



Thank you for considering MFD Pneumatics. MFD Pneumatics has pioneered reliable, well engineered, quality fluid power components for industry. A substantial fluid power distributor network, expert technical support and a one-year warranty support the MFD PNEUMATICS product line. Additionally, you will note that a toll-free telephone number and interactive website is available.

#### What can you expect from MFD Pneumatics?

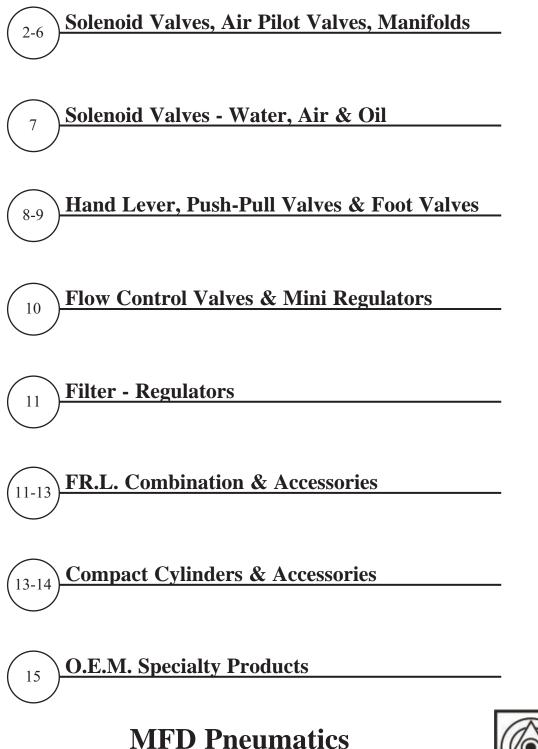
Product "fit and finish" that is uncommon in the fluid power business.
An extensive low cost product offering
Exceptional service

In addition, a sincere desire to exceed your expectations and to become your supplier of choice. MFD Pneumatics is distributed throughout North America.





## **Contents:**



phone 1-866-264-9560 or fax 1-773-685-0597



FM39322 ISO 9001-2000



#### **Solenoid Valves**



Model	M4V110-06	M4V120-06	M4V130C-06		
Media		Air	•		
Actuation		Internally pilo	oted		
Tuno	5		5 port 3 position		
Туре	5 port 2	5 port 2 position			
Flow	Cv 0.67		Cv 0.50		
Port size	1/8" NPT				
Lubrication	Not required				
Pressure range		22 to 120 PS	SI		
Temp. range		23~140°F			
Voltage range		±10%			
Power Consumption	24VDC:	:2.5W 110V	VAC:8.5VA		
Insulation	F class				
Protection	IP65 (DIN 40050)				
Connection	DIN / LED Connector or Grommet				
Max Frequency	5 cyc	les/sec	3 cycles/sec		

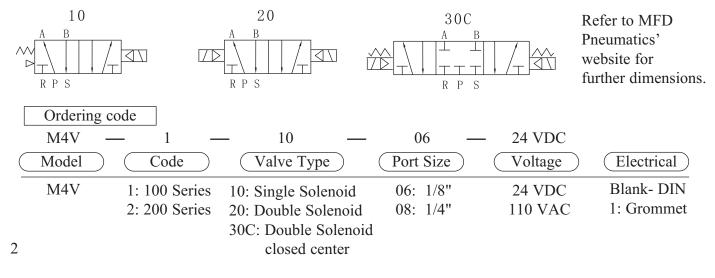
0.05 sec.

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M4V200 series

Model	M4V210-06	M4V220-06	M4V230C-06	M4V210-08	M4V220-08	M4V230C-08
Media			A	Vir		
Actuation	Internally piloted					
Туре	5 port 2	position	5 port 3 position closed center	5 port 2 position		5 port 3 position
Flow	Cv	0.78	Cv 0.67	Cv 0.89		Cv 0.67
Port size	1/8" NPTInlet port 1/4" NPT - Exhaust 1/8" NPT					ust 1/8" NPT
Lubrication			Not re	equired		
Pressure range			22 to 1	20 PSI		
Temp. range			23~]	l40°F		
Voltage range			-15%	~+10%		
Power Consumption			110VAC:2.5VA	24VDC:3.0	)W	
Insulation			F c	lass		
Protection			IP65 (DI	N 40050)		
Connection	DIN / LED Connector or Grommet					
Max Frequency	5 cycl	es/sec	3 cycles/sec	5 cycl	les/sec	3 cycles/sec
Min Activate Time			0.05	5 sec		

Min Activate Time





### **Solenoid Valves**



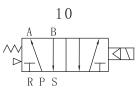
Refer to MFD Pneumatics' website for further dimensions.

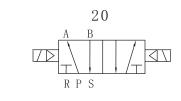
Model	M4V310-08	M4V320-08	M4V330C-08		
	IV14 V 3 1 0-00		W14 V 330C-08		
Media		Air			
Actuation	Internally piloted				
T	5 40 11		5 port 3 position		
Туре	5 port 2	5 port 2 position			
Flow	Cv	Cv 1.00			
Port size	1/4" NPT				
Lubrication	Not required				
Pressure range	22 to 120 PSI				
Temp. range		23~140°F			
Voltage range		±10%			
Power Consumption	24VDC:	:2.5W 110	VAC:8.5VA		
Insulation		F class			
Protection		IP65 (DIN 400	)50)		
Connection	DIN / LI	ED Connector	or Grommet		
Max Frequency	4 cycles/sec		3 cycles/sec		
Min Activate Time		0.05 sec.	•		

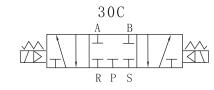
Model	M4V410-15	M4V420-15	M4V430C-15		
Media		Air			
Actuation	Internally piloted				
Туре	5 port 2 position		5 port 3 position closed center		
Flow	Cv	2.79	Cv 1.76		
Port size	1/2" NPT				
Lubrication	Not required				
Pressure range		22 to 120 P	SI		
Temp. range		23~140°F			
Voltage range		±10%			
Power Consumption	24VDC:	:2.5W 110	VAC:8.5VA		
Insulation		F class			
Protection	IP65 (DIN 40050)				
Connection	DIN / LED Connector or Grommet				
Max Frequency	3 cycles/sec				
Min Activate Time		0.05 sec.			

M4V400 series









Ordering c	ode				
M4V –	_ 3 _	- 10 -	08 —	– 24 VDC	
Model	Code	Valve Type	Port Size	Voltage	Electrical
M4V	3: 300 Series	10: Single Solenoid	08: 1/4"	24 VDC	Blank- DIN
	4: 400 Series	20: Double Solenoid	15: 1/2"	110 VAC	1: Grommet
		30C: Double Solenoid	f		
		closed center			



## **Air Pilot Valves**

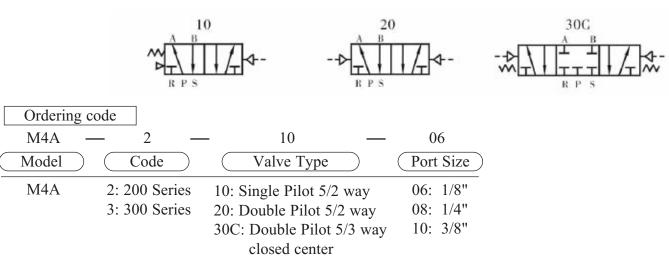
M4A200 series M4A300 series





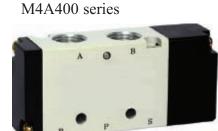
Model	M4A210-06	M4A220-06	M4A230C-06	M4A210-08	M4A220-08	M4A230C-08	
Media	Air						
Actuation		External pilot					
Туре	5 port 2 position		5 port 3 position closed center	5 port 2 position		5 port 3 position	
Flow	Cv	Cv 0.78 Cv 0.67		Cv	0.89	Cv 0.67	
Port size		1/8" NPT		Inlet port 1/	/4" NPT - Exha	ust 1/8" NPT	
Lubrication			Not re	equired			
Pressure range	22 to 120 PSI						
Temp. range	23~140°F						
Min Activate Time	5 cycl	es/sec	3 cycles/sec	5 cycl	les/sec	3 cycles/sec	

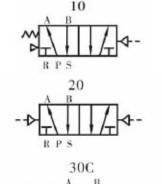
Model	M4A310-08	M4A320-08	M4A330C-08	M4A310-10	M4A320-10	M4A330C-10	
Media		Air					
Actuation			Extern	al pilot			
Туре	5 port 2 position		5 port 3 position closed center	5 port 2 position		5 port 3 position	
Flow	Cv 1.39		Cv 1.00	Cv 1.67		Cv 1.00	
Port size	1/4" NPT Inlet port 3/8" NPT - Exhaust 1/4" N					ust 1/4" NPT	
Lubrication			Not re	equired			
Pressure range	22 to 120 PSI						
Temp. range	23~140°F						
Min Activate Time	5 cycl	les/sec	3 cycles/sec	5 cycl	es/sec	3 cycles/sec	

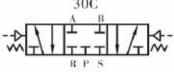




Air Pilot Valves

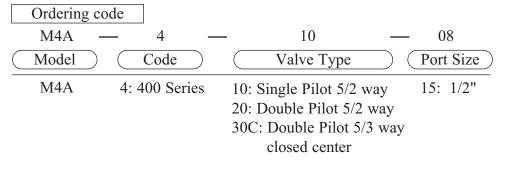






Model	M4A410-15	M4A420-15	M4A430C-15			
Media		Air				
Actuation	External pilot					
	5 port					
Туре	5 port 2	3 position closed				
		center				
Flow	Cv	2.79	Cv 1.68			
Port size		1/2" NPT				
Lubrication	Not required					
Pressure range	22 to 120 PSI					
Temp. range	23~140°F					
Min Activate Time	3 cycles/sec					

Refer to MFD Pneumatics' website for further dimensions.



#### Manifolds



Gaskets and valve mounting screws included with manifold.

# Manifold Blanking Plate



Model	M4V100	M4V200	M4V300	M4V400
		M4A200	M4A300	M4A400
M100M				
M200M				
M300M			•	
M400M				

Refer to MFD Pneumatics' website for further dimensions.

Ordering code	
M100M	— 2F
Model	Number of Stations
M100M: 100 Series Valve M200M: 200 Series Valve M300M: 300 Series Valve M400M: 400 Series Valve	M100M: 2F to 8F Stations* M200M: 2F to 8F Stations* M300M: 2F to 8F Stations* M400M: 2F to 7F Stations*

Model	М100М-В	М200М-В	М300М-В	M400M-B
M100M				
M200M				
M300M				
M400M				

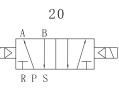


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Solenoid Val	Ves	Model		N	I3V1-06	
		Media		10.	Air	
		Actuation		Dir	ect acting	
	M3V1	Port size			/8" NPT	
	series				- 2 position	
		Туре		· ·	$3 \sim 140^{\circ} \text{ F}$	
C C		Temp. range				
		Flow			Cv .051	
		Lubrication			t required	
		Pressure range		0 to 120 PSI		
		Power consumption		24 VDC:3.0W / 110 VAC: 8.5VA		
		Protection		IP65(DIN40050)		
11	100 m	Connection		DIN / LED Connector or Grommet		
		Max. frequency		10 cycles per sec.		
	/	Insulation		F class		
R P		Voltage range	Voltage range		-15%~+10%	
		Min. activate tim	ie	0	.05 sec.	
Ordering code						
M3V —	1 —	06 —	24VDC —	-	Refer to MFD	
Model C	code I	Port Size	Voltage	Electrical	Pneumatics' website for	
M3V 1:1	Series	06: 1/8"	24 VDC	Blank: DIN	further dimensions.	
			110 VAC	1: Grommet		



10  $\triangleleft \backslash$ R P S



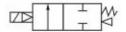
Model	M4M310-08 & M4M320-08
Media	Air
Actuation	Internally piloted
Port size	1/4" NPT
Туре	5 port - 2 position
Temp. range	23~140° F
Flow	Cv 1.39
Lubrication	Not required
Pressure range	22 to 116PSI
Douvon consumption	24 VDC:3.0W
Power consumption	110 VAC: 8.5VA
Protection	IP65(DIN40050)
Connection	DIN Connector / LED
Max. frequency	3 cycles per sec.
Insulation	F class
Voltage range	-15%~+10%
Min. activate time	0.05 sec.

	Ordering c	code			
	M4M -	_ 3 _	- 10 -	08 –	– 24VDC
$\left( \right)$	Model	Code	Valve Type	Port Size	Voltage
	M4M	3: 300 Series	10: Single Solenoid	08: 1/4"	24 VDC
6			20: Double Solenoid		110 VAC



#### **Solenoid Valves**

M2PV series





#### **Valve Specifications**

Model	M2PV150-15	M2PV250-25	
Acting	Internally Piloted		
Acting Type	Piston norm	nally closed	
Orifice Size	1/2"	1"	
Flow	Cv 5.30	Cv 12.00	
Port size	1/2" NPT	1" NPT	
Viscosity limit	Under 20 CST		
Operating	Minimu	m 7 PSI	
Temperature			
Differential	Maximum 142 PSI		
Proof Pressure	213 PSI		
Material	Bra	ass	

#### **Solenoid Specifications**

Model	Power	Freq.	Voltage Range	Power	Electrical	Insulation
M2PV150	AC	50Hz	-15%~+10%	110VA	DIN or	Class B
M2PV250	DC	-	±10%	9.0W	Grommet	

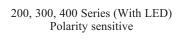
#### **Ambient and Fluid Temperature**

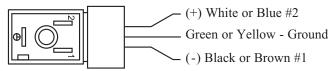
Temperature	Dower	Fluid	Ambient			
remperature	TOWCI	Water Std.	Air Std	Oil Std	Temp (F°)	
Max	AC	140	176	140	140	
IVIAN	DC	104	140	104	104	
Min	AC DC	33.8	-41	-50	-50	
Insulation			Class B	Class B		

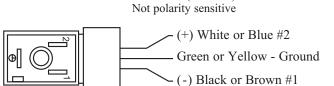
Refer to MFD Pneumatics' website for further dimensions.

Ordering code					
M2PV –	— 150	— Е	<u> </u>	— 24VDC —	- 1
Model	Oraface Size	) Seal Material	Port Size	Voltage	Electrical
M2PV: 2 port 2	150:	E: EPDM	15: 1/2"	24 VDC	Blank: DIN
position solenoid	250:		25: 1"	110 VAC	1: Grommet
valve					

#### DIN Connector Hook-Up Diagram







Series 100 (No LED)



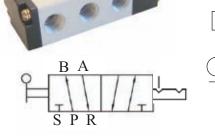
Hand Lever

M4H400 series

Valves



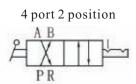
Model	M4H210-06	M4H310-08			
Fluid	Air				
Actuation	Direct actin	Direct acting hand lever			
Туре	5 ports - 2 position - Detented				
Flow	Cv .078	Cv 1.39			
Port sizes	1/8" NPT 1/4" NPT				
Pressure range	0 to 120 PSI				
Temperature	23 to	23 to 140° F			
Lubrication	Not required				
Refer to MFD Pneur	natics' website for furth	er dimensions.			



Refer to MFD	Pneumatics'	website fo	or further of	dimensi	ons.
Ordering of	code				
M4H -	3		10		08
Model	Code		Valve Typ	e	Port Size
M4H	2: 200 Serie		port - 2 po	osition	06: 1/8"
	3: 300 Serie	es			08: 1/4"



Closed Center



Model	M4HV310-08-S	M4HV410-15-S	M4HV330-08-S	M4HV430-15-S		
Fluid	Air					
Туре	4 ports -	2 position	4 ports - 3 position Closed Center - Detented			
Flow	Cv 0.89	Cv 5.29	Cv 0.89	Cv 5.29		
Port sizes	1/4" NPT	1/2" NPT	1/4" NPT 1/2" NPT			
Pressure range		0 to 1	20 PSI			
Temperature	23 to 145° F					
Lubrication		Not r	equired			

	Ordering	code			
	M4HV	<u> </u>	— 10 —	08 —	– S
$\left( \right)$	Model	Code	Valve Type	Port Size	Mounting Type
	M4HV	3: 3 Series 4: 4 Series	10: 4 port - 2 position 30: 4 port - 3 position	08: 1/4" 15: 1/2"	S: Panel nut



### **Push - Pull Valves**

M4L series



Model	M4L210-06	M4L310-08	
Fluid	Air		
Port size	1/8" NPT	1/4" NPT	
Pressure range	0 to 120 PSI		
Flow	Cv .78	Cv 1.39	
Temperature	23 to 140° F		
Туре	5 Port - 2 Pos	sition Detented	

Refer to MFD Pneumatics' website for further dimensions.

	Orderin	ng code				
	M4L	— 2		10		08
$\subset$	Model	Code	$\sum$	Valve Typ	e)	Port Size
	M4L	2: 200 Seri	ies 10:	5 port - 2 p	osition	06: 1/8"
		3: 300 Seri	ies			08: 1/4"

#### **Foot Pedal Valves**

M4F series



Model	M4F210-08G	M4F310-08LG				
Туре	5 ports -	2 position				
Fluid	Air					
Operating	Direct Acting					
Port size	1/4" NPT					
Pressure range	0 to 1	20 PSI				
Temperature	23 to 140° F					
Lubrication	Not required					

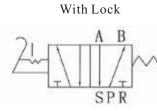
Refer to MFD Pneumatics' website for further dimensions.

Ordering co	ode			
M4F210 —	- 08		G	
Model	Port Size		Note	$\supset$
M4L	08: 1/4"	G: Non-	locking	foot
		pedal	l with G	uard
ala		LG: Lock	ing foot	t pedal

with Guard

Without Lock







## **Flow Control Valves**

MASC series	
•	

Model	1	MASC100-06	MASC200-08	MASC300-10	MASC300-15	
Fluid	Air					
Port size		1/8" NPT	1/4" NPT 3/8" NPT		1/2" NPT	
Pressu	ire range	nge 0 to 140 PSI				
Tempo	erature		23 to 1	40° F		
Flow Cv .407 .813		1.524	2.54			
FIOW	SCFM	14.1	28.2	53.0	88.3	

Refer to MFD Pneumatics' website for further dimensions.

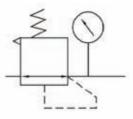
	Orderin	g code			
	MASC	—	200		08
$\subset$	Model	$) \subset$	Туре	$\supset$	Port Size
	MASC	1:	100 Set	ries	06: 1/8"
		2:	200 Set	ries	08: 1/4"
		3:	300 Set	ries	10: 3/8"
					15: 1/2"

## **Mini Regulators**

Model	MSR200-06	MSR200-08			
Fluid	Air				
Port Size	1/8" NPT 1/4" NPT				
Pressure range	8 to 140 PSI				
Max. Pressure	145 PSI				
Temperature	23 to 140° F				
Туре	Relieving / Press to lock adjustable knob				
Body Material	Aluminum				
Includes	Gauge / Bracket / Nut / 2 Gauge Ports				

Ordering	code			
MSR		200		08
Model	$\bigcirc$	Type	$\supset$	Port Size
MSR	200	: 200 Se	eries	06: 1/8"
				08: 1/4"





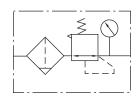


## **Filter - Regulators**

	1.08010					
Model	MGFR200-06	MGFR200-08	MGFR300-08	MGFR300-10	MGFR400-15	
Fluid		•	Air			
Port size	1/8" NPT	1/4" NPT	1/4" NPT	3/8" NPT	1/2" NPT	
Туре	All units ar	e relieving regu	lators with pus	h to lock adjust	tment knobs	
Micron Rating			40μ			
Pressure range	23 to 120 PSI					
Max. Pressure	145 PSI					
Temp. range	41 to 140° F					
Drain bowl capacity	2.2 FI	L. OZ.	8.7 FI	L. OZ.	17.5 FL. OZ.	
Bowl material	Polycarbo	onate bowl	Polycarbonate	e bowl with me	tal bowl guard	
Drain	Semi-auto	Semi-auto	Auto	Auto	Auto	
Ordering	g code M	IGFR200 —	08			
		Model ) (	Port Size			
	N	IGFR200	06: 1/8"			
	N	08: 1/4"				
		IGFR400	10: 3/8"			
			15: 1/2"			

Model





#### FRL Combination

Fluid			Air					
Port size	1/8" NPT	1/4" NPT	1/4" NPT	3/8" NPT	1/2" NPT			
Туре	All units are	e relieving regu	ilators with pus	h to lock adjus	tment knobs			
Filtering		40μ						
Pressure range		23 to 120 PSI						
Max. Pressure		145 PSI						
Temp. range	41 to 140° F							
Drain bowl capacity	2.2 FI	L. OZ.	8.7 FL. OZ.		17.5 FL. OZ.			
Oil bowl capacity	5.5 FI	L. OZ.	16.4 F	34.9 FL. OZ.				
Bowl material	Polycarbo	nate bowl	Polycarbonate	Polycarbonate bowl with metal bowl guard				
Mounting		Fully c	ompatible to SN	MC FRL				
Drain	Semi-auto	Semi-auto	Auto	Auto	Auto			
Ordering	g code M	IGFC200 —	08					
		Model (	Port Size	Refer to N				
	Μ	IGFC200 IGFC300	06: 1/8"     Pneumatics'       08: 1/4"     for further direction					
	Μ	IGFC400	10: 3/8" 15: 1/2"		1			

MGFC200-06 MGFC200-08 MGFC300-08 MGFC300-10 MGFC400-15





### **FRL** Accessories

MGZ series Pressure Relief Valve





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Model	MGZ200		MGZ300		MGZ400
WIOUCI	06	08	08	10	15
Fluid	Air				
Port Size (NPT)	1/8" 1/4" 1/4" 3/8" 1/2"				
Acting type	Manual				
Valve type	3 port - 2 way				
Pressure range	0~0.9MPa (0-130 PSI)				
Proof pressure	1.5MPa (215 PSI)				
Temperature	41-140° F				
Operation angle			90	0	

Refer to MFD Pneumatics' website for further dimensions.

	Ordering co	ode		
	MGZ300 -	— 08		Т
(	Model	Port Size	(	Accessories
_	MGZ200	06: 1/8"		T: T- bracket
	MGZ300	08: 1/4"		Included
	MGZ400	10: 3/8"		
		15: 1/2"		

#### MGA series Air Distribution Block



Model	MGA214		MGA314		MGA414
WIGGET	06	08	08	10	15
Fluid	Air				
Port Size (NPT)	1/8"	1/4"	1/4"	3/8"	1/2"
Way number	4				
Pressure range	0-130 PSI				
Proof pressure	1.5MPa (215 PSI)				
Temperature			41-14(	)° F	

Ordering code	] MGA214 –	- 08 -	<b>–</b> T
	Model	Port Size	Accessories
	MGA214	06: 1/8"	T: T- bracket
	MGA314	08: 1/4"	Included
	MGA414	10: 3/8"	
		15: 1/2"	



## **FRL** Accessories

MGV series Soft Start-up Valve





Model	MGV200-06	MGV200-08	MGV300-08	MGV300-10	MGV400-15				
Fluid		Air							
Port Size	1/8"								
Pressure range		2.5~9.0bar (0.25~0.9MPa) (35-130 PSI)							
Proof pressure		215 PSI							
Temperature	41-140° F								
Acting Type	Standard Control								
Exhaust port size	1/	1/4" 3/8" 1/2"							
Power connection		DIN or Grommet							
Voltage		110VAC 24VDC							
Voltage range		-15%Us~10%Us							
Insulation			Class B						
Power consumption		110V AC: 2.5 VA / 24V DC: 3.0 W							

Refer to MFD Pneumatics' website for further dimensions.

Ordering code	] MGV300 —	- 08 -	— T –	— 24 VDC
	Model	Port Size	Accessories	Voltage
	MGV200 MGV300 MGV400	06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	T: T- bracket Included	24V DC 110V AC

#### **Compact Cylinders**



Bore size (mm)	12	20	25	32	50			
Fluid	Double Acting							
Fluid		Air Filtration 40µ						
Pressure range	14.5 to 130 PSI							
Temperature range F	32~176° F°							
Port size		M5	1/8" NPT	1/4" NPT				

All bore sizes include a magnetic piston. Additional stroke lengths available. Refer to MFD Pneumatics' website for further dimensions.

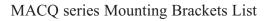
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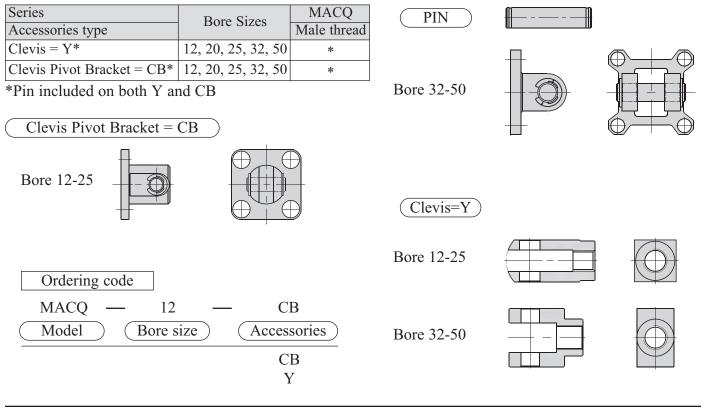
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	Ordering c	ode			
	MACQ -	— S —	- 20 -	- 25	— В
$\left( \right)$	Model	Magnet	Bore Size	Stroke	Rod type
	MACQ	S: With	12	15, 25, 50 mm	B: Male rod
		magnet	20	15, 25, 50 mm	Blank:
			25	15, 25, 50, 65 m	m Female
			32	15, 25, 50, 65 m	m
			50	15, 25, 50, 65 m	m 13

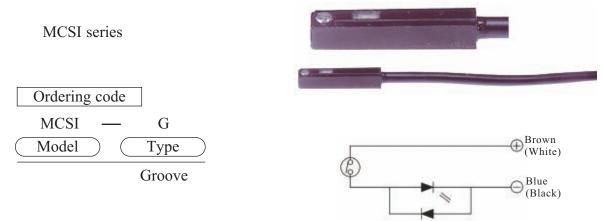


## **Compact Cylinder Accessories**





#### **Sensor Switches**



Sensors switch type	Operating voltage range	Operating current range	Response Time		Vibration Resistance	Lemnerature	Environmental Protection	Lamp	Lead Wire	Life Time Cycles
MCSI - G	DC: 5V-240V AC: 5V-240V			300m/S (30G)	10-50 (Hz)	32 to 140° F	IP-67	LED	2M	At Least 5 million



## **Specialty Products For O.E.M Quantities Only**





#### **Compact Cylinders**

Festo Interchangeable Single Acting Double Acting Double Rod

#### **ISO Standard Cylinders**

(6431, VDMA24562) Smooth Body Single Acting Double Acting Double Rod Adjustable Stroke

## Twin Rod Cylinders

#### **Multi-Mounting Cylinders**

Single Acting Double Acting Double Rod Adjustable Stroke Non-Rotating

#### **Stainless Steel Cylinders**

Single Acting Double Acting Double Rod Adjustable Stroke Versatile Mounting









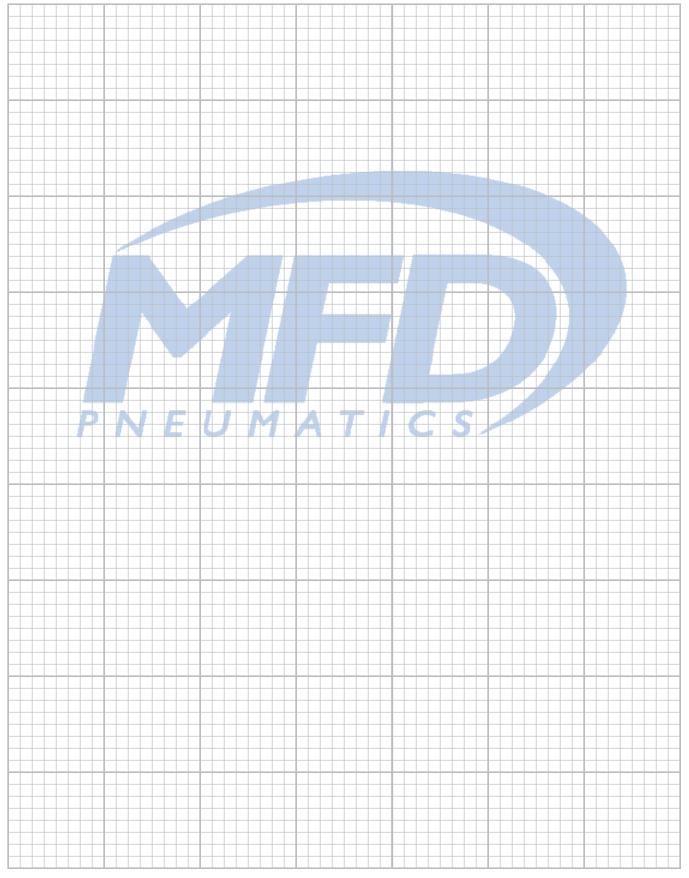


## Notes





### Notes





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