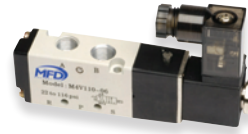
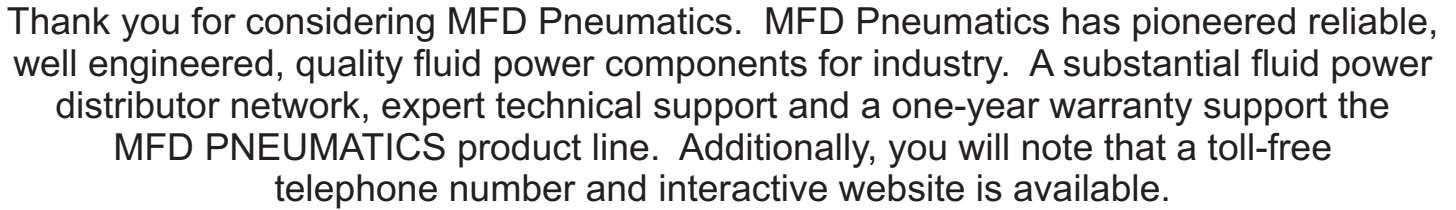


PNEUMATIC PRODUCTS AT OEM PRICING



MFD



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

[illegible]

Contents:

2-6	Solenoid Valves, Air Pilot Valves, Manifolds
7	Solenoid Valves - Water, Air & Oil
8-9	Hand Lever, Push-Pull Valves & Foot Valves
10	Flow Control Valves & Mini Regulators
11	Filter - Regulators
11-13	FR.L. Combination & Accessories
13-14	Compact Cylinders & Accessories
15	O.E.M. Specialty Products

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

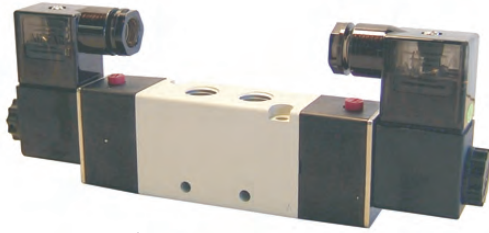


FM39322 ISO 9001-2000

Solenoid Valves



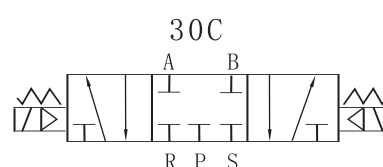
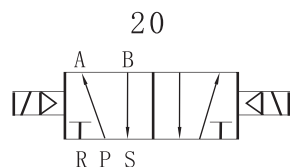
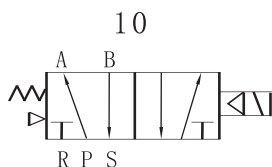
M4V100 series



M4V200 series

Model	M4V110-06	M4V120-06	M4V130C-06
Media	Air		
Actuation	Internally piloted		
Type	5 port 2 position		5 port 3 position closed center
Flow	Cv 0.67		Cv 0.50
Port size	1/8" NPT		
Lubrication	Not required		
Pressure range	22 to 120 PSI		
Temp. range	23~140°F		
Voltage range	±10%		
Power Consumption	24VDC:2.5W		110VAC:8.5VA
Insulation	F class		
Protection	IP65 (DIN 40050)		
Connection	DIN / LED Connector or Grommet		
Max Frequency	5 cycles/sec		3 cycles/sec
Min Activate Time	0.05 sec.		

Model	M4V210-06	M4V220-06	M4V230C-06	M4V210-08	M4V220-08	M4V230C-08
Media	Air					
Actuation	Internally piloted					
Type	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" NPT			Inlet port 1/4" NPT - Exhaust 1/8" NPT		
Lubrication	Not required					
Pressure range	22 to 120 PSI					
Temp. range	23~140°F					
Voltage range	-15%~+10%					
Power Consumption	110VAC:2.5VA 24VDC:3.0W					
Insulation	F class					
Protection	IP65 (DIN 40050)					
Connection	DIN / LED Connector or Grommet					
Max Frequency	5 cycles/sec		3 cycles/sec	5 cycles/sec		3 cycles/sec
Min Activate Time	0.05 sec					



Refer to MFD Pneumatics' website for further dimensions.

Ordering code

M4V	—	1	—	10	—	06	—	24 VDC	
Model		Code		Valve Type		Port Size		Voltage	Electrical
M4V		1: 100 Series		10: Single Solenoid		06: 1/8"		24 VDC	Blank- DIN
		2: 200 Series		20: Double Solenoid		08: 1/4"		110 VAC	1: Grommet
				30C: Double Solenoid closed center					

Solenoid Valves

M4V300 series

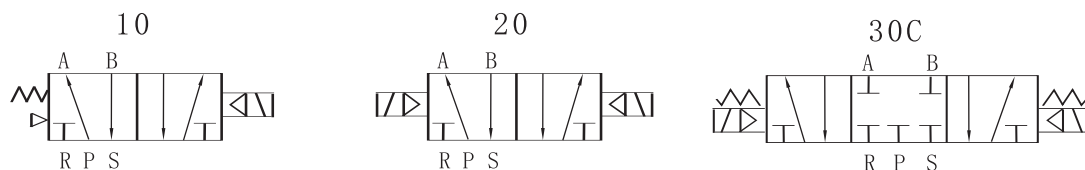
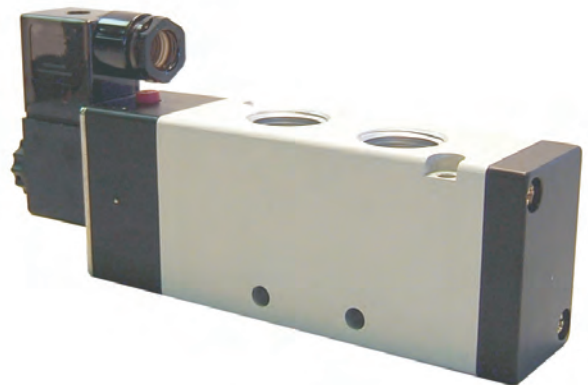


Refer to MFD Pneumatics' website for further dimensions.

Model	M4V310-08	M4V320-08	M4V330C-08
Media	Air		
Actuation	Internally piloted		
Type	5 port 2 position		5 port 3 position closed center
Flow	Cv 1.39		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		110VAC:8.5VA
Insulation	F class		
Protection	IP65 (DIN 40050)		
Connection	DIN / LED 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		
Type	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 PSI		
Temp. range	23~140°F		
Voltage range	±10%		
Power Consumption	24VDC:2.5W		110VAC: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



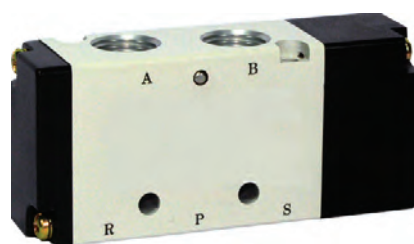
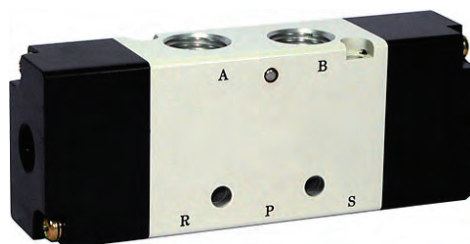
Ordering code

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

Air Pilot Valves

M4A200 series

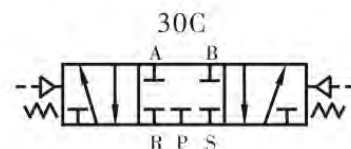
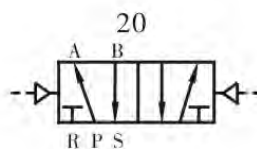
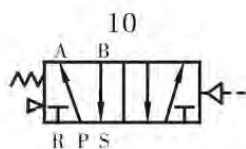
M4A300 series



Model	M4A210-06	M4A220-06	M4A230C-06	M4A210-08	M4A220-08	M4A230C-08
Media	Air					
Actuation	External pilot					
Type	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" NPT			Inlet port 1/4" NPT - Exhaust 1/8" NPT		
Lubrication	Not required					
Pressure range	22 to 120 PSI					
Temp. range	23~140°F					
Min Activate Time	5 cycles/sec		3 cycles/sec	5 cycles/sec		3 cycles/sec

Model	M4A310-08	M4A320-08	M4A330C-08	M4A310-10	M4A320-10	M4A330C-10
Media	Air					
Actuation	External pilot					
Type	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" NPT		
Lubrication	Not required					
Pressure range	22 to 120 PSI					
Temp. range	23~140°F					
Min Activate Time	5 cycles/sec		3 cycles/sec	5 cycles/sec		3 cycles/sec

Refer to MFD Pneumatics' website for further dimensions.



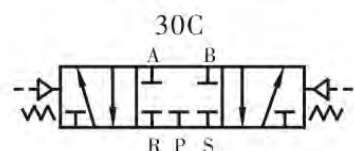
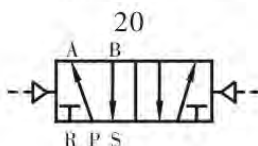
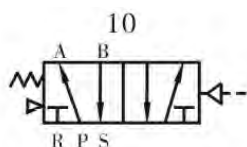
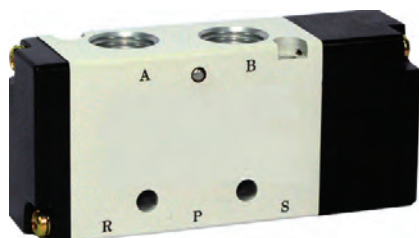
Ordering code

M4A — 2 — 10 — 06

Model	Code	Valve Type	Port Size
M4A	2: 200 Series	10: Single Pilot 5/2 way	06: 1/8"
	3: 300 Series	20: Double Pilot 5/2 way	08: 1/4"
		30C: Double Pilot 5/3 way closed center	10: 3/8"

Air Pilot Valves

M4A400 series

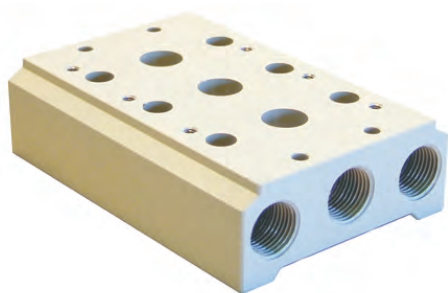


Model	M4A410-15	M4A420-15	M4A430C-15
Media	Air		
Actuation	External pilot		
Type	5 port 2 position		5 port 3 position closed center
Flow	Cv 2.79		Cv 1.68
Port size	1/2" NPT		
Lubrication	Not required		
Pressure range	22 to 120 PSI		
Temp. range	23~140°F		
Min Activate Time	3 cycles/sec		

Refer to MFD Pneumatics' website for further dimensions.

Ordering code			
M4A	—	4	—
Model	Code	Valve Type	Port Size
M4A	4: 400 Series	10: Single Pilot 5/2 way 20: Double Pilot 5/2 way 30C: Double Pilot 5/3 way closed center	15: 1/2"

Manifolds



Gaskets and valve mounting screws included with manifold.

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

Refer to MFD Pneumatics' website for further dimensions.

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

Manifold Blanking Plate



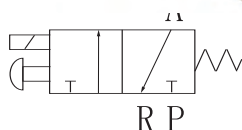
Model	M100M-B	M200M-B	M300M-B	M400M-B
M100M	●			
M200M		●		
M300M			●	
M400M				●

Refer to MFD Pneumatics' website for further dimensions.

Solenoid Valves



M3V1
series



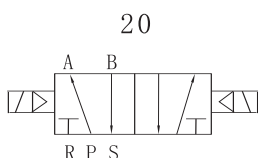
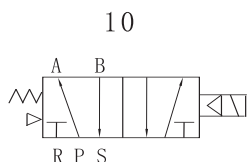
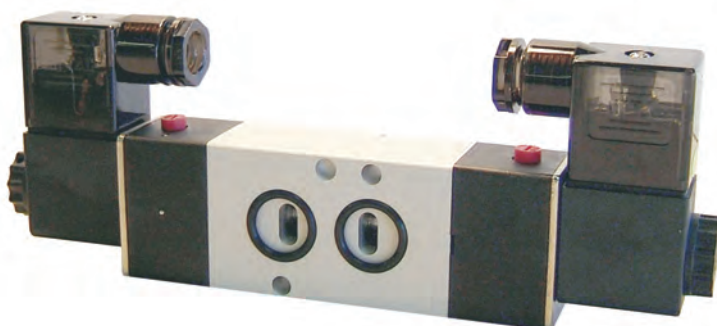
Model	M3V1-06
Media	Air
Actuation	Direct acting
Port size	1/8" NPT
Type	3 port - 2 position
Temp. range	23~140° F
Flow	Cv .051
Lubrication	Not required
Pressure range	0 to 120 PSI
Power consumption	24 VDC:3.0W / 110 VAC: 8.5VA
Protection	IP65(DIN40050)
Connection	DIN / LED Connector or Grommet
Max. frequency	10 cycles per sec.
Insulation	F class
Voltage range	-15%~+10%
Min. activate time	0.05 sec.

Ordering code

M3V	—	1	—	06	—	24VDC	—
Model		Code		Port Size		Voltage	Electrical
M3V		1: 1 Series		06: 1/8"		24 VDC 110 VAC	Blank: DIN 1: Grommet

Refer to MFD
Pneumatics'
website for
further dimensions.

NAMUR series



Model	M4M310-08 & M4M320-08
Media	Air
Actuation	Internally piloted
Port size	1/4" NPT
Type	5 port - 2 position
Temp. range	23~140° F
Flow	Cv 1.39
Lubrication	Not required
Pressure range	22 to 116PSI
Power consumption	24 VDC:3.0W 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.

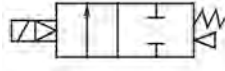
Ordering code

M4M	—	3	—	10	—	08	—	24VDC
Model		Code		Valve Type		Port Size		Voltage
M4M		3: 300 Series		10: Single Solenoid 20: Double Solenoid		08: 1/4"		24 VDC 110 VAC

Refer to MFD
Pneumatics'
website for
further dimensions.

Solenoid Valves

M2PV series



Valve Specifications

Model	M2PV150-15	M2PV250-25
Acting	Internally Piloted	
Acting Type	Piston normally 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 Temperature Differential	Minimum 7 PSI Maximum 142 PSI	
Proof Pressure	213 PSI	
Material	Brass	

Refer to MFD Pneumatics' website for further dimensions.

Solenoid Specifications

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

Ambient and Fluid Temperature

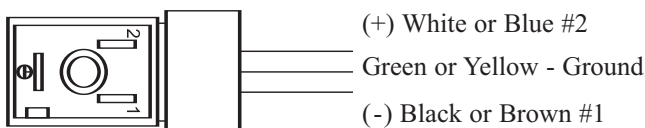
Temperature	Power	Fluid Temperature (F°)			Ambient Temp (F°)
		Water Std.	Air Std.	Oil Std.	
Max	AC	140	176	140	140
	DC	104	140	104	104
Min	AC	33.8	-41	-50	-50
	DC				
Insulation		Class B			

Ordering code

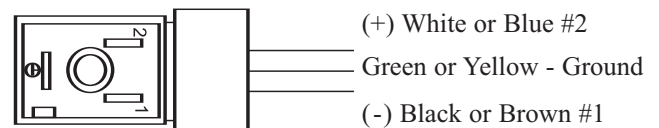
M2PV	—	150	—	E	—	15	—	24VDC	—	1
Model		Orifice Size		Seal Material		Port Size		Voltage		Electrical
M2PV: 2 port 2 position solenoid valve		150:		E: EPDM		15: 1/2"		24 VDC		Blank: DIN
		250:				25: 1"		110 VAC		1: Grommet

DIN Connector Hook-Up Diagram

200, 300, 400 Series (With LED)
Polarity sensitive



Series 100 (No LED)
Not polarity sensitive



Hand Lever Valves

M4H400 series



Model	M4H210-06	M4H310-08
Fluid	Air	
Actuation	Direct acting hand lever	
Type	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 140° F	
Lubrication	Not required	

Refer to MFD Pneumatics' website for further dimensions.

Ordering code

M4H — 3 — 10 — 08

Model	Code	Valve Type	Port Size
M4H	2: 200 Series 3: 300 Series	10: 5 port - 2 position	06: 1/8" 08: 1/4"

M4HV series



Closed Center



4 port 2 position



Model	M4HV310-08-S	M4HV410-15-S	M4HV330-08-S	M4HV430-15-S
Fluid	Air			
Type	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 120 PSI			
Temperature	23 to 145° F			
Lubrication	Not required			

Refer to MFD Pneumatics' website for further dimensions.

Ordering code

M4HV — 3 — 10 — 08 — S

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	
Type	5 Port - 2 Position Detented	

Refer to MFD Pneumatics' website for further dimensions.

Ordering code

M4L — 2 — 10 — 08

Model	Code	Valve Type	Port Size
M4L	2: 200 Series 3: 300 Series	10: 5 port - 2 position	06: 1/8" 08: 1/4"

Foot Pedal Valves

M4F series



Model	M4F210-08G	M4F210-08LG
Type	5 ports - 2 position	
Fluid	Air	
Operating	Direct Acting	
Port size	1/4" NPT	
Pressure range	0 to 120 PSI	
Temperature	23 to 140° F	
Lubrication	Not required	

Refer to MFD Pneumatics' website for further dimensions.

Ordering code

M4F210 — 08 — G

Model	Port Size	Note
M4F	08: 1/4"	G: Non-locking foot pedal with Guard LG: Locking foot pedal with Guard

Without Lock



With Lock



Flow Control Valves

MASC
series



Model	MASC100-06	MASC200-08	MASC300-10	MASC300-15
Fluid	Air			
Port size	1/8" NPT	1/4" NPT	3/8" NPT	1/2" NPT
Pressure range	0 to 140 PSI			
Temperature	23 to 140° F			
Flow	Cv	.407	.813	1.524
	SCFM	14.1	28.2	53.0

Refer to MFD Pneumatics' website for further dimensions.

Ordering code		
MASC	— 200 —	08
Model	Type	Port Size
MASC	1: 100 Series	06: 1/8"
	2: 200 Series	08: 1/4"
	3: 300 Series	10: 3/8"
		15: 1/2"

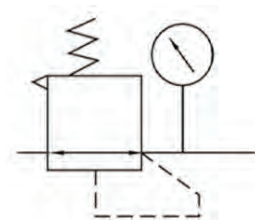
Mini Regulators

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	
Type	Relieving / Press to lock adjustable knob	
Body Material	Aluminum	
Includes	Gauge / Bracket / Nut / 2 Gauge Ports	

Refer to MFD Pneumatics' website for further dimensions.

Ordering code		
MSR	— 200 —	08
Model	Type	Port Size
MSR	200: 200 Series	06: 1/8"
		08: 1/4"

MSR
series

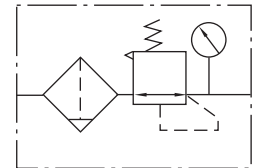


Filter - Regulators

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
Type	All units are relieving regulators with push to lock adjustment 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 FL. OZ.		8.7 FL. OZ.		17.5 FL. OZ.
Bowl material	Polycarbonate bowl		Polycarbonate bowl with metal bowl guard		
Drain	Semi-auto	Semi-auto	Auto	Auto	Auto

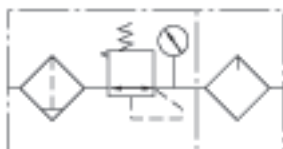
Ordering code	MGFR200 — 08
Model	Port Size
MGFR200	06: 1/8"
MGFR300	08: 1/4"
MGFR400	10: 3/8"
	15: 1/2"

MGFR series



FRL Combination

MGFC series



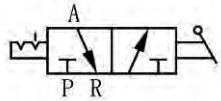
Model	MGFC200-06	MGFC200-08	MGFC300-08	MGFC300-10	MGFC400-15
Fluid	Air				
Port size	1/8" NPT	1/4" NPT	1/4" NPT	3/8" NPT	1/2" NPT
Type	All units are relieving regulators with push to lock adjustment knobs				
Filtering	40μ				
Pressure range	23 to 120 PSI				
Max. Pressure	145 PSI				
Temp. range	41 to 140° F				
Drain bowl capacity	2.2 FL. OZ.		8.7 FL. OZ.		17.5 FL. OZ.
Oil bowl capacity	5.5 FL. OZ.		16.4 FL. OZ.		34.9 FL. OZ.
Bowl material	Polycarbonate bowl		Polycarbonate bowl with metal bowl guard		
Mounting	Fully compatible to SMC FRL				
Drain	Semi-auto	Semi-auto	Auto	Auto	Auto

Ordering code	MGFC200 — 08
Model	Port Size
MGFC200	06: 1/8"
MGFC300	08: 1/4"
MGFC400	10: 3/8"
	15: 1/2"

Refer to MFD Pneumatics' website for further dimensions.

FRL Accessories

MGZ series
Pressure Relief Valve



Model	MGZ200		MGZ300		MGZ400
	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°				

Refer to MFD Pneumatics' website for further dimensions.

Ordering code

MGZ300 — 08 — T

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
	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	41-140° F				

Refer to MFD Pneumatics' website for further dimensions.

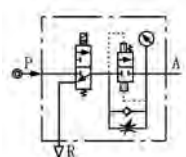
Ordering code

MGA214 — 08 — 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"	1/4"	1/4"	3/8"	1/2"
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	1/4"		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.

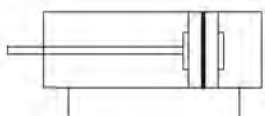
Ordering code	MGV300	08	T	24 VDC
Model	Port Size	Accessories	Voltage	
MGV200	06: 1/8"	T: T- bracket	24V DC	
MGV300	08: 1/4"	Included	110V AC	
MGV400	10: 3/8"			
	15: 1/2"			

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.



Ordering code	MACQ	S	20	25	B
Model	Magnet	Bore Size	Stroke	Rod type	
MACQ	S: With magnet	12	15, 25, 50 mm	B: Male rod	
		20	15, 25, 50 mm	Blank:	
		25	15, 25, 50, 65 mm	Female	
		32	15, 25, 50, 65 mm		
		50	15, 25, 50, 65 mm		

Compact Cylinder Accessories

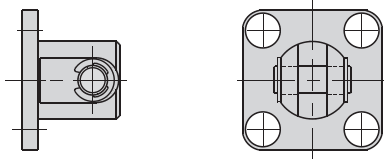
MACQ series Mounting Brackets List

Series	Bore Sizes	MACQ
Accessories type		Male thread
Clevis = Y*	12, 20, 25, 32, 50	*
Clevis Pivot Bracket = CB*	12, 20, 25, 32, 50	*

*Pin included on both Y and CB

Clevis Pivot Bracket = CB

Bore 12-25



Ordering code

MACQ — 12 — CB

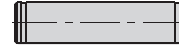
Model

Bore size

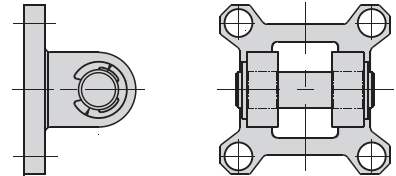
Accessories

CB
Y

PIN

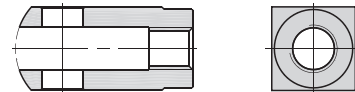


Bore 32-50

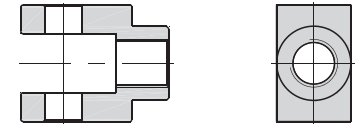


Clevis=Y

Bore 12-25



Bore 32-50



Sensor Switches

MCSI series

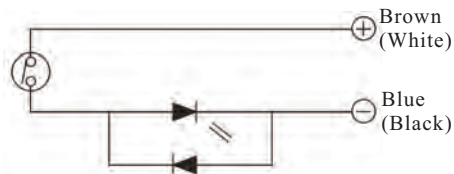
Ordering code

MCSI — G

Model

Type

Groove



Sensors switch type	Operating voltage range	Operating current range	Response Time	Shock Resistance	Vibration Resistance	Temperature	Environmental Protection	Lamp	Lead Wire	Life Time Cycles
MCSI - G	DC: 5V-240V AC: 5V-240V	DC: 5-50mA AC: 5-40mA	0.3ms max	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

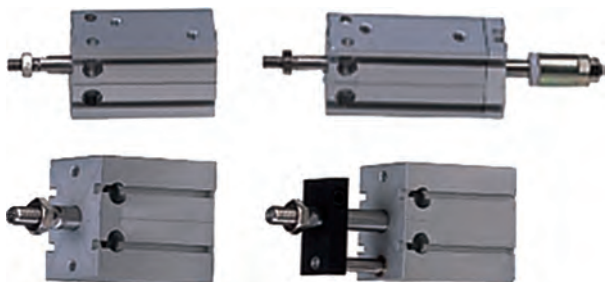


ISO Standard Cylinders

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



Twin Rod Cylinders



Multi-Mounting Cylinders

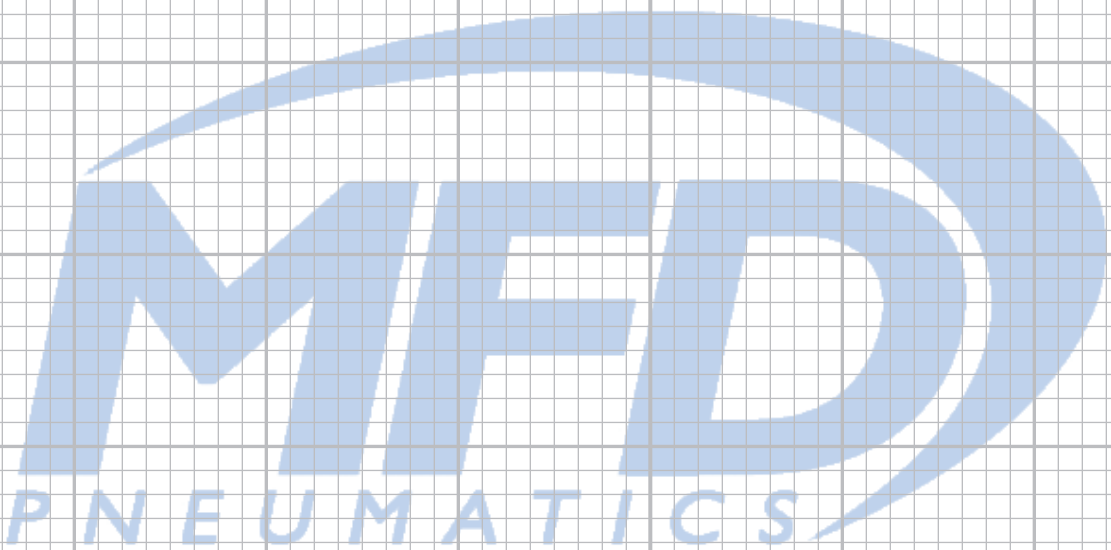
Single Acting
Double Acting
Double Rod
Adjustable Stroke
Non-Rotating



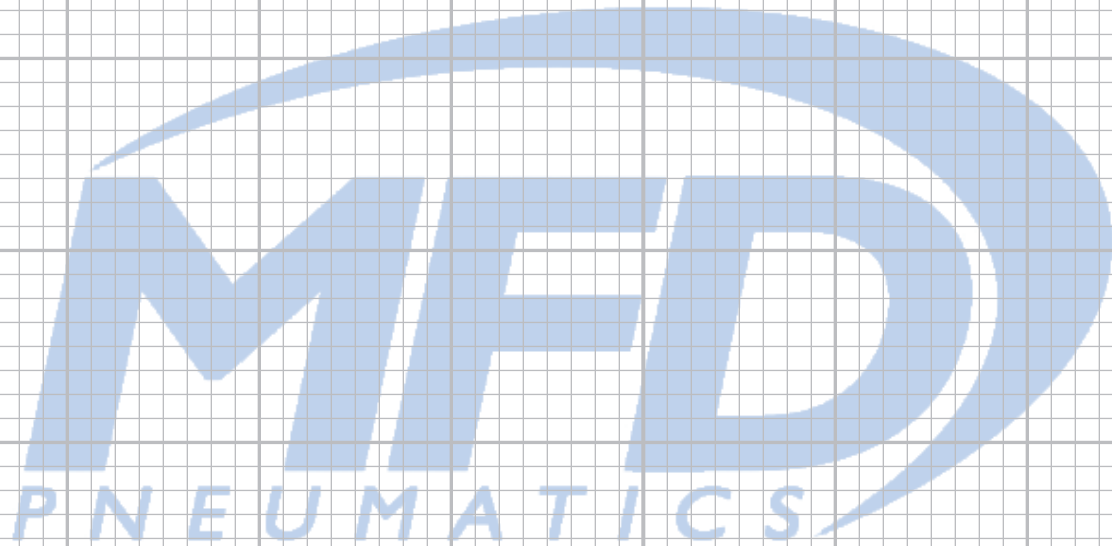
Stainless Steel Cylinders

Single Acting
Double Acting
Double Rod
Adjustable Stroke
Versatile Mounting

Notes

A large, faint, light blue version of the MFD PNEUMATICS logo is centered on a grid of graph paper. The logo consists of the letters "MFD" in a bold, sans-serif font, with a blue swoosh arching over them. Below "MFD", the word "PNEUMATICS" is written in a smaller, sans-serif font. The grid is composed of thin gray lines forming a square pattern.

Notes





Tel: 1-866-264-9560

Fax: 1-773-685-0597

Visit our web site at
www.mfdpneumatics.com

YOUR STOCKING DISTRIBUTOR IS: