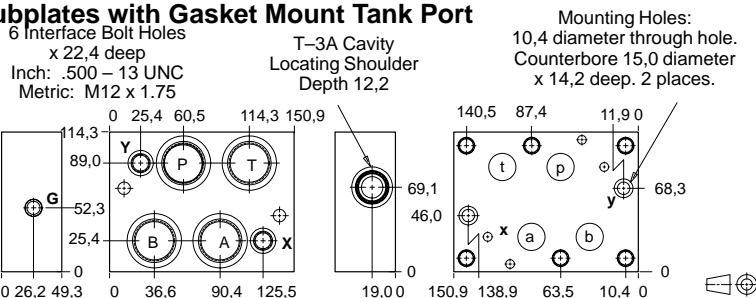
## Side Ported Subplates with Gasket Mount Tank Port



### FUNCTION

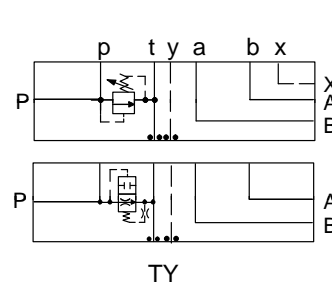
Relief P to T

Air-Bleed and Start-Up



| Interface Bolt Holes | Port P,T,A,B | Port X,Y | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------------|--------------|----------|------------|------------|------------|------------|------------|
|                      |              |          |            | Model Code | List Price | Model Code | List Price |
| Inch                 | 1.00 NPTF    | .25 NPTF | .25 NPTF   | CRE        |            | CRE/S      |            |
| Inch                 | SAE-16       | SAE-6    | .25 NPTF   | CRM        |            | CRM/S      |            |
| Metric               | 1.00 BSPP    | 25 BSPP  | .25 BSPP   | CRX        |            | CRX/S      |            |

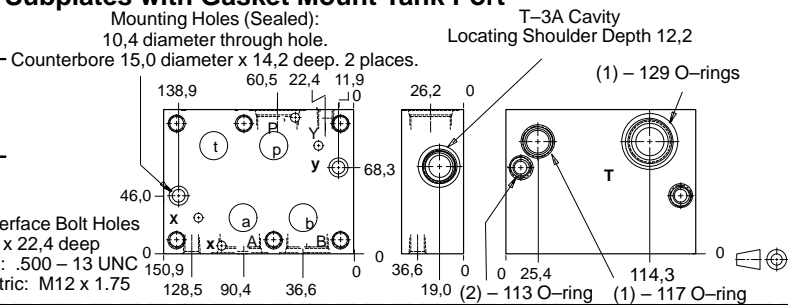
## Side Ported Subplates with Gasket Mount Tank Port



### FUNCTION

Relief P to T

Air-Bleed and Start-Up



| Interface Bolt Holes | Ports A, B, P | Port T    | Port X, Y | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------------|---------------|-----------|-----------|------------|------------|------------|------------|------------|
|                      |               |           |           |            | Model Code | List Price | Model Code | List Price |
| Inch                 | 1.00 NPTF     | 1.00 NPTF | .25 NPTF  | .25 NPTF   | CTE        |            | CTE/S      |            |
| Inch                 | SAE-16        | 1.00 NPTF | SAE-6     | .25 NPTF   | CTM        |            | CTM/S      |            |
| Metric               | 1.00 BSPP     | 1.00 BSPP | .25B SPP  | .25 BSPP   | CTS        |            | CTS/S      |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |   |  |                              |
|---------------|---|--|------------------------------|
|               | Pilot Operated Relief Valve                 |  | Direct Acting Relief Valve   |
|               | RPGC Page 1.06                              |  | RDFA Page 1.10               |
|               | Pilot Operated, Rapid Response Relief Valve |  | Air Bleed and Start-up Valve |
|               | RPGE Page 1.08                              |  | NQEB Page 10.16              |
| OTHER VALVES: |   |  |                              |

08 SUBPLATE

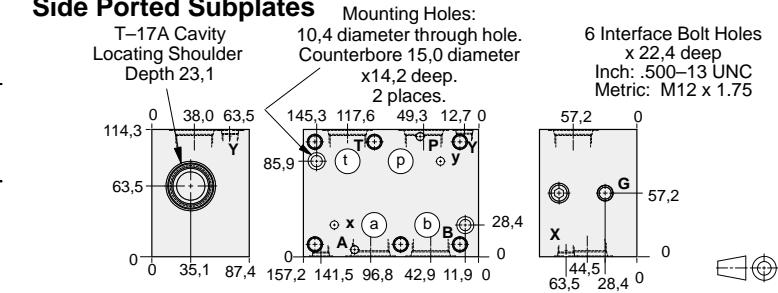
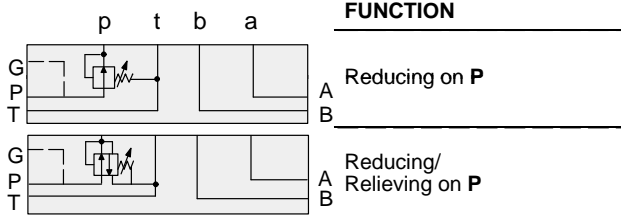


# ISO 08 SANDWICH BODIES



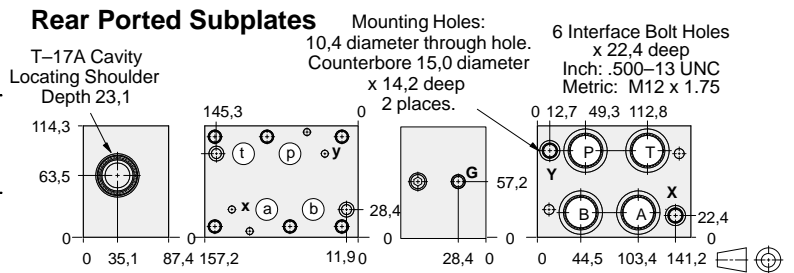
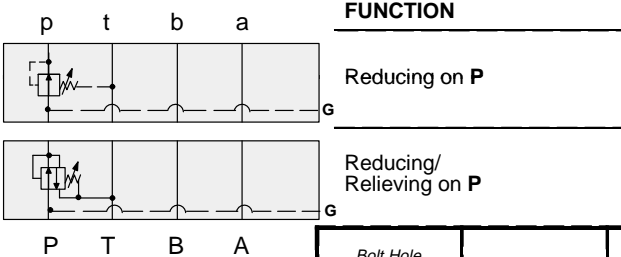
- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## Side Ported Subplates



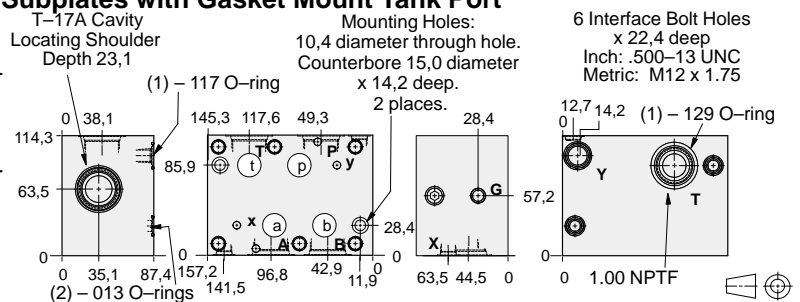
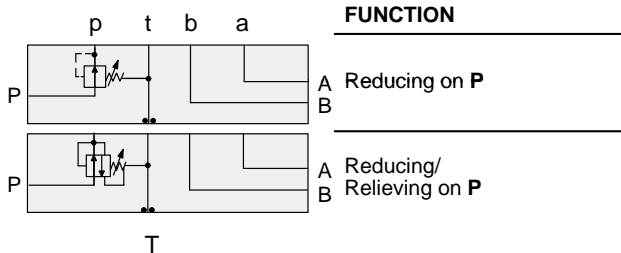
| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | Ports X,Y | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|---------------|-----------|------------|------------|------------|------------|
|                     |            |               |           | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | 1.00 NPTF     | .25 NPTF  | HSE        |            | HSE/S      |            |
| Inch                | .25 NPTF   | SAE-16        | SAE-6     | HSM        |            | HSM/S      |            |
| Metric              | .25 BSPP   | 1.00 BSPP     | .25 BSPP  | HSX        |            | HSX/S      |            |

## Rear Ported Subplates



| Bolt Hole Interface | Gauge Port | Ports A,B,P,T | Ports X,Y | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|---------------|-----------|------------|------------|------------|------------|
|                     |            |               |           | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | 1.00 NPTF     | .25 NPTF  | HRE        |            | HRM/S      |            |
| Inch                | .25 NPTF   | SAE-16        | SAE-6     | HRM        |            | HRM/S      |            |
| Metric              | .25 BSPP   | 1.00 BSPP     | .25 BSPP  | HRX        |            | HRX/S      |            |

## Side Ported Subplates with Gasket Mount Tank Port



| Bolt Hole Interface | Gauge Port | Ports A,B,P | Ports X, Y | ALUMINIUM  |            | SG IRON    |            |
|---------------------|------------|-------------|------------|------------|------------|------------|------------|
|                     |            |             |            | Model Code | List Price | Model Code | List Price |
| Inch                | .25 NPTF   | 1.00 NPTF   | .25 NPTF   | HTE        |            | HTE/S      |            |
| Inch                | .25 NPTF   | SAE-16      | SAE-6      | HTM        |            | HTM/S      |            |
| Metric              | .25 BSPP   | 1.00 BSPP   | .25 BSPP   | HTX        |            | HTX/S      |            |

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|  |   |  |   |
|--|---|--|---|
|  | Pilot Operated Reducing Valve                 |  | Pilot Operated Reducing/Relieving Valve                 |
|  | PBHB Page 3.07                                |  | PPHB Page 3.11  |
|  | Air Controlled, Pilot Operated Reducing Valve |  | Air Controlled, Pilot Operated Reducing/Relieving Valve |
|  | PBHC Page 3.09                                |  | PPHC Page 3.13  |



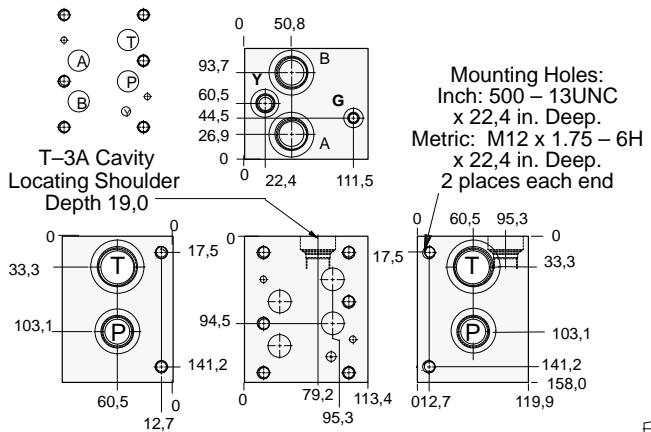
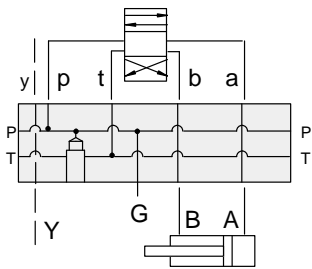
# BAR MANIFOLDS



- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 08 Parallel Circuit with Relief Cavity and Y Port

**FUNCTION**  
 \_\_\_\_\_  
 One Station  
 \_\_\_\_\_



| Mounting Holes | Part T    | Ports A, B, P | Port Y    | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|-----------|------------|------------|------------|------------|------------|
|                |           |               |           |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.25 NPTF | 1.00 NPTF     | .375 NPTF | .25 NPTF   | VLN        |            | VLN/S      |            |
| inch           | SAE-20    | SAE-16        | SAE-8     | SAE-4      | VLT        |            | VLT/S      |            |
| metric         | 1.25 BSPP | 1.00 BSPP     | .375 BSPP | .25 BSPP   | VLX        |            | VLX/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |

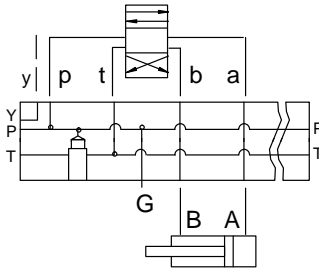


# BAR MANIFOLDS

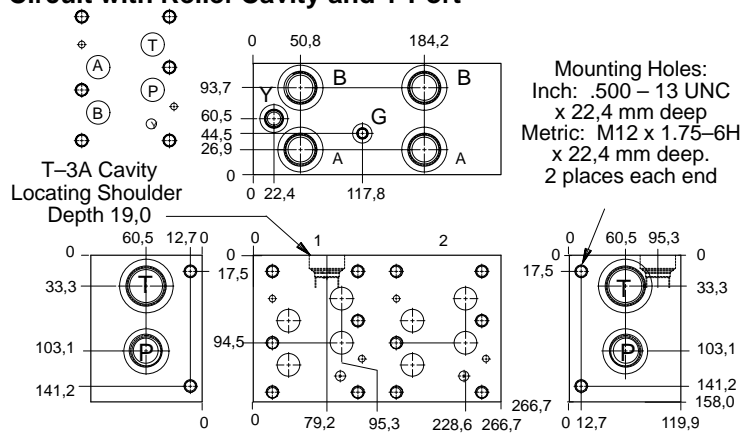


- Aluminium rated to 210 bar and SG Iron rated to 350 bar.
- See page viii for ordering cartridge/body and seals. Pressure ratings, material specifications on page xiv.

## ISO 08 Parallel Circuit with Relief Cavity and Y Port



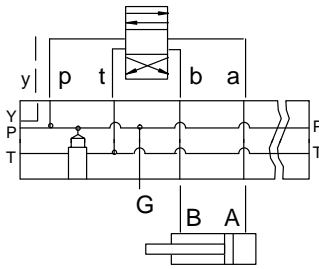
**FUNCTION**  
Two Station



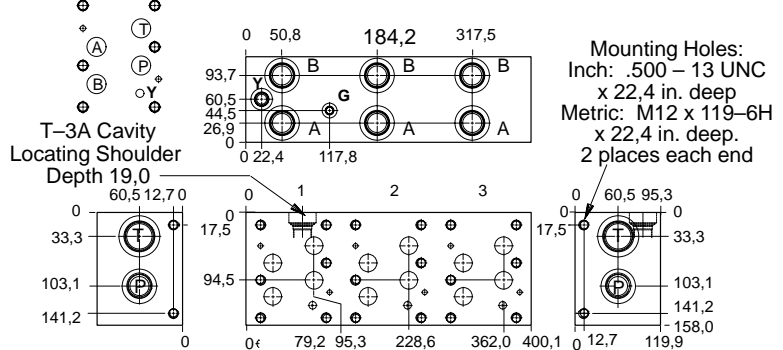
| Mounting Holes | Port T    | Ports A, B, P | Port Y    | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|-----------|------------|------------|------------|------------|------------|
|                |           |               |           |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.25 NPTF | 1.00 NPTF     | .375 NPTF | .25 NPTF   | VLP        |            | VLP/S      |            |
| inch           | SAE-20    | SAE-16        | SAE-8     | SAE-4      | VLV        |            | VLV/S      |            |
| metric         | 1.25 BSPP | 1.00 BSPP     | .375 BSPP | .25 BSPP   | VLY        |            | VLY/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

## ISO 08 Parallel Circuit with Relief Cavity and Y Port



**FUNCTION**  
Three Station



| Mounting Holes | Port T    | Ports A, B, P | Port Y    | Gauge Port | ALUMINIUM  |            | SG IRON    |            |
|----------------|-----------|---------------|-----------|------------|------------|------------|------------|------------|
|                |           |               |           |            | Model Code | List Price | Model Code | List Price |
| inch           | 1.25 NPTF | 1.00 NPTF     | .375 NPTF | .25 NPTF   | VLR        |            | VLR/S      |            |
| inch           | SAE-20    | SAE-16        | SAE-8     | SAE-4      | VLW        |            | VLW/S      |            |
| metric         | 1.25 BSPP | 1.00 BSPP     | .375 BSPP | .25 BSPP   | VLZ        |            | VLZ/S      |            |

Bar Manifold Mounting Kits to be ordered separately. See page 12.087.

### TYPICAL CARTRIDGES USED WITH BODIES SHOWN ABOVE

|               |                             |  |                            |
|---------------|-----------------------------|--|----------------------------|
|               | Pilot Operated Relief Valve |  | Direct Acting Relief Valve |
|               | RPGC Page 1.06              |  | RDFA Page 1.10             |
| OTHER VALVES: |                             |  |                            |





