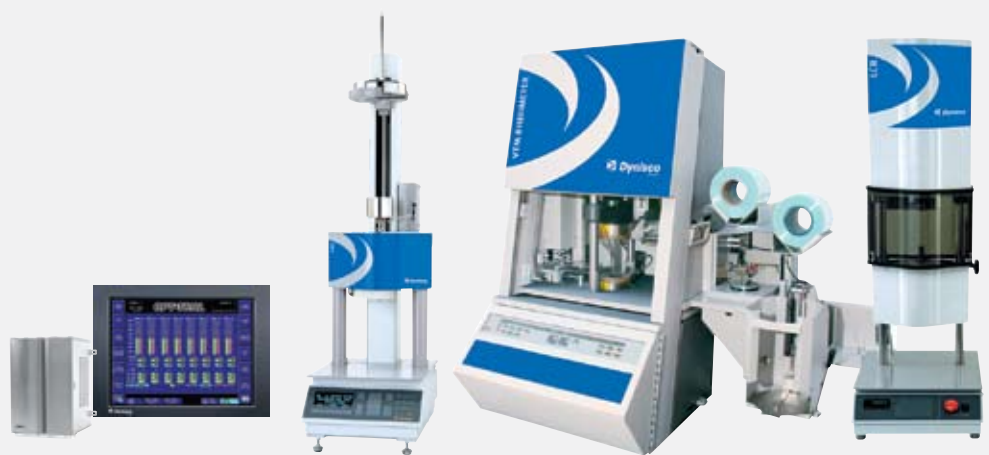


PRODUCT OVERVIEW



Sensors, Controls & Analyzers



Intelligence and Control from Pellet to Part

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Extrusion Control Systems and Solutions

For decades, Dynisco has been a global leader providing innovative solutions for materials testing and extrusion-control monitoring for the plastics industry. Today, it is more vital than ever for us to offer leading-edge technology, manufactured to ISO 9000 quality standards, so our customers can achieve maximum manufacturing efficiency and productivity.



Extrusion Control Systems

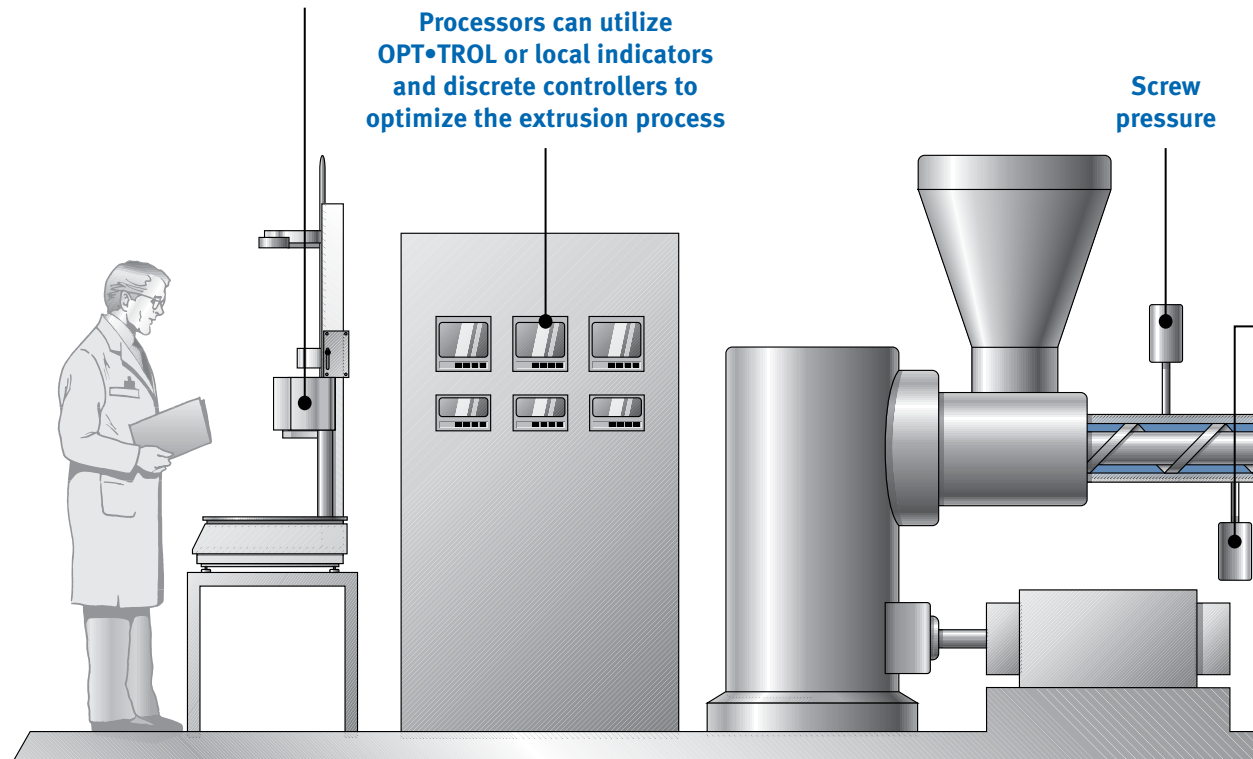
For the first time, Dynisco's OPT•TROL™ system provides precision extruder pressure and temperature control. Through advanced auto-tuning, OPT•TROL automatically monitors temperature, pressure and controls in new installations or retrofitted applications.

OPT•TROL is pre-programmed prior to delivery for easy, plug-and-play installation, and as with all Dynisco technology, it is manufactured to meet or exceed the highest industry standards for process control systems.



Melt Flow Indexer

Processors can utilize OPT•TROL or local indicators and discrete controllers to optimize the extrusion process



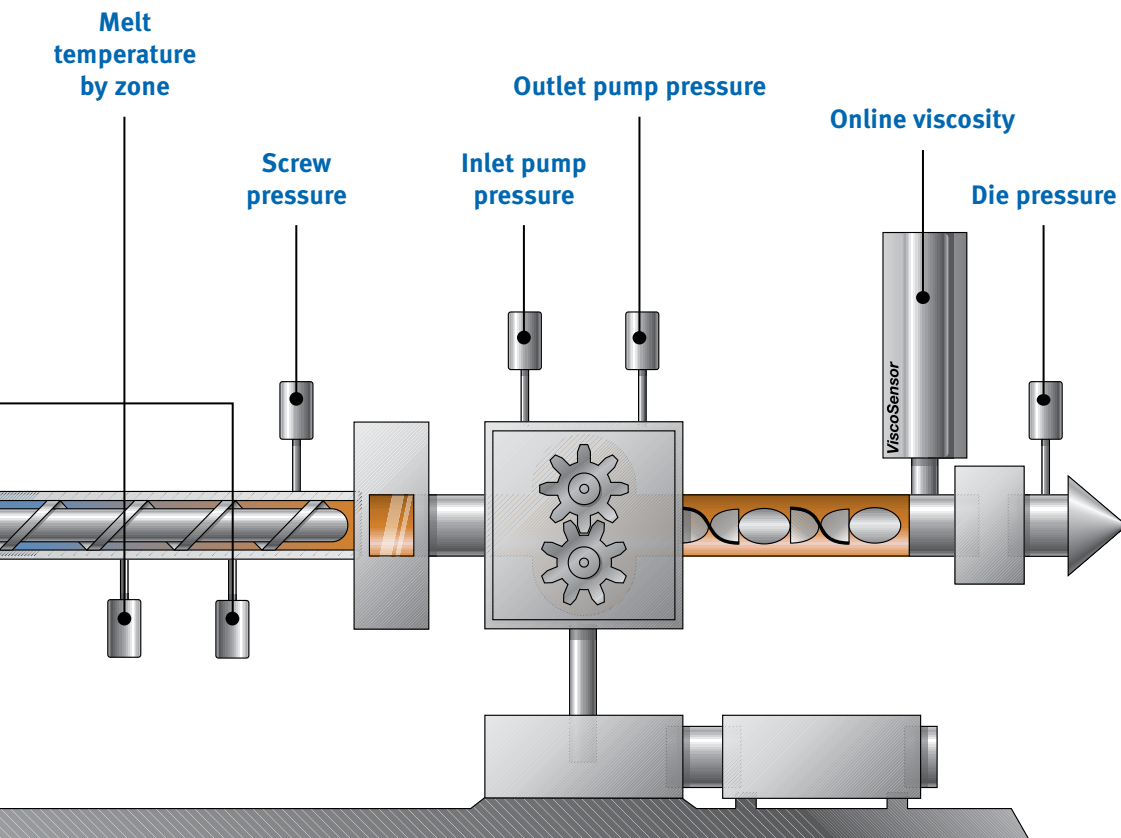
Sensors

Dynisco has developed some of the most innovative measurement solutions for plastics extrusion, molding, and process control applications thanks to hundreds of models of transducers and transmitters and the latest sensing technologies. We're recognized for high-accuracy pressure measurement at high temperatures with transducers that withstand the most corrosive production environments.



Analytical Instruments

Dynisco instruments are recognized and used around the world for testing the physical, mechanical, thermal and flammability properties of polymers. Our bench-scale processing instruments are used to prepare test specimens or evaluate the processability of materials. And all Dynisco instruments conform to the strictest industry, national and international standard test methods.



Rheological Testing

Melt Flow Indexer

The most precise instrument for the measurement of Melt Flow Rate (MFR) or melt volume rate (MVR) in quality control and research applications. The LMI 4000 is the first melt flow indexer to utilize a powerful 32-bit microprocessor to provide test parameter control, self-diagnostics and digital calibration. The on-board computer controls and displays temperature to $\pm 0.1^\circ\text{C}$ using a unique PID control algorithm. Four melt indexer models are offered in the advanced Dynisco LMI 4000 series, each with features designed to meet specific application requirements.

Model	Features & Benefits
LMI 4000	<ul style="list-style-type: none">• Advanced microprocessor design• ASTM D1238 and ISO 1133-2005 standards• Self-diagnostics capability• Comprehensive statistical capability• Simple push-button RTD calibration• Smart keys for easy programming• Bright, 4-line by 20-character vacuum fluorescent display• Windows™ software for test database and analysis



Capillary Rheometer

Designed to meet the demands of a 24-hour-a-day shop floor operation while maintaining the highest possible level of accuracy, repeatability and sensitivity. The LCR series rheometers are versatile and easy to use yet they offer the most sophisticated materials characterization, data analysis and reporting capabilities. The LCR 7001 can be used with a standard load cell or a barrel-mounted pressure transducer. Many years of service ensured through the use of tungsten carbide dies and a hardened and honed tool steel barrel. LAB KARS advanced rheology software provides programming, control, analysis and data storage capability.

Model	Features & Benefits
LCR 7000	<ul style="list-style-type: none">• Advanced microprocessor design• ASTM D3835 and ISO 11433 standards• Self-diagnostics capability• Comprehensive statistical capability• Simple push-button RTD calibration• Smart keys for easy programming• Bright, 4-line by 20-character vacuum fluorescent display• Windows™ software for test database and analysis



Rheological Testing (cont'd)

Viscosity-Transition-Modulus Rheometer

The VTM Rheometer is a more robust and versatile alternative to the traditional Dynamic Mechanical Analyzer (DMA). Measurements of melt-to-solid dynamic properties are provided as well as a wide range of the most meaningful parameters for plastics, including Tangent δ , melt viscosity (η^*), shear modulus (G' & G'') and Modulus cross-over point (G_c and ω_c). The VTM can also replace or eliminate traditional test methods such as melt flow index and gel permeation chromatography.

The VTM will increase analysis throughput with the optional fully automated sampler. Up to 100 samples may be tested with no need for operator interaction once testing is commenced. The VTM's automation system allows for operation outside normal laboratory hours, as well as the elimination of time-consuming clean-up between samples. This system also helps with eliminating operator influence on data.

Model	Features & Benefits
-------	---------------------

- | | |
|-----|--|
| VTM | <ul style="list-style-type: none">• Rapid analysis of samples with typical test times at 10 to 12 minutes• Employs an industry-unique closed cavity technology for analysis• Minimal clean-up between tests minimizes operator interaction• Easy-to-use software suite for quick data analysis• Automated sampler increases lab throughput• Capable of measuring Long Chain Branching of polymers |
|-----|--|



Online Rheometers

■ Dynisco's series of on-line Rheometers can be used to measure continuous, real-time ASTM D1238 Melt Flow Rate (MFR), high/low load MFR and Apparent Viscosity.

ViscoSensor – Online Rheometer

The world's smallest in-line polymer melt rheology instrument, measuring only 25 inches in length by 10 inches in width. The ViscoSensor is extremely easy to install, calibrate and operate making it the most cost-effective in-line sensor on the market. The ViscoSensor's zero discharge system returns the polymer back to the process, eliminating material waste. The ViscoSensor can be used to generate shear rate vs. viscosity data or continuous ASTM melt control tool that can be used for product quality and consistency



Features & Benefits

- Attaches to the process using a standard M18 port
- No waste stream
- Apparent Viscosity and shear rate available
- Online viscosity or melt index monitoring
- Online ASTM D1238 Melt Flow Rate
- Capillary is easy to replace

CMR IV – Continuous Melt Rheometer

Specifically designed for the thermoplastics resin industry, provides continuous measurements of the Melt Flow Rate or Apparent Viscosity directly on the manufacturing process. The CMR measures the flow of the molten resin through a single die. The CMR series can be configured to measure Melt Flow Rate, high/low load MFR, Apparent Viscosity, or to perform other customer-defined tests. Communications to an external distributed control system are available.



Features & Benefits

- Online ASTM D1238 Melt Flow Rate
- Data exchange by analog and digital input/outputs
- Compact measuring head
- A range of metering pumps for specific applications
- Online Apparent Viscosity
- Systems for hazardous locations
- Rugged industrial designs

FCR – Flow Characterization Rheometer

The FCR measures the flow of molten resin through two separate dies. The FCR can be configured to measure dual Melt Flow Rates, simultaneous MFR and Apparent Viscosity, a range of apparent shear viscosity, and extensional viscosity using the Cogswell Equations. Simple "in the field" calibration. Systems for hazardous locations available.

Features & Benefits

- Online Apparent Viscosity over broad shear rate range
- Online measurements of polymer extensional properties
- Online ASTM D1238 Melt Flow Rate at two load conditions
- Dual capillary designs
- Ideal for flow ratio measurements

REX – Rheology Extrusion System

Designed to continuously sample polymer powder, flake, or pellets from a process and convey it to a small 3/4-inch extruder, which melts and conditions the sample for rheological testing. This system provides capability for continuous monitoring of polymer MFR and viscosity, or other analyses, for quality and process control.



Features & Benefits

- Multiple online analyses (rheology, composition, contamination)
- Simple calibration
- Installation on the manufacturing floor or outside of the production area
- Automated pneumatic transfer of samples to extruder
- Fast response time for process control applications
- Data i/o communication to a distributed control system (DCS) via digital or analog signals

Laboratory Processing Equipment

Heat Distortion and Vicat System

This advanced HDV System offers sophisticated control and simple operation. The Windows™ control and analysis software offers easy setup, operation, analysis and calibration. Display and plot distortion vs. temperature and temperature rise rate curves.



Model	Features & Benefits
HDV3	<ul style="list-style-type: none"> • Insulated stainless steel bath • Up to 6 (universal) test stations • Digital gauges with LVDT transducers • Maximum temperature 300°C, up to 400°C (optional) • Temperature rise rates 50°C/hour or 2°C/minute • Invar specimen frames for low linear expansion • PC-controlled frame calibration • Individual specimen thermocouples • High temperature safety reset

Limiting Oxygen Index Analyzer

Provides a means for quality control and determining the relative flammability of plastics compounds and other materials by calculating the minimum oxygen concentration that will support combustion.



Model	Features & Benefits
LOI	<ul style="list-style-type: none"> • ISO 4589 and ASTM D2863 • Precision flow meters for accurate adjustment of gas mixture • Accurate calculation of oxygen concentration • Rigid specimen holder • Uniform combustion atmosphere • Dual inlet gas pressure gauges • Ignition wand with variable gas control valve • Gas line inlet filters • Smoke density measurement system (optional) • U-shaped holder for non-rigid specimens (optional)



LME – Laboratory Mixing Extruder



The LME is a versatile laboratory tool for evaluating the processability of a variety of plastics, rubbers and additives prior to production. The unique, Maxwell screwless design enables the LME to mix, compound and extrude materials that vary widely in both physical form and characteristics.

Features & Benefits

- Able to process very small quantities of material (1 gram)
- Residence time less than a minute
- Variable speed rotor control 5–260 rpm
- Separate header and rotor heater for temperature controls
- Maximum temperature 400°C
- Various Headers and Orifices: ribbon, spinnerette, tube and wire coating



TUS – Take Up System

The Take Up System is an important accessory to the LME. The dual purpose machine draws material from the LME into fibers. The fiber is wound onto the spindle with a variable speed drive to produce the desired fiber diameter. The two lower rollers of the TUS pull the extrudate from the LME to form a strand that can be cut into pellets with the LEC Pelletizing Chopper.



LEC – Pelletizing Chopper

The Chopper pelletizes the extrudate from the LME. Pellet size is determined by the feed rate to the cutter from the Take Up System.

LMM – Laboratory Mixing Molder



The LMM is a bench-top mixer and molder that prepares miniature specimens from as little as one gram of material. Extensive mixing produces high shear rates to break up clumps of material. Intensive mixing produces a folding action to uniformly distribute ingredients. Many molds available to accommodate a range of test methods including D1208 and D1822.

Features & Benefits

- Digital display PID temperature
- Operating temperature
- Accommodates mold
- Variable speed rotor
- Interchangeable 2.0 cc cup
- Heated C-clamp for additional process (optional)

Impact Testing



API – Advanced Pendulum Impact Tester

The API determines the impact strength of standard tension-impact specimens. This high-precision instrument measures the performance of plastics and composites according to ASTM and ISO test methods for Izod, Charpy and Tensile Impact. The automatic brake prevents secondary strike impacts and allows variable starting angles to ensure optimal impact velocity. Siemens-based PLC and operator interface used for all calibration and test functions.

Features & Benefits

- ISO/ASTM conformance for all sample types
- Izod, Charpy and Tensile Impact Testing
- Available for high energy Impact Testing up to 50 joules
- Automatic brake
- Computerized operator interface
- Cold box for low temperature impact testing (optional)
- Digital clamping force adjustment for Izod testing (optional)
- Test reports available through serial printer port
- Instrumented Impact hammers available for R&D applications
- ISO 179, 180, 8256
- ASTM D256, D6110, D1822 and others



ASN – Automatic Sample Notcher

The ASN prepares notched specimens for conducting impact testing of plastic and related materials per ISO and ASTM specifications. Standard 45° single tooth carbide cutter with 0.25 mm radius. Many optional cutters available including 1mm radius.

Features & Benefits

- Variable speed rotary cutter and sample table
- Transparent safety cover with power shutoff switch
- Sample vise accommodates up to 16 samples
- Air sample cooling
- Notch verification tester available (metric or English scale)
- Various cutters available

Miscellaneous



Mini Granulator

The Mini Granulator (not pictured) is ideal for lab preparation of molded or extruded parts into granules suitable for melt index or capillary rheometer tests. The Mini Granulator has power enough to granulate whole PET bottles at a single pass. The Mini Granulator is quiet and compact to fit the laboratory environment.

Block-Reblock

The D9046 measures the static adhesion known as blocking which can exist between layers of certain types of plastic films. The D9046 increases the accuracy and speed of blocking tests and meets or exceeds all conditions specified by ASTM D3354.

Indicators and Controls

■ Dynisco offers a wide range of instruments to complement our pressure and temperature transducers, making it easy to select the combination that will perfectly match your application.



1/8 DIN Pressure / Temperature / Process Indicators

Features & Benefits

- 1390
- 1391
- 1392
- mA, Vdc and strain gage inputs provide versatile process monitoring
- mA and Vdc linear retransmission enables the user to log process trends
- Field-scalable display and dual configurable alarms to meet measurement indication requirements
- UL and CE approved to meet US and European requirements
- Transmitter power supply to power 2 and 4 wire transmitters (1391 only)
- Optional RS485 with MODbus/Jbus selectable communications for remote data retrieval



1/16 DIN (TCS) and 1/8 DIN (TCE) Temperature Controllers

Features & Benefits

- TCS
- TCE
- Self-tuning PID algorithm
- Intuitive color display with text messaging
- Universal process and TC/RTD inputs
- Multi-function ramp-dwell/process timer
- Soft start output power limiter
- Up to 4 control and alarm outputs
- Load current display and fault monitor
- Up to 3 Logic inputs
- Serial ModBus communications option



1/4 DIN Pressure / Process Indicators

Features & Benefits

- UPR800
- Offers availability of differential pressure indication
- TC, RTD, mA, Vdc, and strain gage inputs provide versatile process monitoring
- mA and Vdc linear retransmission enables the user to log process trends
- Secondary digital display captures user-defined high or low process peak values
- Field-scalable display with dual configurable alarms to meet measurement indication requirements
- UL, cUL and CE approved to meet US and European requirements
- Optional transmitter power supply to power 2 and 4 wire transmitters
- Optional RS485 with MODbus/Jbus selectable communications for remote data retrieval



1/4 DIN Pressure / Process Controllers

Features & Benefits

- ATC880
- Unique self-tuning algorithm allows for calculation of tuning parameters
- Secondary digital display for setpoint, deviation from setpoint, % output or high low process peak values
- Field-scalable display with three configurable alarms to meet measurement requirements
- mA and Vdc linear retransmission enables the user to log process trends
- mA, Vdc, and strain gage inputs provide versatile process control
- Scalable up to 99,950 counts allows display of actual engineering units

Indicators and Controls

OPT•TROL Extrusion Control Systems

■ The OPT•TROL Extrusion Control System provides for extruder pressure control, combined with precision temperature control in a single, plug-and-play, factory-programmed unit featuring a high-resolution, full-color, touch-screen operator station.

Operator Station



Features & Benefits

Type	• 12.1" (inch) user-friendly, color screen
Interaction	• Touch screen TFT (thin film transistor) LCD
Resolution	• 800 x 600
Processor	• High-speed, ARM 200MHz processor
Screen Application	• Optigrafix™
Update	• <1mS, pressure loop control
Operating System	• Microsoft® CE.NET
Communications	• Modbus TCP Ethernet
	• USB ACTIVESYNC™ port
Storage	• 2 USB ports (1 front bezel located)
	• 2 GB compact flash memory for recipe and file storage



Control Module

Features & Benefits

Hardware	• 4-slot closed chassis; 6-slot open chassis optional
Temperature	• 8 zones, up to 40 optional (in 8 loop blocks)
Control Type	• Adaptive auto-tune
Input Type	• J, K thermocouple
Output Type	• 2 low current 24Vdc, 30mA (heat only or heat/cool)
Pressure	• 2 independent control loops
Control Type	• Adaptive auto-tune, bumpless
Input Type	• Strain gauge, 0-10Vdc or 4-20mA
Output Type	• 0-10Vdc or 4-20mA
Other	• 4 analog inputs for monitoring and alarm
Input Type	• 0-10Vdc or 4-20mA

Applications & Performance

Specifications

Installation Types	• New or retrofit existing • Single-screw, twin-screw, co-extrusion or blown film • For small to larger extruders, provides lower cost-of-entry control
Control Capability	• Up to 40 zones of control • All zones can be heat only or heat/cool
Temperature Alarms	• Process & Deviation Hi/Lo, T/C Break, Heater Burnout
Temperature Set Points	• Run and Idle, selective as group or individually
Pressure Alarms	• Hi, Lo, Hi/Hi
T/C Break	• Upscale readout, Auto-comp selectable
Display Operating Temp	• 32° to 140° (0° to 50°C)
Controller Operating Temp	• 32° to 140° (0° to 60°C)

Approvals & Certifications

Specifications

CE mark	• Directive EN61010-1:2001
Agency approval cUL (UL)	• C22.2 No. 61010.1-04 (61010-1 2nd Ed)

Sensors

■ These Standard Series transducers and transmitters are the most popular pressure sensors in the extrusion industry. Dynisco has added the new DeviceNet and CANopen transmitters to the product line. They are designed for plastic OEMs and processors who want to take the next step in communication, from analog to digital output. The MRT, Multi Range Transducer, is also part of the family and is ideal for an extruder that uses several different pressure ranges and maintains spares. The MRT is field-selectable

between four of the most commonly used pressure ranges (3,000; 5,000; 7,500 and 10,000 psi).

■ Dynisco offers a variety of mechanical and electrical pressure gauges designed to provide safety and local indication. Indication and alarms provide a warning for over pressure situations. Dual pressure and temperature models are available.



Burst Plugs

Features & Benefits

- | | |
|-------|---|
| BP420 | <ul style="list-style-type: none"> • Burst pressure of 1,500 to 15,000 psig • Simple, intrinsically safe design • Leak - tight seal • Low installation and maintenance costs • Up to 750°F melt temperatures • Accuracy of $\pm 5\%$ • Inconel Disc |
|-------|---|



Mechanical Gauges

Features & Benefits

- | | |
|-----------------------------|---|
| PG441R
PG442R
TPG443R | <ul style="list-style-type: none"> • Mechanical gauge requires no maintenance or electrical power • Stem up and stem down versions available for quick and easy viewing and flexible mounting • 5,000 and 10,000psi versions provide added safety in the extrusion process • Variety of rigid and flexible stem lengths allows for customer-defined configuration • Thermocouple and RTD configurations available for dual pressure and temperature measurement • Available in Bar and kg/cm² (other ranges available) |
|-----------------------------|---|



Dyn-X Series / PT480 Series

Features & Benefits

($\pm 1.0\%$ Combined Error)

- | | |
|--|---|
| Dyn-X, PT480
Dyn-X-MA
Dyn-X-V
Dyn-X-TC, TPT484
Dyn-X-MA-TC
Dyn-X-V-TC | <ul style="list-style-type: none"> • Outputs including 3.33mV/V, 4–20mA, 0–5Vdc and 0–10Vdc for user-defined compatibility • 500 to 15,000psi versions for range-specific extrusion processes • Variety of rigid and flexible stem lengths allows for customer-defined configuration • Thermocouple and RTD configurations available for dual pressure and temperature measurement • Available in Bar and kg/cm² (other ranges available) |
|--|---|



Melt Monitor

Features & Benefits

RMM/RMMT
FMM/FMMT
RMMX/RMMXT
FMMX/FMMXT

- Dual digital display can provide pressure and temperature measurement
- Custom defined alarms with LCD display for critical pressure warning or machine shutdown
- Peak display and digital auto zero through easy to use push buttons
- Optional analog retransmission and MODbus communications
- Variety of rigid and flexible stem lengths allows for customer-defined configuration
- Available in Bar and kg/cm² (other ranges available)



PT460E Series

Features & Benefits

(± 0.5% Combined Error)

PT460E
PT462E
TPT463E
PT467E
PT4624/5/6
PT4674/5/6
TPT4634/5/6

- Outputs including 3.33mV/V, 4–20mA, 0–5Vdc and 0–10Vdc for user-defined compatibility
- 500 to 30,000 psi versions for range-specific extrusion processes
- Variety of rigid and flexible stem lengths allows for customer-defined configuration
- Several diaphragm materials for increased corrosion or abrasion protection
- Thermocouple and RTD configurations available for dual pressure and temperature measurement
- Available in Bar and kg/cm² (other ranges available)



PT420A Series

Features & Benefits

(± 0.25% Combined Error)

PT420A
PT422A
TPT432A
PT435A

- 3.33mV/V output provides industry standard low level output
- 500 to 30,000psi versions for range-specific extrusion processes
- Variety of rigid and flexible stem lengths allows for customer-defined configuration
- Several diaphragm materials for increased corrosion or abrasion protection
- Thermocouple and RTD configurations available for dual pressure and temperature measurement
- Available in Bar and kg/cm² (other ranges available)



MRT Series

Features & Benefits

(± 0.5% Combined Error)

MRT460
MRT462
MRT463

- Four field-selectable pressure ranges for maximum versatility
- 3.33mV/V output for direct input into local display instrumentation
- Variety of rigid and flexible stem lengths allows for customer-defined configuration
- Several diaphragm materials for increased corrosion or abrasion protection
- Thermocouple and RTD configurations available for dual pressure and temperature measurement
- 3,000 / 5,000 / 7,500 / 10,000 psi
- Available in Bar and kg/cm² (other ranges available)

Sensors

■ The SPX family of sensors reliably withstands the rigors of process measurement, such as in a plastic extrusion system, but offers different features and levels of performance at various budget levels.

The SPX-L employs a technique to reduce the effects of non-linearity in a sensor measurement.

The SPX-T pressure sensor has an RTD temperature sensor to limit the impact of temperature, an important variable commonly affecting the performance of polymer melt control systems.



SPX Series

Features & Benefits

(± 0.25% or ± 0.5% Combined Error)

- | | |
|--|--|
| <p>SPX2241
SPX2242
SPX2243
SPX2244
SPX2290
SPX2291
SPX2292</p> | <ul style="list-style-type: none"> • 4–20mA output provides analog output for direct PLC and DCS connection • HART™ protocol provides greater operator convenience, safety and maintenance • 250 to 30,000psi versions for range-specific extrusion processes • Convenient zero and span buttons available on amplified units for easy setup • Intrinsically safe and explosion-proof versions available for hazardous area installations • All types of threaded and button-seal process connections designed for a variety of process connections • Available in Bar and kg/cm² (other ranges available) |
|--|--|



SPX-L Series

Features & Benefits

(± 0.2% Combined Error utilizing "DynaLarity")

- | | |
|--|--|
| <p>SPX-L 5342
SPX-L 5343
SPX-L 5344
SPX-L 5390
SPX-L 5391
SPX-L 5392</p> | <ul style="list-style-type: none"> • Improved accuracy with DynaLarity™ to +0.20% FSO • HART™ digital communications • ATEX Intrinsically Safe for hazardous environments • FM & CSA approved Explosion Proof for hazardous environments • Meets CE-PED requirements for European standards • 0 - 250 to 0 - 30,000 psi customer-defined ranges • Available in Bar and kg/cm² (other ranges available) |
|--|--|

These SPX transmitters represent the top of the line in melt pressure and temperature measurement and control. With combined errors as accurate as ±0.15% including temperature effects, you can bring the ultimate in control to the extrusion process. Hazardous area approved transmitters are available.



SPX-T Series

Features & Benefits

(± 0.15% or ± 0.25% Combined Error)

- | | |
|--|--|
| <p>SPX-T 3242, SPX-T 3342
SPX-T 3243, SPX-T 3343
SPX-T 3291, SPX-T 3391
SPX-T 3244, SPX-T 3344
SPX-T 3290, SPX-T 3390
SPX-T 3292, SPX-T 3392</p> | <ul style="list-style-type: none"> • Full scale temperature compensation • HART™ digital communication • Up to ± 0.25% combined error including temperature effects • 4 – 20 mA loop-powered output • 0 – 250 to 0 – 10,000 psi • 6:1 span turndown • Available in Bar and kg/cm² (other ranges available) |
|--|--|



Digital Series

Features & Benefits

(± 0.5% Combined Error)

- | | |
|---|--|
| <p>PT460DN
PT462DN
TPT463DN
PT460CAN
PT462CAN
TPT463CAN</p> | <ul style="list-style-type: none"> • DeviceNet and CANopen (digital) outputs for network capability • 500 to 30,000psi versions for range-specific extrusion processes • Variety of rigid and flexible stem lengths allows for customer-defined configuration • Several diaphragm materials for increased corrosion or abrasion protection • Thermocouple and RTD configurations available for dual pressure and temperature measurement • Available in Bar and kg/cm² (other ranges available) |
|---|--|

Food & Medical Products

■ Dynisco's PT410 / PT418 Series of pressure transducers are the ideal choice for food and medical extrusion measurements requiring a fill material that meets FDA and USDA requirements. Model PT410 uses a special high temperature fill (NaK, Potassium Sodium) and an Inconel diaphragm to allow accurate pressure measurements in processes with temperatures as high as 1000°F. Model PT418 uses an oil fill.



NaK Filled Series

Features & Benefits

(± 0.25% or ± 0.5% Combined Error, model specific)

- | | |
|--|---|
| <p>PT410
PT412
TPT412
PT415D</p> | <ul style="list-style-type: none"> • Special fill material for processes up to 1,000° F designed for high temperature applications • Meets FDA and USDA requirements for food and medical applications • Inconel 718 diaphragm for rugged, long-lasting transducer life • Excellent thermal stability and repeatability provide ideal high temperature measurement • 500 to 10,000psi versions for range-specific extrusion processes • Available in Bar and kg/cm² (other ranges available) |
|--|---|



Oil Filled Series

Features & Benefits

(± 0.5% Combined Error)

- | | |
|---|--|
| <p>PT418
PT419
TPT4194/5/6
PT4194/5/6
TPT4104/5/6</p> | <ul style="list-style-type: none"> • Special oil fill material meets CFR requirements and USDA H1 status • Multiple outputs including 3.33mV/V, 4–20mA, 0–5Vdc, and 0–10Vdc for user-defined compatibility • 1,000 to 10,000psi versions for range-specific extrusion processes • Intrinsically safe and explosion-proof versions available for hazardous area installations • Convoluted stainless steel diaphragm for added pressure measurement sensitivity • Available in Bar and kg/cm² (other ranges available) |
|---|--|



Push-Rod Series

Features & Benefits

(± 0.5% Combined Error)

- | | |
|---|--|
| <p>EPR3
EPR-TC
EPR4/5/6
EPR4/5/6-TC</p> | <ul style="list-style-type: none"> • Push-Rod design provides non-liquid filled pressure measurement • Variety of threaded process connections designed for standard and non-standard mounting holes • Multiple outputs including 3.33mV/V, 4–20mA, 0–5Vdc, and 0–10Vdc for user-defined compatibility • 1,500 to 10,000psi versions for range-specific extrusion processes • Available in Bar and kg/cm² (other ranges available) |
|---|--|



Accessories

Features & Benefits

- | | |
|--|--|
| <p>Burst Plugs,
Thermocouples
and Mounting
Hole Kits</p> | <ul style="list-style-type: none"> • Burst plugs for safety in overpressure situations • Thermocouples for measurement of polymer melt temperature • Mounting hole machining kits for machining accurate and correctly sized holes • Mounting hole cleaning kits to maintain clean and accurate mounting holes • Cable and connector assemblies |
|--|--|

The Dynipak Series

■ Dynisco offers a fast way to get started with our Dynipak kits. These kits contain everything you need to install our transducers and start using them to maximum advantage. Kits come with pressure transducers or transmitters, an indicator or controller, easy start instructions, anti-seize compound, a screwdriver and tips on use.



Classic Dynipaks

Features & Benefits

(± 0.5% or ± 1.0% Kits)

- | | |
|------------------------------------|--|
| <p>PT460E
PT462E
DYN-X</p> | <ul style="list-style-type: none"> • Ranges from 500 to 10,000psi available to meet pressure measurement requirements • 6" stem and 6/18 stem/flex configurations provide industry standard lengths • 1390-2-3 indicator for local pressure indication and auto-retransmission of pressure signal • Cable assembly connects transducer to indicator for simple installation • Available in Bar and kg/cm² (other ranges available) |
|------------------------------------|--|



MRT Dynipaks

Features & Benefits

(± 0.5% Kits)

- | | |
|--------------------------|--|
| <p>MRT460
MRT462</p> | <ul style="list-style-type: none"> • Four field-selectable pressure ranges for maximum versatility from one transducer • 6" stem and 6/18 stem/flex configurations provide industry standard lengths • 1390-2-3 indicator for local pressure indication and auto-retransmission of pressure signal • Cable assembly connects transducer to indicator for simple installation • Mounting hole machining kit provides proper transducer installation • Available in Bar and kg/cm² (other ranges available) |
|--------------------------|--|



Pressure/Temperature Dynipaks

Features & Benefits

(± 0.5% or ± 1.0% Kits)

- | | |
|--|--|
| <p>TPT463E
MRT463
Dyn-X-TC</p> | <ul style="list-style-type: none"> • J-Type thermocouple provides for dual pressure and temperature measurement • Ranges from 500 to 10,000psi available to meet pressure measurement requirements (TPT463E) • Four field-selectable pressure ranges for maximum versatility from one transducer (MRT463) • 6" stem and 6/18 stem/flex configurations provide industry standard lengths • UPR800-1-0-3 dual indicator for local pressure and temperature indication • Cable assembly connects transducer to indicator for simple installation • Available in Bar and kg/cm² (other ranges available) |
|--|--|



Differential Dynipaks

Features & Benefits

(± 0.5% or ± 1.0% Kits)

- | | |
|---|---|
| <p>PT460E
PT462E
PT4604
PT4624
Dyn-X-MA</p> | <ul style="list-style-type: none"> • Two pressure transducers or transmitters for before and after pressure measurement • 3.33mV/V or 4–20mA outputs for user-defined compatibility • Ranges from 500 to 10,000psi available to meet pressure measurement requirements • Utilizes differential control for screen changers or melt pumps • 6" stem and 6/18 stem/flex configurations provide industry standard lengths • Cable assembly connects transducer to indicator for simple installation • Available in Bar and kg/cm² (other ranges available) |
|---|---|



Transducer Repair and Service

Rather than replace damaged transducers... **Dynisco can repair a damaged transducer** on average for less than half the cost of a new model. We can return it to like-new specifications. If, upon inspection, the unit cannot be repaired, Dynisco will provide a replacement model at 10% off the standard list price.

Trade-in program saves 25% on replacement transducer. Send any pressure transducer by another supplier to Dynisco, and we will replace it with a comparable new Dynisco replacement at a discount of 25% off the standard list price. The new Dynisco transducer will be backed by our standard two-year warranty.

Dynisco's transducer calibration program is ideal for ISO9000 quality audits and preventing repairs. An annual transducer calibration helps ensure consistent accuracy and precision performance. In addition, if the transducer is out of, or near the end of, its warranty period, the calibration program will extend the warranty period for an additional 6 months.





Global Service

Dynisco offers global service coverage for our complete line of polymer test instruments through our sister company Alpha Technologies. A network of over 70 Alpha trained factory service engineers is on call worldwide to keep your equipment performing at industry-consensus standards. Alpha offers installation, operator training, breakdown repair and preventive maintenance services. We are registered to ISO 9001:2000 and accredited by A2LA and NAMAS to ISO 17025.

Our global service reach is particularly important to meet the challenges faced by multi-continent manufacturing. Dynisco Corporate Service Agreements can ensure reliable, industry-consistent standards throughout the world.

Essential Calibration and Maintenance

Routine calibrations and scheduled preventive maintenance are the keys to longer equipment life, reduced operation costs, and having peace of mind with test results you can trust. Our service programs:

- Ensure peak instrument performance
- Identify and correct any instrument malfunction
- Identify and replace worn or defective parts
- Increase reliability and reduce downtime
- Verify compliance with industry standards
- Provide Certificates of Calibration traceable to national standards

The Alpha Training Advantage

Alpha Technologies has a series of training courses to meet the requirements of our customers. These courses are designed to help you get the most from your investment. Having your staff fully trained and qualified by Alpha has many advantages:

- Avoids incorrect maintenance or operation that could adversely affect the production process
- Meets ISO and other quality procedures
- Optimizes systems uptime
- Yields consistently high quality data
- Minimizes operator influence on data
- Enhances precise data interpretation
- Ensures correct response to QC data in the production process
- Realizes the full capabilities of the data system
- Maintains skill levels through personnel changes
- Maximizes the use and efficiency of your instrumentation and software investment

To get more information or to schedule a service appointment, please contact your local Dynisco or Alpha Technologies office.



★ Technical/Regional Centers

Locations of Field Based Service Personnel

AMERICAS

- ★ Boston, MA
- ★ Akron, OH
- Alliance, OH
- Cuyahoga Falls, OH
- Norton, OH
- Hartford, CT
- Philadelphia, PA
- Raleigh, NC
- Charlotte, NC
- Atlanta, GA
- Nashville, TN
- Louisville, KY
- Chicago, IL
- Bettendorf, IA

- Baton Rouge, LA
- Houston, TX
- Dallas, TX
- Ontario, CA
- Los Angeles, CA
- Toronto, ON, Canada
- Montreal, PQ, Canada
- Mexico City, Mexico
- Panama City, Panama
- São Paulo, Brazil
- Buenos Aires, Argentina

EUROPE/AFRICA

- Manchester, Great Britain
- Gislaved, Sweden

- Düsseldorf, Germany
- ★ Heilbronn, Germany
- Amsterdam, Netherlands
- Brussels, Belgium
- Paris, France
- Lyon, France
- Barcelona, Spain
- Madrid, Spain
- Milan, Italy
- Rome, Italy
- Prague, Czech Republic
- Izmit, Turkey
- Moscow, Russia
- Port Elizabeth, South Africa

ASIA/PACIFIC

- Chennai, India
- Delhi, India
- Mumbai, India
- Bangkok, Thailand
- Kuala Lumpur, Malaysia
- Singapore, Singapore
- Shanghai, China
- Hong Kong, China
- Seoul, South Korea
- Taipei, Taiwan
- ★ Tokyo, Japan
- Sydney, Australia



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