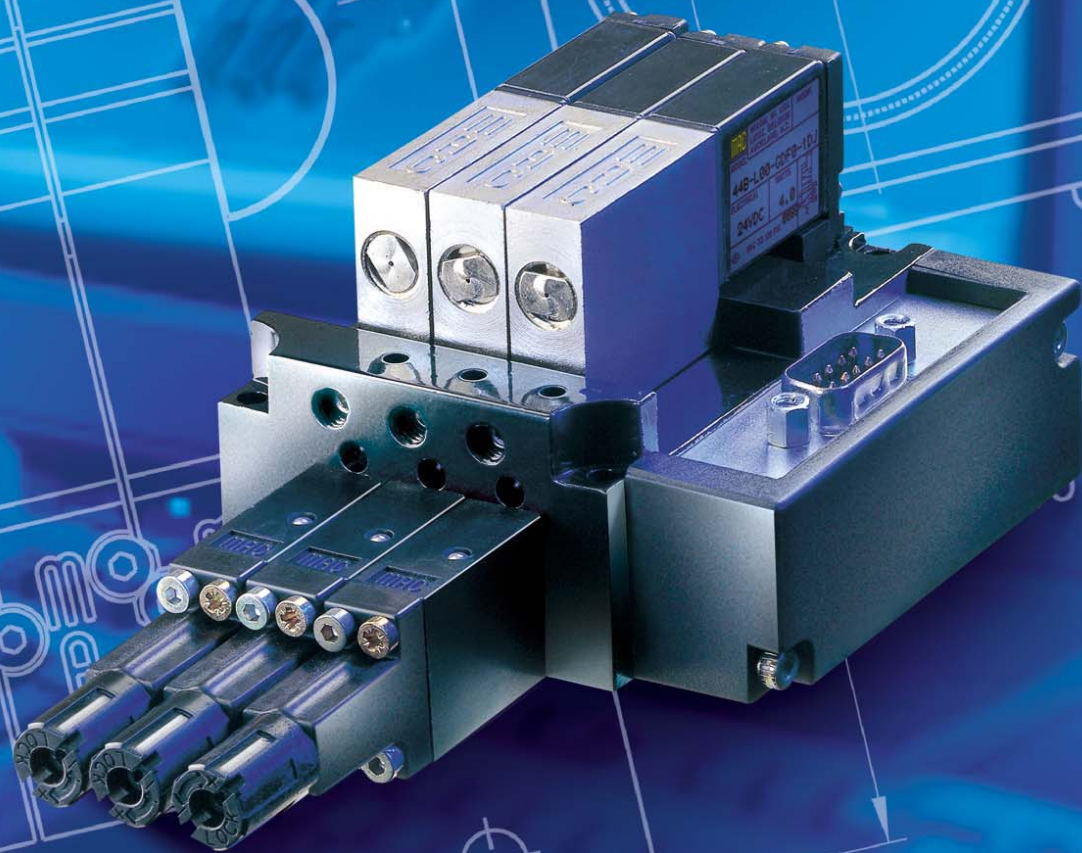


®
MAC

V A L V E S



C i r c u i t B a r ®



CIRCUIT BAR®

CIRCUIT BAR® is an extruded block of aluminum with pneumatic circuits machined right in the bar. The design of these circuits can be very simple or complex depending upon the requirements of the application.

CIRCUIT BAR® are a means by which individual components (i.e. valves, regulators and flow controls) comprising a circuit, can be combined into one extruded CIRCUIT BAR®. The CIRCUIT BAR® will eliminate extra piping and fittings, as well as saving space and money.

Contact your local MAC distributor for more information as to how MAC'S CIRCUIT BAR® can satisfy your needs.

Introduction

Section 1 Direct solenoid and solenoid pilot operated valves

Let us show you via high performance demonstration kits and animated software,

HOW MAC'S PERFORMANCE ADVANTAGES HELP MAKE YOUR EQUIPMENT MORE RELIABLE - FASTER - MORE REPEATABLE.



TLD

Traveling Lab Demonstration measures critical valve performance characteristics - *Shifting forces, Response Time, Speed, Repeatability and Flow.*

PLD

Proportional Lab Demonstration measures critical proportional regulation characteristics - *Response Time, Accuracy, Hysterisis, Repeatability and Flow.*



Animation

Animated Software shows inner workings of various Air Valves Designs - *Powerful educational tool for learning about how air valves function.*

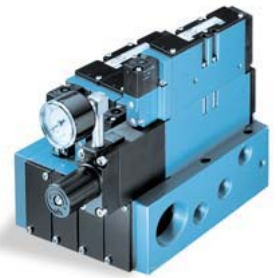
3-way solenoid operated valves

#10-32 to 2 1/2" port size Cv .10 to 65.0



4-way solenoid operated valves

#10-32 to 1 1/2" port size Cv .10 to 15.9



Proportional pressure control valves

Stand alone or Multi-Pressure Pak®

Analog or Digital with an overall accuracy range of $\pm 0.5\%$ to $\pm 2.5\%$ of full scale



Field bus products

Communication Electronics with a variety of MAC Valves' products

Input and Output capability with a variety of protocols





Section 1

Direct solenoid and solenoid pilot operated valves



Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow (Max) C _v	Circuit bar mounting								Series	
			non plug-in cylinder ports in base	non plug-in cylinder ports in valve	plug-in	plug-in with F. C.	plug-in with Pr. Reg.	plug-in with Pr. Reg. and F. C.	add-on style plug-in	add-on style plug-in with F. C.	add-on style plug-in with Pr. Reg.	
3/2	M5 - #10-32	0.11										34
3/2	#10-32 - 1/8"	0.11										
3/2	M5 - #10-32	0.10										
3/2	M5 - #10-32	0.09										
3/2	1/8" NPTF - #10-32 UNF	0.10										35
3/2	1/4" - 3/8"	0.5										
3/2	1/8" - 1/4", 6mm tube receptacle	0.5										37
3/2	1/8" - 1/4"	0.5										
5/2 - 3/2	M5 - #10-32	0.093										44
5/2 - 3/2	#10-32 - 1/8"	0.093										
5/2 - 3/2	M5 - #10-32	0.09										
5/2 - 3/2	M5 - #10-32	0.08										
5/2 - 3/2	M5 - #10-32	0.07										
4/2	1/8" NPTF - #10-32 UNF	0.10										45
5/2	1/8" - 1/4", 6mm tube receptacle	0.5										
5/2	1/8" - 1/4"	0.5										47



Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow [Max] C _v	Circuit bar mounting									Series
			add-on style plug-in with Pr. Reg. and F. C.	plug-in add-a-unit stations	plug-in add-a-unit stations with F. C.	plug-in add-a-unit stations with Pr. Reg.	plug-in add-a-unit stations with F. C. and Pr. Reg.	plug-in with pre-wired connector	plug-in with F. C. and pre-wired connector	plug-in with Pr. Reg. and pre-wired connector	din rail, plug-in with pre-wired connector	
3/2	M5 - #10-32	0.10										34
3/2	M5 - #10-32	0.09										
3/2	M5 - #10-32, 4mm tube receptacle	0.11										
3/2	1/8" - 1/4", 6mm tube receptacle	0.5										37
3/2	1/8" - 1/4"	0.5										
5/2 - 3/2	M5 - #10-32	0.09										
5/2 - 3/2	M5 - #10-32	0.07										44
5/2	M5 - #10-32	0.09										
5/2	M5 - #10-32	0.08										
5/2	M5 - #10-32	0.07										
5/2 - 3/2	M5 - #10-32, 4mm tube receptacle	0.10										
5/2	1/8" - 1/4", 6mm tube receptacle	0.5										47
5/2	1/8" - 1/4"	0.5										

Function	Port size	Flow [Max] C _v	Circuit bar mounting								Series	
			din rail, plug-in with F.C. and pre-wired connector	non plug-in	non plug-in with Pr. Reg.	plug-in with side Pr. Reg.	plug-in with integral terminal strip	plug-in with integral terminal strip and side Pr. Reg.	non plug-in cylinder ports in base with Pr. Reg.	non plug-in add-on style cylinder ports in base	non plug-in add-a-unit stations	
3/2	M5 - #10-32, 4mm tube receptacle	0.11										34
3/2	1/8" NPTF - #10-32 UNF	0.10										35
3/2	1/8" - 1/4", 6mm tube receptacle	0.5										37
4/2	1/8" NPTF - #10-32 UNF	0.10										45
5/2	1/8" - 1/4", 6mm tube receptacle	0.5										47



Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow [Max] C _v	Circuit bar mounting								Series
			cylinder ports in valve	add-on style cylinder ports in valve	cylinder ports in base	add-on style cylinder ports in base	add-a-unit stations for CBM052A bar	add-a-unit stations for CBP052A bar	non plug-in with or without F. C.	non plug-in with Pr. Reg. and F. C.	plug-in with sandwich Pr. Reg.
3/2	1/8" - 1/4"	1.2									52
4/2	1/8" NPTF - #10-32 UNF	0.10									45
5/2 - 5/3	1/4"	1.3									800

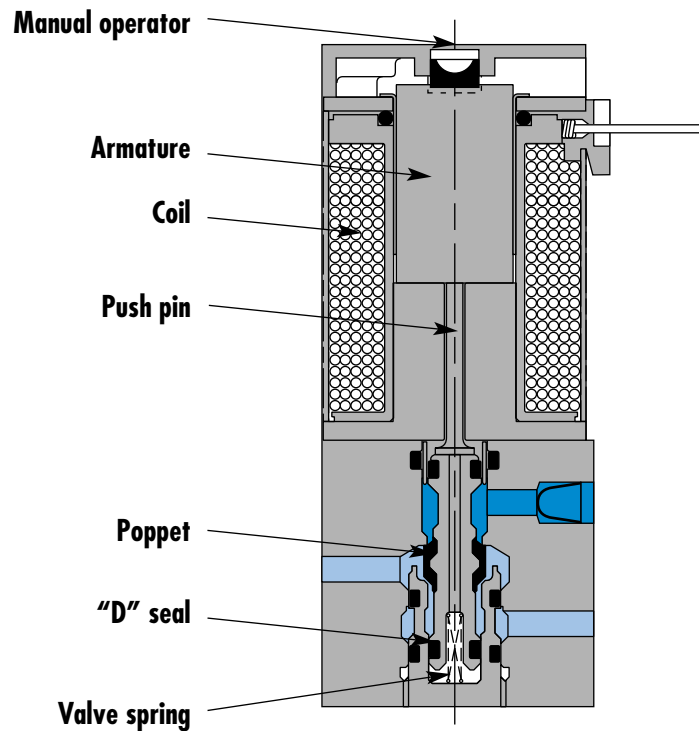
Function	Port size	Flow [Max] C _v	Circuit bar mounting								Series
			plug-in with integral terminal strip and sandwich Pr. Reg.	plug-in with integral terminal strip with F. C.	plug-in with integral terminal strip with Pr. Reg. and F. C.	non plug-in cyl. ports in valve with opt. F. C.	non plug-in cyl. ports in base with opt. F. C.	add-on style non plug-in cyl. ports in valve with opt. F. C.	add-on style non plug-in cyl. ports in base with opt. F. C.	non plug-in cyl. ports in valve with opt. Pr. Reg.	add-on style non plug-in cyl. ports in base
4/2	1/8" NPTF - #10-32 UNF	0.10									45
5/2	3/8"	0.5									47
5/2	1/8" - 1/4", 6mm tube receptacle	0.5									

Function	Port size	Flow [Max] C _v	Circuit bar mounting								Series
			add-on style non plug-in cyl. ports in base with Pr. Reg.	low profile cylinder ports in valve	low profile cylinder ports in base	mid profile cylinder ports in valve	mid profile - add on style cylinder ports in valve	add-a-unit stations for CBM403A bar	mid profile cylinder ports in base	mid profile - add on style cylinder ports in base	add-a-unit stations for CBM404A bar
5/2	1/8" - 1/4", 6mm tube receptacle	0.5									47
5/2 - 5/3	1/8" - 1/4"	1.0									400
5/2 - 5/3	1/8"	1.0									

Function	Port size	Flow [Max] C _v	Circuit bar mounting							Series
			high profile cylinder ports in base	high profile - add on style cylinder ports in base	add-a-unit stations for CBM405A bar	standard	add-on style	add-a-unit stations for CBM092B	with shut-off valve	
5/2 - 5/3	1/8" - 1/4"	1.0								400
5/2 - 5/3 - 3/2	1/8 - 1/4 - 3/8	1.0								92
5/2 - 5/3	1/4"	1.3								800

Circuit bar mounting

non plug-in cylinder ports in base	non plug-in cylinder ports in valve	plug-in	plug-in with F. C.	plug-in with Pr. Reg.	plug-in with Pr. Reg. and F. C.	add-on style plug-in	add-on style plug-in with F. C.
add-on style plug-in with Pr. Reg.	add-on style plug-in with Pr. Reg. and F. C.	plug-in add-a-unit stations	plug-in add-a-unit stations with F. C.	plug-in add-a-unit stations with Pr. Reg.	plug-in add-a-unit stations with F. C. and Pr. Reg.	plug-in with pre-wired connector	plug-in with F. C. and pre-wired connector
plug-in with Pr. Reg. and pre-wired connector	din rail, plug-in with pre-wired connector	din rail, plug-in with F. C. and pre- wired connector					



SERIES FEATURES

- High force MACSOLENOID®.
- Universal porting.
- #10-32 or M5 ports.
- Rated for lubricated or non-lubricated service.
- 10mm direct operated.
- Cylinder port in valve or in circuit bar.

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.11C_v	non plug-in cylinder ports in base

OPERATIONAL BENEFITS

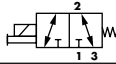
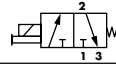
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-Gxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Pressure range : 0 to 120 PSI	☐ 34B-LOO-Gxxx-xxx	☐ 34B-NOO-Gxxx-xxx

SOLENOID OPERATOR ➤

G **XX X- X XX**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ A 18"	☐ 1 Non-locking	☐ KA Mini connector
☐ DD 24VDC (2.5 W)	☐ C 36"		☐ KT Mini connector with light
☐ DF 24VDC (4.0 W)	☐ x Other Options		☐ BA Flying leads
☐ xx Other Options			☐ BT Flying leads with light
			☐ xx Other Options

EBP34B-xxxx-xx

HOW TO ORDER CIRCUIT BAR

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ EBP34B-001D-xx	☐ EBP34B-002D-xx
# 10-32	☐ EBP34B-001B-xx	☐ EBP34B-002B-xx

Number of stations (03=3 stations)

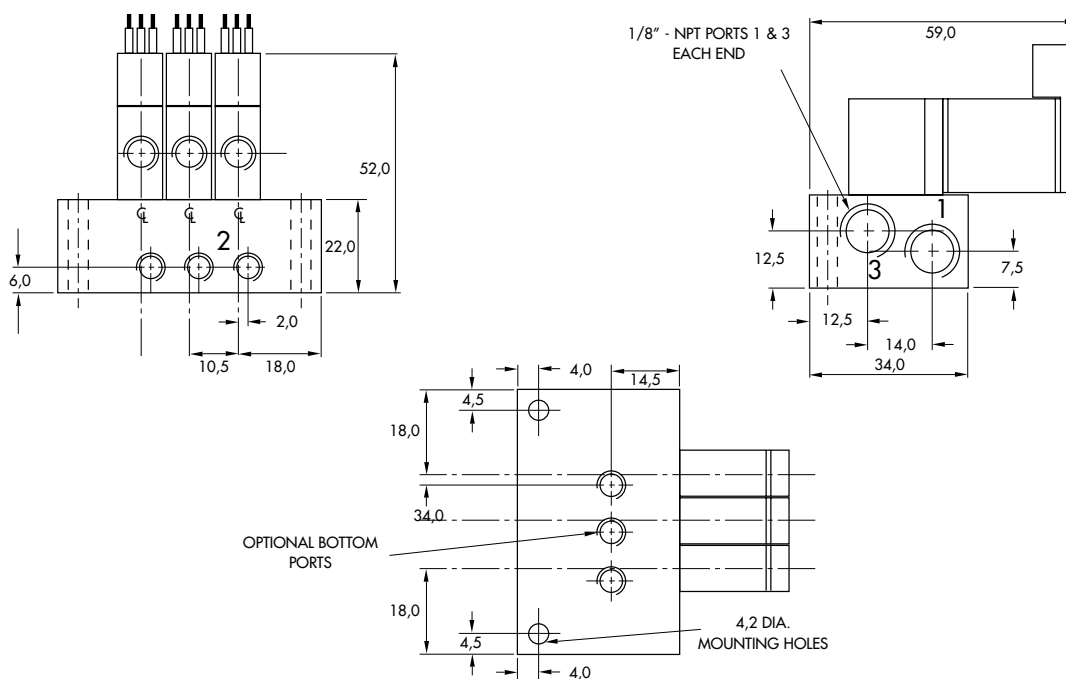
Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.11C _v , 2.5 W : 0.084C _v , 1.8 W : 0.061C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 3.4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory.

DIMENSIONS



Function	Port size (Inlet & Exhaust)	Flow [Max]	Circuit bar mounting
3/2 NO-NC	# 10-32 - 1/8"	0.11 C_v	non plug-in cylinder ports in valve

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

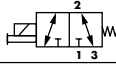
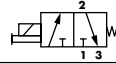
Reset

HOW TO ORDER

34B-xxx-Gxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Valve port size	Universal valve	NC only valve
		
M5	☐ 34B-ABA-Gxxx-xxx	☐ 34B-ABB-Gxxx-xxx
# 10-32	☐ 34B-AAA-Gxxx-xxx	☐ 34B-AAB-Gxxx-xxx

SOLENOID OPERATOR >

G **XX X- X XX**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ A 18"	☐ 1 Non-locking	☐ KA Mini connector
☐ DD 24VDC (2.5 W)	☐ C 36"		☐ KT Mini connector with light
☐ DF 24VDC (4.0 W)	☐ x Other Options		☐ BA Flying leads
☐ xx Other Options			☐ BT Flying leads with light
			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM34A-xxxx-xx

Port size COMMON INLET & EXHAUST	
# 10-32	☐ EBM34A-001B-xx
1/8" NPTF	☐ EBM34A-002A-xx

Number of stations (03=3 stations)

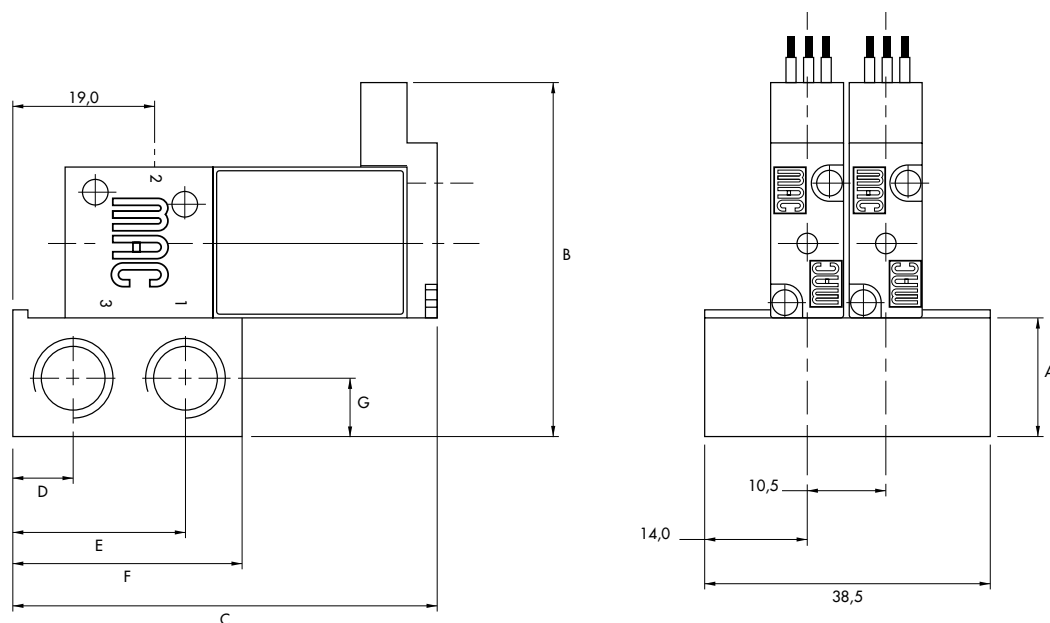
Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.11C _v , 2.5 W : 0.084C _v , 1.8 W : 0.061C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 3.4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Valve fastening kit : M34001-01 (1/8" Bar); M34001-21 (#10-32 Bar) • Blanking plate : 30456-A.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory.

DIMENSIONS



Port size	A	B	C	D	E	F	G
1/8"	16.0	47.5	57.4	8.0	23.0	31.0	8.0
M5	12.0	43.5	51.5	9.0	18.0	26.0	6.0

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

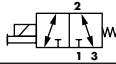
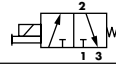
Reset



HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

ECD034B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD034B-001AD-AOxx	☐ ECD034B-002AD-AOxx
# 10-32	☐ ECD034B-001AB-AOxx	☐ ECD034B-002AB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
clic for multi-pin connector option (9, 15 or 25).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note :

- Valve and coil are not interchangeable.

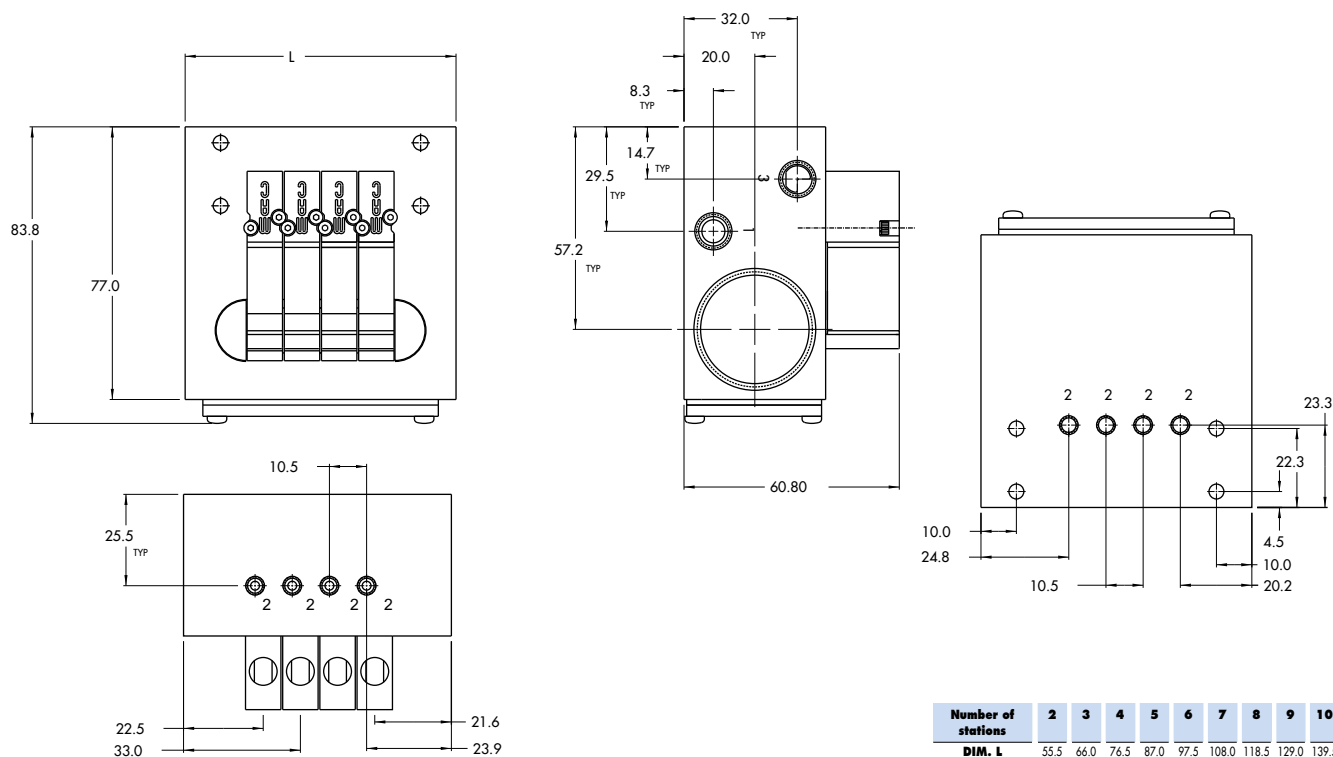
Spare parts :

- Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
- Base wire Plug-in protector : 24180.

Options :

- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in with F. C.

OPERATIONAL BENEFITS

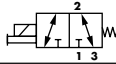
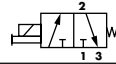
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2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ►

G **XX** O- **X** **XX** *

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

ECD034B-00xxx-AOxx

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD034B-005AD-AOxx	☐ ECD034B-006AD-AOxx
# 10-32	☐ ECD034B-005AB-AOxx	☐ ECD034B-006AB-AOxx

Number of stations (03=3 stations)

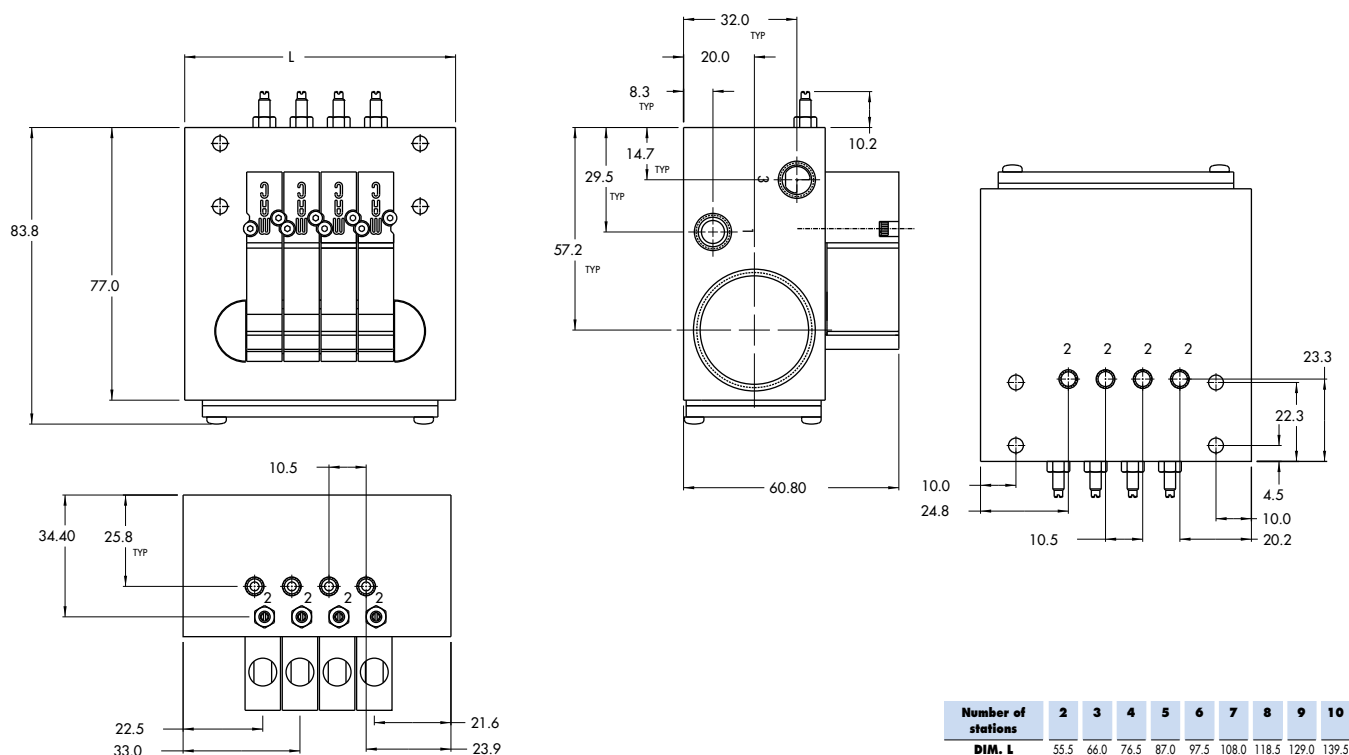
Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
☐ clic for multi-pin connector option (9, 15 or 25).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.
- Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in with Pr. Reg.

OPERATIONAL BENEFITS

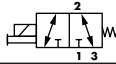
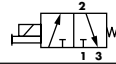
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2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

ECD034B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS ** (to be ordered separately)

Port size	Bottom cylinder ports (10.5 mm)	Side cylinder ports (10.5 mm)
M5	☐ ECD034B-004AD-AOxx	☐ ECD034B-003AD-AOxx
# 10-32	☐ ECD034B-004AB-AOxx	☐ ECD034B-003AB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
☐ clic for multi-pin connector option (9, 15 or 25).

** Pressure Regulators :

PR44A-AOxx

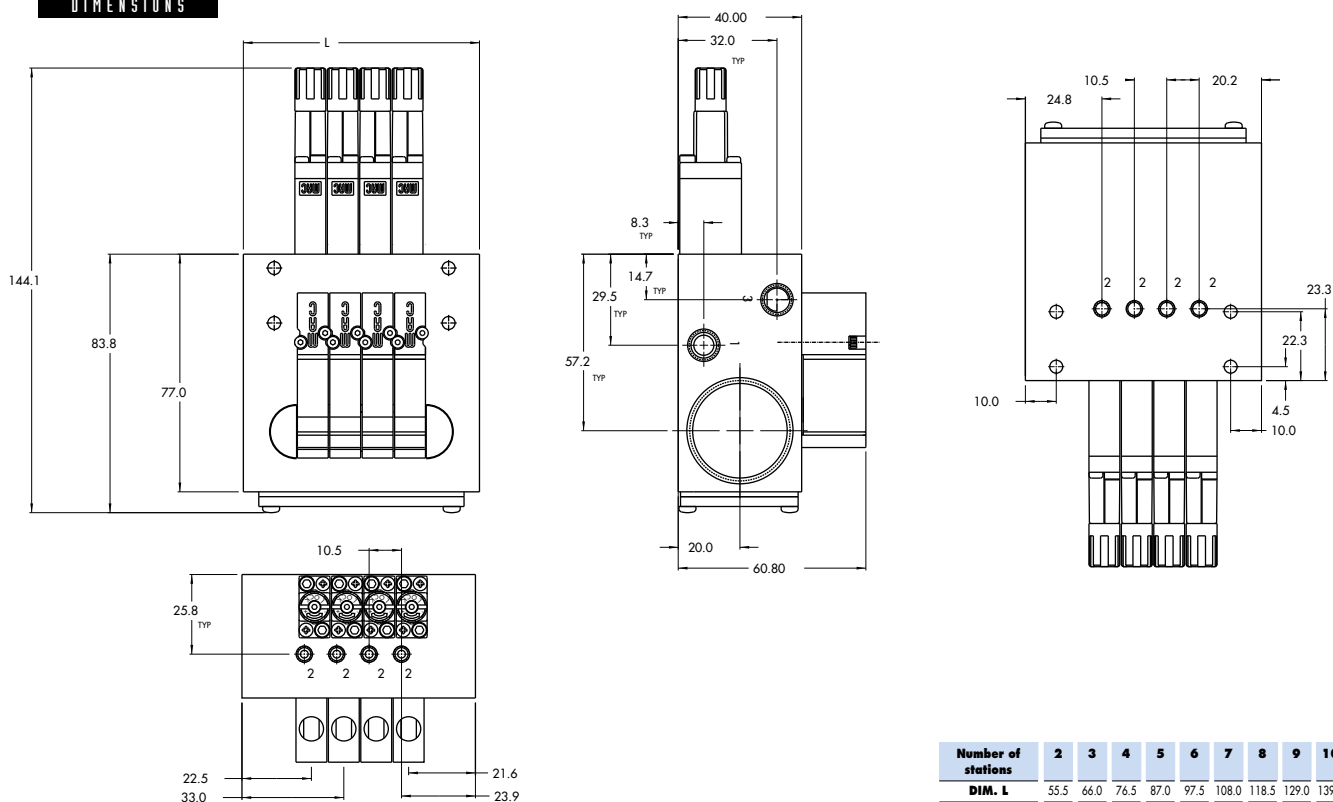
- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
 - Blanking plate for regulator : N-44003. • Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.09C_v	plug-in with Pr. Reg. and F. C.

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

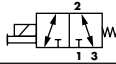
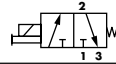
Reset

HOW TO ORDER

34B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

ECD034B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS AND PRESSURE REGULATORS ** (pressure regulators to be ordered separately)

Port size	Bottom cylinder ports (10.5 mm)	Side cylinder ports (10.5 mm)
M5	☐ ECD034B-007AD-AOxx	☐ ECD034B-008AD-AOxx
# 10-32	☐ ECD034B-007AB-AOxx	☐ ECD034B-008AB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
clic for multi-pin connector option (9, 15 or 25).

** Pressure Regulators :

PR44A-AOxx

- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

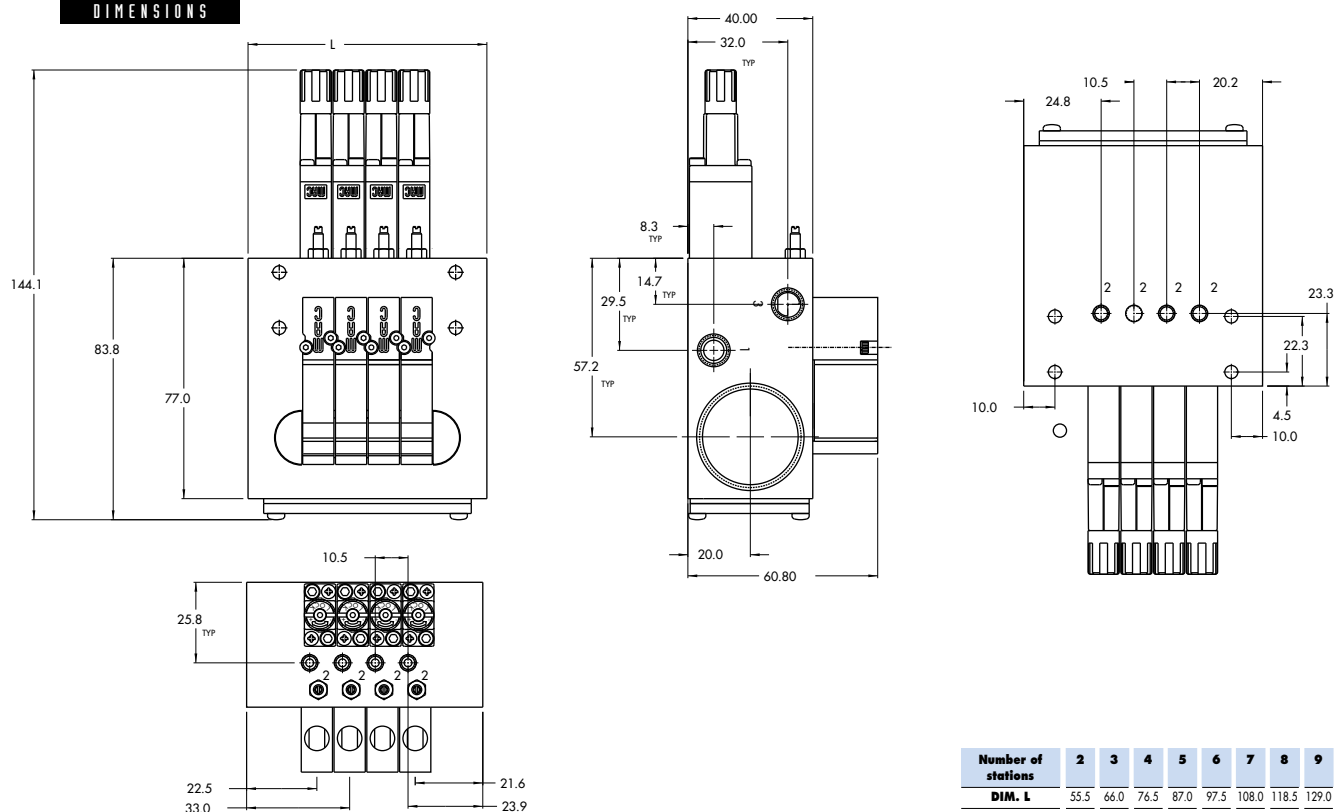
Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.

Options : • Base wire Plug-in protector : 24180. • Blanking plate for regulator : N-44003.

• Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	add-on style plug-in

OPERATIONAL BENEFITS

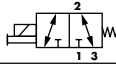
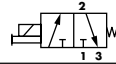
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

ECD034B-00xxx-AOxx

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD034B-001BD-AOxx	☐ ECD034B-002BD-AOxx
# 10-32	☐ ECD034B-001BB-AOxx	☐ ECD034B-002BB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
☐ clic for multi-pin connector option (9, 15 or 25).
 add-a-unit stations may be added to above bars. Click here for model numbers.

**TECHNICAL
DATA**

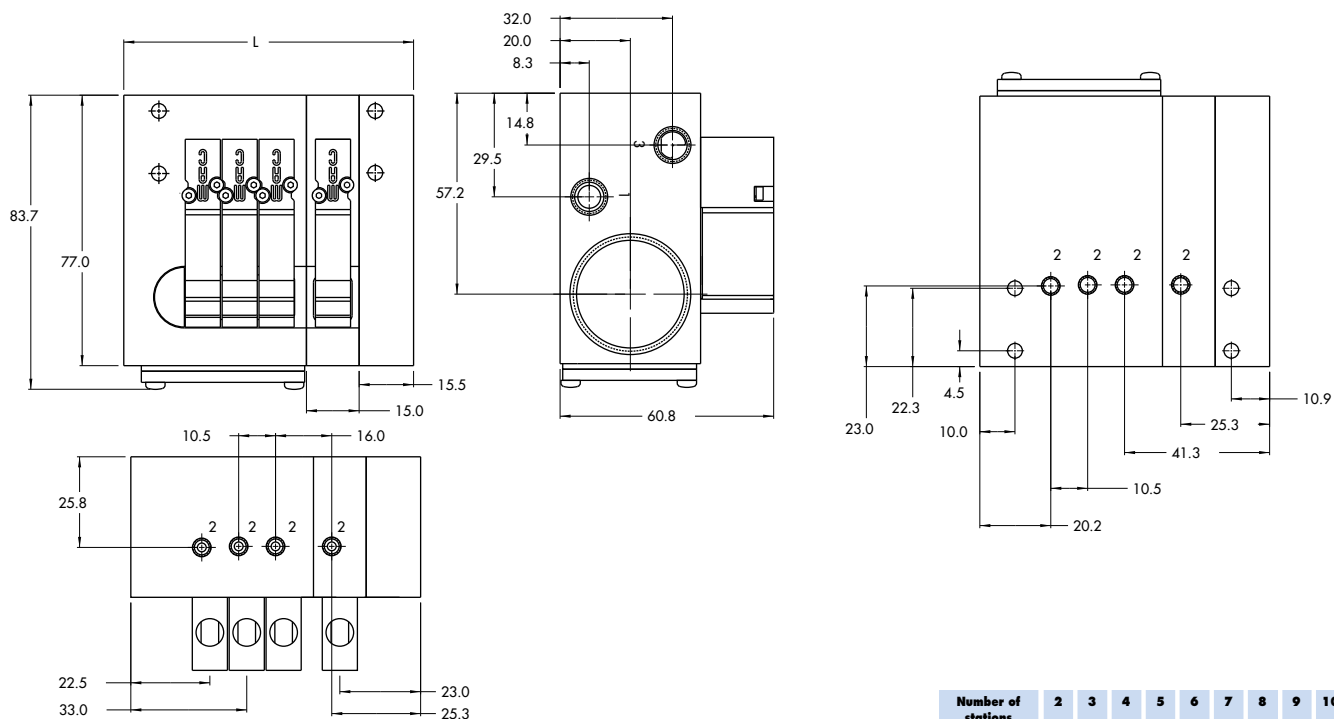
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	add-on style plug-in with F. C.

OPERATIONAL BENEFITS

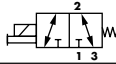
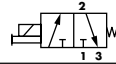
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ►

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

ECD034B-00xxx-AOxx

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD034B-005BD-AOxx	☐ ECD034B-006BD-AOxx
# 10-32	☐ ECD034B-005BB-AOxx	☐ ECD034B-006BB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
☐ clic for multi-pin connector option (9, 15 or 25).
 add-a-unit stations may be added to above bars. Click here for model numbers.

TECHNICAL DATA

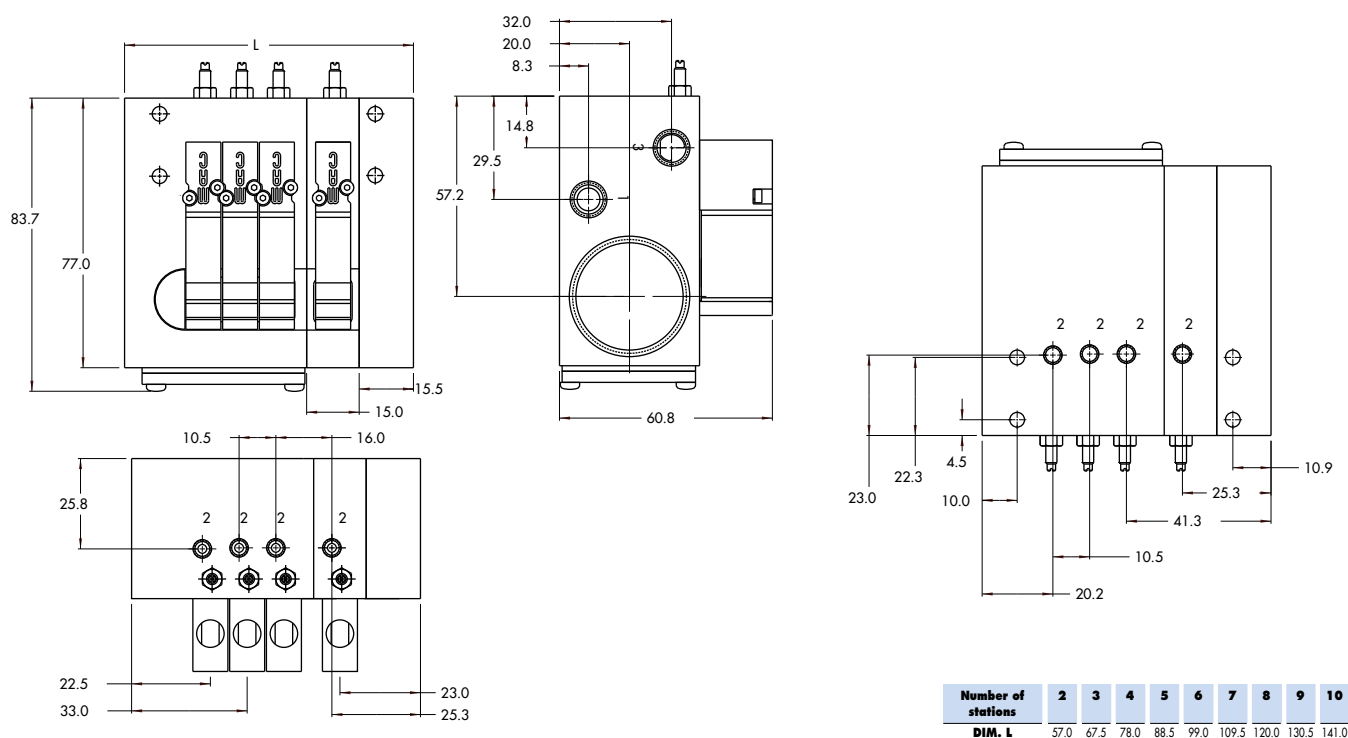
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	add-on style plug-in with Pr. Reg.

OPERATIONAL BENEFITS

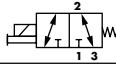
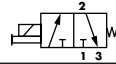
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX** *

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ I Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

ECD034B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS ** (to be ordered separately)

Port size	Bottom cylinder ports (10.5 mm)	Side cylinder ports (10.5 mm)
M5	☐ ECD034B-004BD-AOxx	☐ ECD034B-003BD-AOxx
# 10-32	☐ ECD034B-004BB-AOxx	☐ ECD034B-003BB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
clic for multi-pin connector option (9, 15 or 25).
add-a-unit stations may be added to above bars. Click here for model numbers.

** Pressure Regulators :

PR44A-AOxx

- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

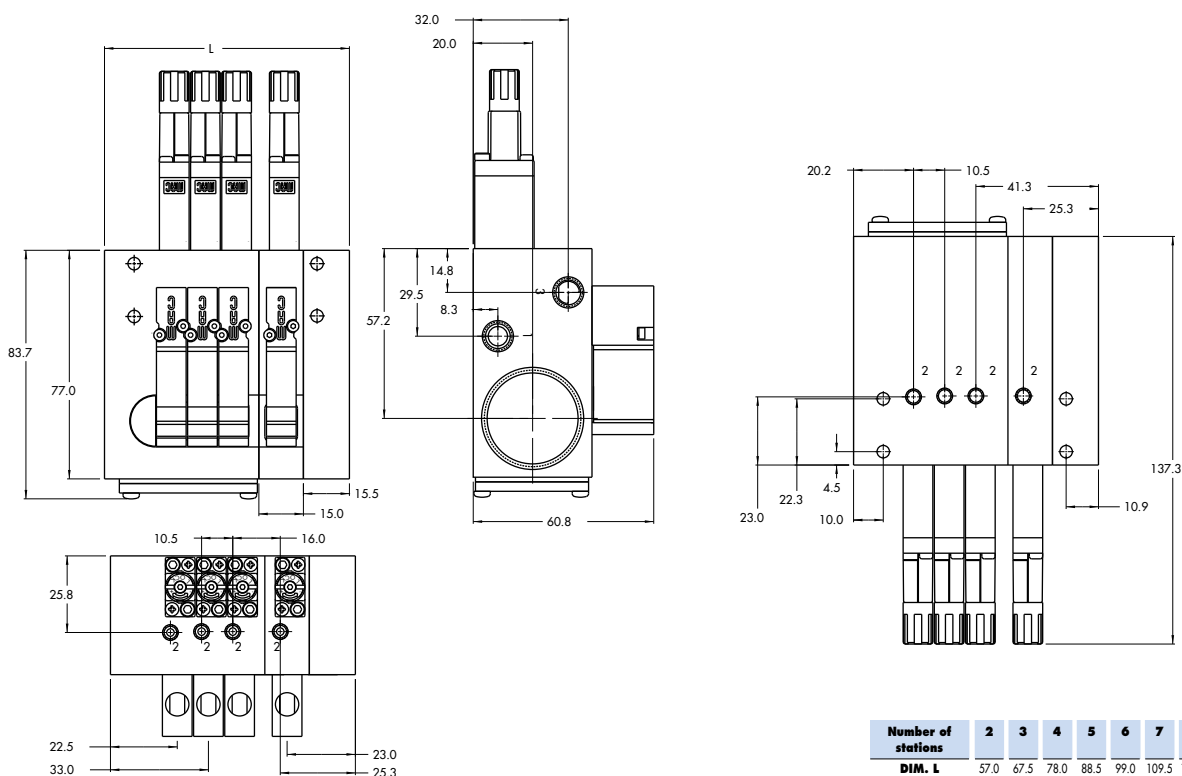
Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.

Options : • Base wire Plug-in protector : 24180. • Blanking plate for regulator : N-44003.

• Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.09C_v	add-on style plug-in with Pr. Reg. and F. C.

OPERATIONAL BENEFITS

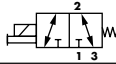
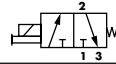
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX**

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

ECD034B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS AND PRESSURE REGULATORS ** (pressure regulators to be ordered separately)

Port size	Bottom cylinder ports (10.5 mm)	Side cylinder ports (10.5 mm)
M5	☐ ECD034B-007BD-AOxx	☐ ECD034B-008BD-AOxx
# 10-32	☐ ECD034B-007BB-AOxx	☐ ECD034B-008BB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
clic for multi-pin connector option (9, 15 or 25).
add-a-unit stations may be added to above bars. Clic here for model numbers.

** Pressure Regulators :

PR44A-AOxx

- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

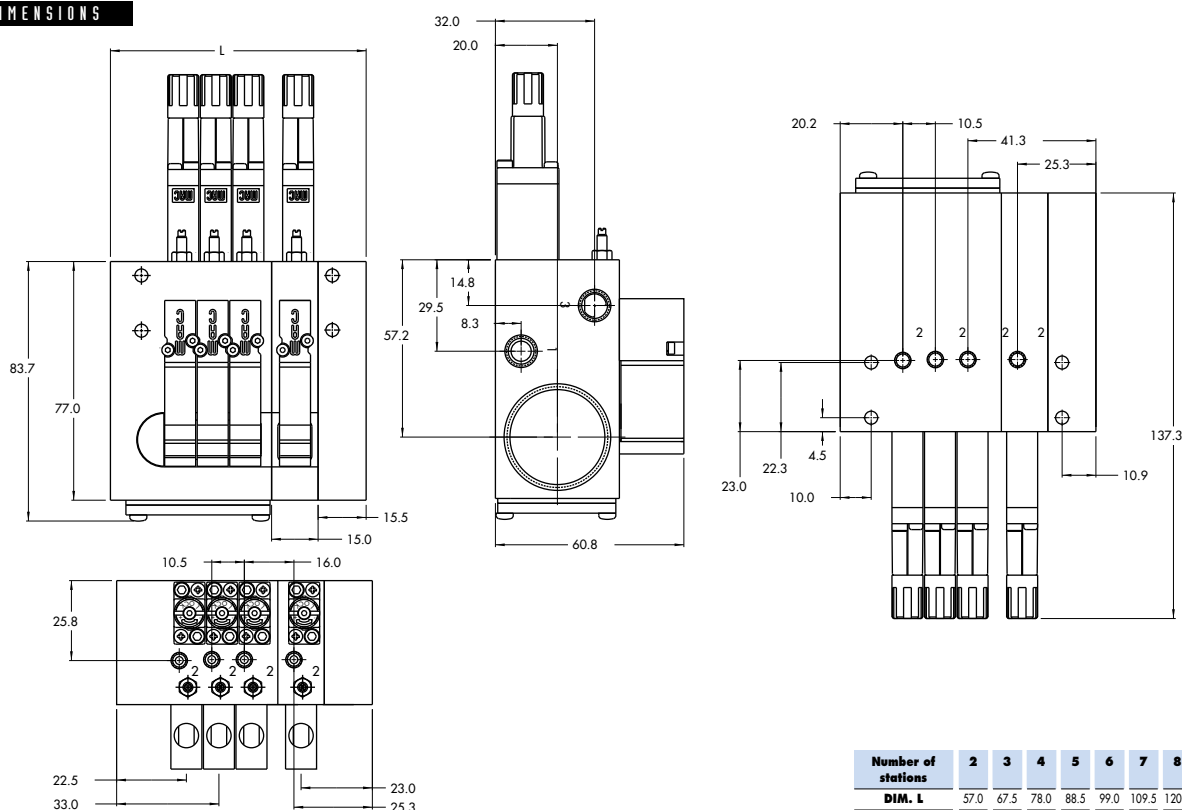
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Blanking plate for regulator : N-44003. • Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in add-a-unit stations

OPERATIONAL BENEFITS

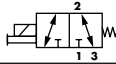
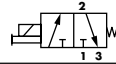
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

ECD034B-00xxx-AOxx

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ ECD034B-001CD-AOxx	☐ ECD034B-002CD-AOxx
# 10-32	☐ ECD034B-001CB-AOxx	☐ ECD034B-002CB-AOxx

Number of stations (03=3 stations) - Maximum length is 4 stations

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
when add-a-unit stations are added to bars with a multi-pin connector,
MOD. SD03 should be included with add-a-unit model number.

**TECHNICAL
DATA**

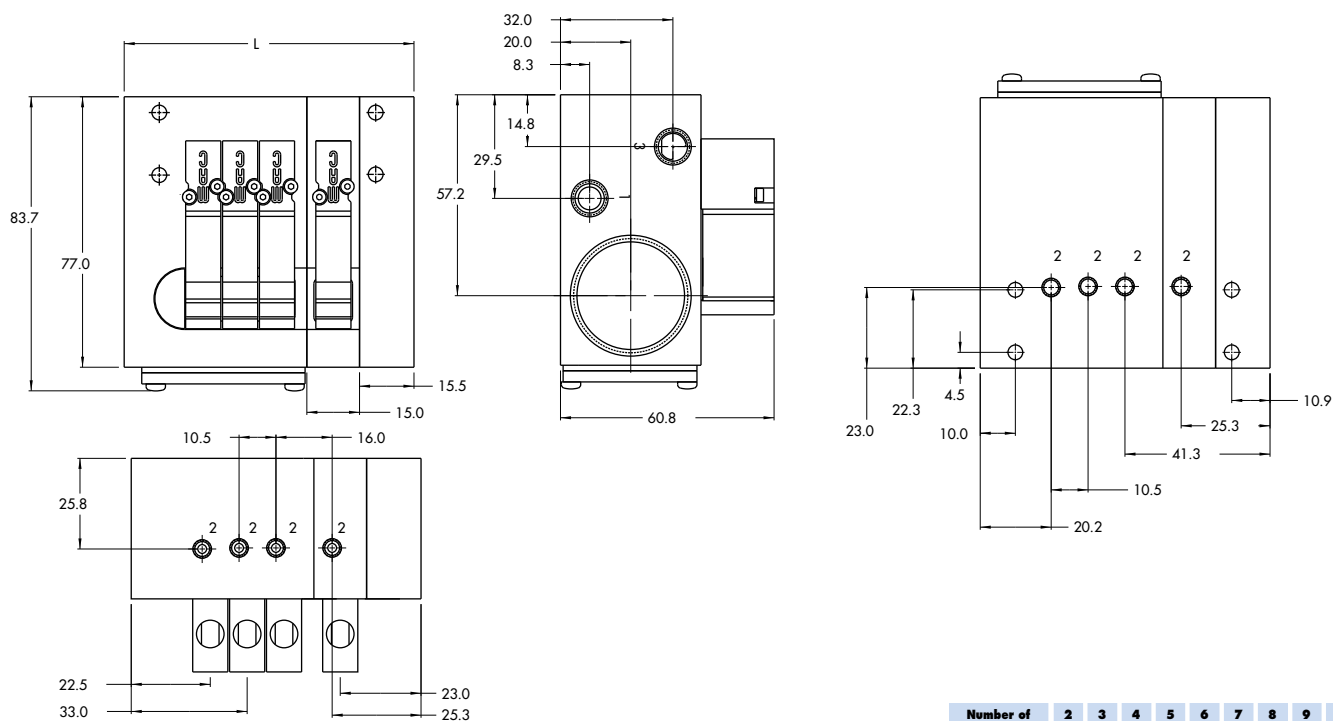
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Number of stations	2	3	4	5	6	7	8	9	10
DIM. L	57.0	67.5	78.0	88.5	99.0	109.5	120.0	130.5	141.0

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in add-a-unit stations with F. C.

OPERATIONAL BENEFITS

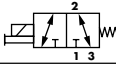
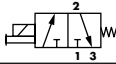
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

ECD034B-00xxx-AOxx

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ ECD034B-005CD-AOxx	☐ ECD034B-006CD-AOxx
# 10-32	☐ ECD034B-005CB-AOxx	☐ ECD034B-006CB-AOxx

Number of stations (03=3 stations) - Maximum length is 4 stations

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
when add-a-unit stations are added to bars with a multi-pin connector,
MOD. SD03 should be included with add-a-unit model number.

**TECHNICAL
DATA**

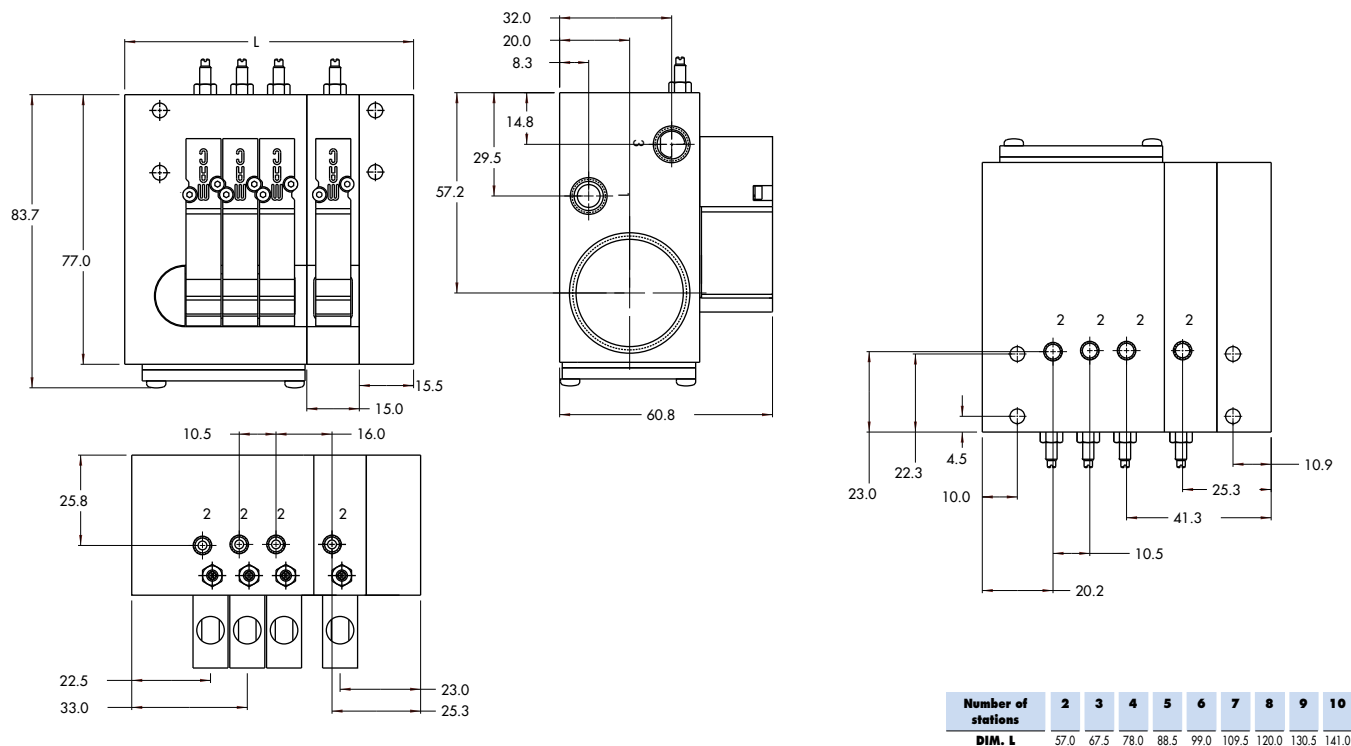
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in add-a-unit stations with Pr. Reg.

OPERATIONAL BENEFITS

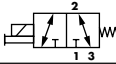
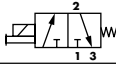
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

ECD034B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS ** (to be ordered separately)

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ ECD034B-003CD-AOxx	☐ ECD034B-004CD-AOxx
# 10-32	☐ ECD034B-003CB-AOxx	☐ ECD034B-004CB-AOxx

Number of stations (03=3 stations) - Maximum length is 4 stations
 Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD. SD03 should be included with add-a-unit model number.

** Regulator ordered separately-see below

PR44A-AOxx

- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

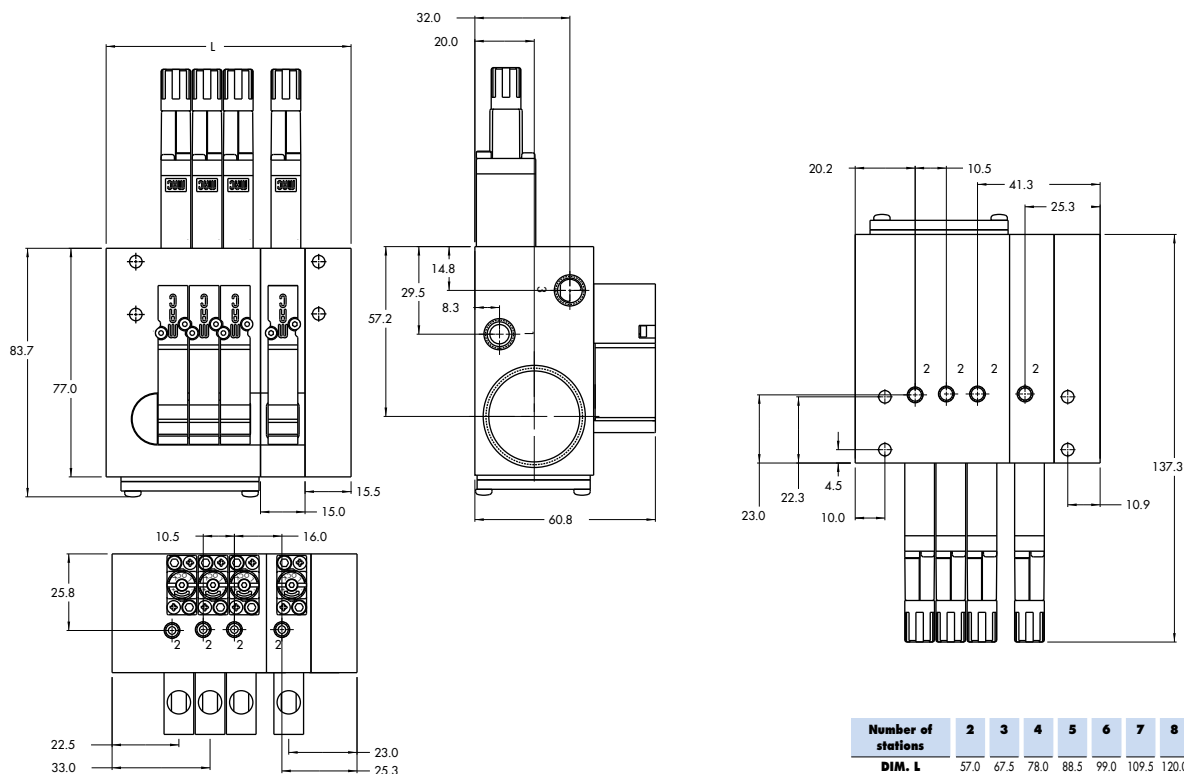
Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.

Options : • Base wire Plug-in protector : 24180. • Blanking plate for regulator : N-44003.

• Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in add-a-unit stations with F. C. and Pr. Reg.

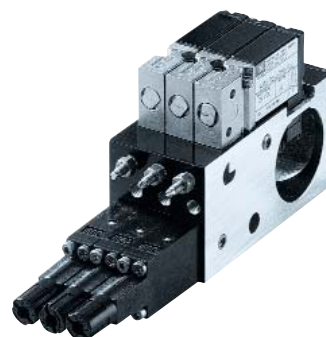
OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

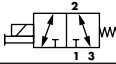
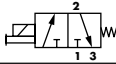
Reset

HOW TO ORDER

34B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX**

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

ECD034B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS AND PRESSURE REGULATORS ** (pressure regulators to be ordered separately)

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ ECD034B-008CD-AOxx	☐ ECD034B-007CD-AOxx
# 10-32	☐ ECD034B-008CB-AOxx	☐ ECD034B-007CB-AOxx

Number of stations (03=3 stations) - Maximum length is 4 stations
 Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD. SD03 should be included with add-a-unit model number.

** Regulator ordered separately-see below

PR44A-AOxx

- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

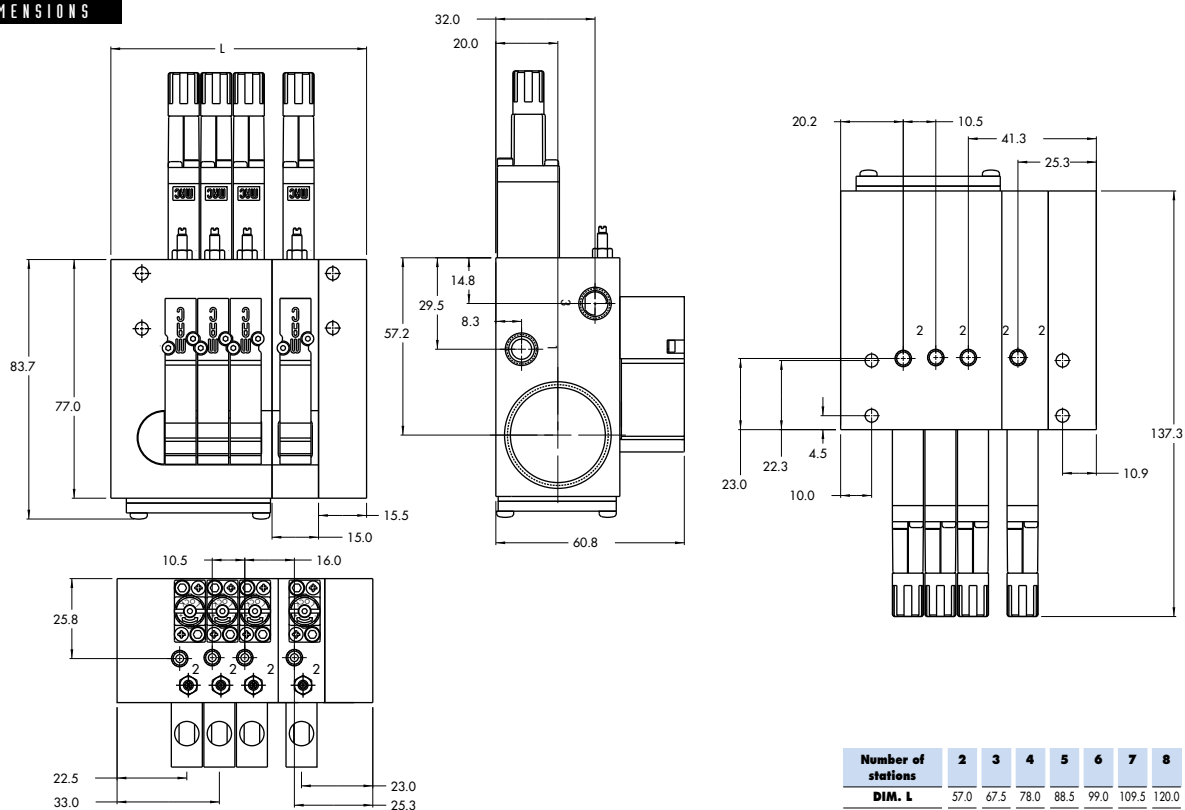
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Blanking plate for regulator : N-44003. • Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32, 4mm tube receptacle	0.11C_v	plug-in with pre-wired connector

OPERATIONAL BENEFITS

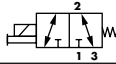
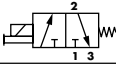
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

ECF34B-00xxx-xxxx

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECF34B-00ADA- zzxx	☐ ECF34B-00BDA- zzxx
# 10-32	☐ ECF34B-00ABA- zzxx	☐ ECF34B-00BBA- zzxx
4 mm tube receptacle	☐ ECF34B-00AEA- zzxx	-----

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

L=Left Side; R=Right Side

ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port	☐ RH	3/8" NPSM Conduit Port
	Standard Base Wires		Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

Note: Left and right end is determined by facing conduit passage.

TECHNICAL
DATA

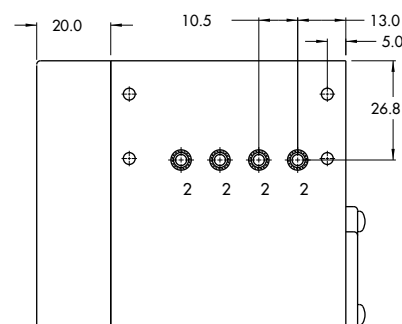
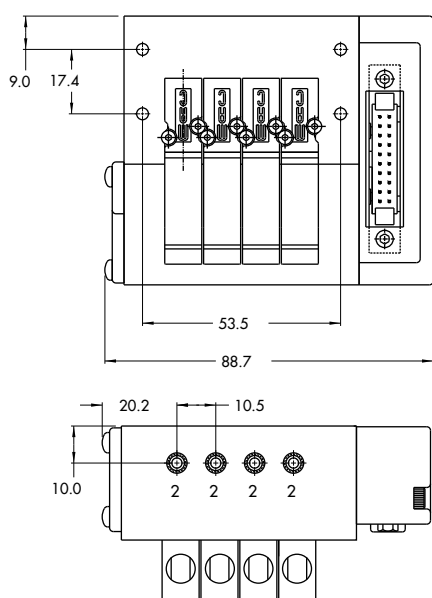
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, $\Delta P=1\text{bar}$) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32, 4mm tube receptacle	0.11C_v	plug-in with F. C. and pre-wired connector

OPERATIONAL BENEFITS

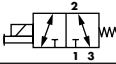
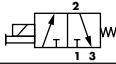
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **XX**

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

ECF34B-00xxx-xxxx

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECF34B-00CDA- zzxx	☐ ECF34B-00DDA- zzxx
# 10-32	☐ ECF34B-00CBA- zzxx	☐ ECF34B-00DBA- zzxx
4 mm tube receptacle	☐ ECF34B-00CEA- zzxx	-----

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

L=Left Side; R=Right Side

ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port	☐ RH	3/8" NPSM Conduit Port
	Standard Base Wires		Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

Note: Left and right end is determined by facing conduit passage.

**TECHNICAL
DATA**

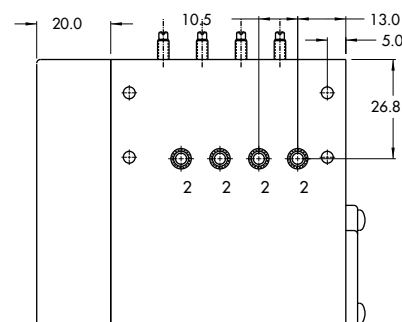
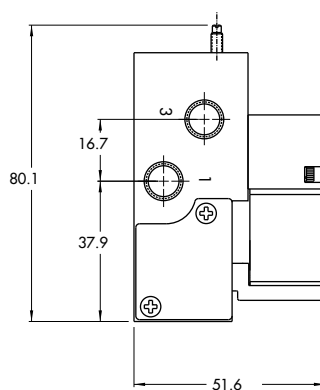
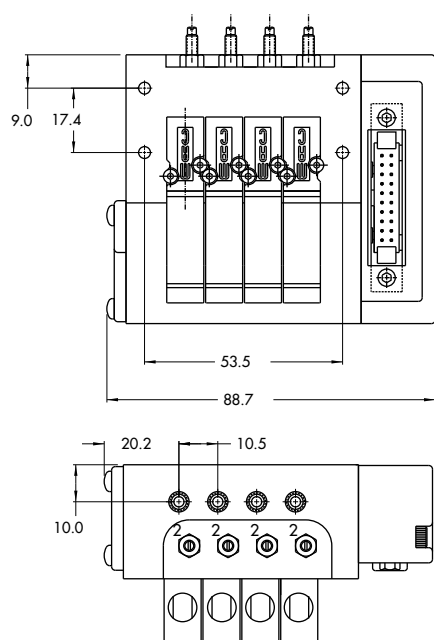
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, $\Delta P=1\text{bar}$) :	4 W : 0.11C _v , 2.5 W : 0.09C _v , 1.8 W : 0.06C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32	0.10C_v	plug-in with Pr. Reg. and pre-wired connector

OPERATIONAL BENEFITS

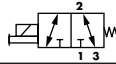
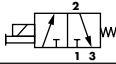
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS ** (to be ordered separately)

ECF34B-00xxx-xxxx

Port size	Bottom cylinder ports (10.5 mm)
M5	☐ ECF34B-00EDA- zzxx
# 10-32	☐ ECF34B-00EBA- zzxx

Number of stations (03=3 stations)

** Pressure Regulators :

PR44A-AOxx

- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

L=Left Side; R=Right Side			
ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port	☐ RH	3/8" NPSM Conduit Port
	Standard Base Wires		Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

Note: Left and right end is determined by facing conduit passage.

**TECHNICAL
DATA**

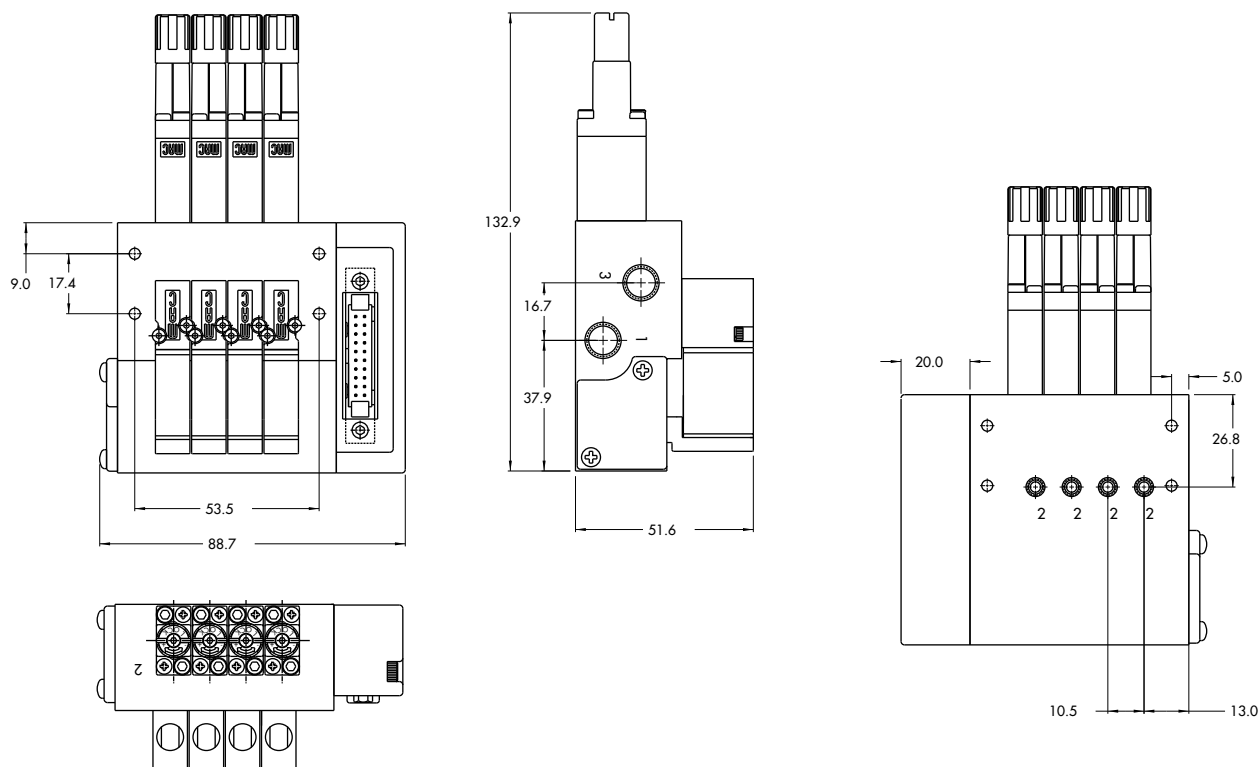
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10C _v , 2.5 W : 0.09C _v , 1.8 W : 0.07C _v
Leak rate :	
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Blanking plate for regulator : N-44003. • Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32, 4mm tube receptacle	0.11C_v	din rail, plug-in with pre-wired connector

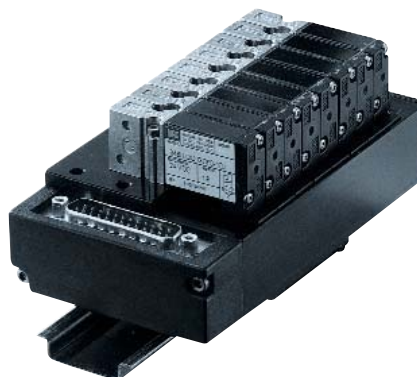
OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

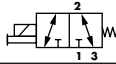
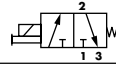
Reset

HOW TO ORDER

34B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

ECF34B-00xxx-xxxx

Port size	Side cylinder ports (10.5 mm)
M5	☐ ECF34B-00ADB- zzxx
# 10-32	☐ ECF34B-00ABB- zzxx
4 mm tube receptacle	☐ ECF34B-00AEB- zzxx

Number of stations (03=3 stations)

Din rail spec. (EN50 022)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

L=Left Side; R=Right Side			
ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port	☐ RH	3/8" NPSM Conduit Port
	Standard Base Wires		Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

Note: Left and right end is determined by facing conduit passage.

T E C H N I C A L
D A T A

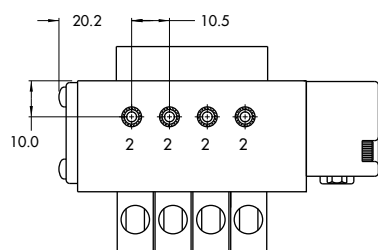
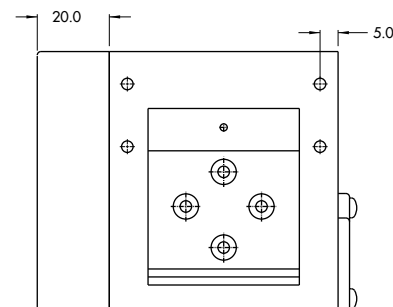
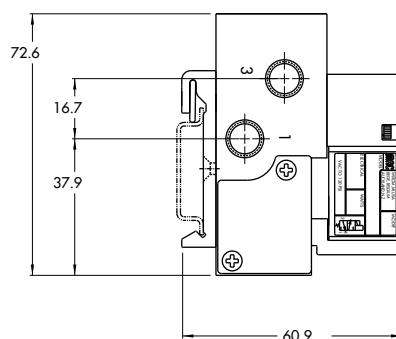
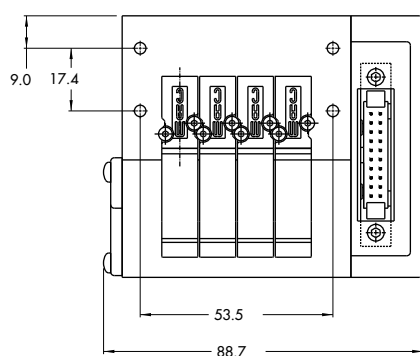
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.11C _v , 2.5 W : 0.09C _v , 1.8 W : 0.06C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

D I M E N S I O N S



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	M5 - #10-32, 4 mm tube receptacle	0.11 C_v	din rail, plug-in with F. C. and pre- wired connector

OPERATIONAL BENEFITS

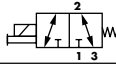
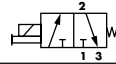
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

34B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 34B-LOO-GxxO-xxx	☐ 34B-NOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DD 24VDC (2.5 W)		☐ DT Plug-in with light
☐ DF 24VDC (4.0 W)		☐ DE Plug-in with suppression diode
☐ xx Other Options		☐ DV Plug-in with light and suppression diode
		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

ECF34B-00xxx-xxxx

Port size	Side cylinder ports (10.5 mm)
M5	☐ ECF34B-00CDB- zzxx
# 10-32	☐ ECF34B-00CBB- zzxx
4 mm tube receptacle	☐ ECF34B-00CEB- zzxx

Number of stations (03=3 stations)

Din rail spec. (EN50 022)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

L=Left Side; R=Right Side			
ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port	☐ RH	3/8" NPSM Conduit Port
☐ Standard Base Wires		☐ Standard Base Wires	

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

Note: Left and right end is determined by facing conduit passage.

**TECHNICAL
DATA**

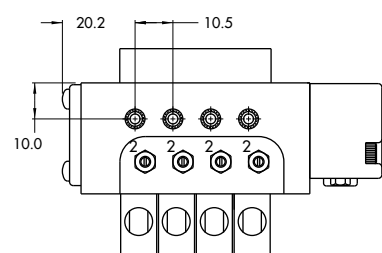
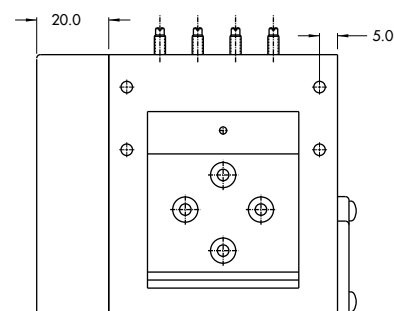
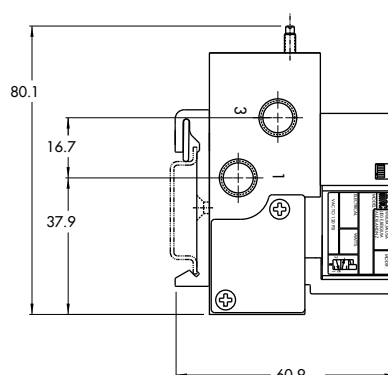
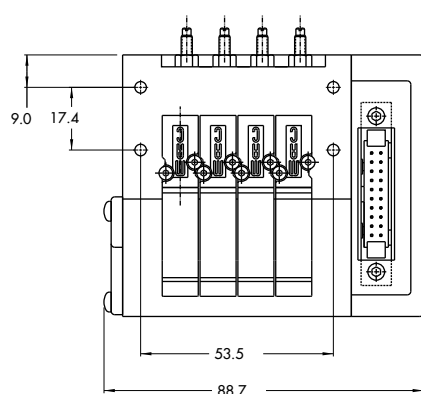
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.11C _v , 2.5 W : 0.09C _v , 1.8 W : 0.06C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16595. • Mounting screw (x2) : 35031. • Blanking plate : M-34005.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS





Section 2

Options

Codification table for voltages / Manual operator / Electrical connection

VALVE CODE ➤

-G XX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- solenoid valves 34 & 44 Series

1. VOLTAGE (type 34 Series)		1. VOLTAGE (type 44 Series)	
-G XX X - X XX	VOLTAGE	-G XX X - X XX	VOLTAGE
☐ DC	24 VDC (1,8 W)	☐ DA	24 VDC (1,0 W)
☐ DD	24 VDC (2,5 W)	☐ DC	24 VDC (1,8 W)
☐ DE	24 VDC (3,0 W)	☐ DD	24 VDC (2,5 W)
☒ DF	24 VDC (4,0 W)	☐ DF	24 VDC (4,0 W)
☐ DJ	12 VDC (1,8 W)	☐ DG	12 VDC (1,0 W)
☐ DK	12 VDC (2,5 W)	☐ DJ	12 VDC (1,8 W)
☐ DM	12 VDC (3,0 W)	☐ DK	12 VDC (2,5 W)
☐ DN	12 VDC (4,0 W)	☐ DN	12 VDC (4,0 W)

2. WIRE LENGTH (Common options for 34 & 44 Series)	
-G XX X - X XX	WIRE LENGTH
☐ A	18"
☐ B	24"
☐ C	36"
☐ D	48"
☐ E	72"
☐ F	96"
☐ G	120"
☐ H	144"

3. MANUAL OPERATOR (COMMON OPTIONS FOR 34 & 44 SERIES)

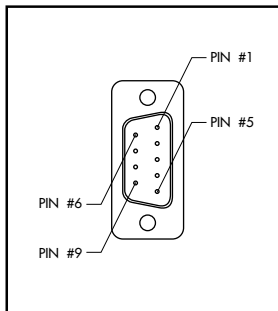
-G XX X - X XX	MANUAL OPERATOR
1	Non-locking recessed
3	Non-locking extended

4. ELECTRICAL CONNECTION (COMMON OPTIONS FOR 34 & 44 SERIES)

-G XX X - X XX	NO CONNECTOR
☐ BA	Flying leads
☐ BB	BA with ground wire
☐ BC	BA with light
☐ BD	BA with light and ground wire
☐ BE	BA with suppression diode
☐ BF	BA with suppression diode and ground wire
☐ BG	BA with suppression diode and light
☐ BH	BA with suppression diode, light and ground wire
☐ BN	BA with suppression diode and blocking diode
☒ BP	BA with suppression diode, blocking diode and ground wire
☐ BR	BA with suppression diode, blocking diode and light
☐ BS	BA with suppression diode, blocking diode, light and ground wire
☐ BT	BA with light
☐ BU	BA with light and ground wire
☐ BV	BA with suppression diode and light
☐ BW	BA with suppression diode, light and ground wire
☐ BX	BA with suppression diode, blocking diode and light
☐ BY	BA with suppression diode, blocking diode, light and ground wire

-G XX X - X XX	PLUG-IN CONNECTOR
☐ KA	Mini connector with flying leads
☐ KB	KA with ground wire
☐ KE	KA with suppression diode
☐ KF	KA with suppression diode and ground wire
☐ KJ	Mini connector for KA option
☐ KM	Mini connector for KB option
☐ KN	KA with suppression diode and blocking diode
☐ KP	KA with suppression diode, blocking diode and ground wire
☐ KT	KA with light
☐ KU	KA with light and ground wire
☐ KV	KA with suppression diode and light
☐ KW	KA with suppression diode, light and ground wire
☐ KX	KA with suppression diode, blocking diode and light
☐ KY	KA with suppression diode, blocking diode, light and ground wire

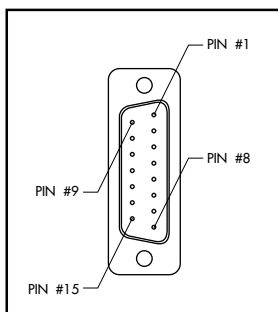
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

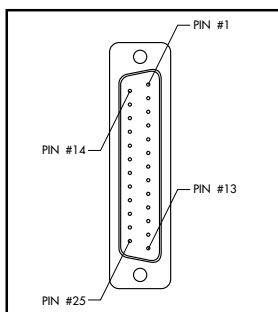
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

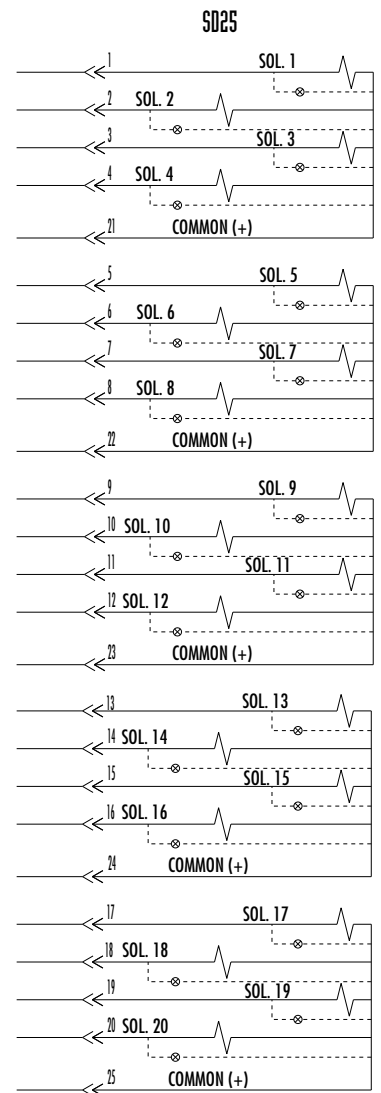
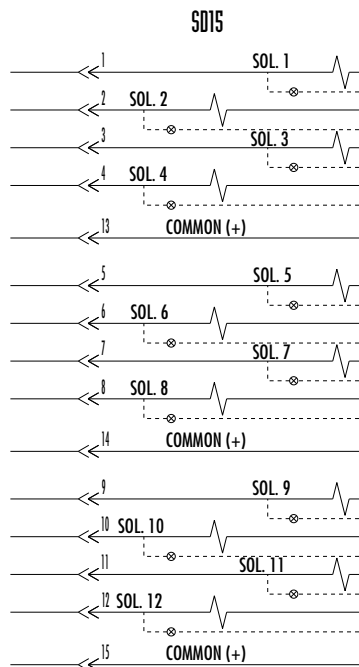
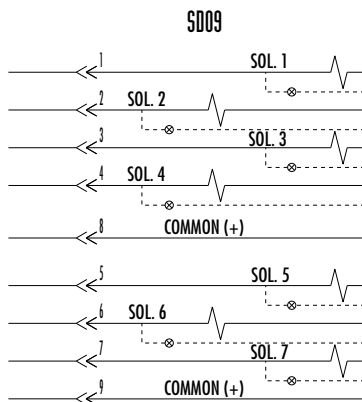
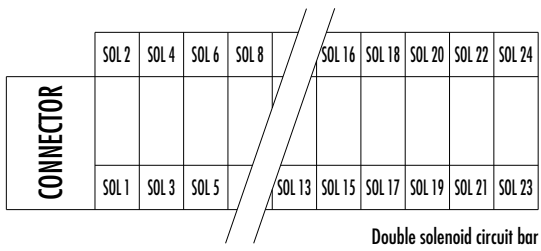
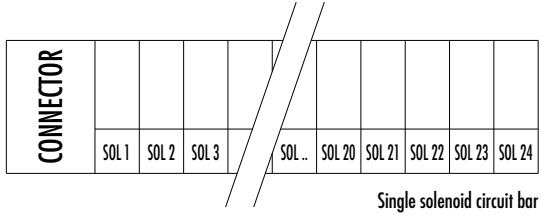


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

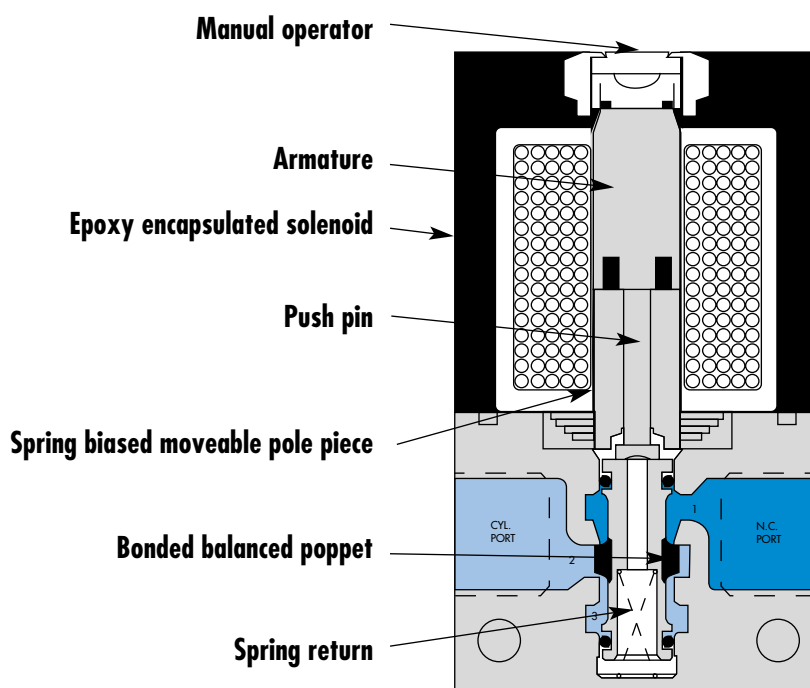
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

non plug-in	non plug-in with Pr. Reg.	plug-in	plug-in with side Pr. Reg.	plug-in with integral terminal strip	plug-in with integral terminal strip and side Pr. Reg.
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SERIES FEATURES

- Patented MACSOLENOID[®] for fastest possible response times.
- Balanced poppet permits versatility in function :
 - 3 way N.C. - 3 way N.O. - Divertor - Selector
- Extremely high cycle rate capability.
- Various solenoid enclosures and plug-in connectors.
- Low wattage DC solenoids - down to 1.8 watts.
- Rated for lubricated or non-lubricated service.

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" NPTF - #10-32 UNF	0.10C_v	non plug-in

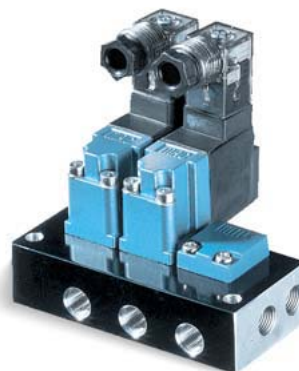
OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

Reset

HOW TO ORDER

35A-xxx-Dxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

	Universal valve
	
Valve less base	☐ 35A-B00-Dxxx-xxx

SOLENOID OPERATOR ➤

D **xx x- x xx***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ AA 120/60, 110/50	☐ A 18" (Flying leads)	☐ 1 Non-locking Recessed	☐ KA Square connector
☐ AB 240/60, 220/50	☐ J Connector	☐ 2 Locking Recessed	☐ KD Square connector with light
☐ AC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ BA Flying leads
☐ FB 24VDC (1.8 W)			☐ xx Other Options
☐ DA 24VDC (5.4 W)			
☐ DF 24VDC (12.7 W)			
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR**

EBM35A-xxxx-xx

Port size	Side cylinder ports Spacing 21 mm	Bottom cylinder ports Spacing 21 mm
1/8" NPTF	☐ EBM35A-001A-xx	☐ EBM35A-002A-xx
# 10-32 UNF	☐ EBM35A-001B-xx	☐ EBM35A-002B-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

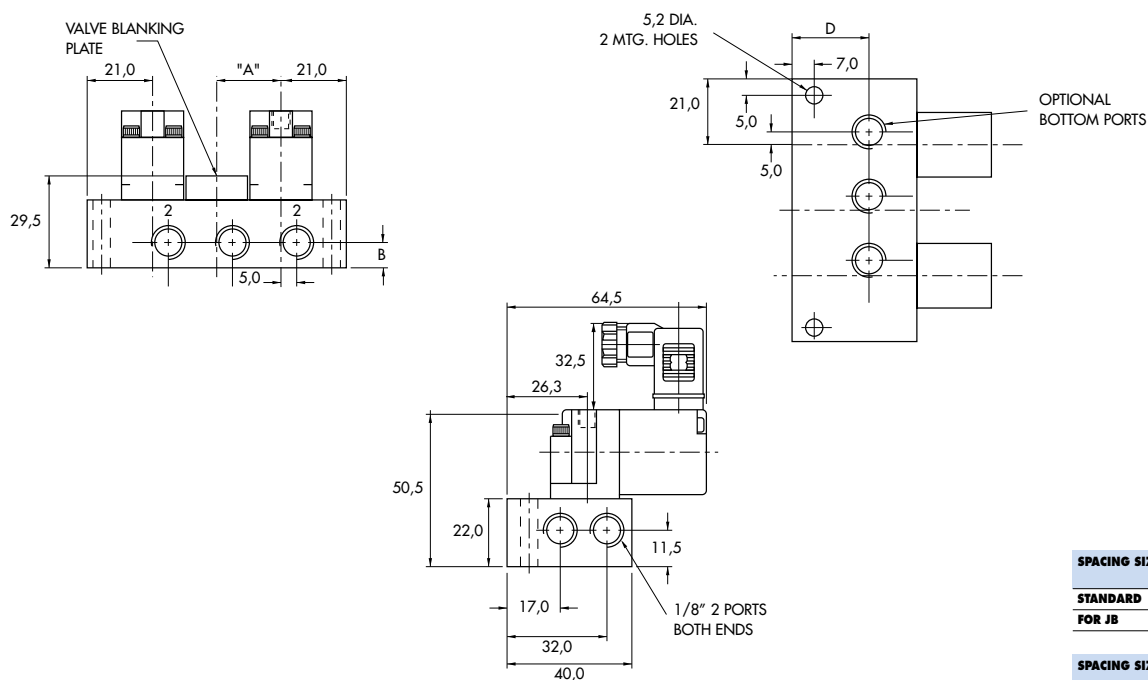
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXX-XXX, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16447.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-35004.

Options :

- BSPP threads. • High flow up to 0.14 C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



SPACING SIZE	A	
STANDARD	21.0	
FOR JB	26.0	
SPACING SIZE	B	D
1/8"	8.0	24.5
# 10-32	5.5	24.2

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" NPTF - #10-32 UNF	0.10C_v	non plug-in with Pr. Reg.

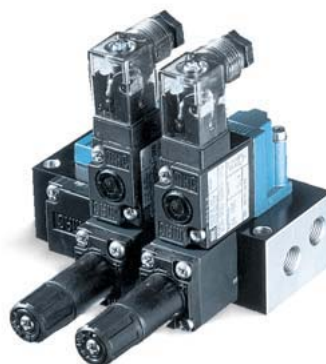
OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

Reset

HOW TO ORDER

35A-xxx-Dxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

	Universal valve
	
Valve less base	☐ 35A-B00-Dxxx-xxx
Valve less base w/ gage port	☐ 35A-F00-Dxxx-xxx

SOLENOID OPERATOR >

XX Voltage		X Wire length	X Manual operator	XX Electrical connection
☐ AA	120/60, 110/50	☐ A 18" (Flying leads)	☐ 1 Non-locking Recessed	☐ KA Square connector
☐ AB	240/60, 220/50	☐ J Connector	☐ 2 Locking Recessed	☐ KD Square connector with light
☐ AC	24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ BA Flying leads
☐ FB	24VDC (1.8 W)			☐ xx Other Options
☐ DA	24VDC (5.4 W)			
☐ DF	24VDC (12.7 W)			
☐ xx	Other Options			

EBM35A-xxxx-xx

HOW TO ORDER CIRCUIT BAR WITH PRESSURE REGULATORS (TO BE ORDERED SEPARATELY)* *

Port size Side cylinder ports	Spacing 21 mm	Spacing 40 mm
1/8" NPTF	☐ EBM35A-003A-xx	☐ EBM35A-023A-xx
# 10-32 UNF	☐ EBM35A-003B-xx	☐ EBM35A-023B-xx
Port size Bottom cylinder ports	Spacing 21 mm	Spacing 40 mm
1/8" NPTF	☐ EBM35A-004A-xx	☐ EBM35A-024A-xx
# 10-32 UNF	☐ EBM35A-004B-xx	☐ EBM35A-024B-xx

Number of stations (03=3 stations)

Other options available. Consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
use 40 mm spacing for valves w/ gage port.

** Pressure Regulators :

35A-00M (Adjusting knob)
35A-00L (Slotted stem)
35A-00U (Locking stem)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

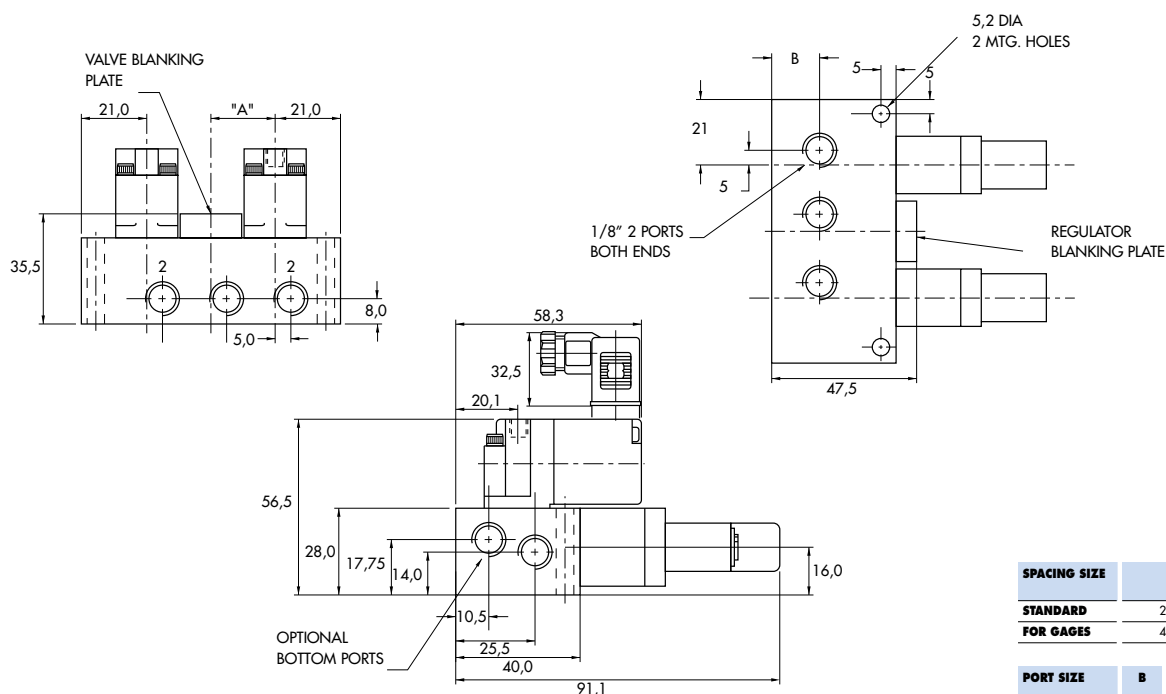
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXX-XXX, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16447.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-35004. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



SPACING SIZE	A
STANDARD	21.0
FOR GAGES	40.0
PORT SIZE	B
1/8"	15.5
# 10-32	18.0

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

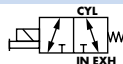
Reset

HOW TO ORDER

35A-xxx-DxxJ-xFM



HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

	Universal valve
	
Valve less base	☐ 35A-B00-DxxJ-xFM

SOLENOID OPERATOR ➤

D **xx** J- **x** FM *

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

HOW TO ORDER "PLUG-IN" CIRCUIT BAR **

ECD35A-xxxx-xx-xx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	21	☐ ECD35A-001A-A0-xx*	☐ ECD35A-002A-A0-xx*
# 10-32 UNF	21	☐ ECD35A-001B-A0-xx*	☐ ECD35A-002B-A0-xx*
1/8" NPTF	30	☐ ECD35A-031A-C0-xx*	☐ ECD35A-032A-C0-xx*
# 10-32 UNF	30	☐ ECD35A-031B-C0-xx*	☐ ECD35A-032B-C0-xx*

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note : clic for valves mounted on base at the factory, add - 9 to the model number.
clic for multi-pin connector (9, 15 or 25).

- * ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal w/light (120V)
- ☐ CB = terminal w/light (240V)
- ☐ CD = terminal w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, $\Delta P=1\text{bar}$) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

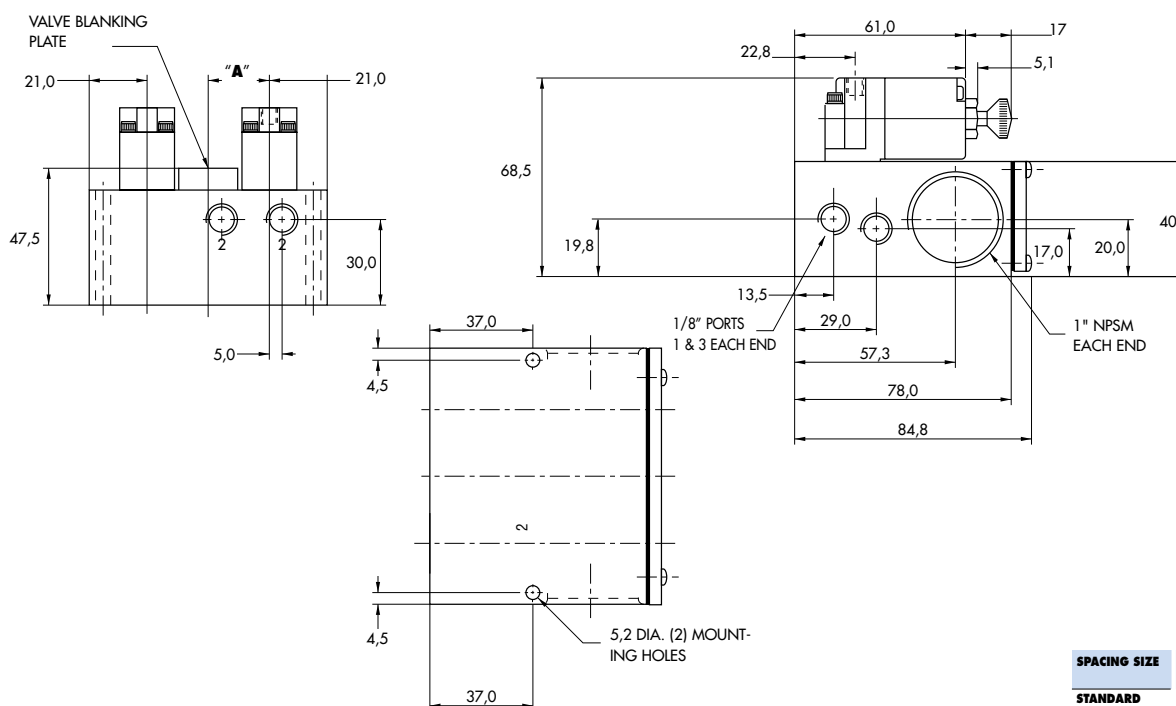
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXX-XXX, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16447.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-35004. • Plug-in protector : 16520.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with side Pr. Reg.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

Reset

HOW TO ORDER

35A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

	Universal valve
	
Valve less base	☐ 35A-B00-DxxJ-xFM
Valve less base w/ gage port	☐ 35A-F00-DxxJ-xFM

SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

ECD35A-xxxx-xx-xx

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH PRESSURE REGULATORS (TO BE ORDERED SEPARATELY)* *

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	21	☐ ECD35A-004A-A0-xx*
# 10-32 UNF	21	☐ ECD35A-004B-A0-xx*
1/8" NPTF	30	☐ ECD35A-034A-C0-xx*
# 10-32 UNF	30	☐ ECD35A-034B-C0-xx*
1/8" NPTF	40	☐ ECD35A-024A-A0-xx*
# 10-32 UNF	40	☐ ECD35A-024B-A0-xx*

Number of stations (03=3 stations)

* * Other options available. Consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
 clic for multi-pin connector (9, 15 or 25).
 minimum spacing for terminal strips is 30 mm.
 use 40 mm spacing for valves w/ gage port.

** Pressure Regulators :
 35A-00M (Adjusting knob)
 35A-00L (Slotted stem)
 35A-00U (Locking stem)

* ☐ A0 = without light
☐ AA = with light (120V)
☐ AB = with light (240V)
☐ AD = with light (24V)
☐ C0 = terminal strip
☐ CA = terminal w/light (120V)
☐ CB = terminal w/light (240V)
☐ CD = terminal w/light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

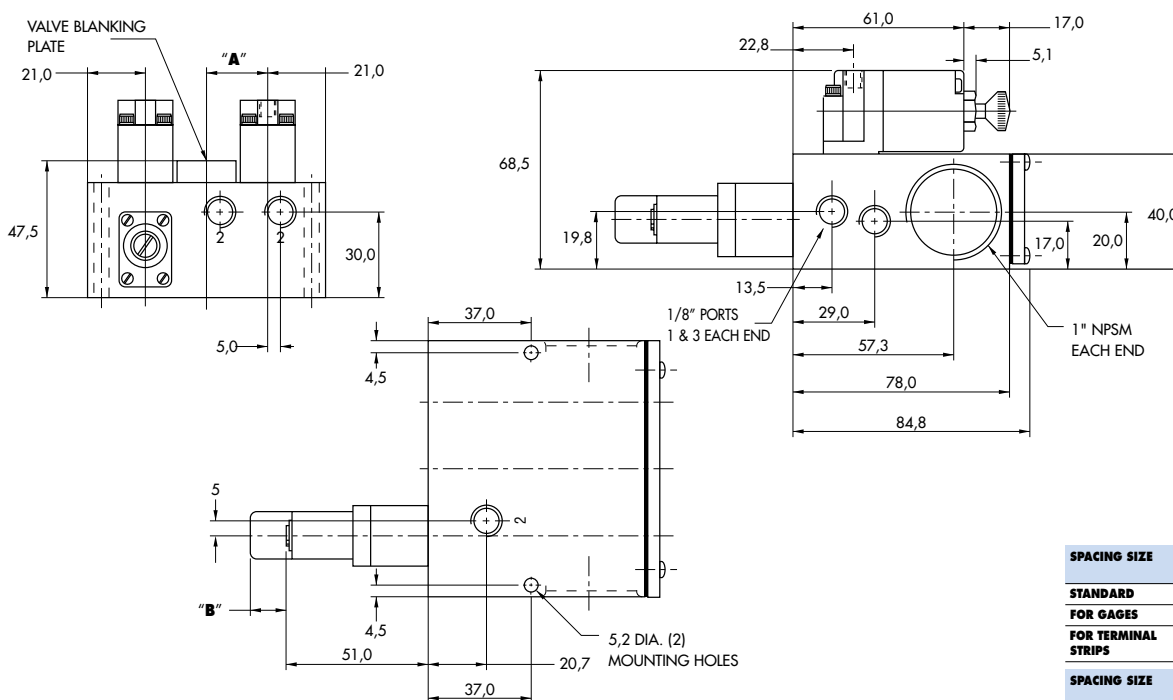
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXX-XXX, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16447.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-35004. • Blanking plate regulator : M-35005.
- Plug-in protector : 16520.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



SPACING SIZE	A
STANDARD	21.0
FOR GAGES	40.0
FOR TERMINAL STRIPS	30.0
SPACING SIZE	B
SLOTTED LOCKING STEM	6.0
ADJUSTING KNOB	13.4

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with integral terminal strip

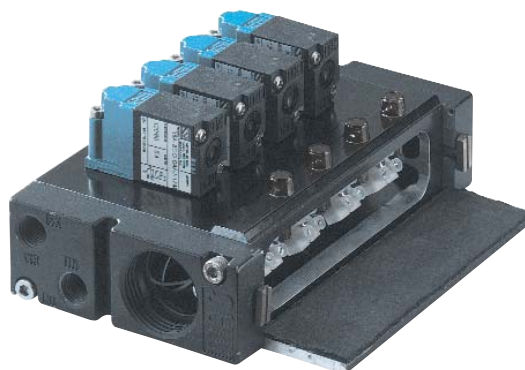
OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

Reset

HOW TO ORDER

35A-xxx-DxxJ-xFM



HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

	Universal valve
	
Valve less base	35A-B00-DxxJ-xFM

SOLENOID OPERATOR ➤

D **xx** J- **x** FM *

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

HOW TO ORDER "PLUG-IN" CIRCUIT BAR **

ECE35A-xxxx-xx-xx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	26	☐ ECE35A-011A-C0-xx*	☐ ECE35A-012A-C0-xx*
# 10-32 UNF	26	☐ ECE35A-011B-C0-xx*	☐ ECE35A-012B-C0-xx*

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
end plate kit required: M-45017.

- * ☐ C0 = terminal strip
- ☐ CA = terminal strip w/light (120V)
- ☐ CB = terminal strip w/light (240V)
- ☐ CD = terminal strip w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

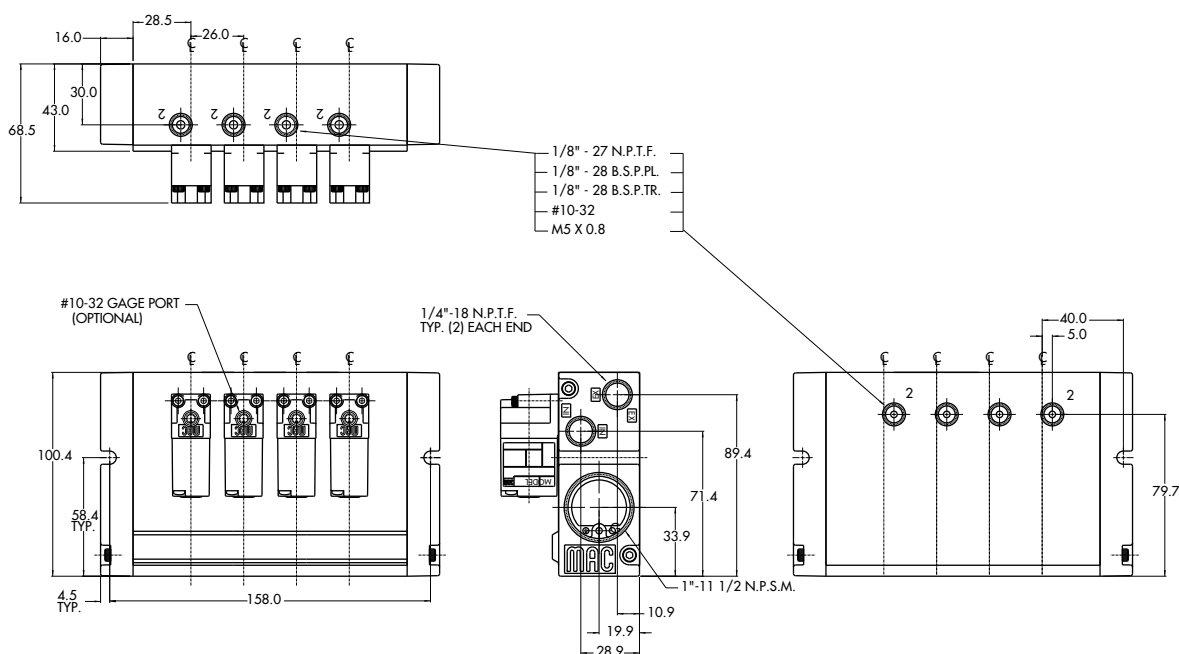
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXX-XXX, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16447.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-35004. • Plug-in protector : 16520.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Note: Bottom & side cylinder ports not available on the same station

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with integral terminal strip and side Pr. Reg.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

Reset

HOW TO ORDER

35A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

	Universal valve
	
Valve less base	☐ 35A-B00-DxxJ-xFM
Valve less base w/ gage port	☐ 35A-F00-DxxJ-xFM

SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

ECE35A-xxxx-xx-xx

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH PRESSURE REGULATORS (TO BE ORDERED SEPARATELY)**

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	26	☐ ECE35A-014A-C0-xx*
# 10-32 UNF	26	☐ ECE35A-014B-C0-xx*
1/8" NPTF	40	☐ ECE35A-024A-C0-xx*
# 10-32 UNF	40	☐ ECE35A-024B-C0-xx*

Number of stations (03=3 stations)

Note: ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
use 40 mm spacing for valves w/ gage port.
end plate kit required: M-45017.

** Pressure Regulators :
35A-00M (Adjusting knob)
35A-00L (Slotted stem)
35A-00U (Locking stem)

* ☐ C0 = terminal strip
☐ CA = terminal strip w/light (120V)
☐ CB = terminal strip w/light (240V)
☐ CD = terminal strip w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

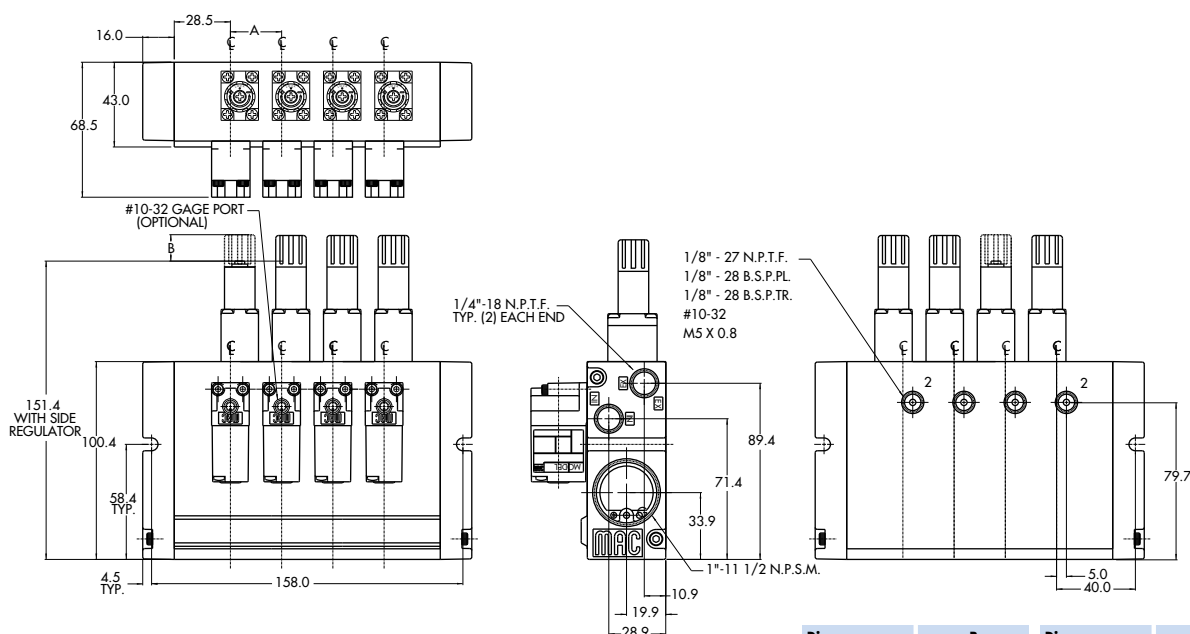
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXX-XXX, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16447.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-35004. • Blanking plate regulator : M-35005.
- Plug-in protector : 16520.

Options :

- BSPP threads. • High flow up to 0.14 C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Dim.	B	Dim.	A
SLOTTED LOCKING STEM	6.0	STANDARD SPACING	26.0
ADJUSTABLE KNOB	13.4	SPACING FOR GAUGES	40.0



Section 2

Options



0 p t i o n s

Codification table for voltages / Wire length / Manual operators / Electrical connections

VALVE CODE ➤

-D XX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- Solenoid valves 35 & 45 Series

1. VOLTAGE

- D XX X - X XX VOLTAGE

☐ AD	24/60
☐ AE	200/60
☐ AF	240/50
☐ AG	100/50, 100/60, 110/60
☐ DB	12 VDC (5.4 W)
☐ DC	12 VDC (7.5 W)
☐ DD	24 VDC (7.3 W)
☐ DE	12 VDC (12.7 W) CLSF
☐ DK	110 VDC (5.8 W)
☐ DL	64 VDC (6.0 W)
☐ DM	36 VDC (5.8 W)
☐ DN	6 VDC (6.0 W)
☐ DP	48 VDC (5.8 W)
☐ DU	24 VDC (6.0 W)
☐ EA	12 VDC (6.0 W)
☐ FA	12 VDC (1.8 W)
☐ FE	12 VDC (2.4 W)
☐ FF	24 VDC (2.4 W)

2. WIRE LENGTH

- D XX X - X XX WIRE LENGTH

☐ B	24"
☐ C	36"
☐ D	48"
☐ E	72"
☐ F	96"

3. MANUAL OPERATOR

- D XX X - X XX MANUAL OPERATOR

☐	0	No operator
☐	1	Non-locking recessed
☐	2	Locking recessed
☐	3	Non-locking extended
☐	4	Locking extended

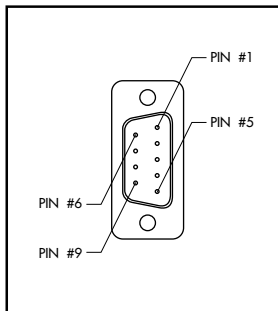
4. ELECTRICAL CONNECTION

- D XX X - X XX ELECTRICAL CONNECTION

☐	BA	Flying leads
☐	BK	BA with protection diode
☐	BL	BA with protection varistor
☐	CA	1/2" NPS conduit
☐	*FN	Plug-in with diode
☐	*FP	Plug-in with M.O.V.
☐	JB	Rectangular connector
☐	JD	Rectangular connector with light
☐	JM	Rectangular connector, male only
☐	KA	Square connector
☐	KB	Square connector with protection diode
☐	KC	Square connector with protection varistor
☐	KD	Square connector with light
☐	KE	Square connector with light and protection diode
☐	KF	Square connector with light and protection varistor
☐	KJ	Square connector (male only)
☐	KK	Square connector with protection diode (male only)
☐	KL	Square connector with protection varistor (male only)
☐	TA	Dual tabs
☐	TB	TA with protection diode
☐	TD	TA with light
☐	TE	TA with light and protection diode
☐	TJ	Dual tabs (male only)
☐	TK	TJ with protection diode
☐	TM	TJ with light
☐	TN	TJ with light and protection diode

* For use with the ECD and ECE style circuit bars.

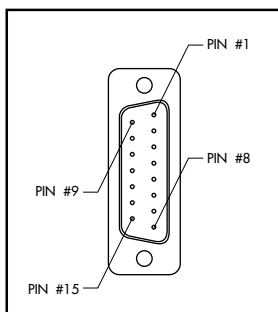
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

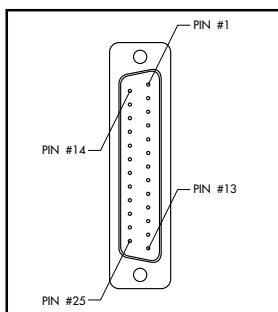
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

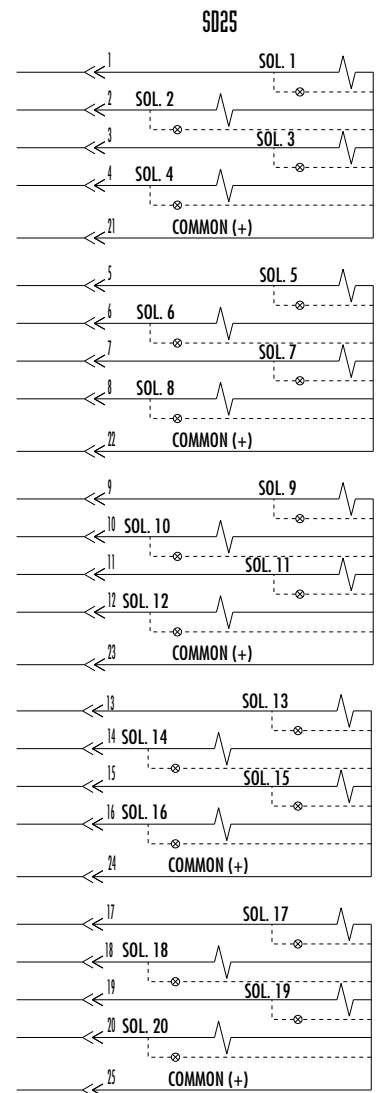
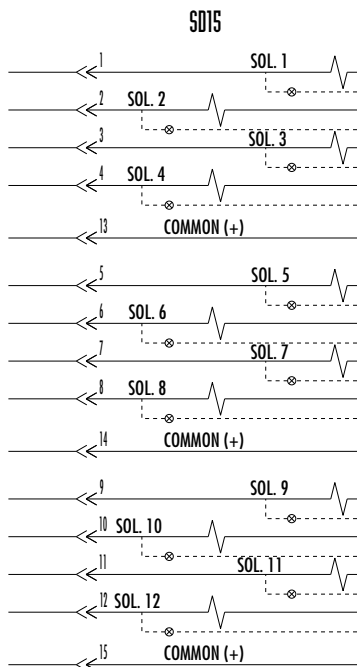
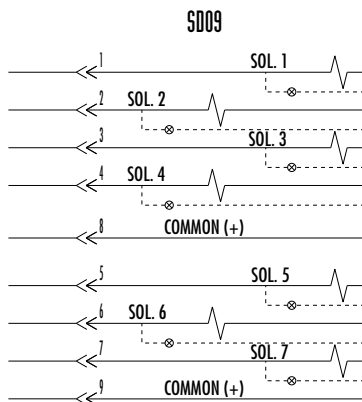
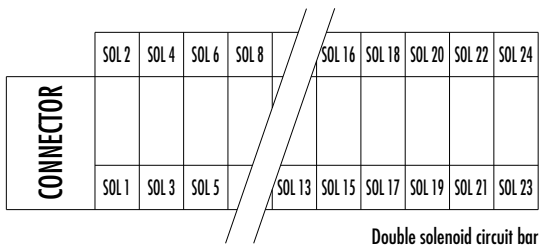
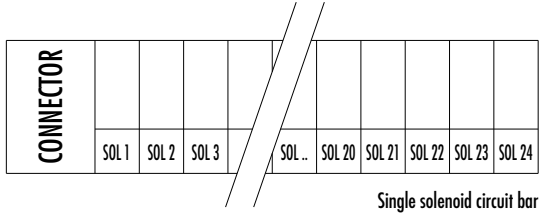


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

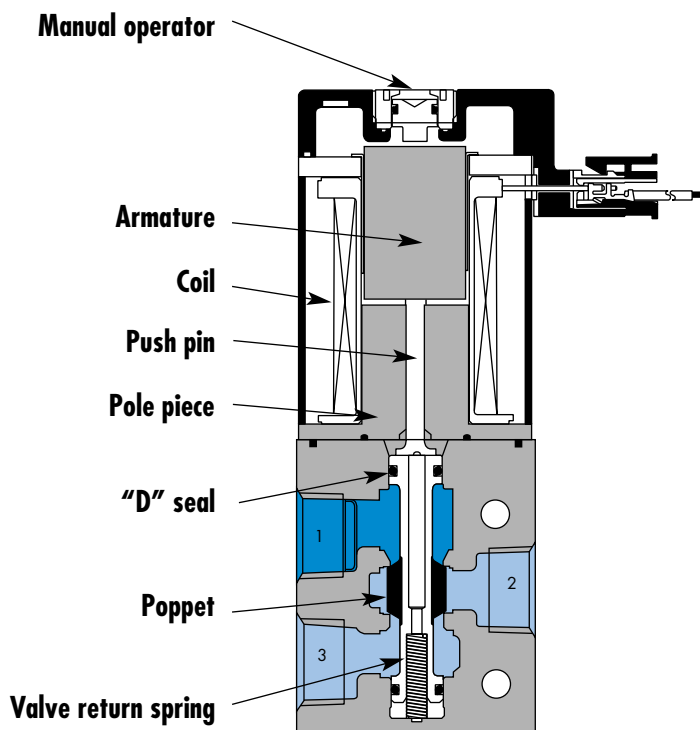
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

non plug-in cylinder ports in valve	non plug-in cylinder ports in base	non plug-in cylinder ports in base with Pr. Reg.	non plug-in add-on style cylinder ports in base	non plug-in add-a-unit stations	plug-in	plug-in with Pr. Reg.	add-on style plug-in
add-on style plug in with Pr. Reg.	plug-in add-a-unit stations	plug-in add-a-unit stations with Pr. Reg.					



SERIES FEATURES

- Balanced poppet equals consistent high shifting forces.
- Valve shifting forces are consistent and independent of pressure fluctuations.
- High solenoid and return spring forces ensure high speed and precise repeatability.
- Built-in wear compensation - valve stroke is shorter than solenoid stroke.
- Constant high flow maintained throughout the pressure range.
- Exhaust contaminants are isolated from the solenoid.
- Full flow exhaust.
- Universal porting - 6 functions in one valve.

Function	Port size (Inlet & Exhaust)	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/4" - 3/8"	0.5C_v	non plug-in cylinder ports in valve	26 mm 38 mm

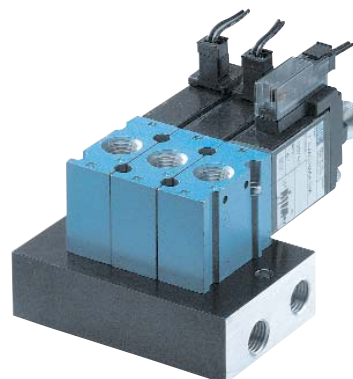
OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

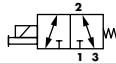
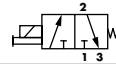
Reset

HOW TO ORDER

37A-xxx-Hxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Valve port size	Universal valve	NC only valve
		
1/8" NPTF	☐ 37A-EGO-Hxxx-xxx	☐ 37A-FGO-Hxxx-xxx
1/4" NPTF	☐ 37A-EHO-Hxxx-xxx	☐ 37A-FHO-Hxxx-xxx

SOLENOID OPERATOR >

H **XX** X- X **XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ A 18"	☐ 1 Non-locking	☐ MA Plug-in wire assy
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ MC Plug-in wire assy with light
☐ DA 24VDC (5.2 W)	☐ x Other Options		☐ BA Flying leads
☐ AA 120VAC (must use with rectified connector)			☐ BC Flying leads with light
☐ xx Other Options			☐ HA Plug-in connector with rectifier and light
			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

EBM37A-xxxxx-xx

Port size COMMON INLET & EXHAUST	Without regulators (20mm)	With regulators (20mm)
26mm Profile 1/4" NPTF	☐ EBM37A-01CAK-xx	-
38mm Profile 3/8" NPTF	-	☐ EBM37A-01JAK-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

** Pressure Regulators :

PR37A-GOAx

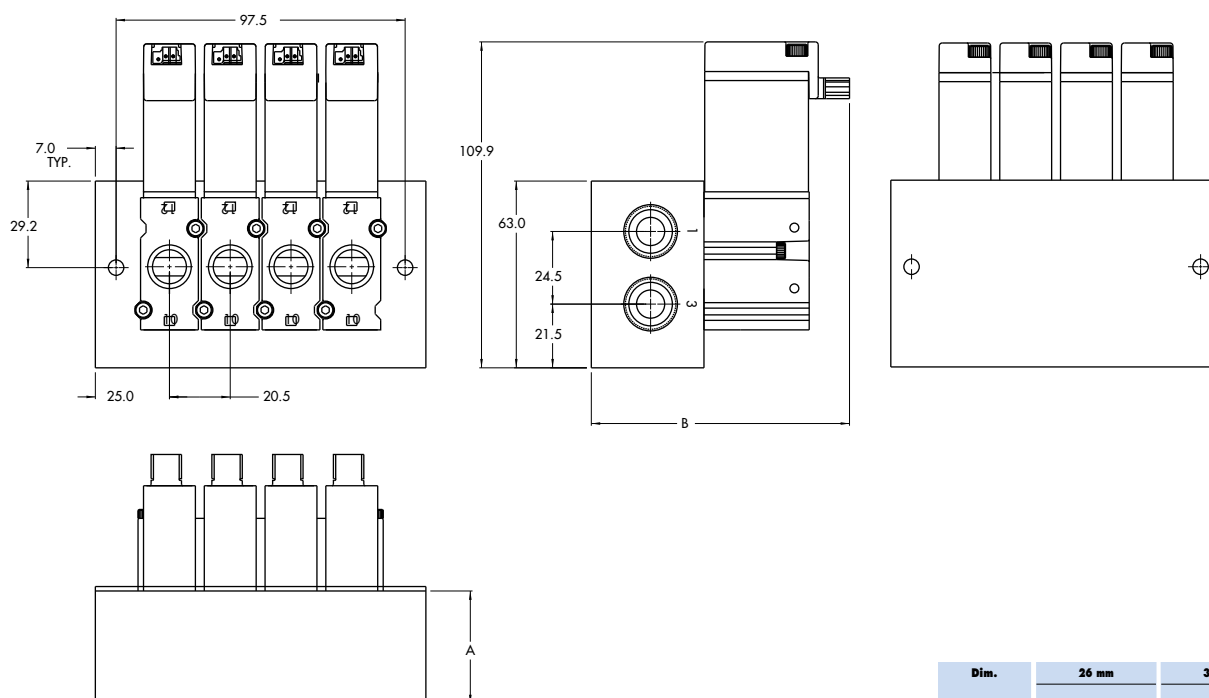
- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37002.
• Regulator blanking plate : R-47003.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Dim.	26 mm	38 mm
"A"	26.0	38.0
"B"	75.1	87.1

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	non plug-in cylinder ports in base	26 mm

OPERATIONAL BENEFITS

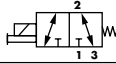
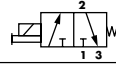
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

37A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C10-Hxxx-xxx	☐ 37A-D10-Hxxx-xxx

SOLENOID OPERATOR ➤

H **XX** X- X **XX**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DC 24VDC (1.8 W)	☐ A 18"	☐ 1 Non-locking	☐ MA Plug-in wire assy
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ MC Plug-in wire assy with light
☐ DA 24VDC (5.2 W)	☐ x Other Options		☐ BA Flying leads
☐ AA 120VAC (must use with rectified connector)			☐ BC Flying leads with light
☐ xx Other Options			☐ HA Plug-in connector with rectifier and light
			☐ xx Other Options

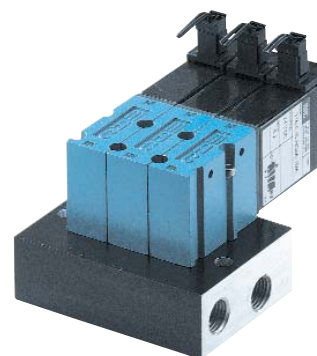
HOW TO ORDER CIRCUIT BAR

EBM37A-00xxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	☐ EBM37A-00AAA-xx	☐ EBM37A-00BAA-xx
1/4" NPTF	☐ EBM37A-00AAB-xx	☐ EBM37A-00BAB-xx
6 mm tube receptacle	☐ EBM37A-00AAG-xx	☐ EBM37A-00BAG-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.



**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

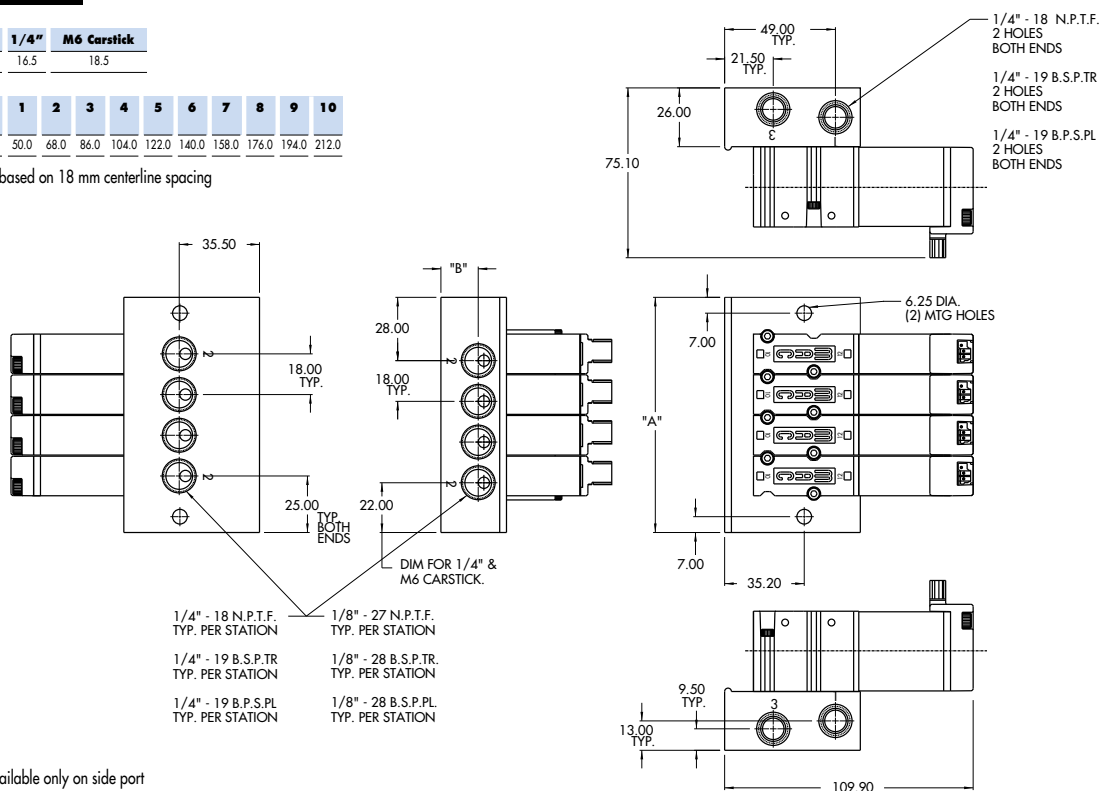
- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Dim.	1/4"	M6 Carstick
"B"	16.5	18.5

Number of stations	1	2	3	4	5	6	7	8	9	10
"A"	50.0	68.0	86.0	104.0	122.0	140.0	158.0	176.0	194.0	212.0

Dimensions are based on 18 mm centerline spacing



* M6 Carstick available only on side port

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	non plug-in cylinder ports in base with Pr. Reg.	38 mm

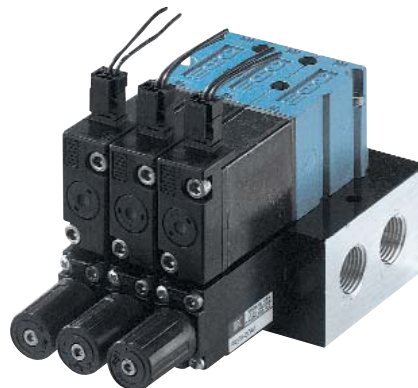
OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

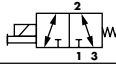
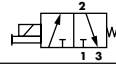
Reset

HOW TO ORDER

37A-xxx-Hxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-Hxxx-xxx	☐ 37A-D1O-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx** X- **x** **xx***

Voltage	Wire length	Manual operator	Electrical connection
☐ DC 24VDC (1.8 W)	☐ A 18"	☐ 1 Non-locking	☐ MA Plug-in wire assy
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ MC Plug-in wire assy with light
☐ DA 24VDC (5.2 W)	☐ x Other Options		☐ BA Flying leads
☐ AA 120VAC (must use with rectified connector)			☐ BC Flying leads with light
☐ xx Other Options			☐ HA Plug-in connector with rectifier and light
			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

EBM37A-00xxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	☐ EBM37A-00FAA-xx	☐ EBM37A-00GAA-xx
1/4" NPTF	☐ EBM37A-00FAB-xx	☐ EBM37A-00GAB-xx
6 mm tube receptacle	☐ EBM37A-00FAG-xx	☐ EBM37A-00GAG-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

** Pressure Regulators :

PR37A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

**TECHNICAL
DATA**

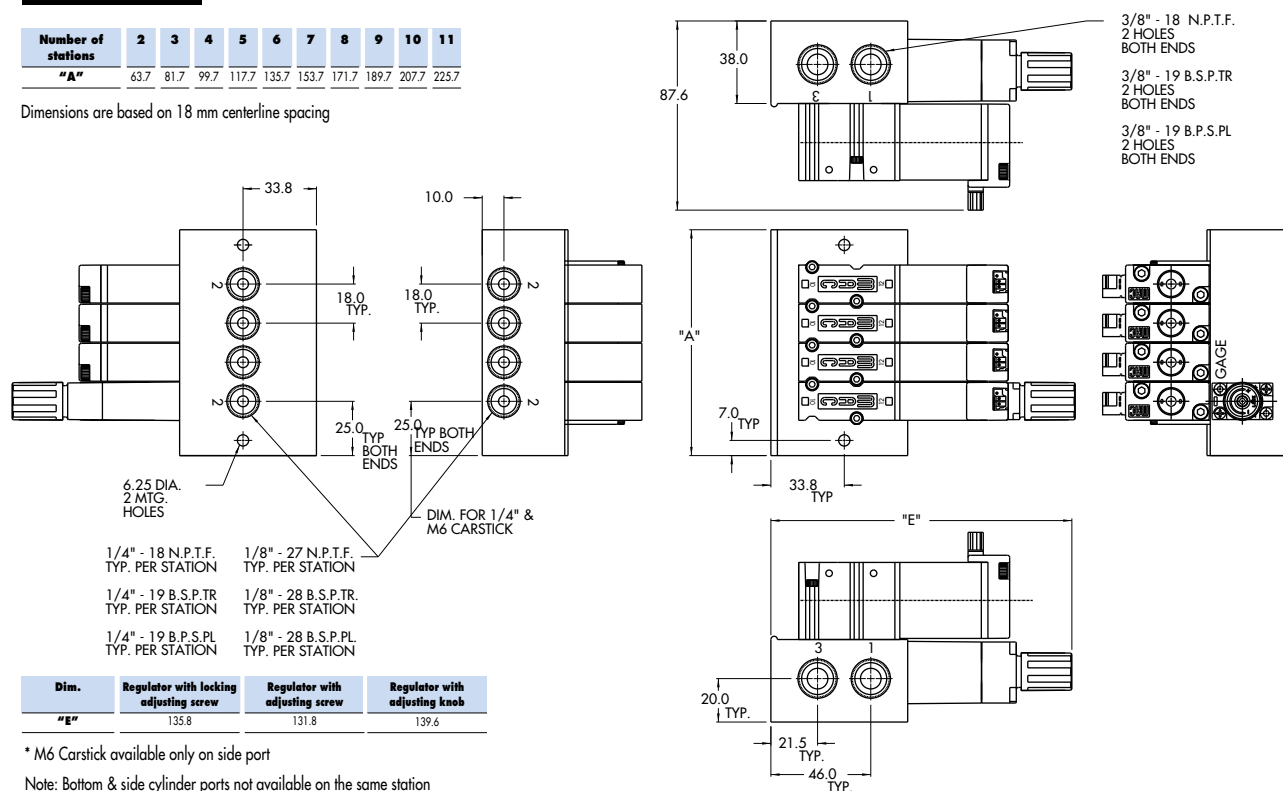
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001.
• Regulator blanking plate : R-47003.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	2	3	4	5	6	7	8	9	10	11
"A"	63.7	81.7	99.7	117.7	135.7	153.7	171.7	189.7	207.7	225.7

Dimensions are based on 18 mm centerline spacing



Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	non plug-in add-on style cylinder ports in base	38 mm

OPERATIONAL BENEFITS

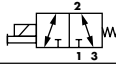
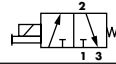
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

37A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-Hxxx-xxx	☐ 37A-D1O-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx***

Voltage	Wire length	Manual operator	Electrical connection
☐ DC 24VDC (1.8 W)	☐ A 18"	☐ I Non-locking	☐ MA Plug-in wire assy
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ MC Plug-in wire assy with light
☐ DA 24VDC (5.2 W)	☐ x Other Options		☐ BA Flying leads
☐ AA 120VAC (must use with rectified connector)			☐ BC Flying leads with light
☐ xx Other Options			☐ HA Plug-in connector with rectifier and light
			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM37A-00xxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	☐ EBM37A-00DBA-xx	☐ EBM37A-00EBA-xx
1/4" NPTF	☐ EBM37A-00DBB-xx	☐ EBM37A-00EBB-xx
6 mm tube receptacle	☐ EBM37A-00DBG-xx	☐ EBM37A-00EBG-xx

Number of stations (03=3 stations)

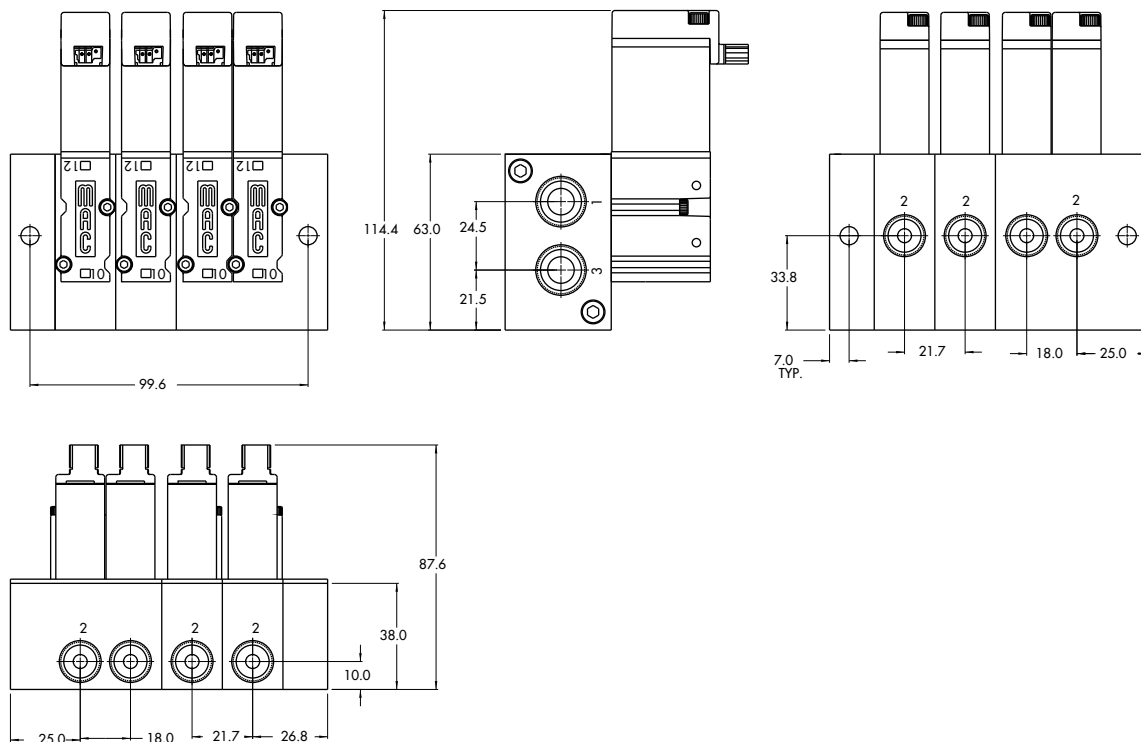
Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
add-a-unit stations may be added to above bars. Clic here for model numbers.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001. • End plate Kit : M-37005-0
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Note: Bottom & side cylinder ports not available on the same station

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	non plug-in add-a-unit stations	38 mm

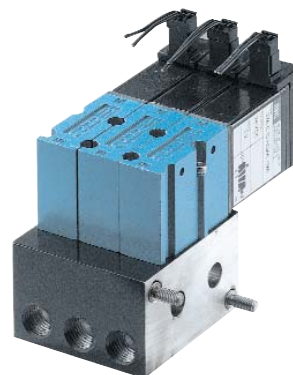
OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

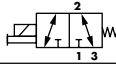
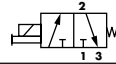
Reset

HOW TO ORDER

37A-xxx-Hxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-Hxxx-xxx	☐ 37A-D1O-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx***

Voltage	Wire length	Manual operator	Electrical connection
☐ DC 24VDC (1.8 W)	☐ A 18"	☐ I Non-locking	☐ MA Plug-in wire assy
☐ DB 24VDC (2.4 W)	☐ c 36"		☐ MC Plug-in wire assy with light
☐ DA 24VDC (5.2 W)	☐ x Other Options		☐ BA Flying leads
☐ AA 120VAC (must use with rectified connector)			☐ BC Flying leads with light
☐ xx Other Options			☐ HA Plug-in connector with rectifier and light
			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM37A-00xxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	☐ EBM37A-00DCA-xx	☐ EBM37A-00ECA-xx
1/4" NPTF	☐ EBM37A-00DCB-xx	☐ EBM37A-00ECB-xx
6 mm tube receptacle	☐ EBM37A-00DCG-xx	☐ EBM37A-00ECG-xx

Number of stations (01, 02, 03 or 04)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

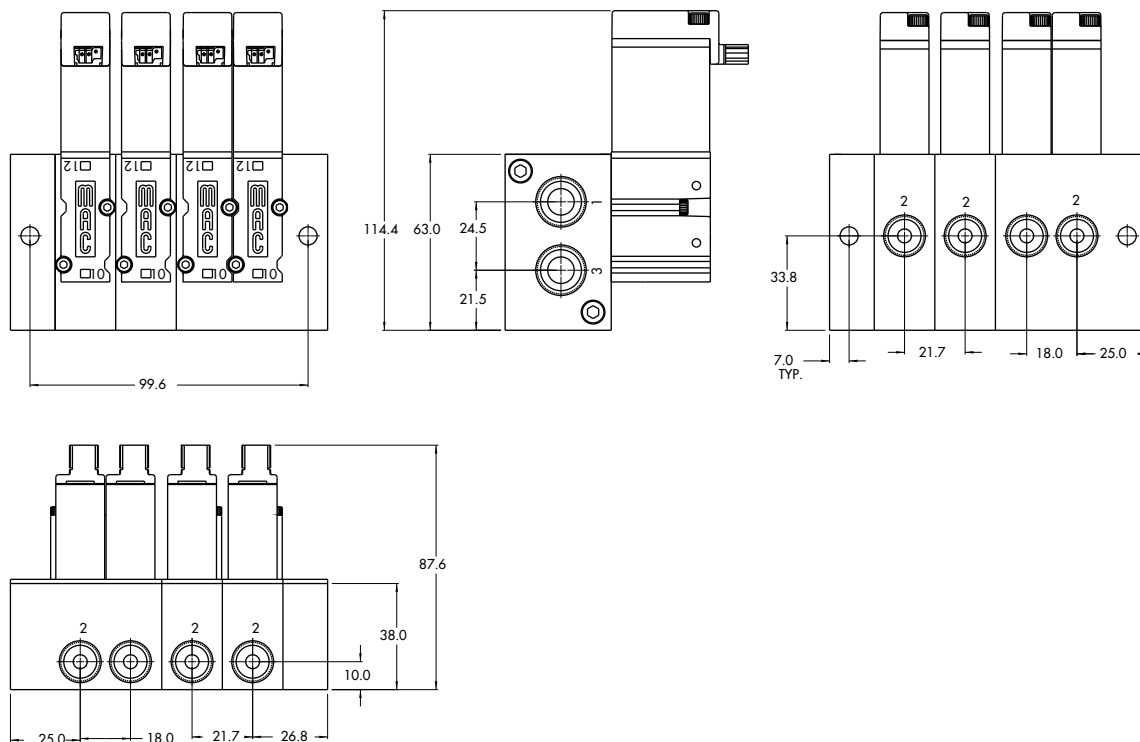
Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001.

• O-ring port seal (x2) : 17015-01. • Tie rod (x2) : 79007-01 (one station length)

Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Note: Bottom & side cylinder ports not available on the same station

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	plug-in	32.5 mm

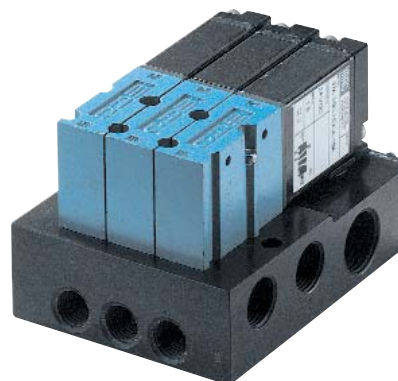
OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

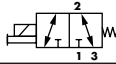
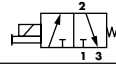
Reset

HOW TO ORDER

37A-xxx-HxxP-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-HxxP-xxx	☐ 37A-D1O-HxxP-xxx

SOLENOID OPERATOR ➤

H **xx** P- **x** **xx**

xx Voltage	x Manual operator	xx Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DA 24VDC (5.2 W)		☐ FE Plug-in with suppression diode
☐ AA 120VAC (Mod. No. required see below)		☐ FG Plug-in with suppression diode with LED light
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR**

ECD37A-xxxxxx-xxxx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	18	☐ ECD37A-00AAA-A0xx	☐ ECD37A-00BAA-A0xx
1/4" NPTF	18	☐ ECD37A-00AAB-A0xx	☐ ECD37A-00BAB-A0xx
6 mm tube receptacle	18	☐ ECD37A-00AAG-A0xx	☐ ECD37A-00BAG-A0xx
1/8" NPTF	30	☐ ECD37A-01AAA-C0xx	☐ ECD37A-01BAA-C0xx
1/4" NPTF	30	☐ ECD37A-01AAB-C0xx	☐ ECD37A-01BAB-C0xx
6 mm tube receptacle	30	☐ ECD37A-01AAG-C0xx	☐ ECD37A-01BAG-C0xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
clic for multi-pin connector (9, 15 or 25).
for AC voltage use mod. FWR2 after circuit bar model number.

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

Note :

- Valve and coil are not interchangeable.

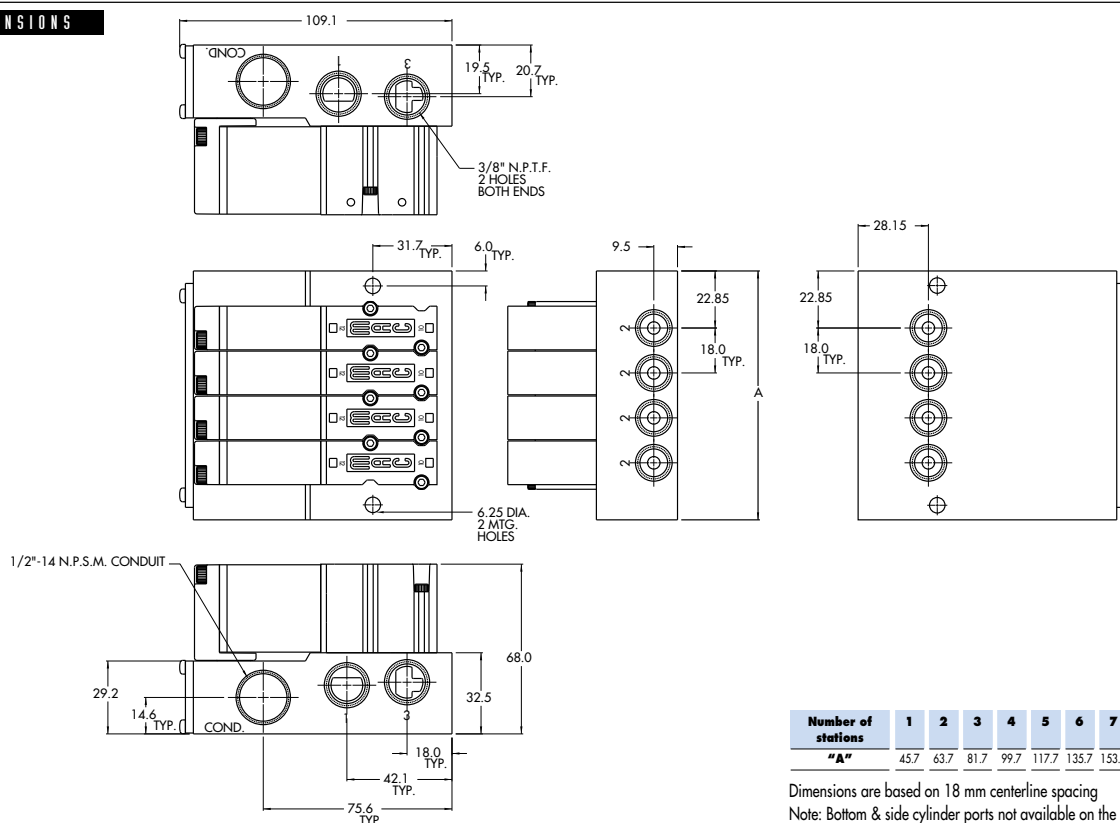
Spare parts :

- Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001.
- Base wire plug-in protector : 16520.

Options :

- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Number of stations	1	2	3	4	5	6	7	8	9	10
"A"	45.7	63.7	81.7	99.7	117.7	135.7	153.7	171.7	189.7	207.7

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4"	0.5C_v	plug-in with Pr. Reg.	44 mm

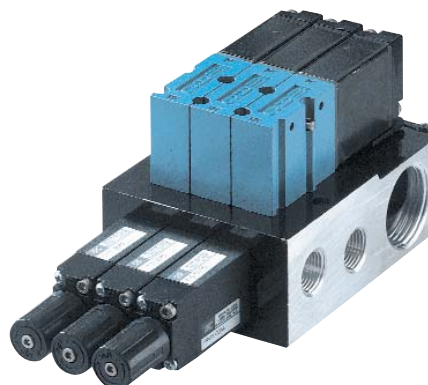
OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

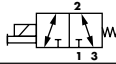
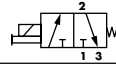
Reset

HOW TO ORDER

37A-xxx-HxxP-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-HxxP-xxx	☐ 37A-D1O-HxxP-xxx

SOLENOID OPERATOR ➤

H **xx** P- **x** **xx***

xx Voltage	x Manual operator	xx Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DA 24VDC (5.2 W)		☐ FE Plug-in with suppression diode
☐ AA 120VAC (Mod. No. required see below)		☐ FG Plug-in with suppression diode with LED light
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

ECD37A-xxxxxx-xxxx

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	18	☐ ECD37A-00CDA-A0xx
1/4" NPTF	18	☐ ECD37A-00CDB-A0xx
1/8" NPTF	30	☐ ECD37A-01CDA-C0xx
1/4" NPTF	30	☐ ECD37A-01CDB-C0xx

Number of stations (03=3 stations)

** Other options available, consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
☐ clic for multi-pin connector (9, 15 or 25).
 for AC voltage use mod. FWR2 after circuit bar model number.

** Pressure Regulators :

PR37A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

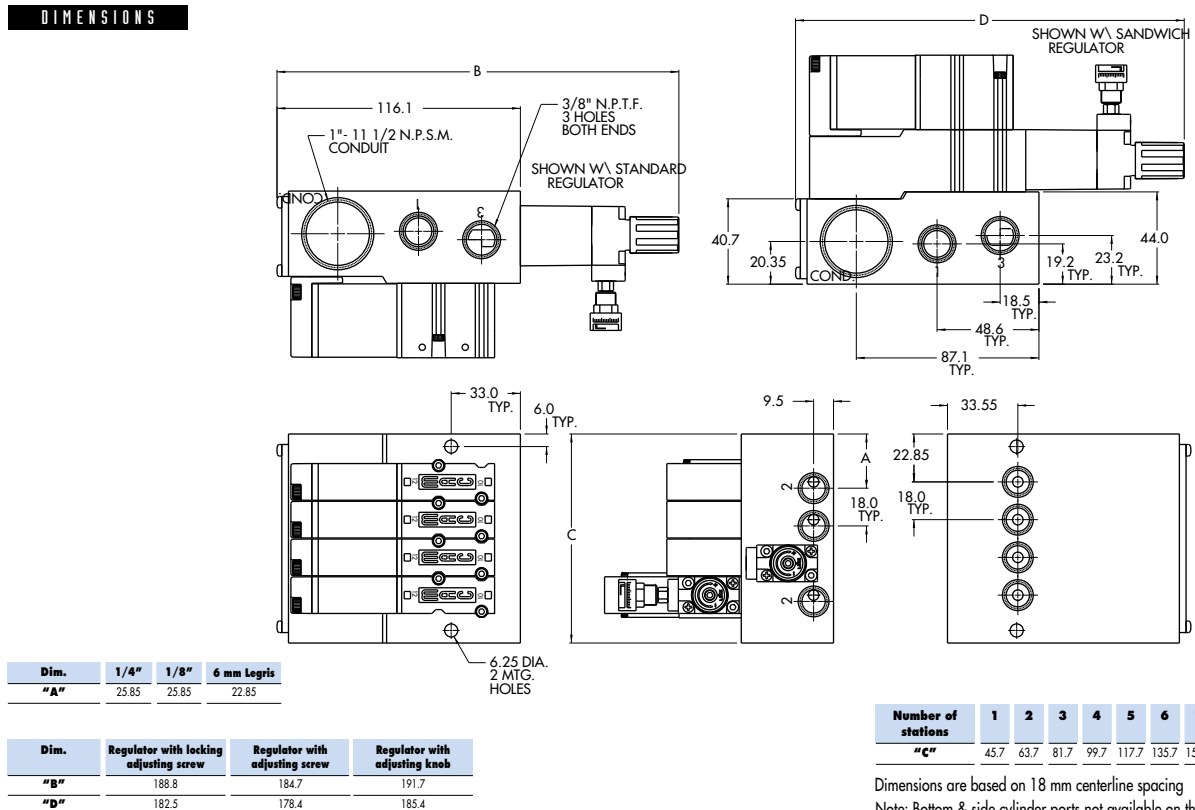
- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001.
- Options :
- Base wire plug-in protector : 16520. • Regulator blanking plate : R-47003.
 - Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	add-on style plug-in	44 mm

OPERATIONAL BENEFITS

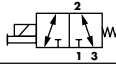
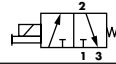
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

37A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-HxxP-xxx	☐ 37A-D1O-HxxP-xxx

SOLENOID OPERATOR ➤

H **xx** P- **x** **xx***

xx Voltage	x Manual operator	xx Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DA 24VDC (5.2 W)		☐ FE Plug-in with suppression diode
☐ AA 120VAC (Mod. No. required see below)		☐ FG Plug-in with suppression diode with LED light
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR**

ECD37A-xxxxxx-xxxx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	18	☐ ECD37A-00AEA-A0xx	☐ ECD37A-00BEA-A0xx
1/4" NPTF	18	☐ ECD37A-00AEB-A0xx	☐ ECD37A-00BEB-A0xx
6 mm tube receptacle	18	☐ ECD37A-00AEG-A0xx	☐ ECD37A-00BEG-A0xx
1/8" NPTF	30	☐ ECD37A-01AEA-C0xx	☐ ECD37A-01BEA-C0xx
1/4" NPTF	30	☐ ECD37A-01AEB-C0xx	☐ ECD37A-01BEB-C0xx
6 mm tube receptacle	30	☐ ECD37A-01AEG-C0xx	☐ ECD37A-01BEG-C0xx

Number of stations (03=3 stations) ☐

** Other options available, consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
 clic for multi-pin connector (9, 15 or 25).
 for AC voltage use mod. FWR2 after circuit bar model number.
 add-a-unit stations may be added to above bars. Clic here for model numbers.

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

TECHNICAL DATA

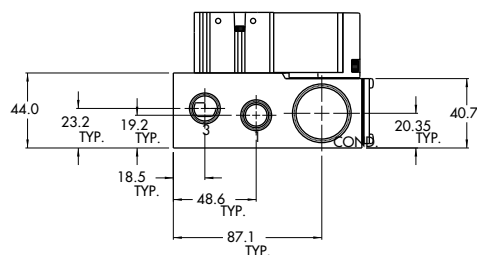
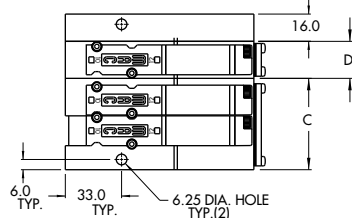
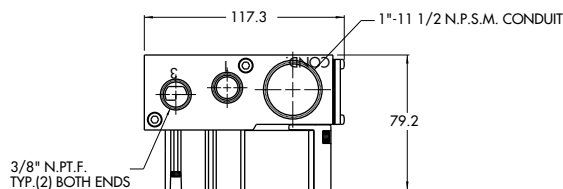
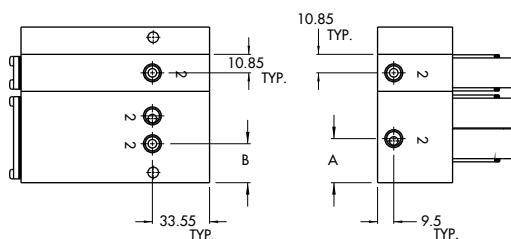
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001. • End plate kit : M-37003-01
 - Base wire plug-in protector : 16520. • Isolator disc between add-a-units : 28438.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"C" w/regulator	-	53.6	71.6	89.6	107.6	125.6	143.6	161.6	179.6	197.6
"C" w/o regulator	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"D"	21.7	39.7	57.7	75.7	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing
Note: Bottom & side cylinder ports not available on the same station



Dim.	1/8"	1/4"	6 mm Legris	1/8" w/regulator	1/4" w/regulator
"A"	22.65	24.20	22.85	-	-
"B"	22.85	22.85	25.85	21.20	22.60

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4"	0.5C_v	add-on style plug in with Pr. Reg.	44 mm

OPERATIONAL BENEFITS

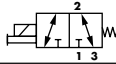
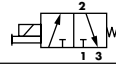
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

37A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-HxxP-xxx	☐ 37A-D1O-HxxP-xxx

SOLENOID OPERATOR ➤

H xx P- x xx*

xx Voltage	x Manual operator	xx Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DA 24VDC (5.2 W)		☐ FE Plug-in with suppression diode
☐ AA 120VAC (Mod. No. required see below)		☐ FG Plug-in with suppression diode with LED light
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

ECD37A-xxxxxx-xxxx

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	18	☐ ECD37A-00CEA-A0xx
1/4" NPTF	18	☐ ECD37A-00CEB-A0xx
1/8" NPTF	30	☐ ECD37A-01CEA-C0xx
1/4" NPTF	30	☐ ECD37A-01CEB-C0xx

Number of stations (03=3 stations)

** Other options available, consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.

clic for multi-pin connector (9, 15 or 25).

for AC voltage use mod. FWR2 after circuit bar model number.

add-a-unit stations may be added to above bars. Clic here for model numbers.

** Pressure Regulators :

PR37A-GOAx

☐ X=A (0 to 120 PSI)

☐ X=B (0 to 80 PSI)

☐ X=C (0 to 30 PSI)

☐ A0 = without light

☐ AA = with light (120V)

☐ AB = with light (240V)

☐ AD = with light (24V)

☐ C0 = terminal strip

☐ CA = terminal strip with light (120V)

☐ CB = terminal strip with light (240V)

☐ CD = terminal strip with light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001. • End plate kit : M-37003-01

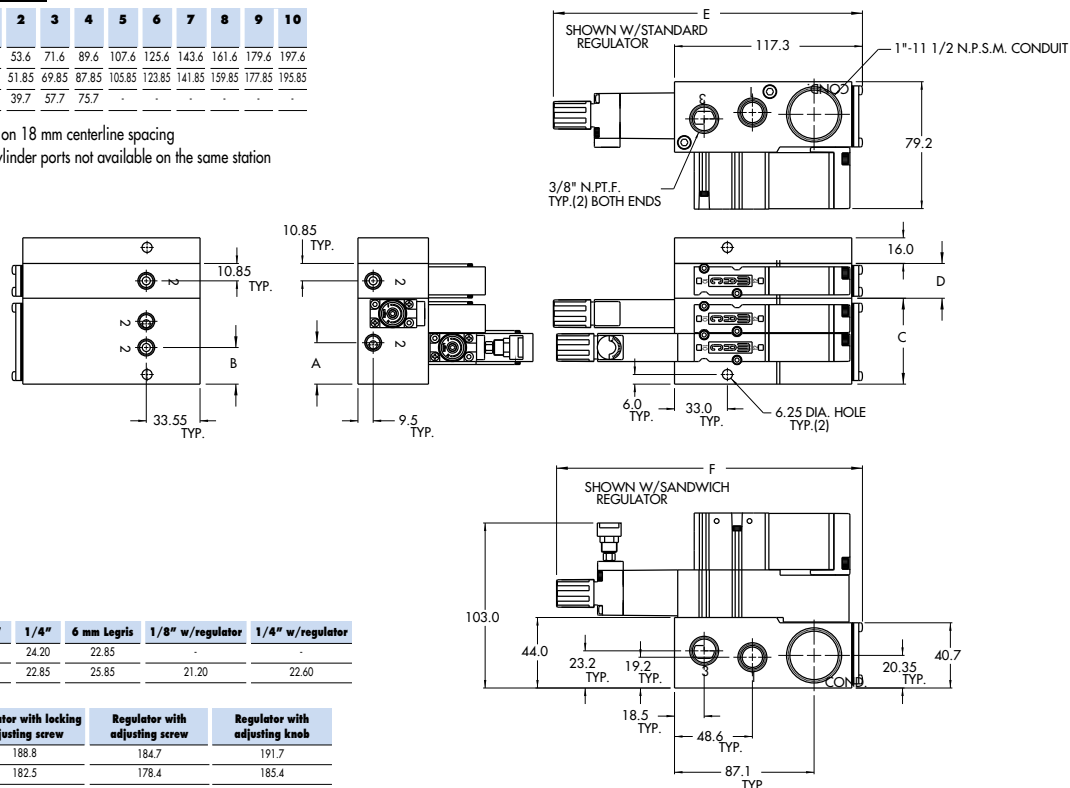
Options : • Base wire plug-in protector : 16520. • Isolator disc between add-a-units : 28438. • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"C" w/regulator	-	53.6	71.6	89.6	107.6	125.6	143.6	161.6	179.6	197.6
"C" w/o regulator	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"B"	21.7	39.7	57.7	75.7	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Dim.	1/8"	1/4"	6 mm Legris	1/8" w/regulator	1/4" w/regulator
"A"	22.65	24.20	22.85	-	-
"B"	22.85	22.85	25.85	21.20	22.60

Dim.	Regulator with locking adjusting screw	Regulator with adjusting screw	Regulator with adjusting knob
"E"	188.8	184.7	191.7
"F"	182.5	178.4	185.4

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	plug-in add-a-unit stations	44 mm

OPERATIONAL BENEFITS

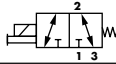
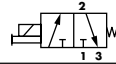
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

37A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-HxxP-xxx	☐ 37A-D1O-HxxP-xxx

SOLENOID OPERATOR ➤

H **xx** P- **x** **xx***

xx Voltage	x Manual operator	xx Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DA 24VDC (5.2 W)		☐ FE Plug-in with suppression diode
☐ AA 120VAC (Mod. No. required see below)		☐ FG Plug-in with suppression diode with LED light
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR**

ECD37A-xxxxxx-xxxx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	18	☐ ECD37A-00AFA-A0xx	☐ ECD37A-00BFA-A0xx
1/4" NPTF	18	☐ ECD37A-00AFB-A0xx	☐ ECD37A-00BFB-A0xx
6 mm tube receptacle	18	☐ ECD37A-00AFG-A0xx	☐ ECD37A-00BFG-A0xx
1/8" NPTF	30	☐ ECD37A-01AFA-C0xx	☐ ECD37A-01BFA-C0xx
1/4" NPTF	30	☐ ECD37A-01AFB-C0xx	☐ ECD37A-01BFB-C0xx
6 mm tube receptacle	30	☐ ECD37A-01AFG-C0xx	☐ ECD37A-01BFG-C0xx

Number of stations (03=3 stations) - maximum length is 4 stations. ☐

** Other options available, consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
for AC voltage use mod. FWR2 after circuit bar model number.
when add-a-unit stations are added to bars with a multi-pin connector, mod SD03 should be included with add-a-unit model number.

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001.
• O-ring port seal (x2) : 17015-01 • Tie rod (x2) : 79007-01 (one station length).

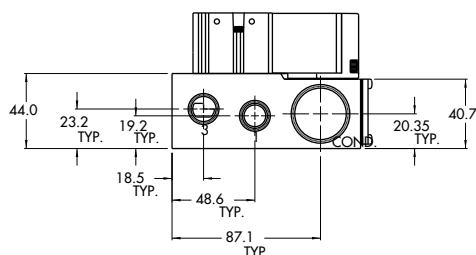
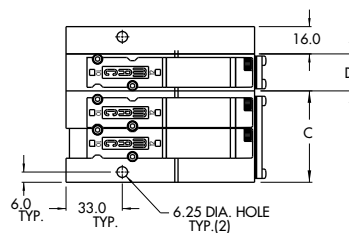
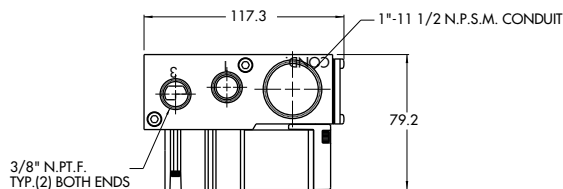
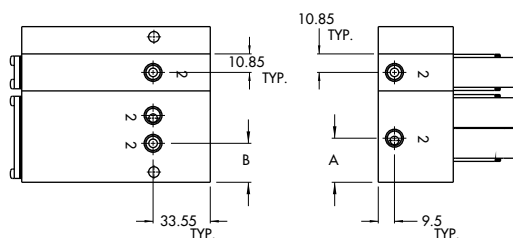
Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"C" w/regulator	-	53.6	71.6	89.6	107.6	125.6	143.6	161.6	179.6	197.6
"C" w/o regulator	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"D"	21.7	39.7	57.7	75.7	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Dim.	1/8"	1/4"	6 mm Legris	1/8" w/regulator	1/4" w/regulator
"A"	22.65	24.20	22.85	-	-
"B"	22.85	22.85	25.85	21.20	22.60

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
3/2 NO-NC	1/8" - 1/4"	0.5C_v	plug-in add-a-unit stations with Pr. Reg.	44 mm

OPERATIONAL BENEFITS

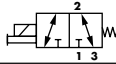
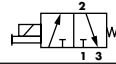
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

37A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Universal valve	NC only valve
		
Valve less base	☐ 37A-C1O-HxxP-xxx	☐ 37A-D1O-HxxP-xxx

SOLENOID OPERATOR ➤

H xx P- x xx*

xx Voltage	x Manual operator	xx Electrical connection
☐ DC 24VDC (1.8 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DA 24VDC (5.2 W)		☐ FE Plug-in with suppression diode
☐ AA 120VAC (Mod. No. required see below)		☐ FG Plug-in with suppression diode with LED light
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

ECD37A-xxxxxx-xxxx

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	18	☐ ECD37A-00CFA-A0xx
1/4" NPTF	18	☐ ECD37A-00CFB-A0xx
1/8" NPTF	30	☐ ECD37A-01CFA-C0xx
1/4" NPTF	30	☐ ECD37A-01CFB-C0xx

Number of stations (03=3 stations) - maximum length is 4 stations.

** Other options available, consult factory.

Note : ☐ clic for valves mounted on base at the factory, add - 9 to the model number.
for AC voltage use mod. FWR2 after circuit bar model number.
when add-a-unit stations are added to bars with a multi-pin connector, mod SD03 should be included with add-a-unit model number.

** Pressure Regulators :

PR37A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.25C _v , 1.8 W : 0.15C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 17.0 ms
(with 5.2 W coil)	De-energize : 6.0 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16630. • Mounting screw (x2) : 35043. • Blanking plate : M-37001.
• O-ring port seal (x2) : 17015-01 • Tie rod (x2) : 79007-01 (one station length). • Regulator blanking plate : R-47003.

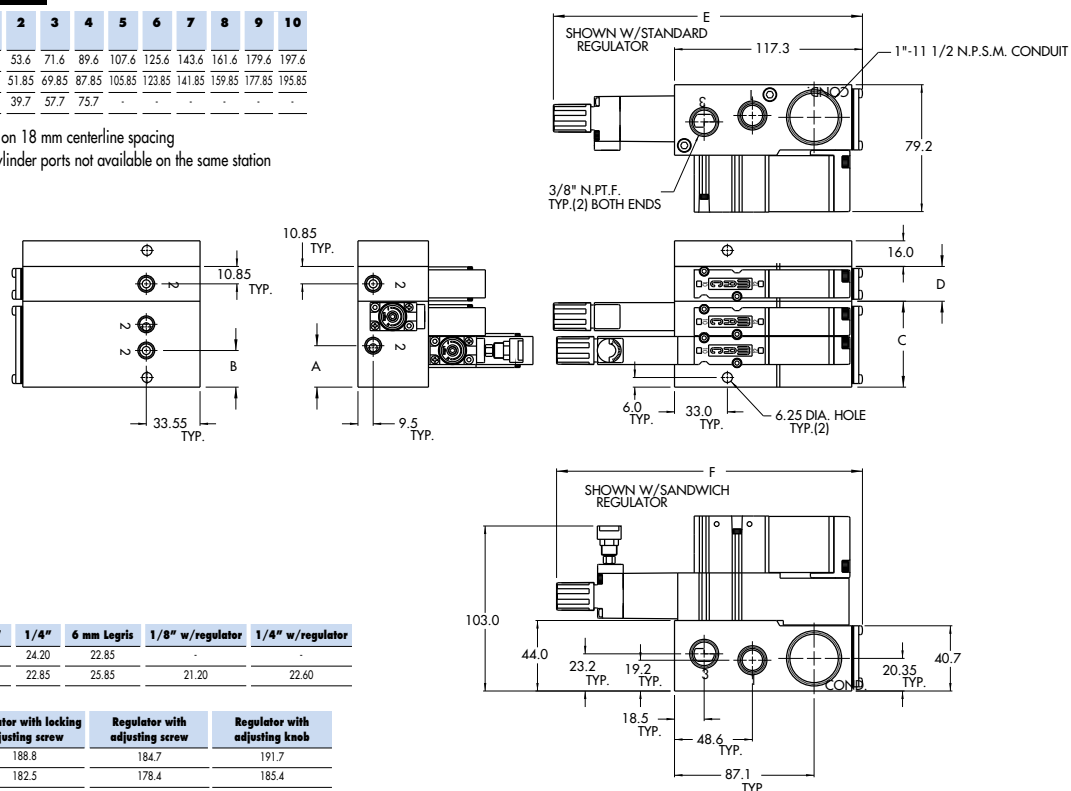
Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"C" w/regulator	-	53.6	71.6	89.6	107.6	125.6	143.6	161.6	179.6	197.6
"C" w/o regulator	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"B"	21.7	39.7	57.7	75.7	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Dim.	1/8"	1/4"	6 mm Legris	1/8" w/regulator	1/4" w/regulator
"A"	22.65	24.20	22.85	-	-
"B"	22.85	22.85	25.85	21.20	22.60

Dim.	Regulator with locking adjusting screw	Regulator with adjusting screw	Regulator with adjusting knob
"E"	188.8	184.7	191.7
"F"	182.5	178.4	185.4

Consult "Precautions" before use, installation or service of MAC Valves.



Section 2

Options



0 p t i o n s

Codification table for voltages / Wire length / Manual operators / Electrical connections

VALVE CODE ➤

-HXX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- Solenoid valves 37 & 47 Series

1. VOLTAGE

- H XX	X - X XX	VOLTAGE
DC Options		
☐ DA		24 VDC (5.2 W)
☐ DB		24 VDC (2.4 W)
☐ DC		24 VDC (1.8 W)
☐ DD		24 VDC (1.0 W)
☐ DF		12 VDC (5.2 W)
☐ DG		12 VDC (2.4 W)
☐ DH		12 VDC (1.8 W)
☐ DJ		12 VDC (1.0 W)
☐ DL		120 VDC (6.3 W)
AC Options (50/60hz)		
☐ AA		120 VAC (6.7 W)
☐ AB		220 VAC (5.6 W)
☐ AC		240 VAC (5.8 W)
☐ AD		24 VAC (7.8 W)

Note : AC Voltages only available with "H" & "F" type connectors. MOD FWR2 must be used with the "F" type connectors.

2. WIRE LENGTH

- H XX	X - X XX	WIRE LENGTH
☐ O		No lead wire
☐ A		18"
☐ B		24"
☐ C		36"
☐ D		48"
☐ E		72"
☐ F		96"
☐ G		120"
☐ H		144"
☐ P		Plug-in (used only with "F" type connector Opts.)

Use "O" with MJ & MM Opts.

3. MANUAL OPERATOR

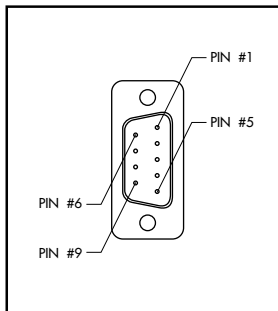
- H XX	X - X XX	MANUAL OPERATOR
☐ 0		No operator
☐ 1		Non-locking recessed
☐ 2		Locking recessed
☐ 3		Non-locking extended
☐ 4		Locking extended

4. ELECTRICAL CONNECTION

- H XX X - X XX	ELECTRICAL CONNECTION
☐ BA	Flying leads
☐ BB	Flying leads with ground wire
☐ BC	Flying leads with led light
☐ BD	Flying leads with led light & ground wire
☐ BE	Flying leads with suppression diode
☐ BF	Flying leads with suppression diode & ground wire
☐ BG	Flying leads with suppression diode plus led light
☐ BH	Flying leads with suppression diode plus led light & ground wire
☐ *BN	Flying leads with suppression diode plus blocking diode
☐ *BP	Flying leads with suppression diode plus blocking diode & ground wire
☐ *BR	Flying leads with suppression diode plus blocking diode & led light
☐ *BS	Flying leads with suppression diode plus blocking diode & led light & ground wire
☐ FA	Plug-in
☐ FB	Plug-in with ground wire
☐ FC	Plug-in with led light
☐ FD	Plug-in with led light & ground wire
☐ FE	Plug-in with suppression diode
☐ FF	Plug-in with suppression diode & ground wire
☐ FG	Plug-in with suppression diode plus led light
☐ FH	Plug-in with suppression diode plus led light & ground wire
Note : FA ---- FH options for use with ECD type circuit bars	
☐ HA	Circuit board plug-in with full wave rectifier & led light
☐ HB	Circuit board with full wave rectifier & led with ground wire
☐ HC	Same as "HA" without lead wires
☐ HD	Same as "HB" without lead wires
☐ HL	Circuit board plug-in with suppression diode plus blocking diode & led light
☐ HN	Same as "HL" without lead wires
☐ MA	Plug-in wire assembly
☐ MB	Plug-in wire assembly with ground wire
☐ MC	Plug-in wire assembly with led light
☐ MD	Plug-in wire assembly led light & ground wire
☐ ME	Plug-in wire assembly with suppression diode
☐ MF	Plug-in wire assembly with suppression diode & ground wire
☐ *MG	Plug-in wire assembly suppression diode plus led light
☐ *MH	Plug-in wire assembly suppression diode plus led light & ground wire
☐ *MN	Plug-in wire assembly with suppression diode plus blocking diode
☐ *MP	Plug-in wire assembly with suppression diode plus blocking diode & ground wire
☐ MR	Plug-in wire assembly with suppression diode plus blocking diode & led light
☐ MS	Plug-in wire assembly with suppression diode plus blocking diode & led light & ground wire
☐ MJ	Plug-in housing w/o wire assembly ("MA" option without wire assembly)
☐ MM	Plug-in housing w/o wire assembly ("MB" option without wire assembly)

* Blocking diode is in lead wire.

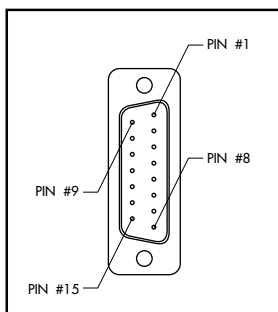
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

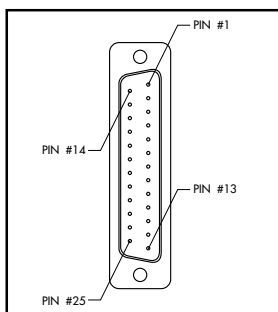
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

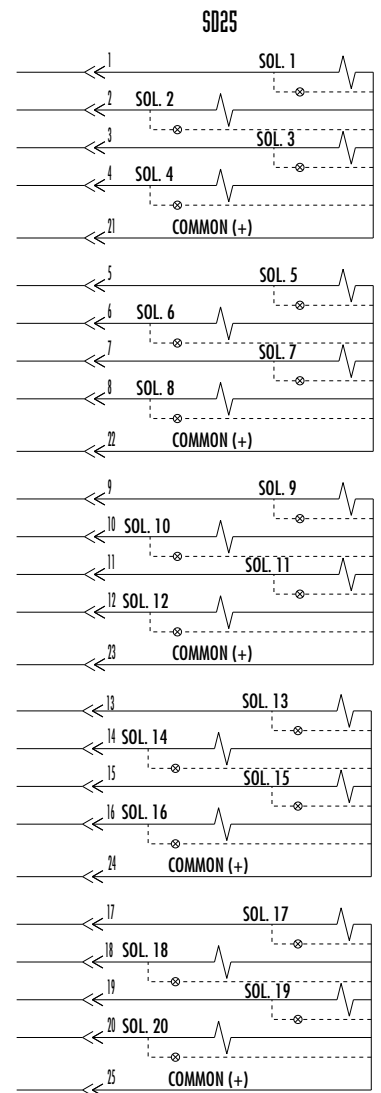
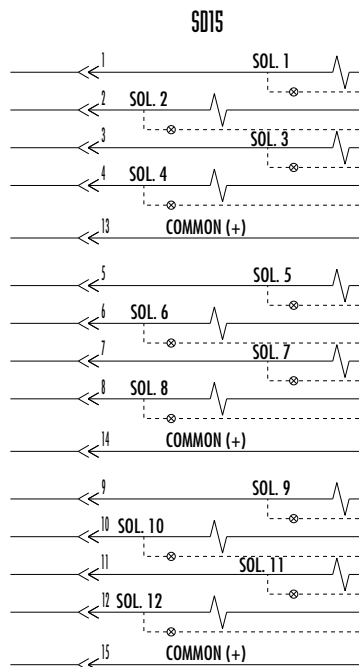
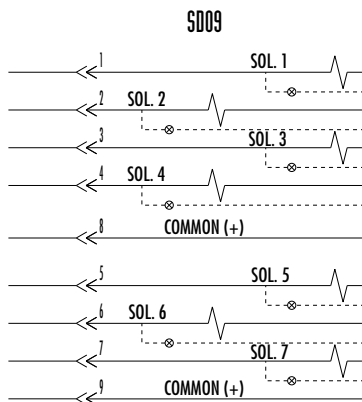
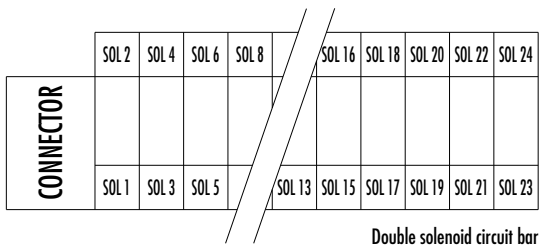
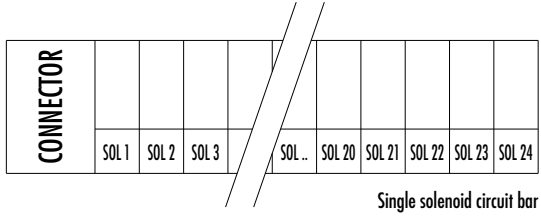


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

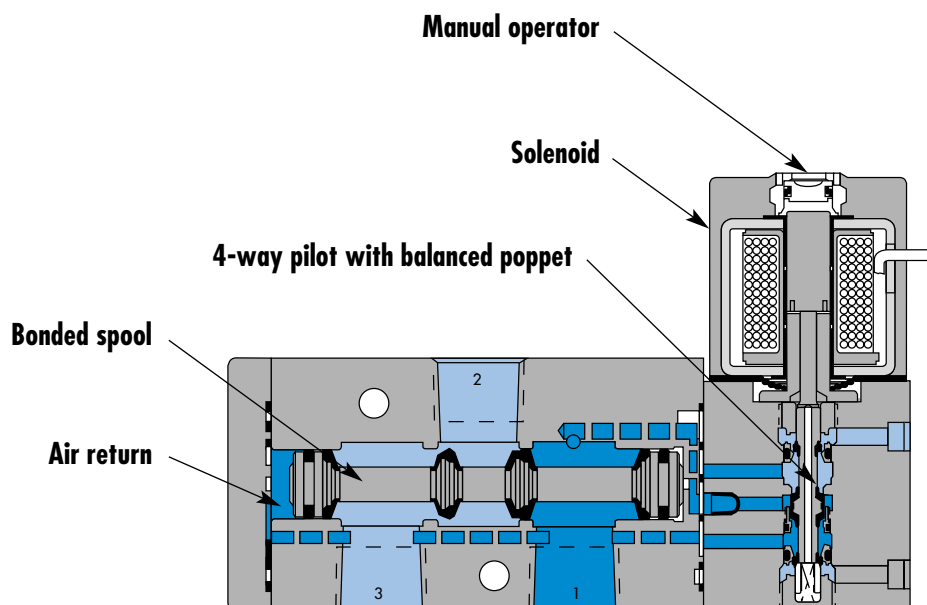
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

cylinder ports in valve	add-on style cylinder ports in valve	cylinder ports in base	add-on style cylinder ports in base	add-a-unit stations for CBM052A bar	add-a-unit stations for CBP052A bar
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SERIES FEATURES

- Patented MACSOLENOID[®] for fastest possible response times and virtually burn-out proof AC solenoid operation.
- Optional low watt DC solenoids.
- Various manual operators.
- Optional memory spring.
- Normally closed or normally open valve function.
- May be plugged for 2-way operation.
- Internal or external pilot.

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" - 1/4"	1.2C_v	cylinder ports in valve

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

HOW TO ORDER

52A-xx-xxx-DM-Dxxx-xxx

SOLENOID OPERATOR

Port size	Pilot air	Single operator		Double operator	
		NO valve	NC valve	NO valve	NC valve
1/8" NPTF	Internal	☐ 52A-31-AOA-DM-Dxxx-xxx	☐ 52A-11-AOA-DM-Dxxx-xxx	☐ 52A-41-AOA-DM-Dxxx-xxx	☐ 52A-21-AOA-DM-Dxxx-xxx
1/4" NPTF		☐ 52A-31-BOA-DM-Dxxx-xxx	☐ 52A-11-BOA-DM-Dxxx-xxx	☐ 52A-41-BOA-DM-Dxxx-xxx	☐ 52A-21-BOA-DM-Dxxx-xxx
1/8" NPTF	External	☐ 52A-31-AOC-DM-Dxxx-xxx	☐ 52A-11-AOC-DM-Dxxx-xxx	☐ 52A-41-AOC-DM-Dxxx-xxx	☐ 52A-21-AOC-DM-Dxxx-xxx
1/4" NPTF		☐ 52A-31-BOC-DM-Dxxx-xxx	☐ 52A-11-BOC-DM-Dxxx-xxx	☐ 52A-41-BOC-DM-Dxxx-xxx	☐ 52A-21-BOC-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X - X XX***

XX	Voltage	X	Wire length	X	Manual operator	XX	Electrical connection
☐ JA	120/60, 110/50	☐ A	18" (Flying leads)	☐ 1	Non-locking	☐ KA	Square connector
☐ JB	240/60, 220/50	☐ J	Connector	☐ 2	Locking	☐ KD	Square connector with light
☐ JC	24/60, 24/50	☐ x	Other Options	☐ x	Other Options	☐ JB	Rectangular connector
☐ DA	24VDC (5.4 W)					☐ JD	Rectangular connector with light
☐ FB	24VDC (1.8 W)					☐ BA	Flying leads
☐ DF	24VDC (12.7 W)					☐ xx	Other Options
☐ xx	Other Options						

HOW TO ORDER CIRCUIT BAR **

CBM052A-xxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm	Spacing 26 mm (Rectangular connector)
3/8" NPTF	Internal	☐ CBM052A-00AAA-xx	☐ CBM052A-02AAA-xx
	External	☐ CBM052A-00CAA-xx	☐ CBM052A-02CAA-xx

Number of stations (03=3 stations) **3**
 ** Other options available. Consult factory.

OPTIONS

52A-31-AOA-DM-Dxxx-xxx

☐ clic for memory spring (replace by 4).

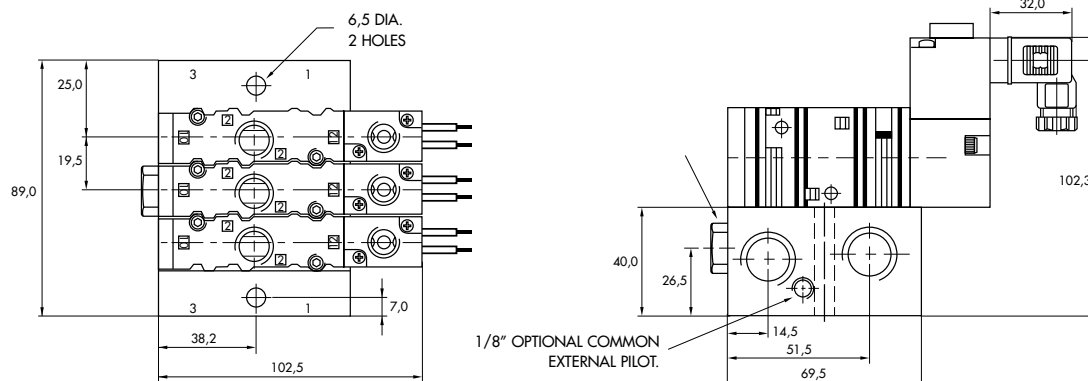


**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum to 150 PSI
Pilot pressure :	20 - 150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	7.3 mm
Flow :	1.2C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W
Response times :	24 V= / 5.4 W Energize : 7.3 ms De-energize : 5.3ms 60Hz/6 W Energize : 8-12 ms De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35043 and seal 16524.
- Accessories • Blanking plate : M-04001. • Seal (x3) : 17015-01. • Mounting screw (x2) : 35043.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" - 1/4"	1.2C_v	add-on style cylinder ports in valve

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

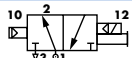
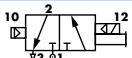
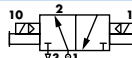
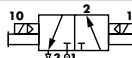
Reset

HOW TO ORDER

52A-xx-xxx-DM-Dxxx-xxx



SOLENOID OPERATOR

Port size	Pilot air	Single operator		Double operator	
		NO valve	NC valve	NO valve	NC valve
					
1/8" NPTF	Internal	☐ 52A-31-AOA-DM-Dxxx-xxx	☐ 52A-11-AOA-DM-Dxxx-xxx	☐ 52A-41-AOA-DM-Dxxx-xxx	☐ 52A-21-AOA-DM-Dxxx-xxx
1/4" NPTF		☐ 52A-31-BOA-DM-Dxxx-xxx	☐ 52A-11-BOA-DM-Dxxx-xxx	☐ 52A-41-BOA-DM-Dxxx-xxx	☐ 52A-21-BOA-DM-Dxxx-xxx
1/8" NPTF	External	☐ 52A-31-AOC-DM-Dxxx-xxx	☐ 52A-11-AOC-DM-Dxxx-xxx	☐ 52A-41-AOC-DM-Dxxx-xxx	☐ 52A-21-AOC-DM-Dxxx-xxx
1/4" NPTF		☐ 52A-31-BOC-DM-Dxxx-xxx	☐ 52A-11-BOC-DM-Dxxx-xxx	☐ 52A-41-BOC-DM-Dxxx-xxx	☐ 52A-21-BOC-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X - X XX***

XX	Voltage	X	Wire length	X	Manual operator	XX	Electrical connection
☐ JA	120/60, 110/50	☐ A	18" (Flying leads)	☐ 1	Non-locking	☐ KA	Square connector
☐ JB	240/60, 220/50	☐ J	Connector	☐ 2	Locking	☐ KD	Square connector with light
☐ JC	24/60, 24/50	☐ x	Other Options	☐ x	Other Options	☐ JB	Rectangular connector
☐ DA	24VDC (5.4 W)					☐ JD	Rectangular connector with light
☐ FB	24VDC (1.8 W)					☐ BA	Flying leads
☐ DF	24VDC (12.7 W)					☐ xx	Other Options
☐ xx	Other Options						

HOW TO ORDER CIRCUIT BAR **

CBM052A-xxxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm	Spacing 26 mm (Rectangular connector)
3/8" NPTF	Internal	☐ CBM052A-00ABA-xx	☐ CBM052A-02ABA-xx
	External	☐ CBM052A-00CBA-xx	☐ CBM052A-02CBA-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note : add-a-unit stations may be added to above bars. Clic here for model numbers.

OPTIONS

52A-31-AOA-DM-Dxxx-xxx

☐ clic for memory spring (replace by 4).

Consult "Precautions" before use, installation or service of MAC Valves.

**TECHNICAL
DATA**

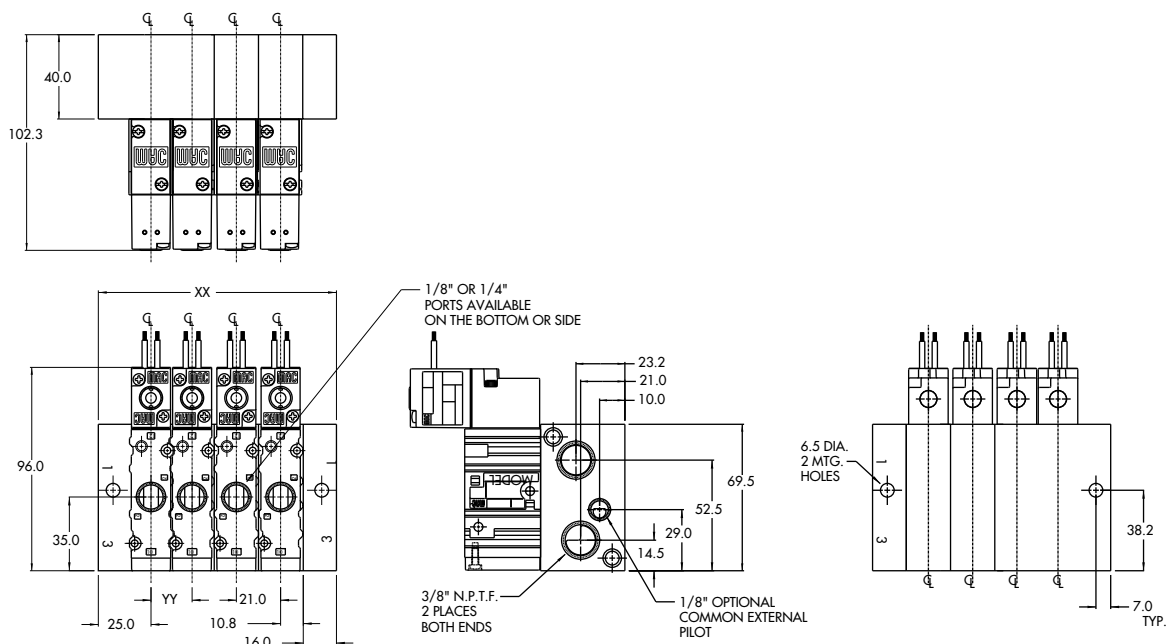
Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum to 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	7.3 mm		
Flow :	1.2C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/6 W	Energize : 8-12 ms	De-energize : 7-11 ms

Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35043 and seal 16524.

Accessories • Blanking plate : M-04001. • Seal (x3) : 17015-01. • Mounting screw (x2) : 35043. • End plate kit (Internal) : M-52001-01.
• End plate kit (External) : M-52002-01.

Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



YY	XX
19.5	113
26	119.5

Function	Port size	Flow [Max]	Individual mounting
3/2 NO-NC	1/8" - 1/4"	1.2C_v	cylinder ports in base

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

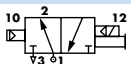
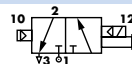
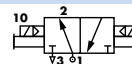
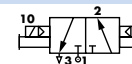
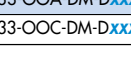
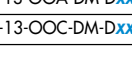
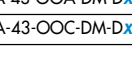
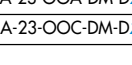
Reset



HOW TO ORDER

52A-xx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	Single operator		Double operator	
	NO valve	NC valve	NO valve	NC valve
Internal	 52A-33-OOA-DM-Dxxx-xxx	 52A-13-OOA-DM-Dxxx-xxx	 52A-43-OOA-DM-Dxxx-xxx	 52A-23-OOA-DM-Dxxx-xxx
External	 52A-33-OOC-DM-Dxxx-xxx	 52A-13-OOC-DM-Dxxx-xxx	 52A-43-OOC-DM-Dxxx-xxx	 52A-23-OOC-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **xx x - x xx***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JA 120/60, 110/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JB 240/60, 220/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ DA 24VDC (5.4 W)			☐ JD Rectangular connector with light
☐ FB 24VDC (1.8 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR **

CBP052A-xxxxx-xx

Port size (NPTF)	Pilot air	Spacing standard 19,5 mm	Spacing 26 mm (Rectangular connector)
1/8" SIDE PORT	Internal	☐ CBP052A-00AAA-xx	☐ CBP052A-02AAA-xx
1/4" SIDE PORT		☐ CBP052A-00AAD-xx	☐ CBP052A-02AAD-xx
1/8" SIDE PORT	External	☐ CBP052A-00EAA-xx	☐ CBP052A-02EAA-xx
1/4" SIDE PORT		☐ CBP052A-00EAD-xx	☐ CBP052A-02EAD-xx
1/8" BOTTOM PORT	Internal	☐ CBP052A-00BAA-xx	☐ CBP052A-02BAA-xx
1/4" BOTTOM PORT		☐ CBP052A-00BAD-xx	☐ CBP052A-02BAD-xx
1/8" BOTTOM PORT	External	☐ CBP052A-00FAA-xx	☐ CBP052A-02FAA-xx
1/4" BOTTOM PORT		☐ CBP052A-00FAD-xx	☐ CBP052A-02FAD-xx

Number of stations (03=3 stations) **

Other options available. Consult factory.

OPTIONS

52A-33-OOA-DM-Dxxx-xxx

☐ clic for memory spring (replace by 6).

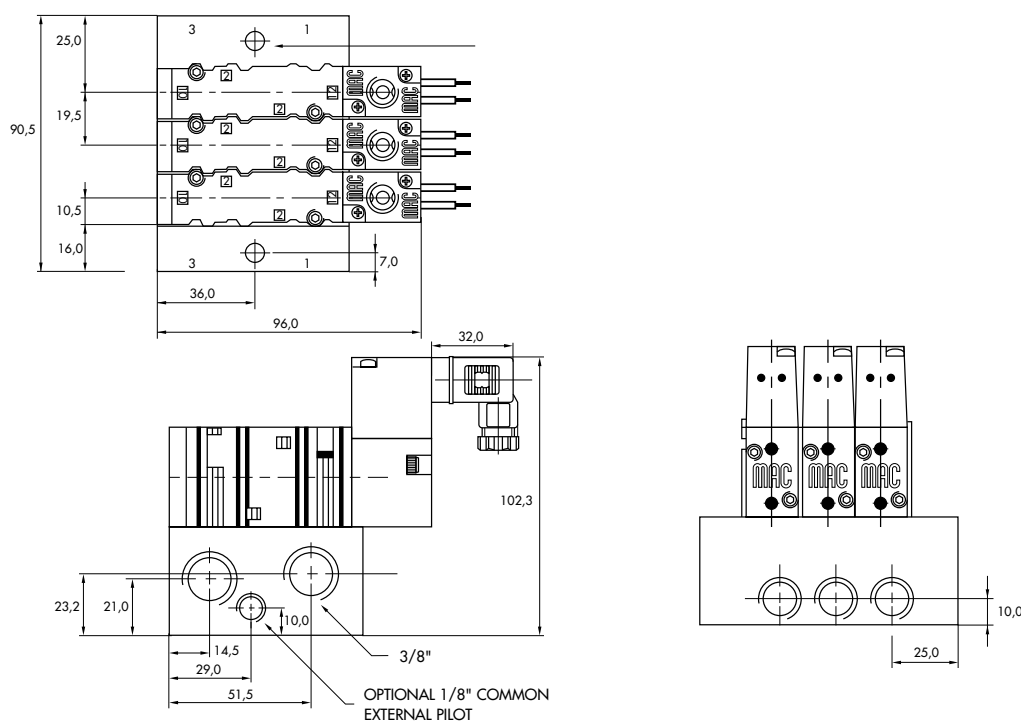
Consult "Precautions" before use, installation or service of MAC Valves.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum to 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	7.3 mm		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/6 W	Energize : 8-12 ms	De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35043 and seal 16524.
- Accessories : • Blanking plate : M-52003. • Seal (x3) : 17013-01. • Mounting screw (x2) : 35043.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function Port size Flow [Max] Individual mounting

3/2 NO-NC

1/8" - 1/4"

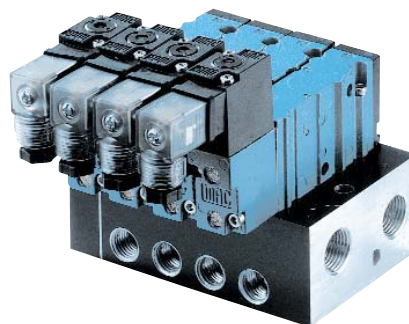
1.2C_v

add-on style
cylinder ports
in base

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

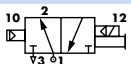
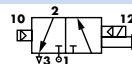
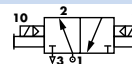
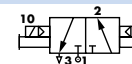
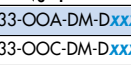
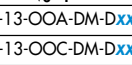
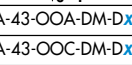
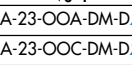
Reset



HOW TO ORDER

52A-xx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	Single operator		Double operator	
	NO valve	NC valve	NO valve	NC valve
Internal	 ☐ 52A-33-OOA-DM-Dxxx-xxx	 ☐ 52A-13-OOA-DM-Dxxx-xxx	 ☐ 52A-43-OOA-DM-Dxxx-xxx	 ☐ 52A-23-OOA-DM-Dxxx-xxx
External	 ☐ 52A-33-OOC-DM-Dxxx-xxx	 ☐ 52A-13-OOC-DM-Dxxx-xxx	 ☐ 52A-43-OOC-DM-Dxxx-xxx	 ☐ 52A-23-OOC-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D xx x - x xx*

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JA 120/60, 110/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JB 240/60, 220/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ DA 24VDC (5.4 W)			☐ JD Rectangular connector with light
☐ FB 24VDC (1.8 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR **

CBP052A-xxxxx-xx

Port size (NPTF)	Pilot air	Spacing standard 19,5 mm	Spacing 26 mm (Rectangular connector)
1/8" SIDE PORT	Internal	☐ CBP052A-00ABA-xx	☐ CBP052A-02ABA-xx
1/4" SIDE PORT		☐ CBP052A-00ABD-xx	☐ CBP052A-02ABD-xx
1/8" SIDE PORT	External	☐ CBP052A-00EBA-xx	☐ CBP052A-02EBA-xx
1/4" SIDE PORT		☐ CBP052A-00EBD-xx	☐ CBP052A-02EBD-xx
1/8" BOTTOM PORT	Internal	☐ CBP052A-00BBA-xx	☐ CBP052A-02BBA-xx
1/4" BOTTOM PORT		☐ CBP052A-00BBD-xx	☐ CBP052A-02BBD-xx
1/8" BOTTOM PORT	External	☐ CBP052A-00FBA-xx	☐ CBP052A-02FBA-xx
1/4" BOTTOM PORT		☐ CBP052A-00FBD-xx	☐ CBP052A-02FBD-xx

Number of stations (03=3 stations) **

Other options available. Consult factory.

Note : add-a-unit stations may be added to above bars.
Click here for model numbers.

OPTIONS

52A-33-OOA-DM-Dxxx-xxx

☐ clic for memory spring (replace by 6).

Consult "Precautions" before use, installation or service of MAC Valves.

**TECHNICAL
DATA**

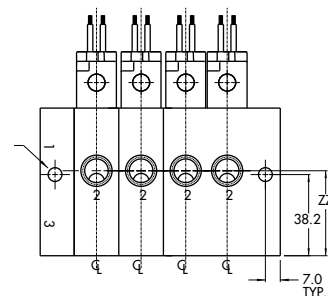
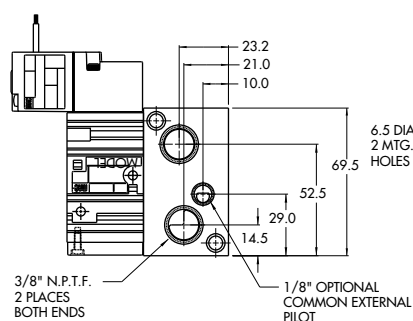
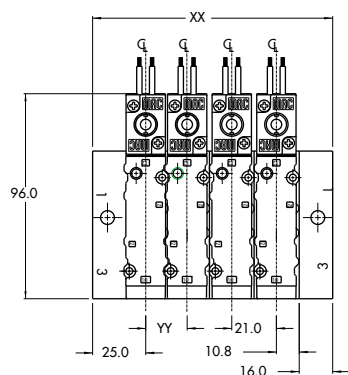
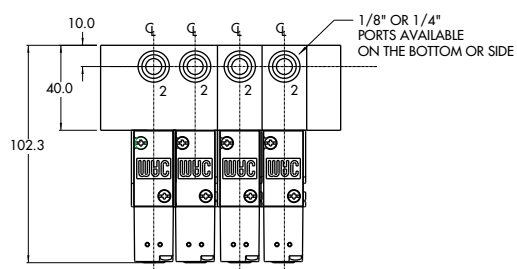
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum to 150 PSI
Pilot pressure :	20 - 150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	7.3 mm
Flow :	1.2C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W
Response times :	24 V= / 5.4 W Energize : 7.3 ms De-energize : 5.3ms 60Hz/ 6 W Energize : 8-12 ms De-energize : 7-11 ms

Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35043 and seal 16524.

Accessories • Blanking plate : M-52003. • Seal (x3) : 17013-01. • Mounting screw (x2) : 35043. • End plate kit (Internal) : M-52001-01.
• End plate kit (External) : M-52002-01.

Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



YY	XX	PORT	ZZ
19.5	113	1/8"	36.0
26	119.5	1/4"	40.0

Note: Bottom & side cylinder ports not available on the same station

Function	Port size	Flow [Max]	Circuit bar mounting
3/2 NO-NC	1/8" - 1/4"	1.2C_v	add-a-unit stations for CBM052A bar

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

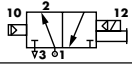
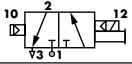
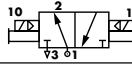
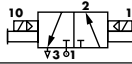
Reset



HOW TO ORDER

52A-xx-xxx-DM-Dxxx-xxx

SOLENOID OPERATOR

Port size	Pilot air	Single operator		Double operator	
		NO valve	NC valve	NO valve	NC valve
					
1/8" NPTF	Internal	☐ 52A-31-AOA-DM-Dxxx-xxx	☐ 52A-11-AOA-DM-Dxxx-xxx	☐ 52A-41-AOA-DM-Dxxx-xxx	☐ 52A-21-AOA-DM-Dxxx-xxx
1/4" NPTF		☐ 52A-31-BOA-DM-Dxxx-xxx	☐ 52A-11-BOA-DM-Dxxx-xxx	☐ 52A-41-BOA-DM-Dxxx-xxx	☐ 52A-21-BOA-DM-Dxxx-xxx
1/8" NPTF	External	☐ 52A-31-AOC-DM-Dxxx-xxx	☐ 52A-11-AOC-DM-Dxxx-xxx	☐ 52A-41-AOC-DM-Dxxx-xxx	☐ 52A-21-AOC-DM-Dxxx-xxx
1/4" NPTF		☐ 52A-31-BOC-DM-Dxxx-xxx	☐ 52A-11-BOC-DM-Dxxx-xxx	☐ 52A-41-BOC-DM-Dxxx-xxx	☐ 52A-21-BOC-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X - X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JA 120/60, 110/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JB 240/60, 220/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ DA 24VDC (5.4 W)			☐ JD Rectangular connector with light
☐ FB 24VDC (1.8 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR **

CBM052A-xxxxx-xx

Port size	Pilot air	Spacing standard 21 mm	Spacing 26 mm (Rectangular connector)
3/8" NPTF	Internal	☐ CBM052A-01 AEA-xx	☐ CBM052A-02 AEA-xx
	External	☐ CBM052A-01 CEA-xx	☐ CBM052A-02 CEA-xx

Number of stations (01=1 station)

** Other options available. Consult factory.

Note : add-a-unit stations available in lengths up to 4 stations (01, 02, 03 or 04).

OPTIONS

52A-31-AOA-DM-Dxxx-xxx

☐ clic for memory spring (replace by 4).

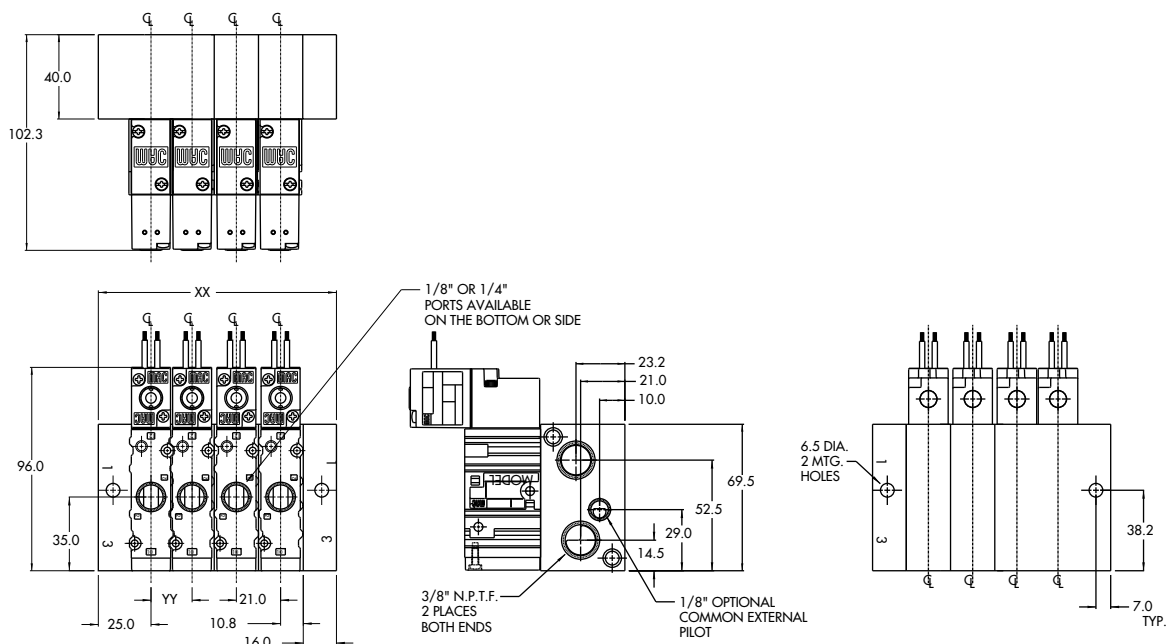
Consult "Precautions" before use, installation or service of MAC Valves.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum to 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	7.3 mm		
Flow :	1.2C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/6 W	Energize : 8-12 ms	De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35043 and seal 16524.
- Accessories • Blanking plate : M-04001. • Seal (x3) : 17015-01. • Mounting screw (x2) : 35043.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



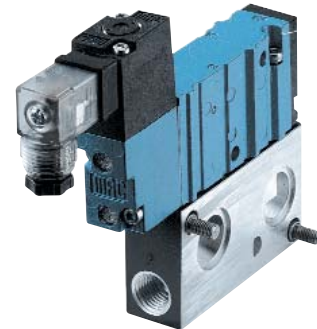
YY	XX
19.5	113
26	119.5

Function	Port size	Flow [Max]	Individual mounting
3/2 NO-NC	1/8" - 1/4"	1.2C_v	add-a-unit stations for CBP052A bar

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

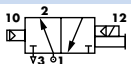
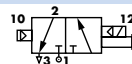
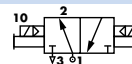
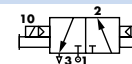
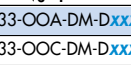
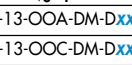
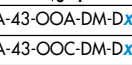
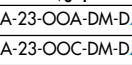
Reset



HOW TO ORDER

52A-xx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	Single operator		Double operator	
	NO valve	NC valve	NO valve	NC valve
Internal	 ☐ 52A-33-OOA-DM-Dxxx-xxx	 ☐ 52A-13-OOA-DM-Dxxx-xxx	 ☐ 52A-43-OOA-DM-Dxxx-xxx	 ☐ 52A-23-OOA-DM-Dxxx-xxx
External	 ☐ 52A-33-OOC-DM-Dxxx-xxx	 ☐ 52A-13-OOC-DM-Dxxx-xxx	 ☐ 52A-43-OOC-DM-Dxxx-xxx	 ☐ 52A-23-OOC-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **xx x - x xx***

XX	Voltage	X	Wire length	X	Manual operator	XX	Electrical connection
☐ JA	120/60, 110/50	☐ A	18" (Flying leads)	☐ 1	Non-locking	☐ KA	Square connector
☐ JB	240/60, 220/50	☐ J	Connector	☐ 2	Locking	☐ KD	Square connector with light
☐ JC	24/60, 24/50	☐ x	Other Options	☐ x	Other Options	☐ JB	Rectangular connector
☐ DA	24VDC (5.4 W)					☐ JD	Rectangular connector with light
☐ FB	24VDC (1.8 W)					☐ BA	Flying leads
☐ DF	24VDC (12.7 W)					☐ xx	Other Options
☐ xx	Other Options						

HOW TO ORDER CIRCUIT BAR **

CBP052A-xxxxx-xx

Port size (NPTF)	Pilot air	Spacing standard 21 mm	Spacing 26 mm (Rectangular connector)
1/8" SIDE PORT	Internal	☐ CBP052A-01AEA-xx	☐ CBP052A-02AEA-xx
1/4" SIDE PORT		☐ CBP052A-01AED-xx	☐ CBP052A-02AED-xx
1/8" SIDE PORT	External	☐ CBP052A-01EEA-xx	☐ CBP052A-02EEA-xx
1/4" SIDE PORT		☐ CBP052A-01EED-xx	☐ CBP052A-02EED-xx
1/8" BOTTOM PORT	Internal	☐ CBP052A-01BEA-xx	☐ CBP052A-02BEA-xx
1/4" BOTTOM PORT		☐ CBP052A-01BED-xx	☐ CBP052A-02BED-xx
1/8" BOTTOM PORT	External	☐ CBP052A-01FEA-xx	☐ CBP052A-02FEA-xx
1/4" BOTTOM PORT		☐ CBP052A-01FED-xx	☐ CBP052A-02FED-xx

Number of stations (03=3 stations) **

Other options available. Consult factory.

Note : add-a-unit stations available in lengths up to 4 stations (01, 02, 03 or 04).

OPTIONS

52A-33-OOA-DM-Dxxx-xxx

☐ clic for memory spring (replace by 6).

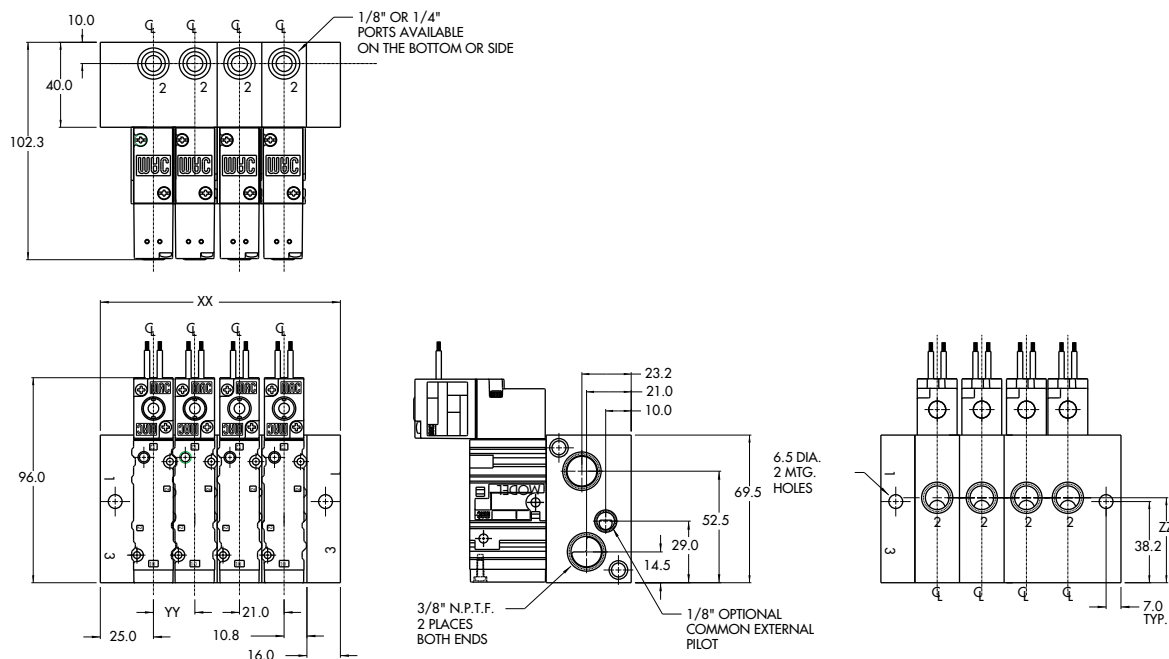
Consult "Precautions" before use, installation or service of MAC Valves.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum to 150 PSI
Pilot pressure :	20 - 150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	7.3 mm
Flow :	50 cm³/min
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W
Response times :	24 V= / 5.4 W Energize : 7.3 ms De-energize : 5.3ms 60Hz/6 W Energize : 8-12 ms De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35043 and seal 16524.
- Accessories : • Blanking plate : M-52003. • Seal (x3) : 17013-01. • Mounting screw (x2) : 35043.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



YY	XX	PORT	ZZ
19.5	113	1/8"	36.0
26	119.5	1/4"	40.0

Note: Bottom & side cylinder ports not available on the same station



Section 2

Options



0 p t i o n s

Codification table for voltages / Wire length / Manual operator / Electrical connection

VALVE CODE ➤

DM-DXX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- pilot operated valves 400, 52 & 92 Series

1. VOLTAGE

- D XX	X - X XX	VOLTAGE
☐ DB		12 VDC (5.4 W)
☐ DC		12 VDC (7.5 W)
☐ DD		24 VDC (7.3 W)
☐ DE		12 VDC (12.7 W)
☐ DK		110 VDC (5.8 W)
☐ DJ		28 VDC (5.7 W)
☐ DL		64 VDC (6.0 W)
☐ DM		36 VDC (5.8 W)
☐ DN		6 VDC (6.0 W)
☐ DR		90 VDC (6.6 W)
☐ DS		110 VDC (7.3 W), 100 VDC (6.0 W)
☐ DT		75 VDC (5.6 W)
☐ DP		48 VDC (5.8 W)
☐ FA		12 VDC (1.8 W)
☐ FE		12 VDC (2.4 W)
☐ FF		24 VDC (2.4 W)
☐ JD		100/60, 100/50, 110/60

2. WIRE LENGTH

- D XX	X - X XX	WIRE LENGTH
☐ B		24"
☐ C		36"
☐ D		48"
☐ E		72"
☐ F		96"

3. MANUAL OPERATOR

- D XX X - X XX MANUAL OPERATOR

☐	0	No operator
☐	1	Non-locking recessed
☐	2	Locking recessed
☐	3	Non-locking extended
☐	4	Locking extended

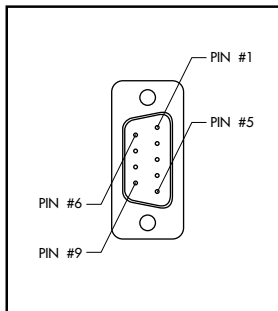
4. ELECTRICAL CONNECTION

- D XX X - X XX ELECTRICAL CONNECTION

☐	BA	Flying leads
☐	BK	BA with protection diode
☐	BL	BA with protection varistor
☐	CA	1/2" NPS conduit
☐	JB	Rectangular connector
☐	JD	Rectangular connector with light
☐	JM	Rectangular connector, male only
☐	KA	Square connector
☐	KB	Square connector with protection diode
☐	KC	Square connector with protection varistor
☐	KD	Square connector with light
☐	KE	Square connector with light and protection diode
☐	KF	Square connector with light and protection varistor
☐	KJ	Square connector (male only)
☐	KK	Square connector with protection diode (male only)
☐	KL	Square connector with protection varistor (male only)
☐	TA	Dual tabs
☐	TB	TA with protection diode
☐	TD	TA with light
☐	TE	TA with light and protection diode
☐	TJ	Dual tabs (male only)
☐	TK	TJ with protection diode
☐	TM	TJ with light
☐	TN	TJ with light and protection diode
☐	*DN	Plug-in with diode
☐	*DP	Plug-in with M.O.V.
☐	*DH	Plug-in with diode & ground
☐	*DJ	Plug-in with M.O.V & ground

* These options only apply to the 92 series. All others are for the 400 and 52 series.

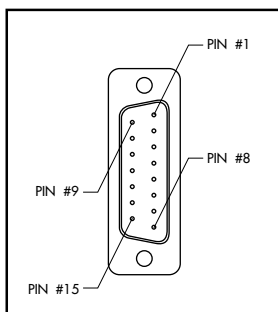
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

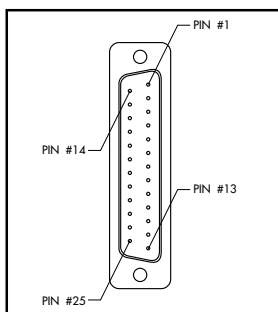
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

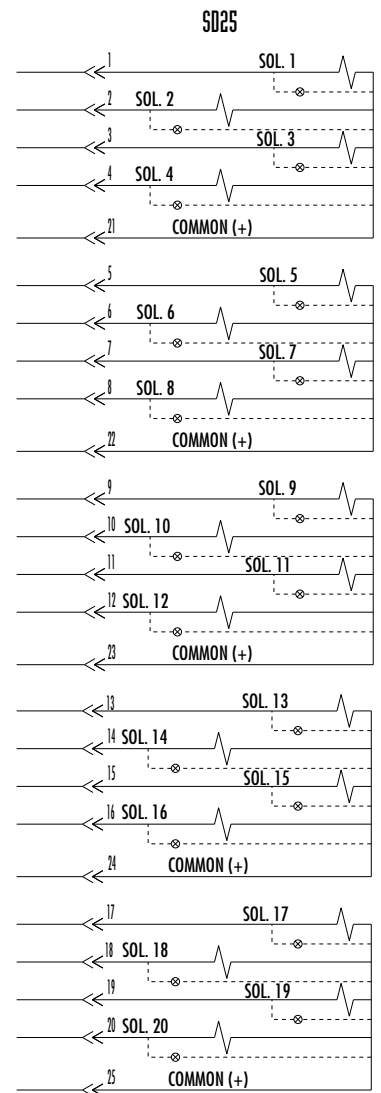
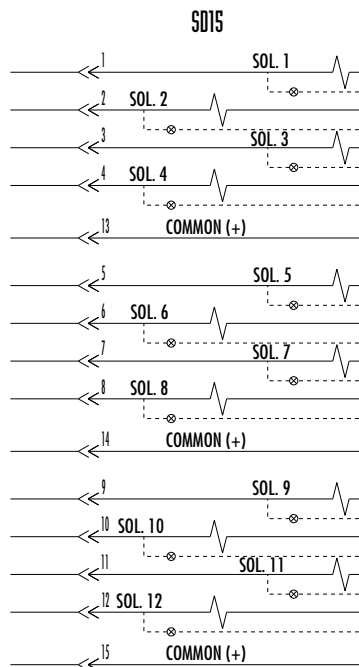
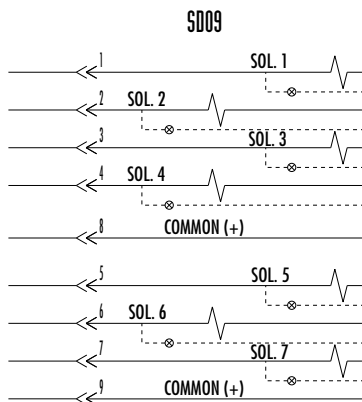
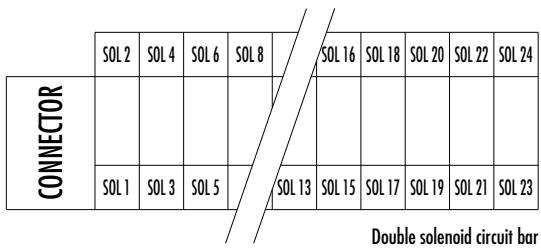
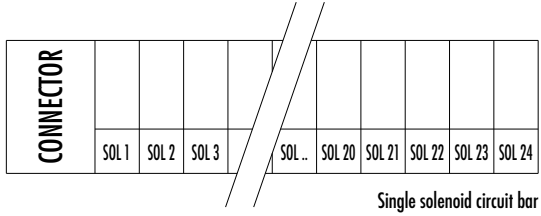


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

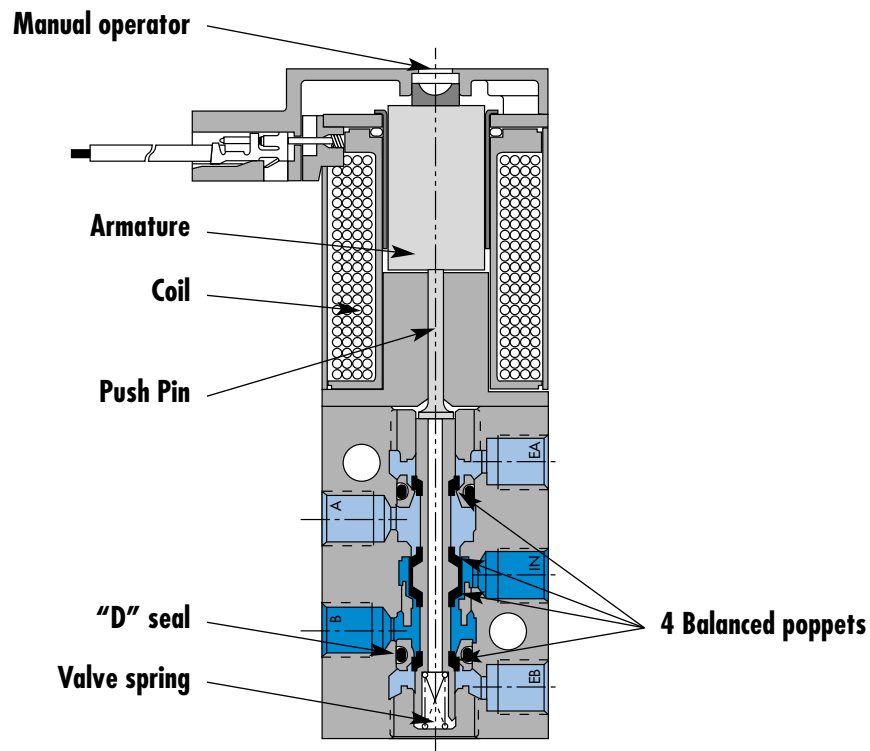
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

non plug-in cylinder ports in base	non plug-in cylinder ports in valve	plug-in	plug-in with F. C.	plug-in with Pr. Reg.	plug-in with Pr. Reg. and F. C.	add-on style plug-in	add-on style plug-in with F. C.
add-on style plug-in with Pr. Reg.	add-on style plug-in with Pr. Reg. and F. C.	plug-in add-a-unit stations	plug-in add-a-unit stations with F. C.	plug-in add-a-unit stations with Pr. Reg.	plug-in add-a-unit stations with F. C. and Pr. Reg.	plug-in with pre-wired connector	plug-in with F. C. and pre-wired connector
plug-in with Pr. Reg. and pre-wired connector	din rail, plug-in with pre-wired connector						



SERIES FEATURES

- High force MACSOLENOID®.
- 10mm direct operated.
- # 10-32 or M5 ports.
- Rated for lubricated or non-lubricated service.
- Cylinder ports in valve or in circuit bar.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.093C_v	non plug-in cylinder ports in base

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-Gxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Valve	Valve for use with external flow controls
		
Valve less base	☐ 44B-LOO-Gxxx-xxx	☐ 44B-MOO-Gxxx-xxx

SOLENOID OPERATOR ➤

G **XX X- X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ A 18"	☐ 1 Non-locking	☐ BA Flying leads
☐ DC 24VDC (1.8 W)	☐ C 36"		☐ BT Flying leads with light
☐ DD 24VDC (2.5 W)	☐ x Other Options		☐ KA Mini connector
☐ DF 24VDC (4.0 W)			☐ KT Mini connector with light
☐ xx Other Options			☐ xx Other Options

EBP44B-xxxx-xx

HOW TO ORDER CIRCUIT BAR

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ EBP44B-001D-xx	☐ EBP44B-002D-xx
# 10-32	☐ EBP44B-001B-xx	☐ EBP44B-002B-xx

Number of stations (03=3 stations)

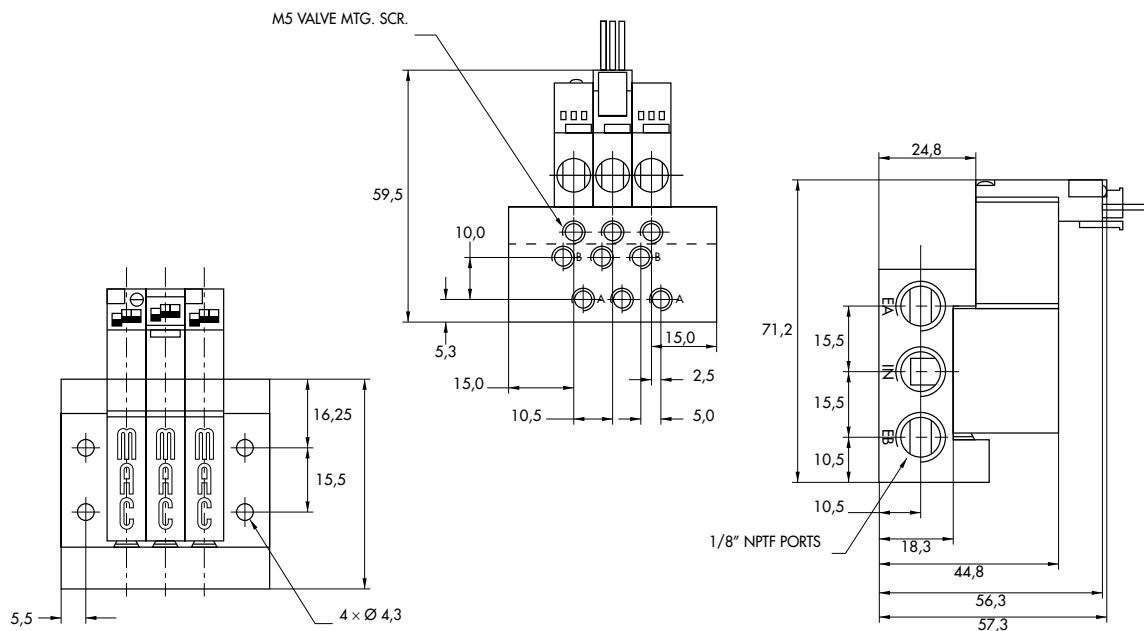
Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.093 C _v , 2.5 W : 0.077 C _v , 1.8 W : 0.057 C _v , 1.0 W : 0.048 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 3.4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Valve mounting kit : N-44001-03. • Blanking plate : M-44003.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult Factory.

DIMENSIONS



Function	Port size (Inlet & Exhaust)	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	# 10-32 - 1/8"	0.093C_v	non plug-in cylinder ports in valve

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-Gxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Valve port size	Valve	Valve for use with external flow controls
		
M5	☐ 44B-ABA-Gxxx-xxx	☐ 44B-BBA-Gxxx-xxx
# 10-32	☐ 44B-AAA-Gxxx-xxx	☐ 44B-BAA-Gxxx-xxx

SOLENOID OPERATOR ➤

G XX X- X XX			
XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DC 24VDC (1.8 W)	☐ c 36"		☐ BT Flying leads with light
☐ DD 24VDC (2.5 W)	☐ x Other Options		☐ KA Mini connector
☐ DF 24VDC (4.0 W)			☐ KT Mini connector with light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM44A-xxxx-xx

Port size COMMON INLET & EXHAUST	
# 10-32	☐ EBM44A-001B-xx
1/8" NPTF	☐ EBM44A-002A-xx

Number of stations (03=3 stations)

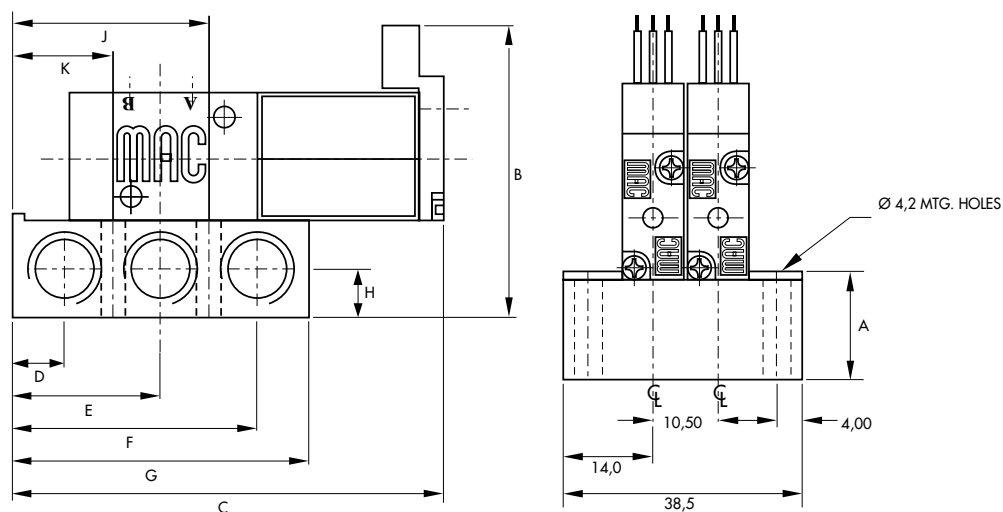
Note: ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.093 C _v , 2.5 W : 0.077 C _v , 1.8 W : 0.057 C _v , 1.0 W : 0.048 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 3.5 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :**
- Valve and coil are not interchangeable.
- Spare parts :**
- Valve mounting kit (M5) : M-44001-21. • Valve mounting kit (1/8") : M-44001-01. • Blanking plate : 30426-A.
- Options :**
- Isolation of inlet and/or exhaust. Special bar. Consult Factory.

DIMENSIONS



Port size	A	B	C	D	E	F	G	H	J	K
1/8"	16.0	47.5	69.2	8.5	24.0	39.5	48.0	8.0	31.85	16.15
M5	12.0	43.5	63.2	5.0	17.0	29.0	34.0	6.0	23.00	11.00

Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.09C_v	plug-in

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD044B-001AD-AOxx	☐ ECD044B-002AD-AOxx
# 10-32	☐ ECD044B-001AB-AOxx	☐ ECD044B-002AB-AOxx

Number of stations (03=3 stations)

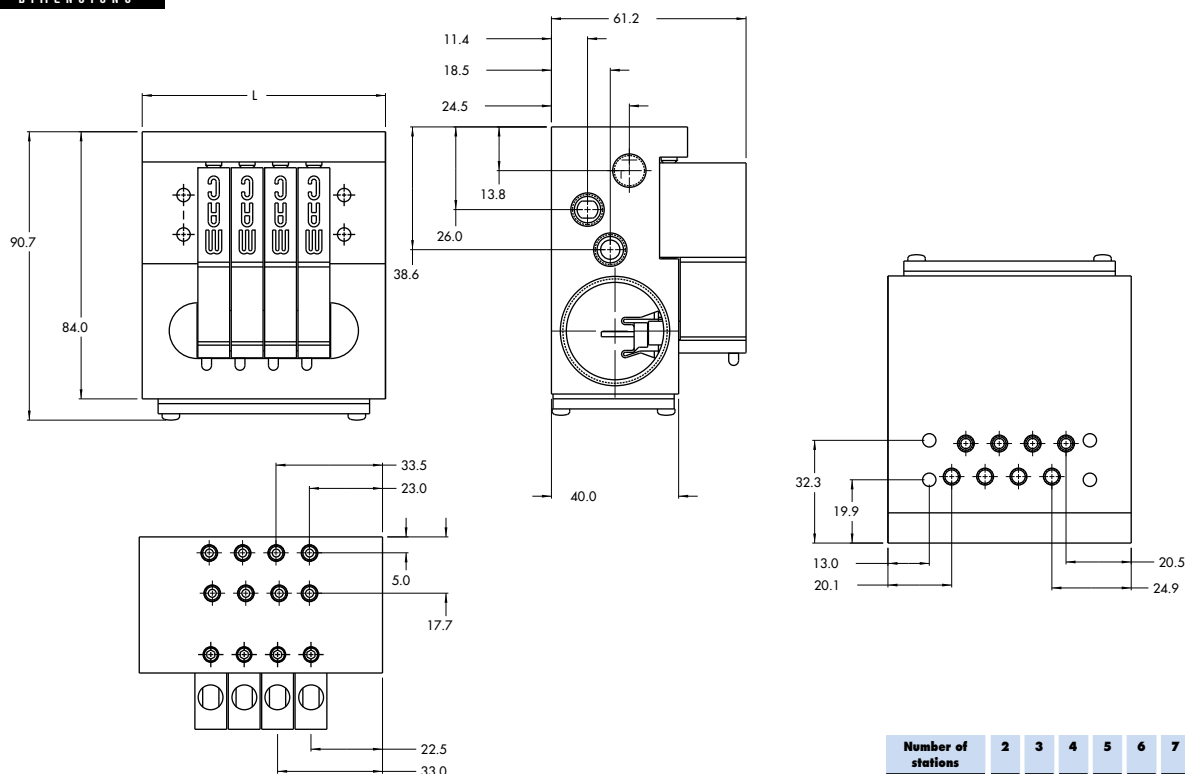
Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Valve mounting kit : N-44001-03. • Blanking plate : M-44003.
- Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.08C_v	plug-in with F. C.

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-MOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD044B-005AD-AOxx	☐ ECD044B-006AD-AOxx
# 10-32	☐ ECD044B-005AB-AOxx	☐ ECD044B-006AB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).

**TECHNICAL
DATA**

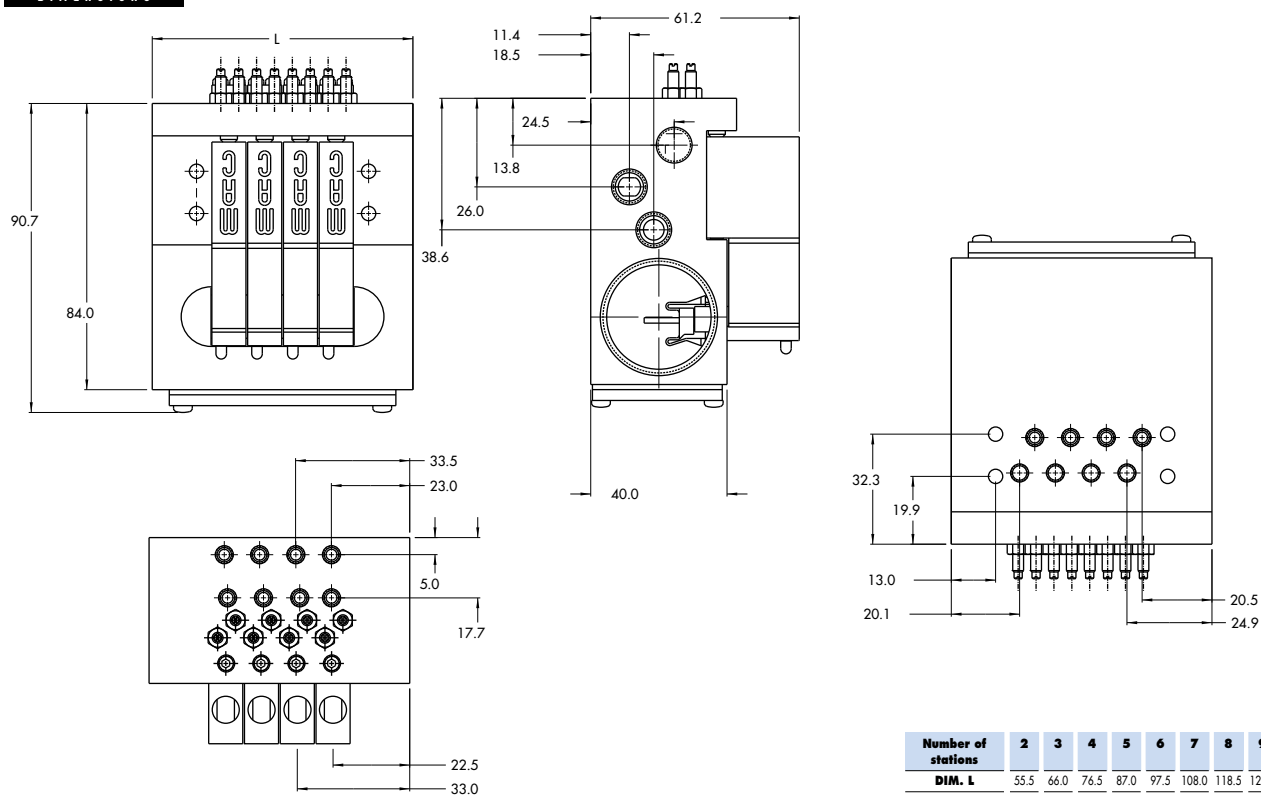
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Flow control needle (x2): N-44002.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.08C_v	plug-in with Pr. Reg.

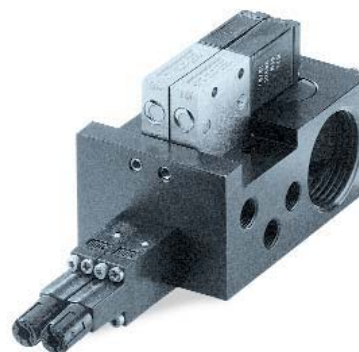
OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS** (to be ordered separately)

Port size	Bottom cylinder ports (10,5 mm)
M5	☐ ECD044B-004AD-AO-xx
# 10-32	☐ ECD044B-004AB-AO-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).

** Pressure Regulators :

PR44A-AOxx

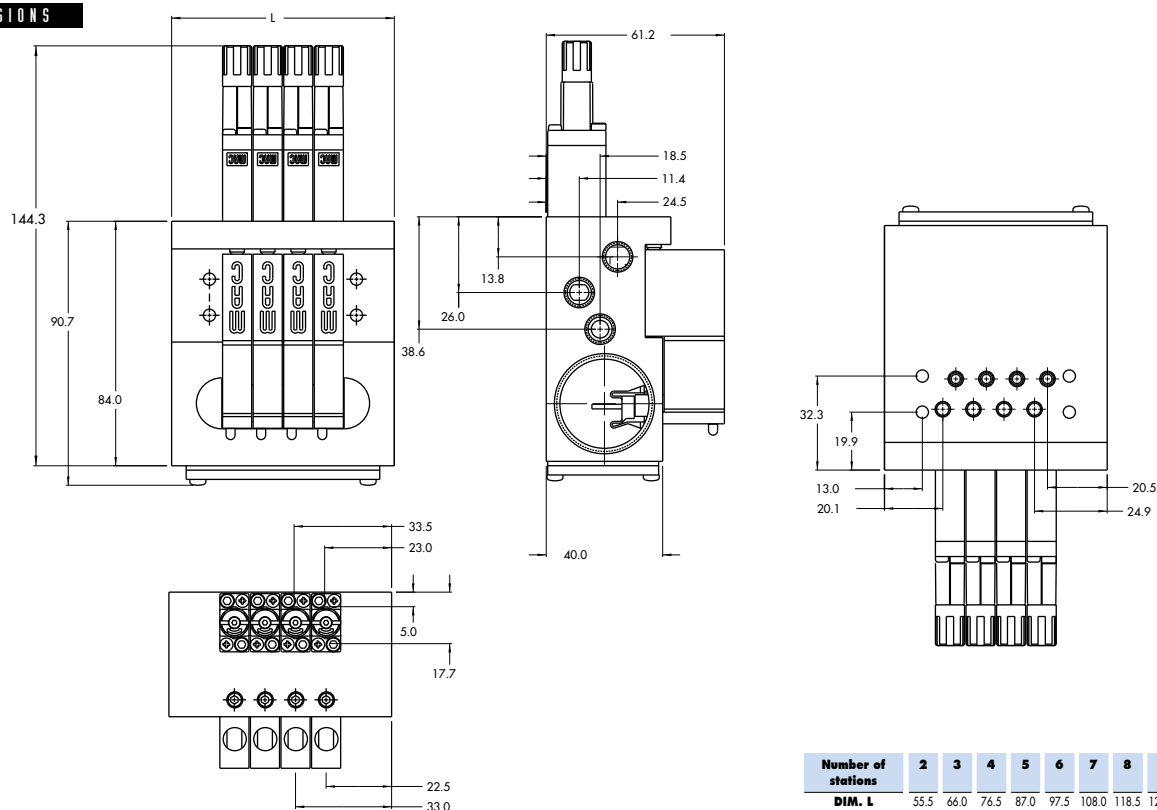
- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
 - Pressure range regulators : (0-100 PSI).
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Blanking plate regulator: N-44003.
 - Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.07C_v	plug-in with Pr. Reg. and F. C.

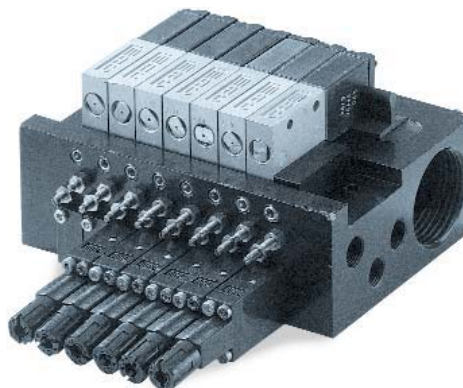
OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-MOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS AND PRESSURE REGULATORS** (pressure regulators to be ordered separately)

Port size	Bottom cylinder ports (10,5 mm)
M5	☐ ECD044B-007AD-AO-xx
# 10-32	☐ ECD044B-007AB-AO-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).

** Pressure Regulators :

PR44A-AOxx

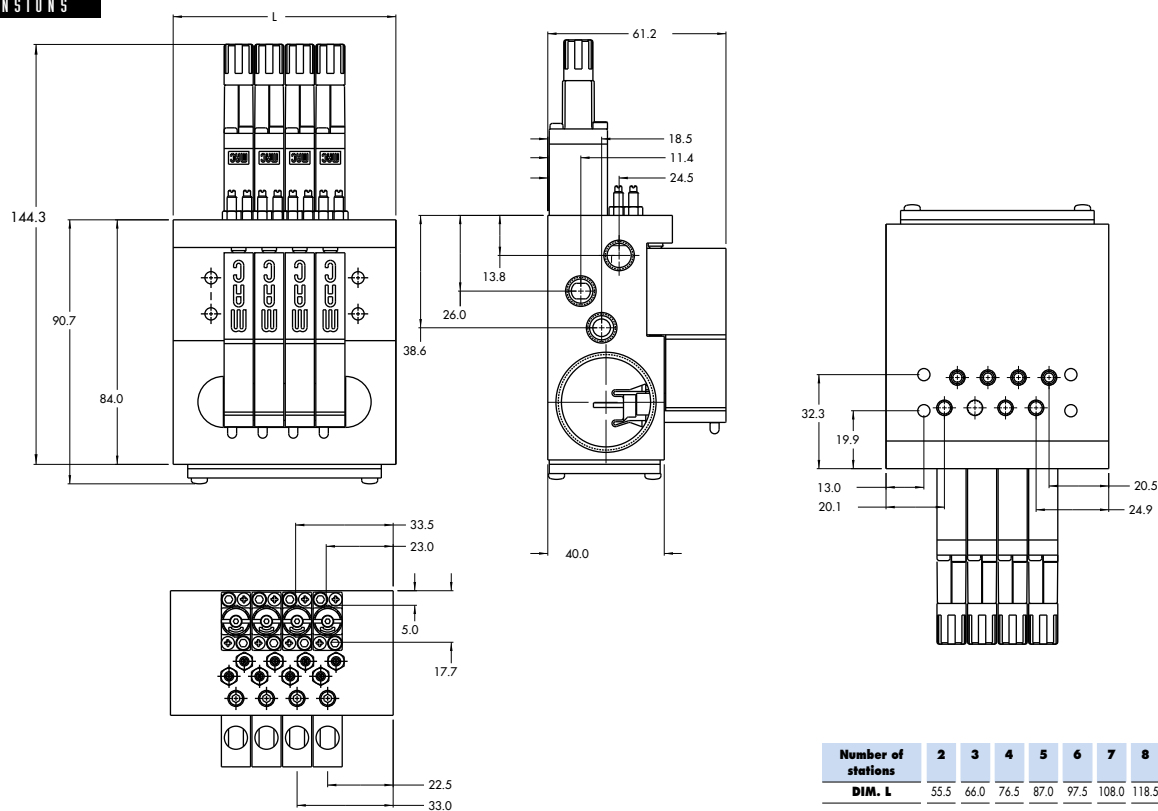
- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.07 C _V , 2.5 W : 0.06 C _V , 1.8 W : 0.06 C _V , 1.0 W : 0.05 C _V
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
 - Pressure range regulators : (0-100 PSI).
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Blanking plate regulator: N-44003.
 - Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.09C_v	add-on style plug-in

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset



HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD044B-001BD-AOxx	☐ ECD044B-002BD-AOxx
# 10-32	☐ ECD044B-001BB-AOxx	☐ ECD044B-002BB-AOxx

Number of stations (03=3 stations)

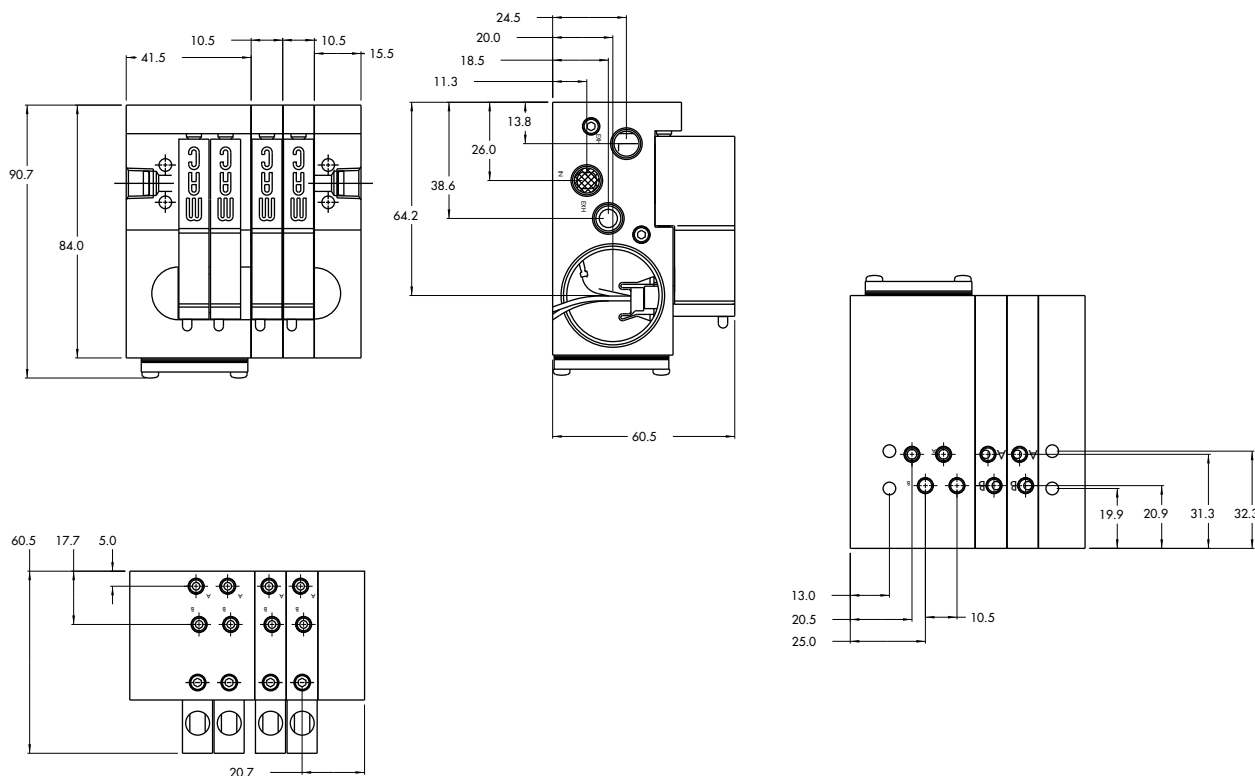
Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).
 add-a-unit stations may be added to above bars.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Valve mounting kit : N-44001-03. • Blanking plate : M-44003.
- Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.08C_v	add-on style plug-in with F. C.

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-MOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX** *

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECD044B-005BD-AOxx	☐ ECD044B-006BD-AOxx
# 10-32	☐ ECD044B-005BB-AOxx	☐ ECD044B-006BB-AOxx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).
 add-a-unit stations may be added to above bars.

**TECHNICAL
DATA**

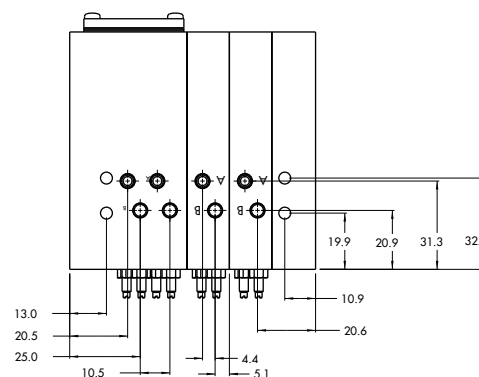
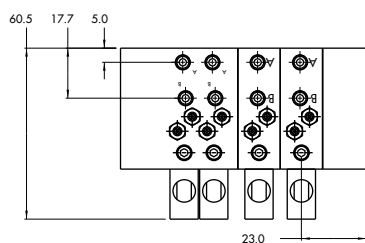
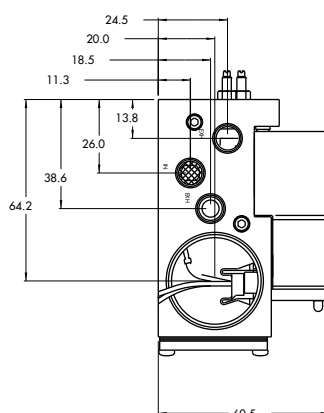
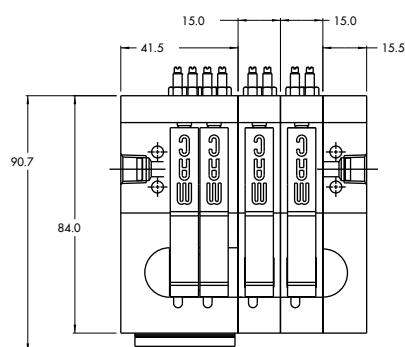
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Flow control needle (x2): N-44002.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.08C_v	add-on style plug-in with Pr. Reg.

OPERATIONAL BENEFITS

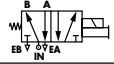
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS** (to be ordered separately)

Port size	Bottom cylinder ports (10,5 mm)
M5	☐ ECD044B-004BD-AO-xx
# 10-32	☐ ECD044B-004BB-AO-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).
 add-a-unit stations may be added to above bars.

** Pressure Regulators :

PR44A-AOxx

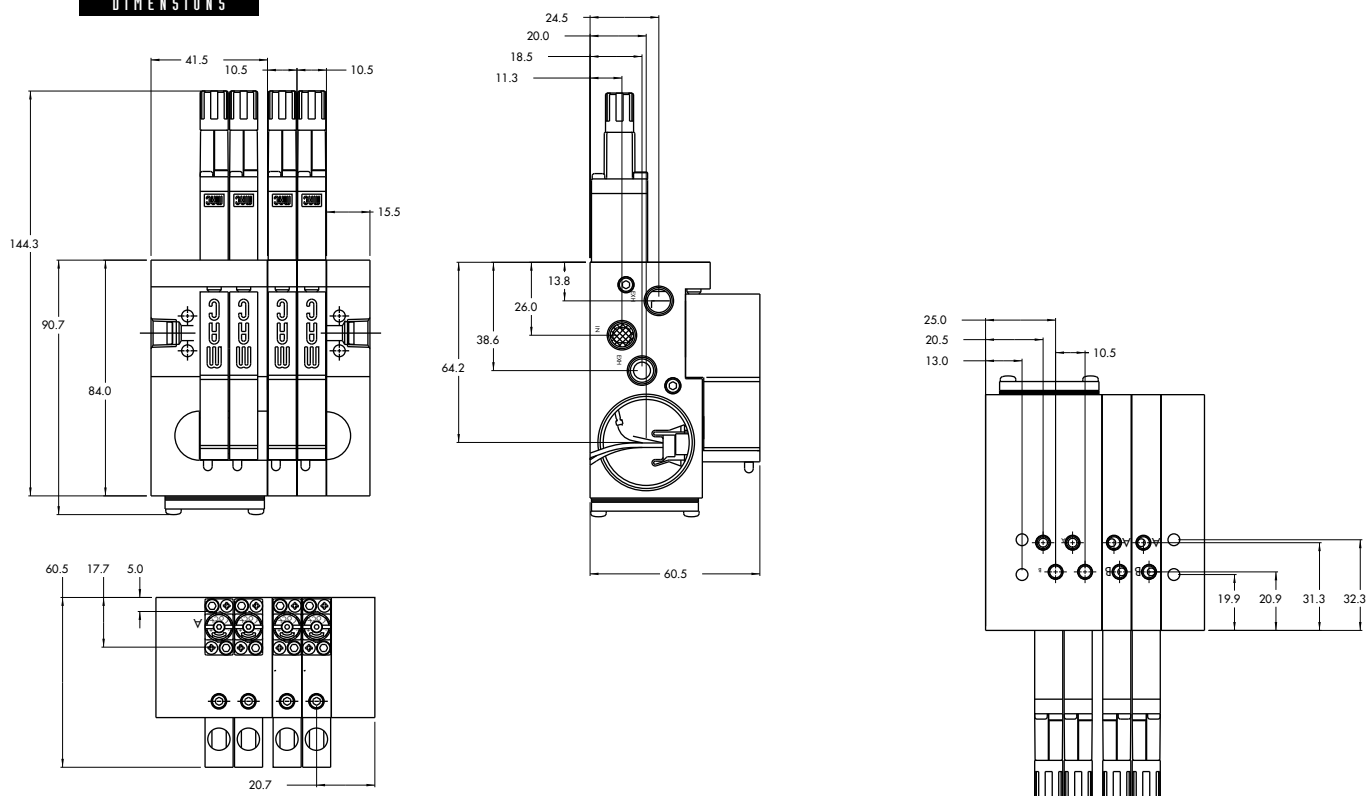
- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
 - Pressure range regulators : (0-100 PSI).
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Blanking plate regulator: N-44003.
 - Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.07C_v	add-on style plug-in with Pr. Reg. and F. C.

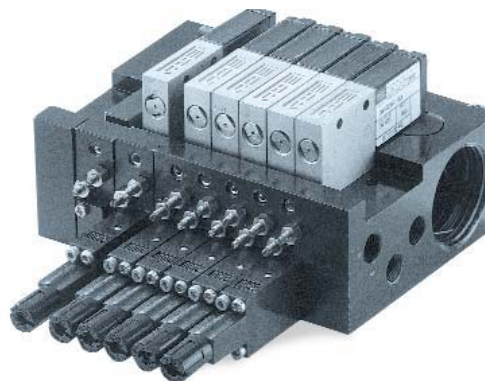
OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-MOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS AND PRESSURE REGULATORS** (pressure regulators to be ordered separately)

Port size	Bottom cylinder ports (10,5 mm)
M5	☐ ECD044B-007BD-AO-xx
# 10-32	☐ ECD044B-007BB-AO-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
☐ clic for multi-pin connector option (9, 15 or 25).
 add-a-unit stations may be added to above bars.

** Pressure Regulators :

PR44A-AOxx

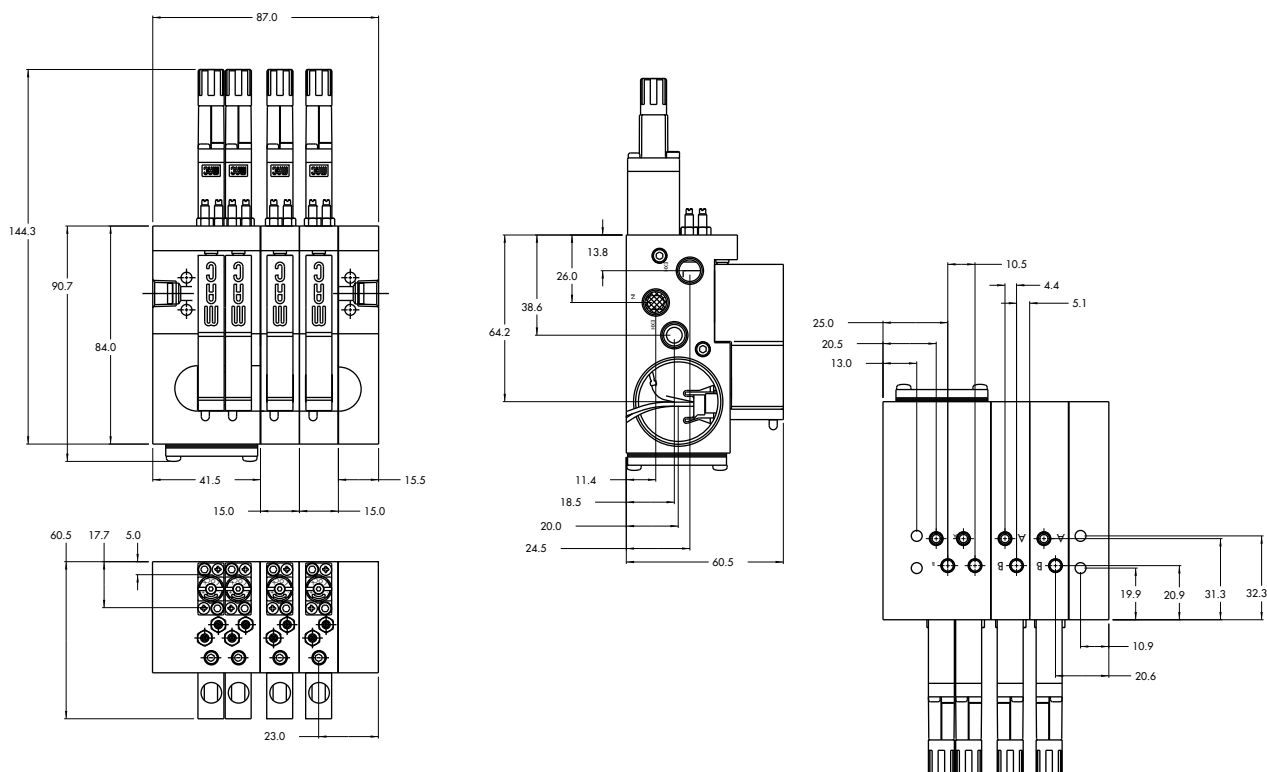
- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.07 C _v , 2.5 W : 0.06 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
 - Pressure range regulators : (0-100 PSI).
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Blanking plate regulator: N-44003.
 - Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2	M5 - #10-32	0.09C_v	plug-in add-a-unit stations

OPERATIONAL BENEFITS

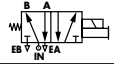
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ ECD044B-001CD-AOxx	☐ ECD044B-002CD-AOxx
# 10-32	☐ ECD044B-001CB-AOxx	☐ ECD044B-002CB-AOxx

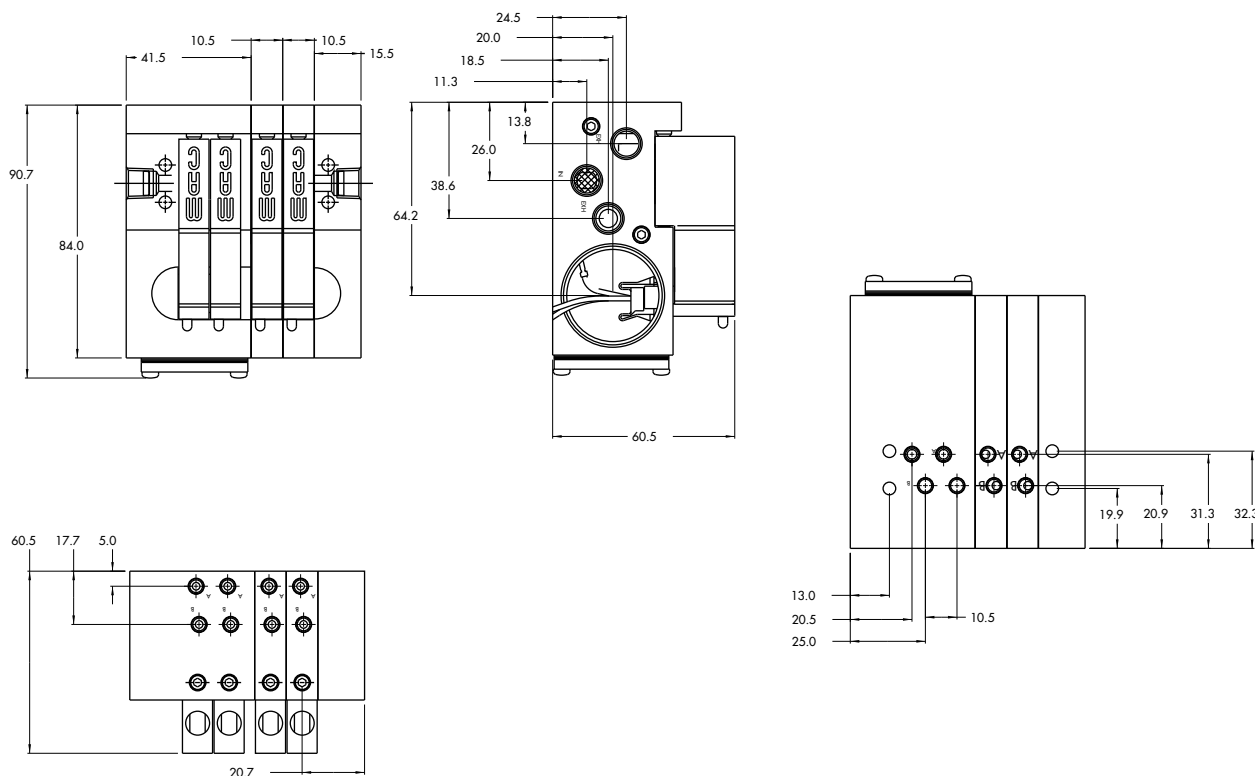
Number of stations (03=3 stations) - Maximum length is 4 stations
 Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD. SD03 should be included with add-a-unit model number.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :**
- Valve and coil are not interchangeable.
- Spare parts :**
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003.
- Options :**
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2	M5 - #10-32	0.08C_v	plug-in add-a-unit stations with F. C.

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-MOO-G xx O- xxx

SOLENOID OPERATOR >

G **xx** O- **x** **xx** *

xx Voltage	x Manual operator	xx Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS

Port size	Side cylinder ports	Bottom cylinder ports
M5	☐ ECD044B-005CD-AO xx	☐ ECD044B-006CD-AO xx
# 10-32	☐ ECD044B-005CB-AO xx	☐ ECD044B-006CB-AO xx

Number of stations (03=3 stations) - Maximum length is 4 stations
 Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD. SD03 should be included with add-a-unit model number.

**TECHNICAL
DATA**

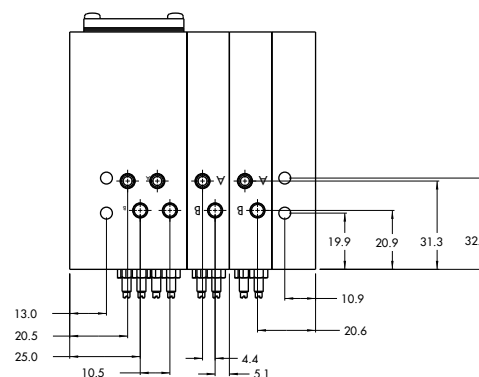
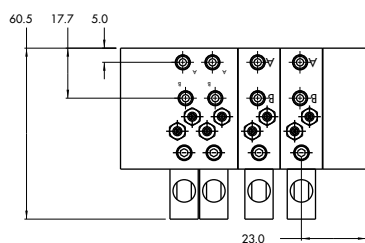
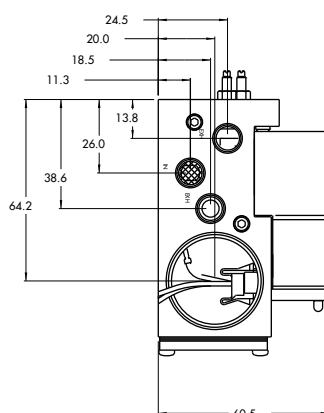
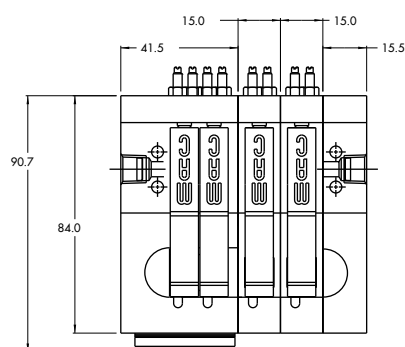
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Flow control needle (x2): N-44002.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2	M5 - #10-32	0.08C_v	plug-in add-a-unit stations with Pr. Reg.

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS ** (to be ordered separately)

Port size	Bottom cylinder ports (10,5 mm)
M5	☐ ECD044B-004CD-AOxx
# 10-32	☐ ECD044B-004CB-AOxx

Number of stations (03=3 stations) - Maximum length is 4 stations
 Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD. SD03 should be included with add-a-unit model number.

** Regulator ordered separately-see below :

PR44A-AOxx

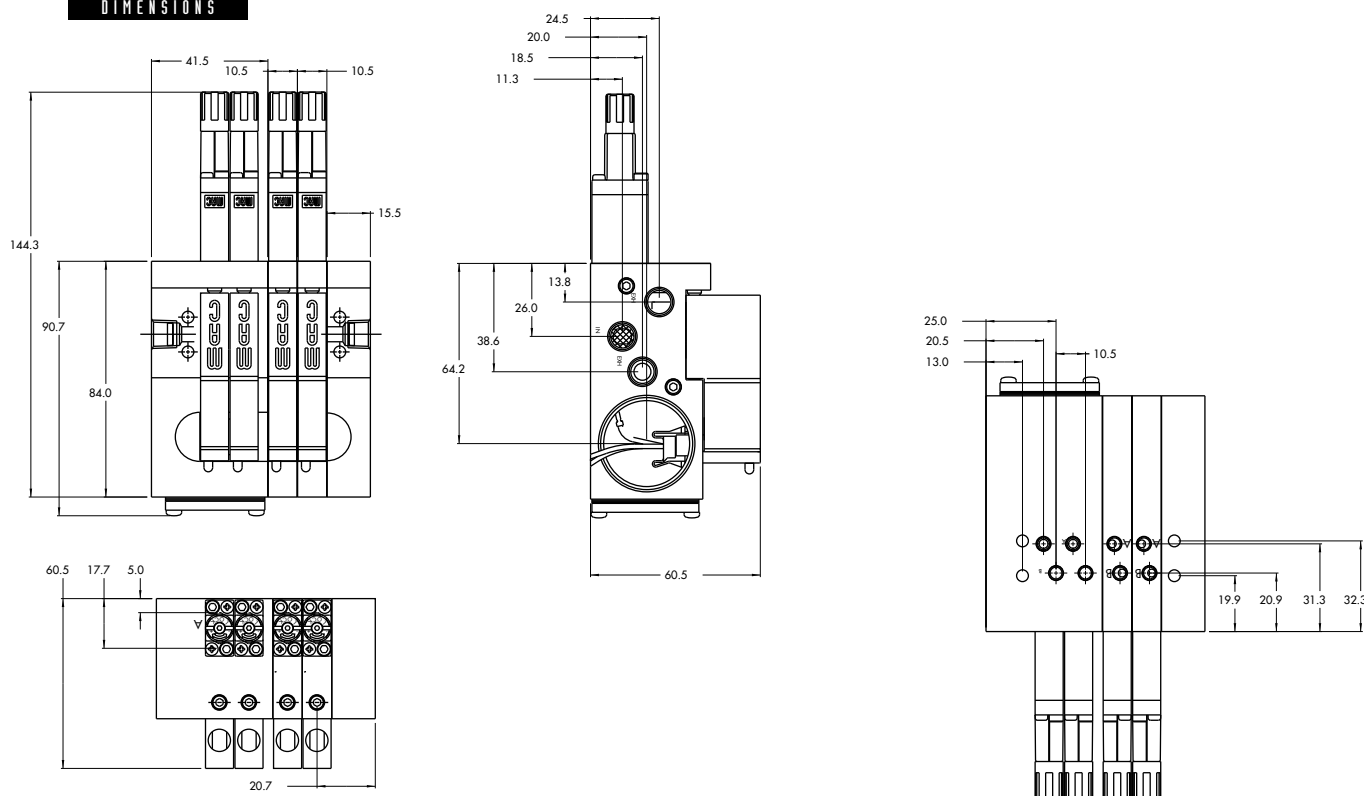
- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
 - Pressure range regulators : (0-100 PSI).
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Blanking plate regulator: N-44003.
 - Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2	M5 - #10-32	0.07C_v	plug-in add-a-unit stations with F. C. and Pr. Reg.

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-MOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX**

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECD044B-00xxx-AOxx

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS AND PRESSURE REGULATORS ** (pressure regulators to be ordered separately)

Port size	Bottom cylinder ports (10,5 mm)
M5	☐ ECD044B-007CD-AOxx
# 10-32	☐ ECD044B-007CB-AOxx

Number of stations (03=3 stations) - Maximum length is 4 stations
 Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD. SD03 should be included with add-a-unit model number.

** Regulator ordered separately-see below :

PR44A-AOxx

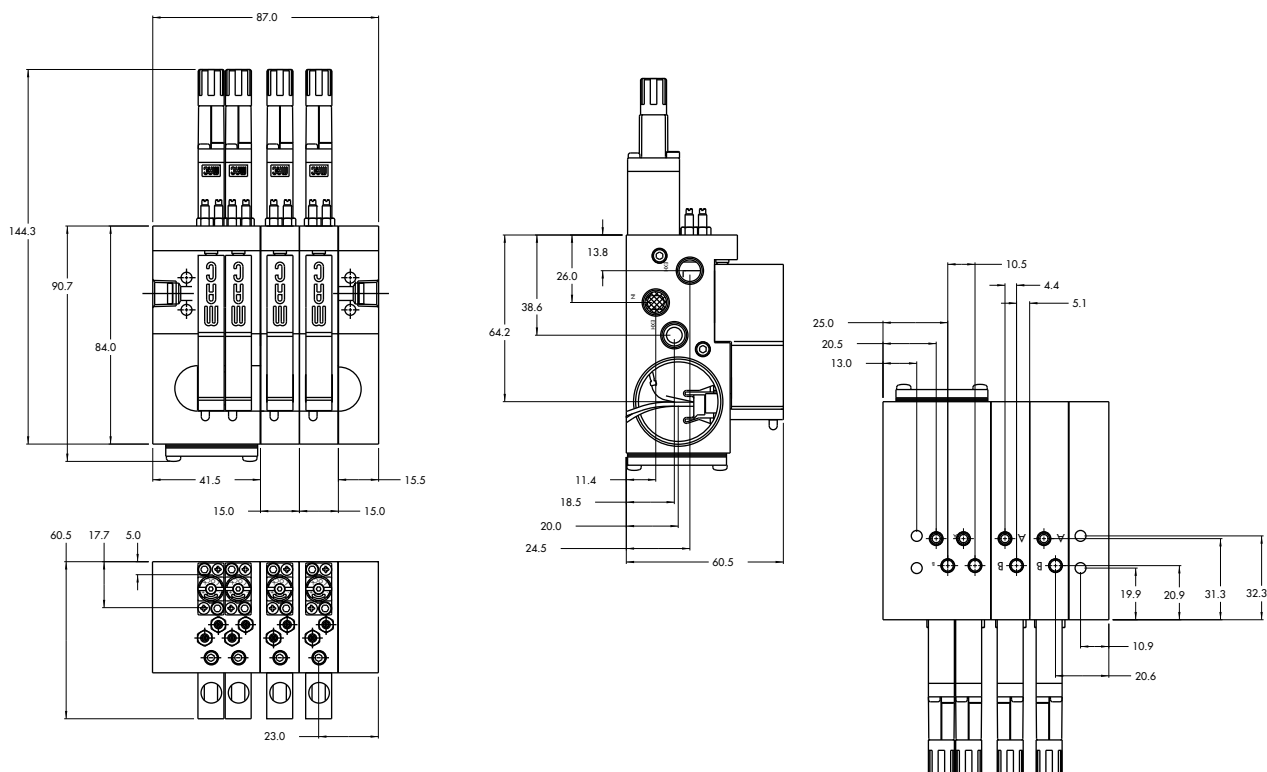
- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.07 C _v , 2.5 W : 0.06 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
 - Pressure range regulators : (0-100 PSI).
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Blanking plate regulator: N-44003.
 - Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32, 4 mm tube receptacle	0.10C_v	plug-in with pre-wired connector

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **XX** O- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECF44B-00xxx-xxxx

HOW TO ORDER CIRCUIT BAR **

Port size	Side cylinder ports (10.5 mm)	Bottom cylinder ports (10.5 mm)
M5	☐ ECF44B-00BDA- zzxx	☐ ECF44B-00CDA- zzxx
# 10-32	☐ ECF44B-00BBA- zzxx	☐ ECF44B-00CBA- zzxx
4 mm tube receptacle	☐ ECF44B-00BEA- zzxx	-----

Number of stations (03=3 stations)

** Other options available Consult factory.

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

L=Left Side; R=Right Side

ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port Standard Base Wires	☐ RH	3/8" NPSM Conduit Port Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

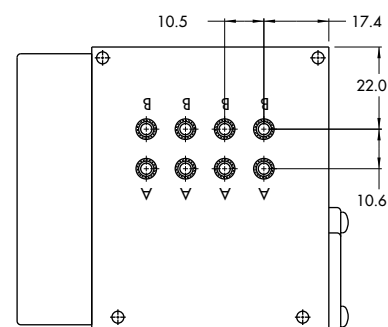
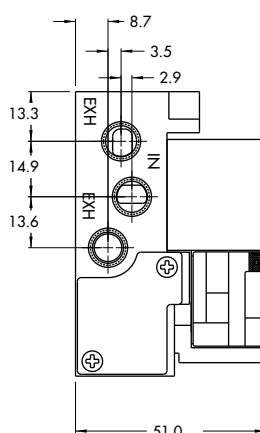
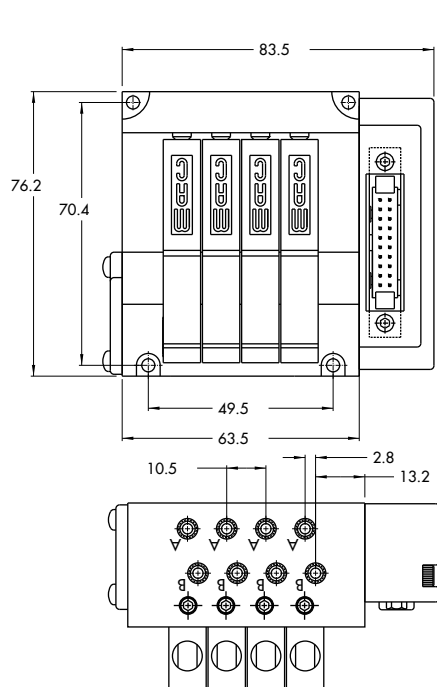
Note: Left and right end is determined by facing conduit passage.

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 μ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, $\Delta P=1$ bar) :	4 W : 0.10 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP threads.

DIMENSIONS





Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.09C_v	plug-in with F. C. and pre-wired connector

OPERATIONAL BENEFITS

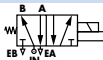
1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 44B-MOO-GxxO-xxx

SOLENOID OPERATOR ►

G **XX** O- **X XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR WITH FLOW CONTROLS **

ECF44B-00xxx-xxxx

Port size	Bottom cylinder ports (10.5 mm)
M5 # 10-32	☐ ECF44B-00EDA-zzxx ☐ ECF44B-00EBA-zzxx

Number of stations (03=3 stations)

** Other options available Consult factory.

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

L=Left Side; R=Right Side

ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port Standard Base Wires	☐ RH	3/8" NPSM Conduit Port Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

Note: Left and right end is determined by facing conduit passage.

Consult "Precautions" before use, installation or service of MAC Valves.

TECHNICAL DATA

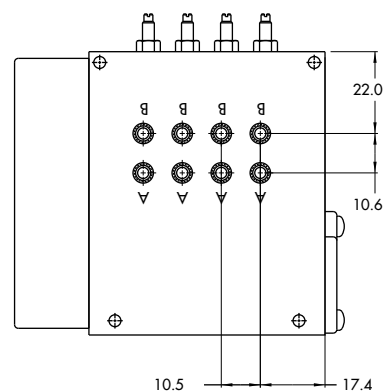
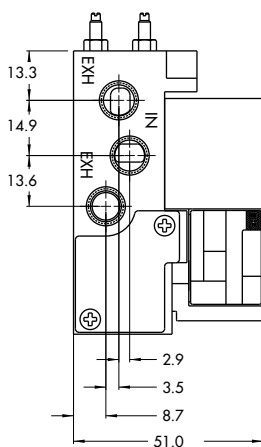
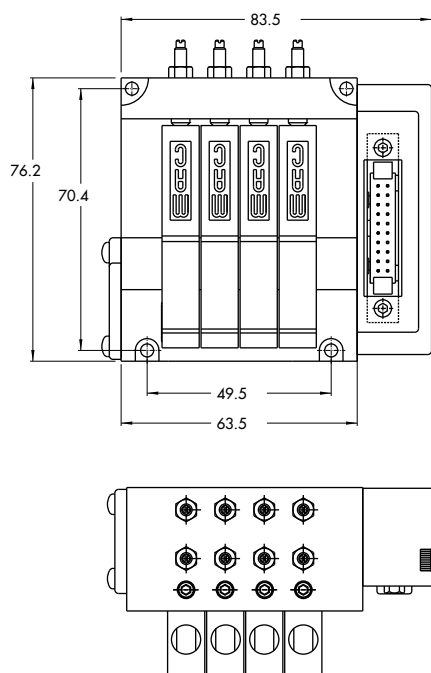
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 μ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, $\Delta P=1\text{bar}$) :	4 W : 0.09 C_v , 2.5 W : 0.08 C_v , 1.8 W : 0.06 C_v , 1.0 W : 0.05 C_v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Flow control needle (x2): N-44002.
• Base wire Plug-in protector : 24180.

Options : • Isolation of inlet and/or exhaust. • BSPP threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32	0.09C_v	plug-in with Pr. Reg. and pre-wired connector

OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **xx** O- **x** **xx***

xx Voltage	x Manual operator	xx Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER CIRCUIT BAR FOR PRESSURE REGULATORS ** (to be ordered separately)

ECF44B-00xxx-xxxx

Port size	Bottom cylinder ports (10.5 mm)
M5 # 10-32	☐ ECF44B-00GDA- zzxx ☐ ECF44B-00GBA- zzxx

Number of stations (03=3 stations)

** Other options available Consult factory.

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

** Pressure Regulators :

PR44A-AOxx

- ☐ Y=A (no gage port)
- ☐ Y=B (with gage port)
- ☐ X=A (0 to 100 PSI)
- ☐ X=B (0 to 60 PSI)
- ☐ X=C (0 to 40 PSI)
- ☐ X=D (0 to 15 PSI)

L=Left Side; R=Right Side			
ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port Standard Base Wires	☐ RH	3/8" NPSM Conduit Port Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

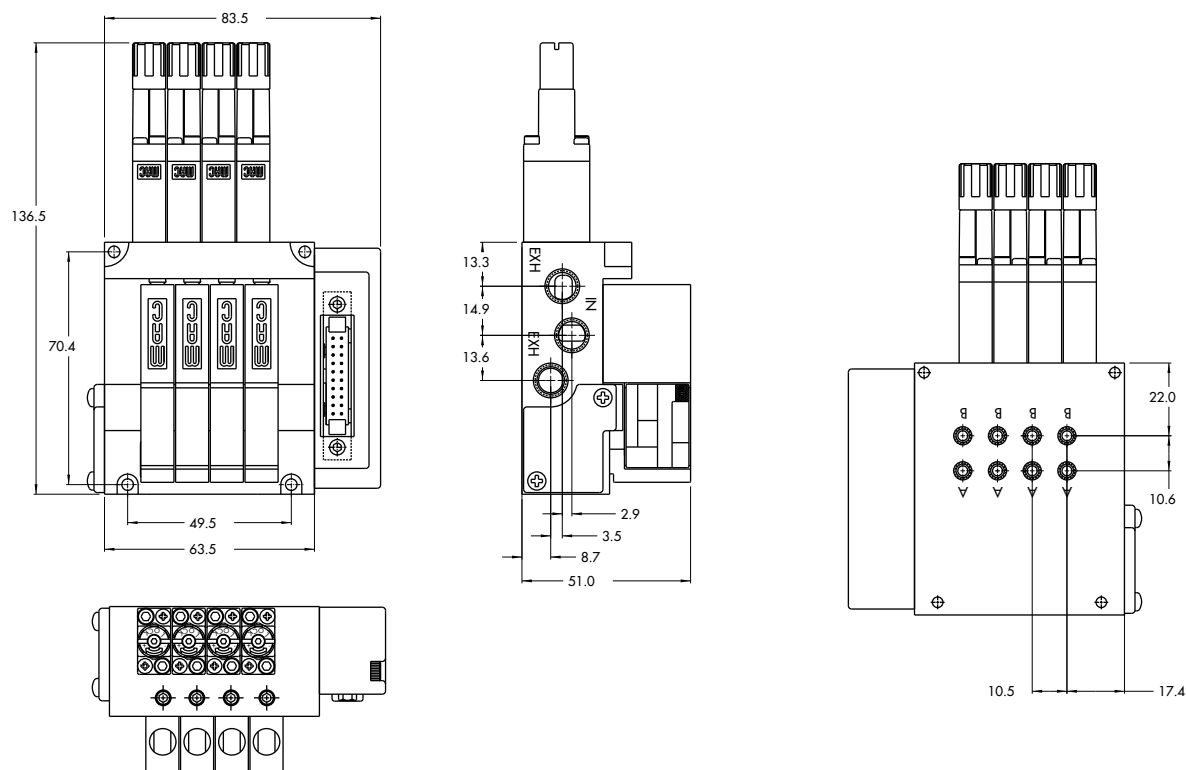
Note: Left and right end is determined by facing conduit passage.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.09 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
 - Pressure range regulator (0-100 PSI)
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Blanking plate regulator : N-44003.
 - Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
5/2, 3/2 NO-NC	M5 - #10-32, 4 mm tube receptacle	0.10C_v	din rail, plug-in with pre-wired connector

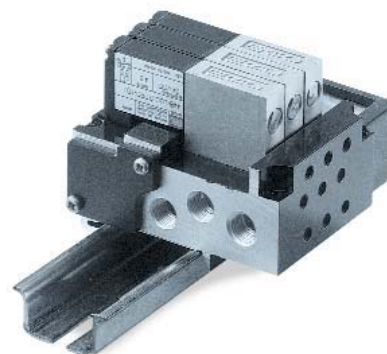
OPERATIONAL BENEFITS

1. 10 mm valve, direct solenoid operated.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Flow is specifically adjusted on each valve.
7. Manual operator standard on all valves.

Reset

HOW TO ORDER

44B-xxx-GxxO-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Single operator
Valve less base	 ☐ 44B-LOO-GxxO-xxx

SOLENOID OPERATOR ➤

G **xx** O- **x xx***

xx Voltage	x Manual operator	xx Electrical connection
☐ DA 24VDC (1.0 W)	☐ 1 Non-locking	☐ DJ Plug-in
☐ DC 24VDC (1.8 W)		☐ DT Plug-in with light
☐ DD 24VDC (2.5 W)		☐ DE Plug-in with suppression diode
☐ DF 24VDC (4.0 W)		☐ DV Plug-in with light and suppression diode
☐ xx Other Options		☐ xx Other Options

ECF44B-00xxx-xxxx

HOW TO ORDER CIRCUIT BAR

Port size	Side cylinder ports (10.5 mm)
M5	☐ ECF44B-00BDB- zzxx
# 10-32	☐ ECF44B-00BBB- zzxx
4 mm tube receptacle	☐ ECF44B-00BEB- zzxx

Number of stations (03=3 stations)

Din rail spec. (EN50 022)

Note: ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

L=Left Side; R=Right Side

ZZ	Connector	ZZ	Connector
☐ LA	9 Pin Sub D*	☐ RA	9 Pin Sub D*
☐ LB	15 Pin Sub D*	☐ RB	15 Pin Sub D*
☐ LC	25 Pin Sub D*	☐ RC	25 Pin Sub D*
☐ LD	10 Pin Ribbon Cable**	☐ RD	10 Pin Ribbon Cable**
☐ LE	16 Pin Ribbon Cable**	☐ RE	16 Pin Ribbon Cable**
☐ LF	20 Pin Ribbon Cable**	☐ RF	20 Pin Ribbon Cable**
☐ LG	26 Pin Ribbon Cable**	☐ RG	26 Pin Ribbon Cable**
☐ LH	3/8" NPSM Conduit Port Standard Base Wires	☐ RH	3/8" NPSM Conduit Port Standard Base Wires

* MIL. Spec; MIL-C-24308

** MIL. Spec; MIL-C-83503

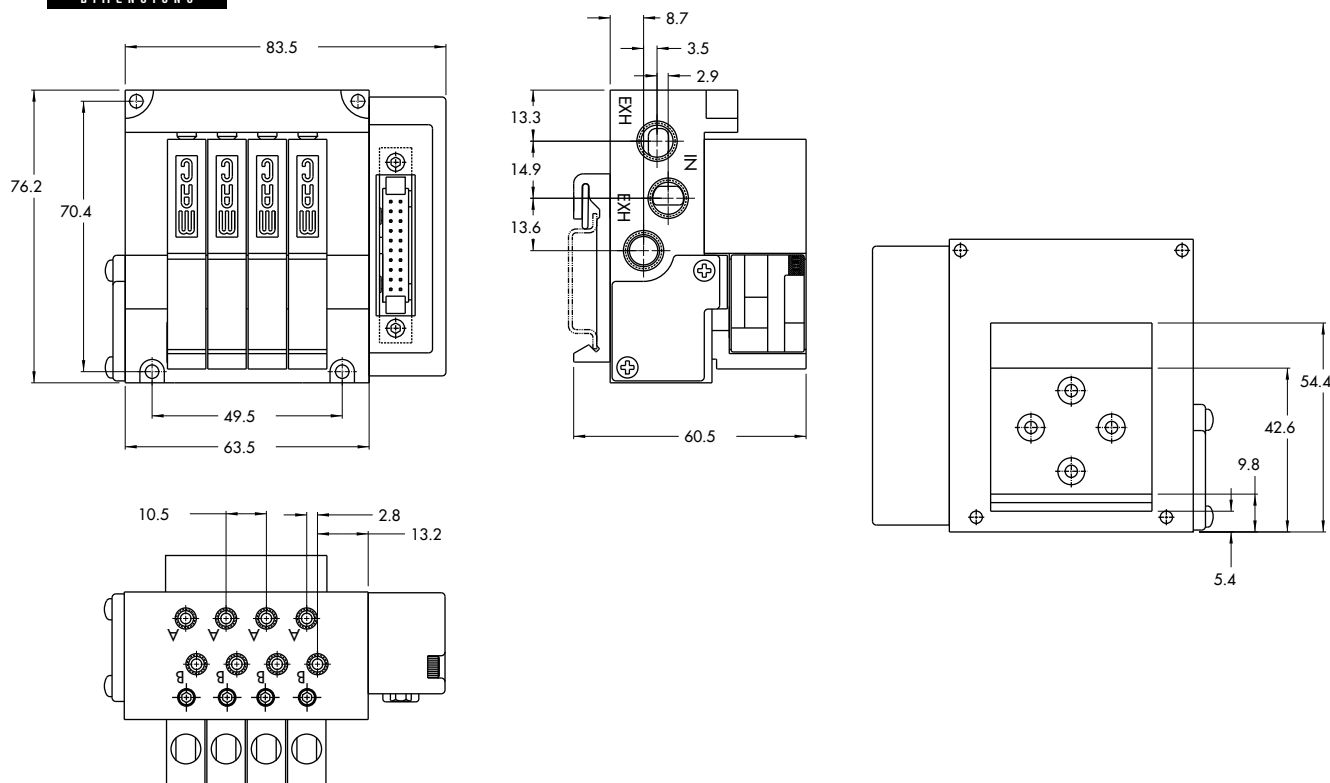
Note: Left and right end is determined by facing conduit passage.

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	1.8 mm
Flow (at 6 bar, ΔP=1bar) :	4 W : 0.10 C _v , 2.5 W : 0.08 C _v , 1.8 W : 0.06 C _v , 1.0 W : 0.05 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	4 W - 2.5 W - 1.8 W - 1.0 W
Response times :	Energize : 4 ms
(with 4 W coil)	De-energize : 1.5 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Valve mounting kit : N-44001-03. • Blanking plate : M-44003. • Base wire Plug-in protector : 24180.
- Options :
- Isolation of inlet and/or exhaust. • BSPP threads.

DIMENSIONS





Section 2

Options



0 p t i o n s

Codification table for voltages / Manual operator / Electrical connection

VALVE CODE ➤

-G XX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- solenoid valves 34 & 44 Series

1. VOLTAGE (type 34 Series)		1. VOLTAGE (type 44 Series)	
-G XX X - X XX	VOLTAGE	-G XX X - X XX	VOLTAGE
DC	24 VDC (1,8 W)	☐ DA	24 VDC (1,0 W)
DD	24 VDC (2,5 W)	☐ DC	24 VDC (1,8 W)
DE	24 VDC (3,0 W)	☐ DD	24 VDC (2,5 W)
DF	24 VDC (4,0 W)	☐ DF	24 VDC (4,0 W)
DJ	12 VDC (1,8 W)	☐ DG	12 VDC (1,0 W)
DK	12 VDC (2,5 W)	☐ DJ	12 VDC (1,8 W)
DM	12 VDC (3,0 W)	☒ DK	12 VDC (2,5 W)
DN	12 VDC (4,0 W)	☐ DN	12 VDC (4,0 W)

2. WIRE LENGTH (Common options for 34 & 44 Series)	
-G XX X - X XX	WIRE LENGTH
☐ A	18"
☐ B	24"
☐ C	36"
☒ D	48"
☐ E	72"
☐ F	96"
☐ G	120"
☐ H	144"

3. MANUAL OPERATOR (COMMON OPTIONS FOR 34 & 44 SERIES)

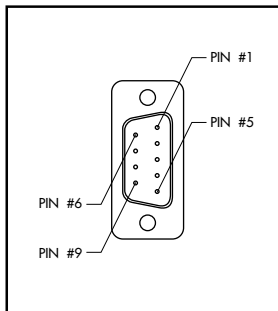
-G XX X - X XX	MANUAL OPERATOR
1	Non-locking recessed
3	Non-locking extended

4. ELECTRICAL CONNECTION (COMMON OPTIONS FOR 34 & 44 SERIES)

-G XX X - X XX	NO CONNECTOR
☐ BA	Flying leads
☐ BB	BA with ground wire
☐ BC	BA with light
☐ BD	BA with light and ground wire
☐ BE	BA with suppression diode
☐ BF	BA with suppression diode and ground wire
☐ BG	BA with suppression diode and light
☐ BH	BA with suppression diode, light and ground wire
☐ BN	BA with suppression diode and blocking diode
☒ BP	BA with suppression diode, blocking diode and ground wire
☐ BR	BA with suppression diode, blocking diode and light
☐ BS	BA with suppression diode, blocking diode, light and ground wire
☐ BT	BA with light
☐ BU	BA with light and ground wire
☐ BV	BA with suppression diode and light
☐ BW	BA with suppression diode, light and ground wire
☐ BX	BA with suppression diode, blocking diode and light
☐ BY	BA with suppression diode, blocking diode, light and ground wire

-G XX X - X XX	PLUG-IN CONNECTOR
☐ KA	Mini connector with flying leads
☐ KB	KA with ground wire
☐ KE	KA with suppression diode
☐ KF	KA with suppression diode and ground wire
☐ KJ	Mini connector for KA option
☐ KM	Mini connector for KB option
☐ KN	KA with suppression diode and blocking diode
☐ KP	KA with suppression diode, blocking diode and ground wire
☐ KT	KA with light
☐ KU	KA with light and ground wire
☐ KV	KA with suppression diode and light
☐ KW	KA with suppression diode, light and ground wire
☐ KX	KA with suppression diode, blocking diode and light
☐ KY	KA with suppression diode, blocking diode, light and ground wire

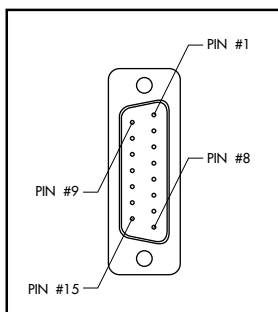
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

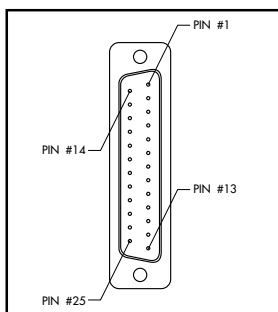
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

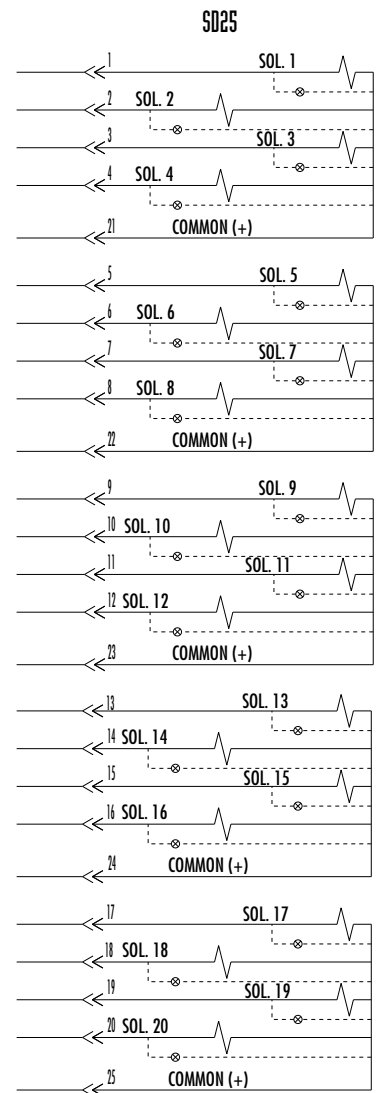
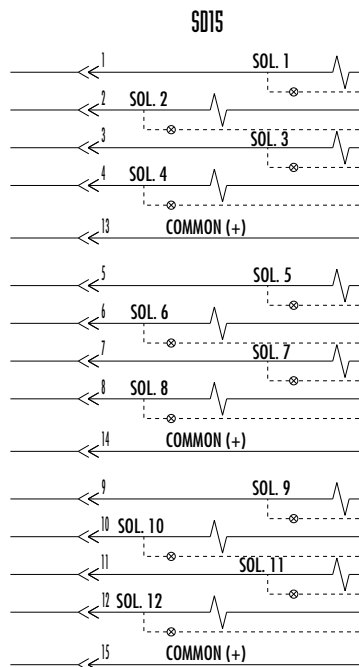
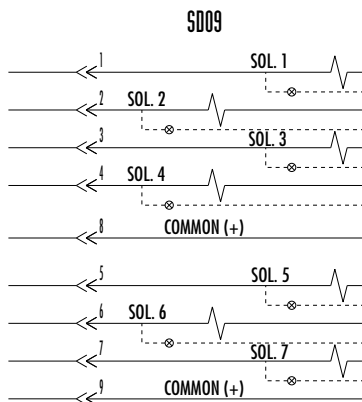
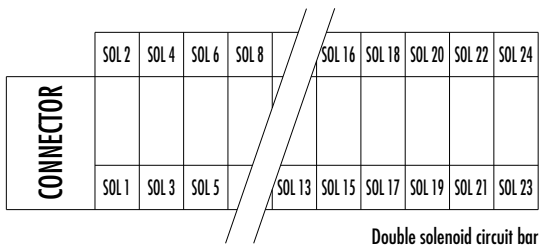
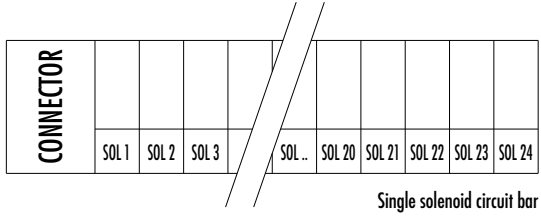


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

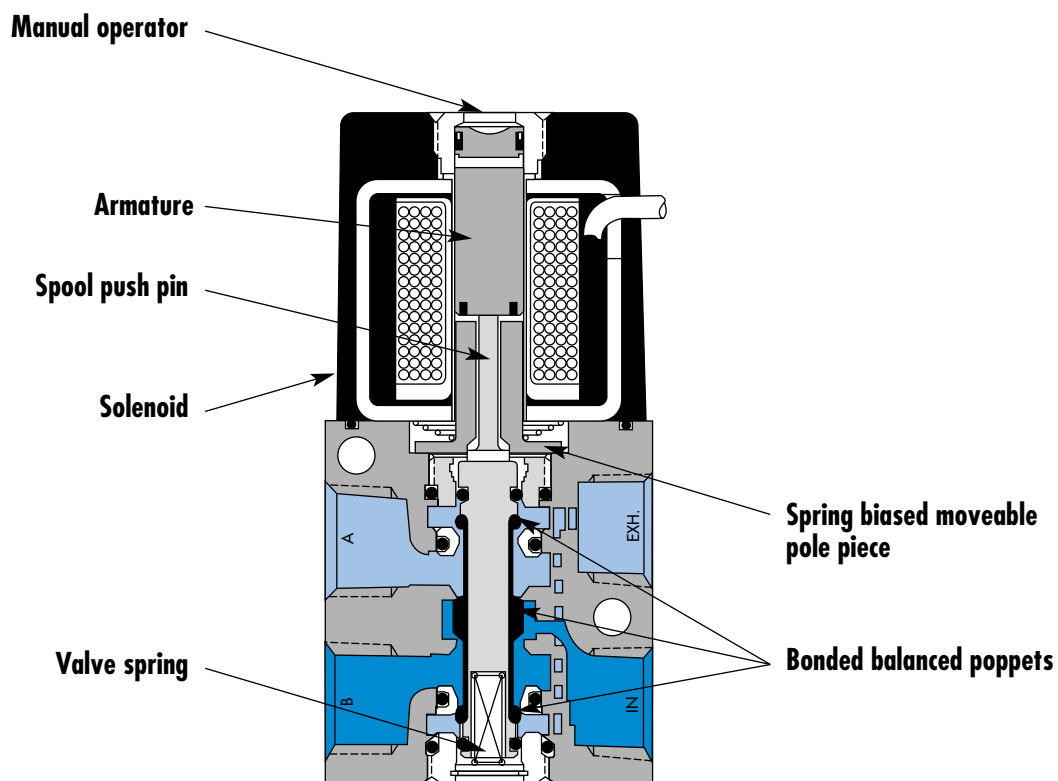
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

non plug-in with or without F. C.	non plug-in with Pr. Reg.	non plug-in with Pr. Reg. and F. C.	plug-in	plug-in with side Pr. Reg.	plug-in with sandwich Pr. Reg.	plug-in with F. C.	plug-in with Pr. Reg. and F. C.
plug-in with integral terminal strip	plug-in with integral terminal strip and side Pr. Reg.	plug-in with integral terminal strip and sandwich Pr. Reg.	plug-in with integral terminal strip with F. C.	plug-in with integral terminal strip with Pr. Reg. and F. C.			



SERIES FEATURES

- Patented MACSOLENOID[®] for fastest possible response times.
- Extremely high cycle rate capability.
- Rated for lubricated or non-lubricated service.
- Various solenoid enclosures and plug-in connectors.
- Low wattage DC solenoids - down to 1.8 watts.

Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	non plug-in with or without F. C.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

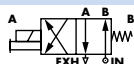
Reset

HOW TO ORDER

45A-xxx-Dxxx-xxx

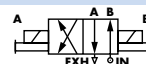
HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Single operator



○ 45A-L00-Dxxx-xxx

Double operator (Minimum DC wattage 5,4W)



○ 45A-N00-Dxxx-xxx



SOLENOID OPERATOR ➤

D **xx x- x xx***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
○ AA 120/60, 110/50	○ A 18" (Flying leads)	○ 1 Non-locking Recessed	○ KA Square connector
○ AB 240/60, 220/50	○ J Connector	○ 2 Locking Recessed	○ KD Square connector with light
○ AC 24/60, 24/50	○ x Other Options	○ x Other Options	○ BA Flying leads
○ FB 24VDC (1.8 W)			○ xx Other Options
○ DA 24VDC (5.4 W)			
○ DF 24VDC (12.7 W)			
○ xx Other Options			

HOW TO ORDER CIRCUIT BAR** (WITHOUT FLOW CONTROLS)

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	21	○ EBM45A-001A-xx	○ EBM45A-002A-xx
# 10-32 UNF	21	○ EBM45A-001B-xx	○ EBM45A-002B-xx

HOW TO ORDER CIRCUIT BAR** (WITH FLOW CONTROLS)

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	26	○ EBM45A-015A-xx	○ EBM45A-016A-xx
# 10-32 UNF	26	○ EBM45A-015B-xx	○ EBM45A-016B-xx
1/8" NPTF	40	○ EBM45A-025A-xx	○ EBM45A-026A-xx
# 10-32 UNF	40	○ EBM45A-025B-xx	○ EBM45A-026B-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

Consult "Precautions" before use, installation or service of MAC Valves.

EBM45A-xxxx-xx

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

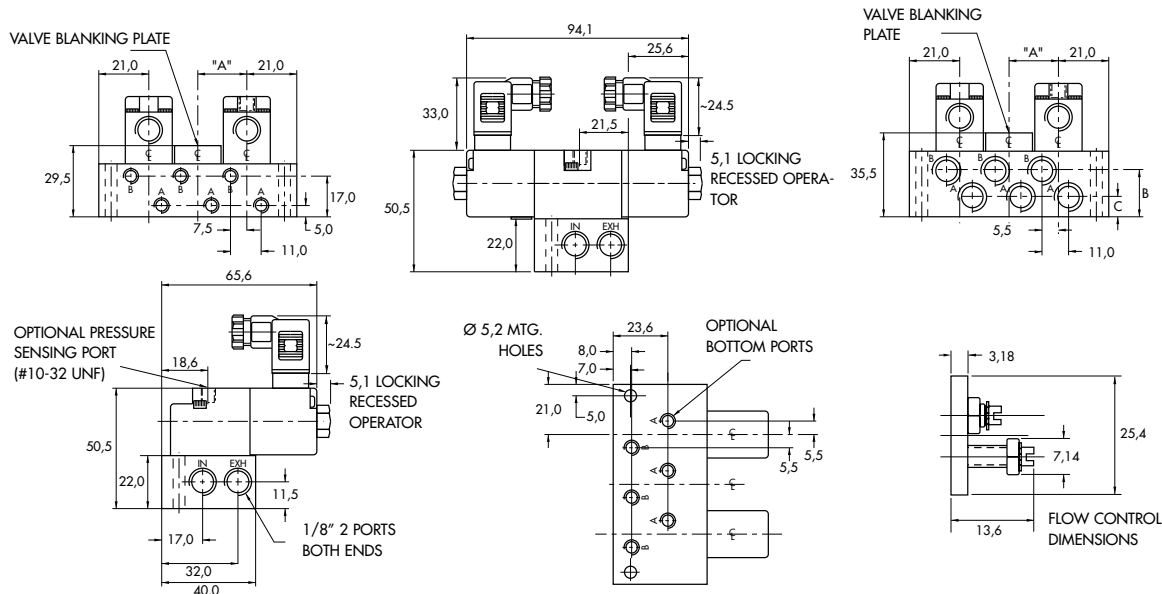
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14 C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



SPACING SIZE	A	PORT SIZE	B	C
STANDARD	21.0	1/8"	20.0	8.0
PER JB	26.0	M5	22.0	6.0
GAGES	40.0			

Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	non plug-in with Pr. Reg.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

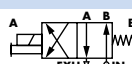
Reset

HOW TO ORDER

45A-xxx-Dxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

	Single operator	Double operator (Minimum DC wattage 5,4W)
		
Valve w/o gage port	☐ 45A-L00-Dxxx-xxx	☐ 45A-N00-Dxxx-xxx
Valve w/ gage port	☐ 45A-M00-Dxxx-xxx	☐ 45A-P00-Dxxx-xxx

SOLENOID OPERATOR >

D **XX X- X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ AA 120/60, 110/50	☐ A 18" (Flying leads)	☐ 1 Non-locking Recessed	☐ KA Square connector
☐ AB 240/60, 220/50	☐ J Connector	☐ 2 Locking Recessed	☐ KD Square connector with light
☐ AC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ BA Flying leads
☐ FB 24VDC (1.8 W)			☐ xx Other Options
☐ DA 24VDC (5.4 W)			
☐ DF 24VDC (12.7 W)			
☐ xx Other Options			

EBM45A-xxxx-xx

HOW TO ORDER CIRCUIT BAR WITH PRESSURE REGULATORS (ORDER REGULATORS SEPARATELY) **

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	21 (w/o gage)	☐ EBM45A-003A-xx	☐ EBM45A-004A-xx
# 10-32 UNF	21 (w/o gage)	☐ EBM45A-003B-xx	☐ EBM45A-004B-xx
1/8" NPTF	40 (w/ gage)	☐ EBM45A-023A-xx	☐ EBM45A-024A-xx
# 10-32 UNF	40 (w/ gage)	☐ EBM45A-023B-xx	☐ EBM45A-024B-xx

Number of stations (03=3 stations)

** Other options available Consult factory.

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory (add - 9 to the model number).
gage not supplied w/ circuit bar.

Pressure regulators :

- 35A-00M (Adjusting knob)
- 35A-00L (Slotted stem)
- 35A-00U (Locking stem)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

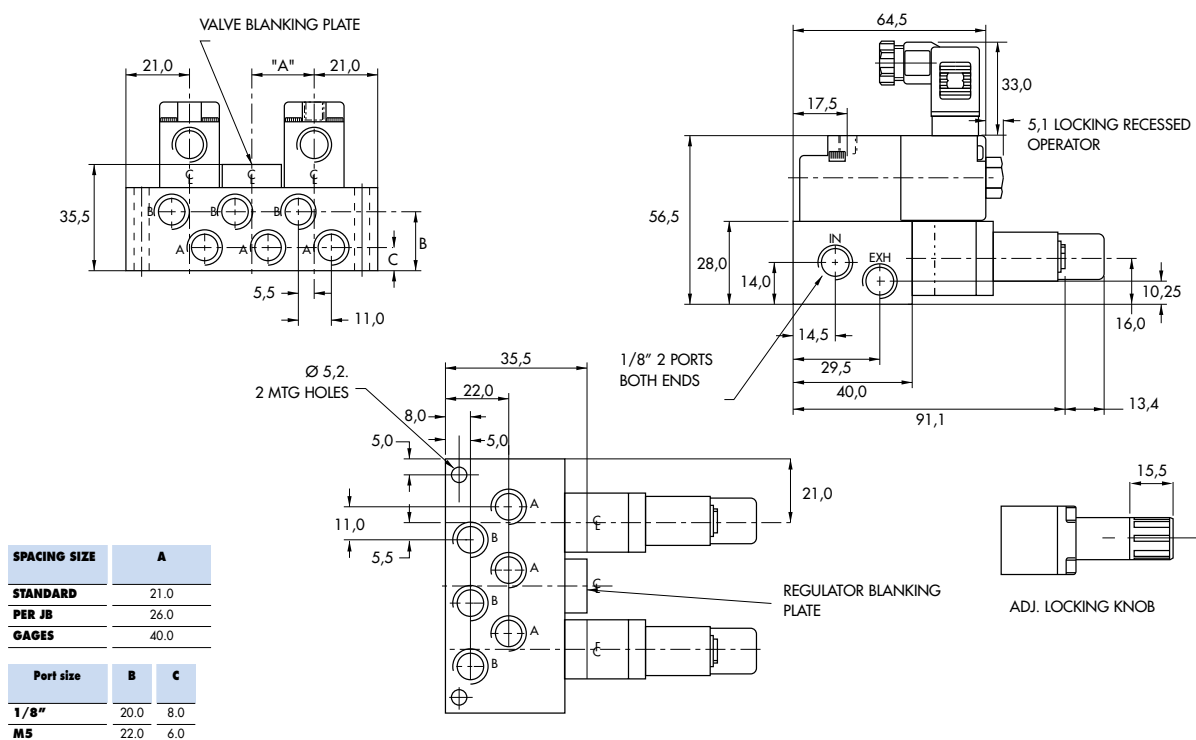
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14 C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	non plug-in with Pr. Reg. and F. C.

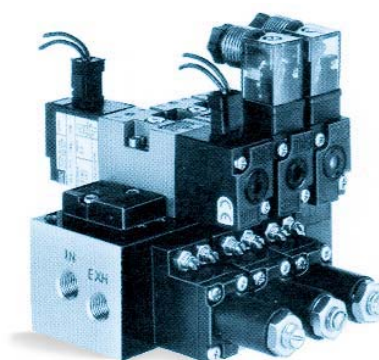
OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

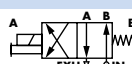
Reset

HOW TO ORDER

45A-xxx-Dxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

	Single operator	Double operator (Minimum DC wattage 5,4W)
		
Valve w/o gage port	☐ 45A-L00-Dxxx-xxx	☐ 45A-N00-Dxxx-xxx
Valve w/ gage port	☐ 45A-M00-Dxxx-xxx	☐ 45A-P00-Dxxx-xxx

SOLENOID OPERATOR >

D **XX X- X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ AA 120/60, 110/50	☐ A 18" (Flying leads)	☐ 1 Non-locking Recessed	☐ KA Square connector
☐ AB 240/60, 220/50	☐ J Connector	☐ 2 Locking Recessed	☐ KD Square connector with light
☐ AC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ BA Flying leads
☐ FB 24VDC (1.8 W)			☐ xx Other Options
☐ DA 24VDC (5.4 W)			
☐ DF 24VDC (12.7 W)			
☐ xx Other Options			

EBM45A-xxxx-xx

HOW TO ORDER CIRCUIT BAR WITH PRESSURE REGULATORS AND FLOW CONTROLS (ORDER REGULATOR AND FLOW CONTROL SEPARATELY) **

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	21 (w/o gage)	☐ EBM45A-007A-xx	☐ EBM45A-008A-xx
# 10-32 UNF	21 (w/o gage)	☐ EBM45A-007B-xx	☐ EBM45A-008B-xx
1/8" NPTF	40 (w/ gage)	☐ EBM45A-027A-xx	☐ EBM45A-028A-xx
# 10-32 UNF	40 (w/ gage)	☐ EBM45A-027B-xx	☐ EBM45A-028B-xx

Number of stations (03=3 stations) ☐

** Other options available Consult factory.

Note : ☐ clic for valves, regulators and flow controls mounted to circuit bar at the factory (add - 9 to the model number).
gage not supplied w/circuit bar

Pressure regulators and flow controls:
45A-001 (Slotted stem)
45A-002 (Adjusting knob)
45A-003 (Locking stem)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

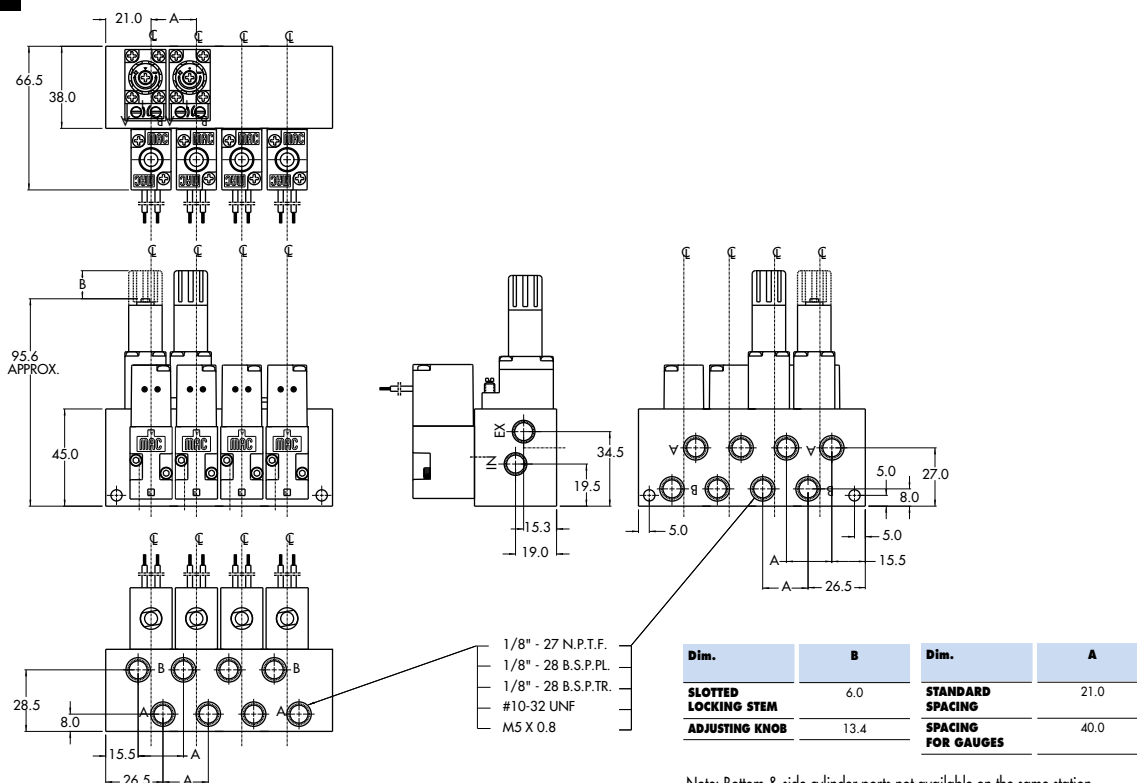
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Note: Bottom & side cylinder ports not available on the same station

Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

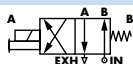
Reset

HOW TO ORDER

45A-xxx-DxxJ-xFM

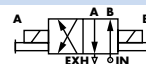
HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Single operator



☐ 45A-L00-DxxJ-xFM

Double operator (Minimum DC wattage 5,4W)



☐ 45A-N00-DxxJ-xFM

SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx	Voltage
☐ AA	120/60, 110/50
☐ AB	240/60, 220/50
☐ AC	24/60, 24/50
☐ FB	24VDC (1.8 W)
☐ DA	24VDC (5.4 W)
☐ DF	24VDC (12.7 W)
☐ xx	Other Options

x	Manual operator
☐ 1	Non-locking Recessed
☐ 2	Locking Recessed
☐ x	Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR**

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	21	☐ ECD45A-001A-A0-xx	☐ ECD45A-002A-A0-xx
# 10-32 UNF	21	☐ ECD45A-001B-A0-xx	☐ ECD45A-002B-A0-xx
1/8" NPTF	30	☐ ECD45A-031A-C0-xx	☐ ECD45A-032A-C0-xx
# 10-32 UNF	30	☐ ECD45A-031B-C0-xx	☐ ECD45A-032B-C0-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
for multi-pin connector (9, 15 or 25).

OPTIONS

ECD45A-002A-A0-xx

☐ - clic for double operator valve (replace by 8) (Bottom cylinder ports).

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal w/light (120V)
- ☐ CB = terminal w/light (240V)
- ☐ CD = terminal w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

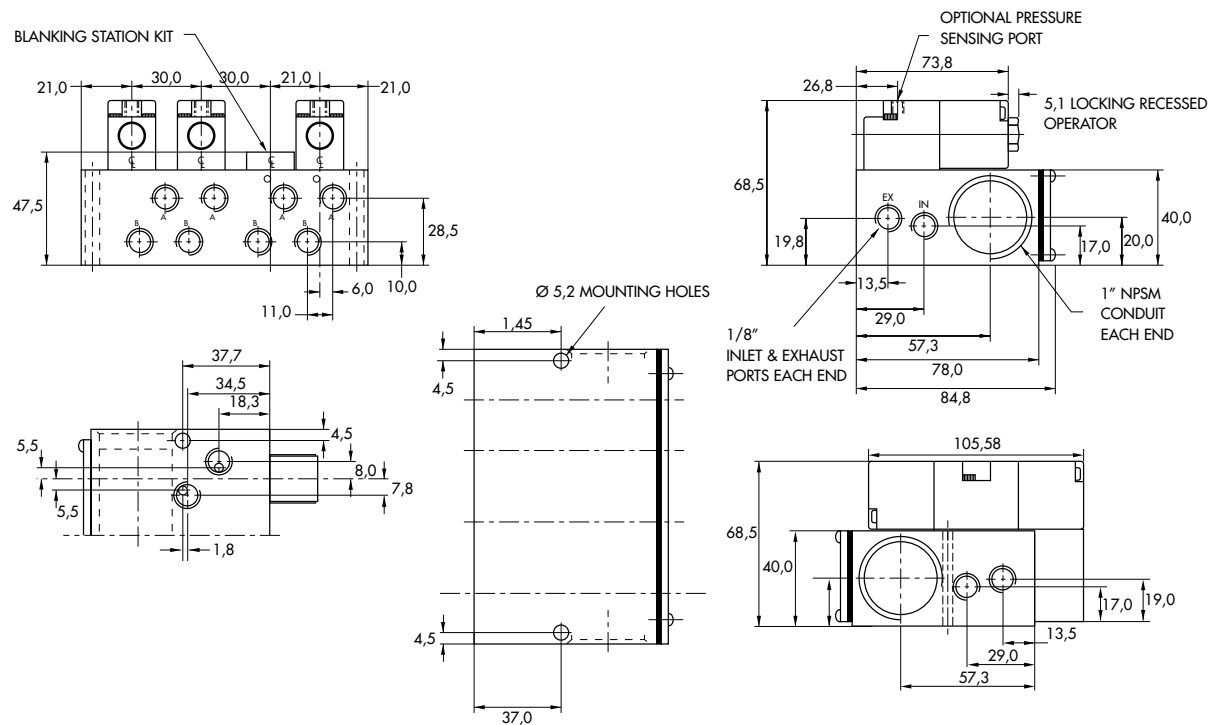
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with side Pr. Reg.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

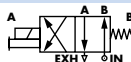
Reset

HOW TO ORDER

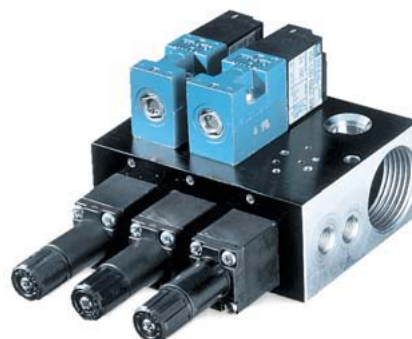
45A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Single operator



☐ 45A-L00-DxxJ-xFM	Valve w/o gage port
☐ 45A-M00-DxxJ-xFM	Valve w/ gage port



SOLENOID OPERATOR ➤

D xx J- x FM*

XX Voltage	X Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

ECD45A-xxxx-xx-xx

HOW TO ORDER CIRCUIT BAR WITH PRESSURE REGULATORS (TO BE ORDERED SEPARATELY) **

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	21	☐ ECD45A-004A-A0-xx
# 10-32 UNF	21	☐ ECD45A-004B-A0-xx
1/8" NPTF	30	☐ ECD45A-034A-C0-xx
# 10-32 UNF	30	☐ ECD45A-034B-C0-xx
1/8" NPTF	40	☐ ECD45A-024A-A0-xx
# 10-32 UNF	40	☐ ECD45A-024B-A0-xx

Number of stations (03=3 stations) ☐

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory (add - 9 to the model number).
for multi-pin connector (9, 15 or 25).
minimum spacing for terminal strips is 30 mm.
use 40 mm spacing for gages.

** Pressure Regulators :

- 35A-00M (Adjusting knob)
- 35A-00L (Slotted stem)
- 35A-00U (Locking stem)

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal w/light (120V)
- ☐ CB = terminal w/light (240V)
- ☐ CD = terminal w/light (24V)

Consult "Precautions" before use, installation or service of MAC Valves.

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

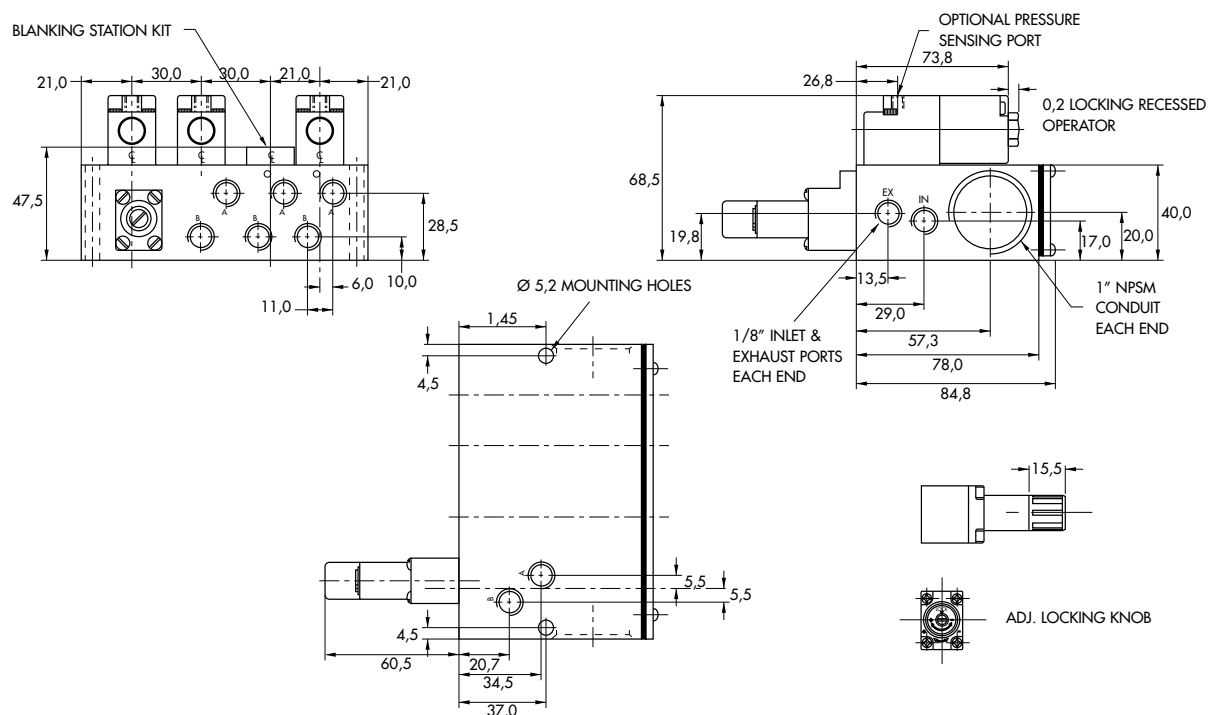
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with sandwich Pr. Reg.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

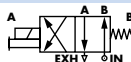
Reset

HOW TO ORDER

45A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Single operator



☐ 45A-L00-DxxJ-xFM	Valve w/o gage port
☐ 45A-M00-DxxJ-xFM	Valve w/ gage port



SOLENOID OPERATOR ➤

D **xx** J- **x** FM*

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

ECD45A-xxxx-xx-xx

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH SANDWICH PRESSURE REGULATORS (TO BE ORDERED SEPARATELY) **

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	21	☐ ECD45A-001A-A0-xx	☐ ECD45A-002A-A0-xx
# 10-32 UNF	21	☐ ECD45A-001B-A0-xx	☐ ECD45A-002B-A0-xx
1/8" NPTF	30	☐ ECD45A-031A-C0-xx	☐ ECD45A-032A-C0-xx
# 10-32 UNF	30	☐ ECD45A-031B-C0-xx	☐ ECD45A-032B-C0-xx
1/8" NPTF	40	☐ ECD45A-021A-A0-xx	☐ ECD45A-022A-A0-xx
# 10-32 UNF	40	☐ ECD45A-021B-A0-xx	☐ ECD45A-022B-A0-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory, add - 9 to the model number.
for multi-pin connector (9, 15 or 25).
minimum spacing for terminal strips is 30 mm.
use 40 mm spacing for gages.

** Pressure Regulators :
PR45A-AA0A (Adjusting knob)
PR45A-AB0A (Slotted stem)
PR45A-AC0A (Locking stem)

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal w/light (120V)
- ☐ CB = terminal w/light (240V)
- ☐ CD = terminal w/light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

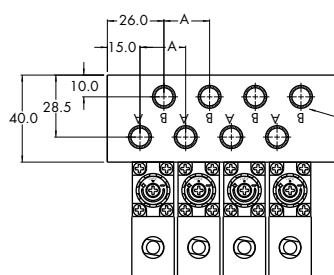
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

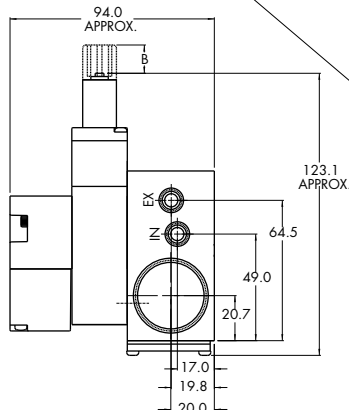
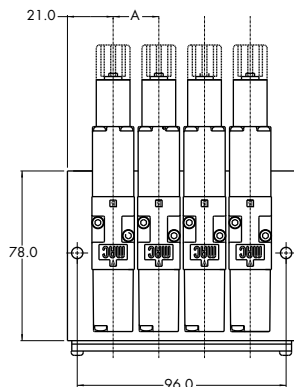
Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS

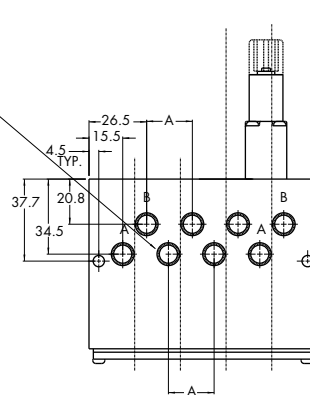


1/8" - 27 N.P.T.F.
1/8" - 28 B.S.P.PL.
1/8" - 28 B.S.P.TR.
#10-32
M5 0.8



Dim.	A	Dim.	B
STANDARD SPACING	21.0	SLOTTED LOCKING STEM	6.0
OPTIONAL SPACING	30.0	ADJUSTING KNOB	13.4
SPACING FOR GAUGES	40.0		

Note: Bottom & side cylinder ports not available on the same station



Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with F. C.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

Reset

HOW TO ORDER

45A-xxx-DxxJ-xFM



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Port size (see base)	Single operator
Valve less base	 ☐ 45A-L00-DxxJ-xFM

SOLENOID OPERATOR ➤

D **xx** J- **x** FM*

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH FLOW CONTROLS **

ECD45A-xxxx-xx-xx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	21	-----	☐ ECD45A-006A-A0-xx
# 10-32 UNF	21	-----	☐ ECD45A-006B-A0-xx
1/8" NPTF	30	☐ ECD45A-035A-A0-xx	-----
# 10-32 UNF	30	☐ ECD45A-035B-A0-xx	-----

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
for multi-pin connector (9, 15 or 25).
minimum spacing for terminal strips is 30 mm.

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal w/light (120V)
- ☐ CB = terminal w/light (240V)
- ☐ CD = terminal w/light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

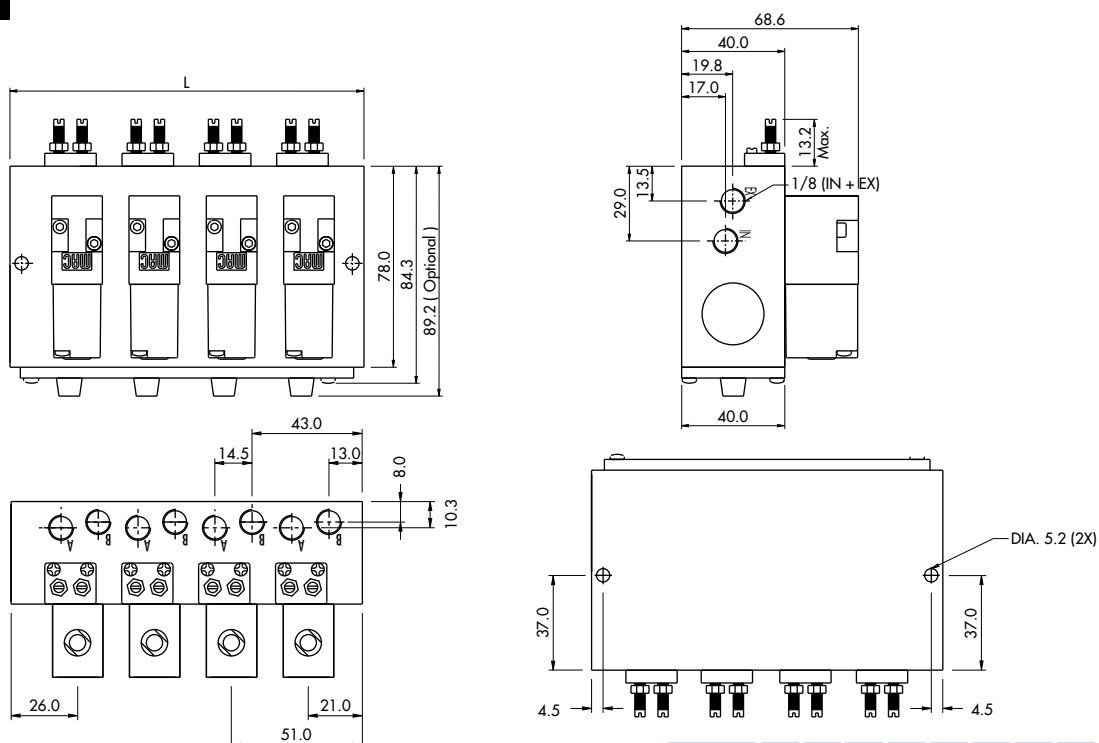
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Number of stations	2	3	4	5	6	7	8	9	10
DIM. L	77.0	107.0	137.0	167.0	197.0	227.0	257.0	287.0	317.0

Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with Pr. Reg. and F. C.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

Reset

HOW TO ORDER

45A-xxx-DxxJ-xFM



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Port size (see base)	Single operator
Valve less base (w/o gage port)	☐ 45A-L00-DxxJ-xFM
Valve less base (w/ gage port)	☐ 45A-M00-DxxJ-xFM

SOLENOID OPERATOR ➤

D **xx** J- **x** FM*

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

ECD45A-xxxx-xx-xx

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH REGULATORS AND FLOW CONTROLS (TO BE ORDERED SEPARATELY) **

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	21	☐ ECD45A-007A-A0-xx
# 10-32 UNF	21	☐ ECD45A-007B-A0-xx
1/8" NPTF	30	☐ ECD45A-037A-C0-xx
# 10-32 UNF	30	☐ ECD45A-037B-C0-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory
(add - 9 to the model number).
for multi-pin connector (9, 15 or 25).
minimum spacing for terminal strips is 30 mm.

Pressure regulators and flow controls:

- 45A-001 (Slotted stem)
- 45A-002 (Adjusting knob)
- 45A-003 (Locking stem)

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal w/light (120V)
- ☐ CB = terminal w/light (240V)
- ☐ CD = terminal w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

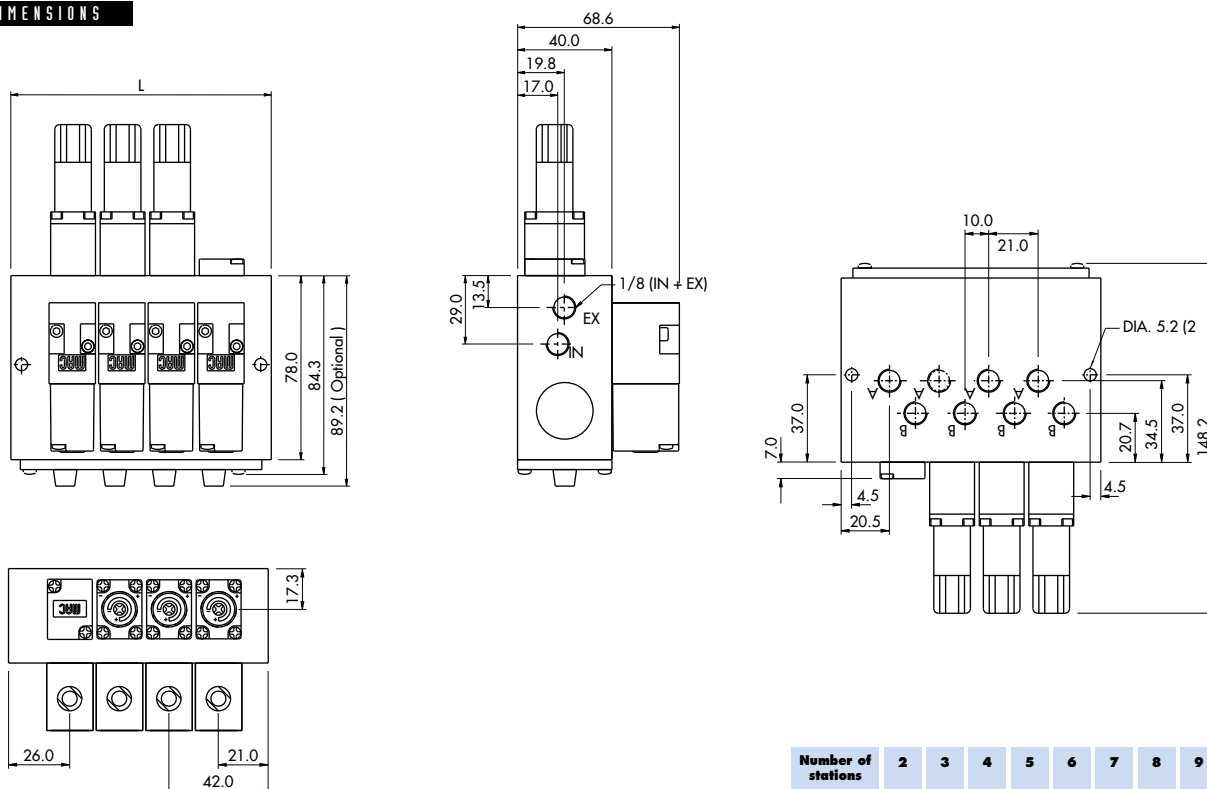
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Number of stations	2	3	4	5	6	7	8	9	10
DIM. L	68.0	89.0	110.0	131.0	152.0	173.0	194.0	215.0	236.0

Function	Port size	Flow [Max]	Circuit bar mounting	S
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with integral terminal strip	

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

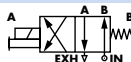
Reset

HOW TO ORDER

45A-LOO-DxxJ-xFM

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Single operator



☒ 45A-LOO-DxxJ-xFM

Valve less base



SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

HOW TO ORDER "PLUG-IN" CIRCUIT BAR**

ECE45A-011A-CD-02

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	26	☒ ECE45A-011A-C0-xx	☐ ECE45A-012A-C0-xx
# 10-32 UNF	26	☐ ECE45A-011B-C0-xx	☐ ECE45A-012B-C0-xx

Number of stations (03=3 stations) **2**

End plate kit required : M-45017

Note : ☐ clic for valves mounted on circuit bar at the factory (add - 9 to the model number).

- ☐ C0 = terminal strip
- ☐ CA = terminal strip w/light (120V)
- ☐ CB = terminal strip w/light (240V)
- ☒ CD = terminal strip w/light (24V)

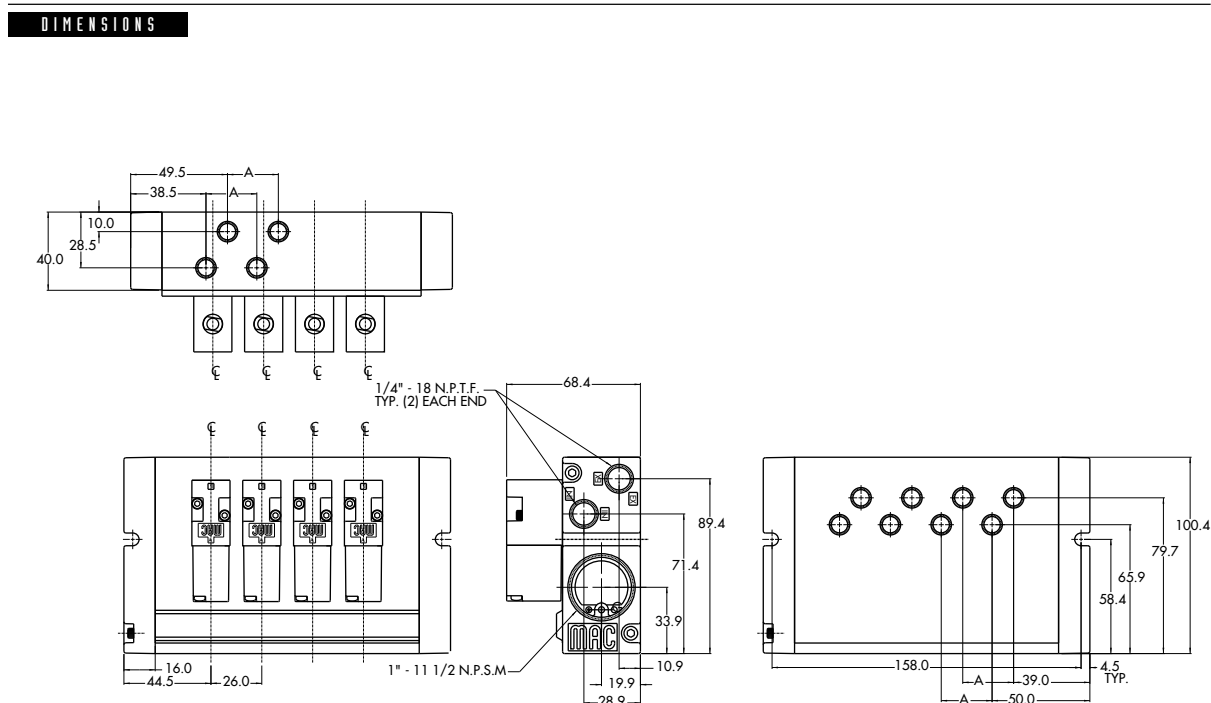
TECHNICAL DATA	
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 μ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, $\Delta P=1\text{bar}$) :	1.8 W : 0.08 C_v , 5.4 W : 0.1 C_v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14 C_v , according to wattage. • Isolation of inlet and/or exhaust.



Note: Bottom & side cylinder ports not available on the same station

Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with integral terminal strip and side Pr. Reg.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

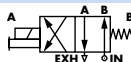
Reset

HOW TO ORDER

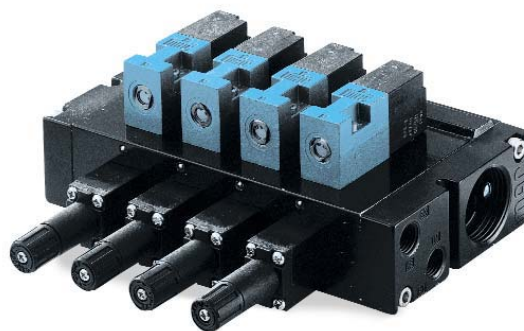
45A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Single operator



☐ 45A-L00-DxxJ-xFM	Valve less base w/o gage port
☐ 45A-M00-DxxJ-xFM	Valve less base w/ gage port



SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

ECE45A-xxxx-xx-xx

HOW TO ORDER CIRCUIT BAR WITH PRESSURE REGULATORS (TO BE ORDERED SEPARATELY) **

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	26	☐ ECE45A-014A-C0-xx
# 10-32 UNF	26	☐ ECE45A-014B-C0-xx
1/8" NPTF	40	☐ ECE45A-024A-C0-xx
# 10-32 UNF	40	☐ ECE45A-024B-C0-xx

Number of stations (03=3 stations)

End plate kit required : M-45017

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory (add - 9 to the model number).
Use 40 mm spacing for valves w/ gage port.

** Pressure Regulators :

- 35A-00M (Adjusting knob)
- 35A-00L (Slotted stem)
- 35A-00U (Locking stem)

- ☐ C0 = terminal strip
- ☐ CA = terminal strip w/light (120V)
- ☐ CB = terminal strip w/light (240V)
- ☐ CD = terminal strip w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

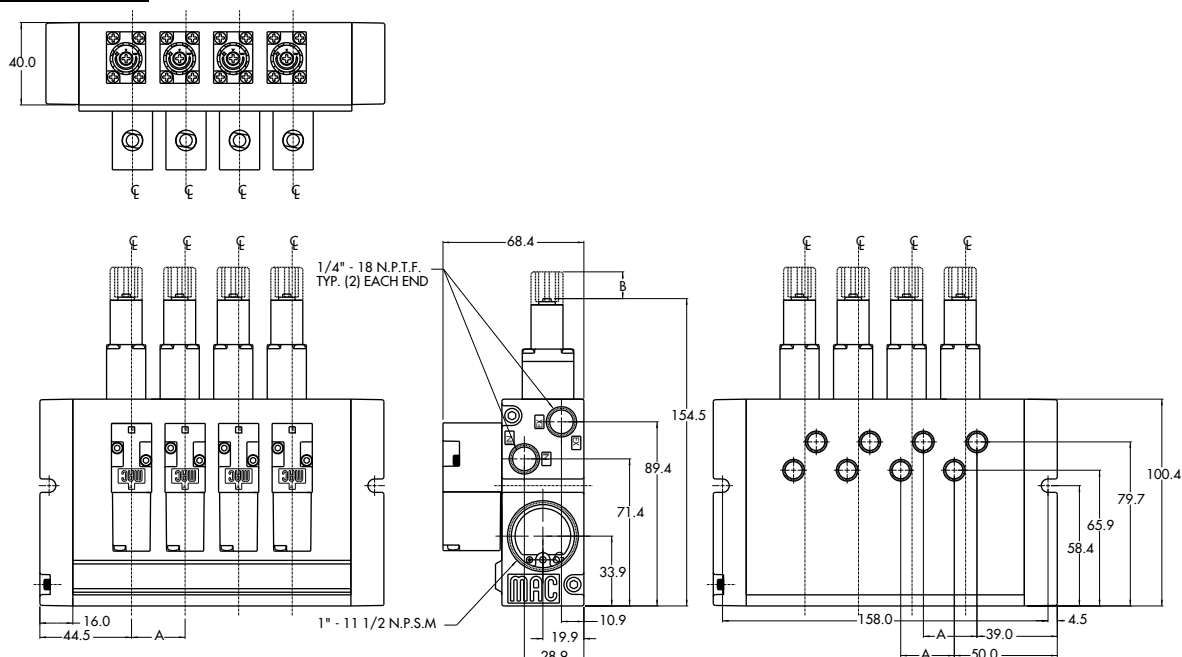
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Dim.	B	Dim.	A
SLOTTED LOCKING STEM	6.0	STANDARD SPACING	26.0
ADJUSTING KNOB	13.4	SPACING FOR GAUGES	40.0

Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with integral terminal strip and sandwich Pr. Reg.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

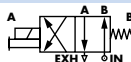
Reset

HOW TO ORDER

45A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Single operator



☐ 45A-L00-DxxJ-xFM	Valve w/o gage port
☐ 45A-M00-DxxJ-xFM	Valve w/ gage port



SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx Voltage	x Manual operator
☐ AA 120/60, 110/50	☐ 1 Non-locking Recessed
☐ AB 240/60, 220/50	☐ 2 Locking Recessed
☐ AC 24/60, 24/50	☐ x Other Options
☐ FB 24VDC (1.8 W)	
☐ DA 24VDC (5.4 W)	
☐ DF 24VDC (12.7 W)	
☐ xx Other Options	

ECE45A-xxxx-xx-xx

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH SANDWICH REGULATORS (TO BE ORDERED SEPARATELY) **

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	26	☐ ECE45A-011A-C0-xx	☐ ECE45A-012A-C0-xx
# 10-32 UNF	26	☐ ECE45A-011B-C0-xx	☐ ECE45A-012B-C0-xx
1/8" NPTF	40	☐ ECE45A-021A-C0-xx	☐ ECE45A-022A-C0-xx
# 10-32 UNF	40	☐ ECE45A-021B-C0-xx	☐ ECE45A-022B-C0-xx

Number of stations (03=3 stations)

End plate kit required : M-45017

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory (add - 9 to the model number).
Use 40 mm spacing for valves w/ gage port.

** Pressure Regulators :

- PR45A-AA0A (Adjusting knob)
- PR45A-AB0A (Slotted stem)
- PR45A-AC0A (Locking stem)

☐ C0 = terminal strip

☐ CA = terminal strip w/light (120V)

☐ CB = terminal strip w/light (240V)

☐ CD = terminal strip w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

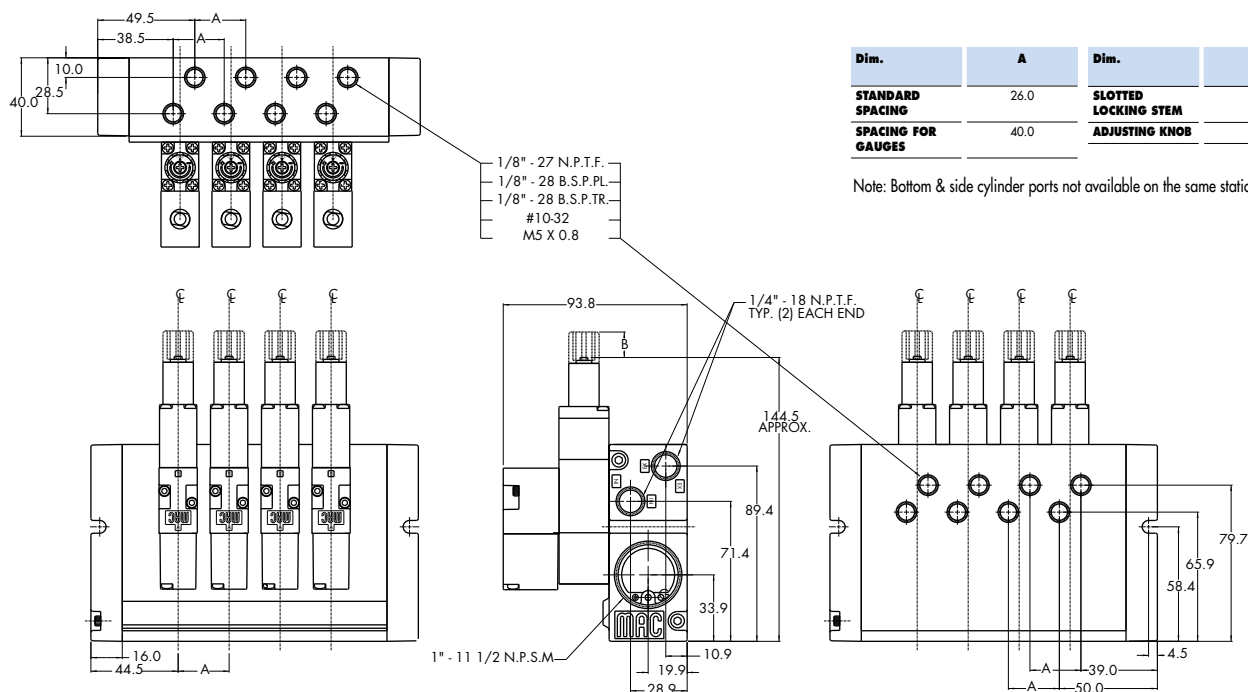
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with integral terminal strip with F. C.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

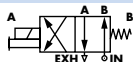
Reset

HOW TO ORDER

45A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Single operator



☐ 45A-L00-DxxJ-xFM

Valve less base



SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx	Voltage
☐ AA	120/60, 110/50
☐ AB	240/60, 220/50
☐ AC	24/60, 24/50
☐ FB	24VDC (1.8 W)
☐ DA	24VDC (5.4 W)
☐ DF	24VDC (12.7 W)
☐ xx	Other Options

x	Manual operator
☐ 1	Non-locking Recessed
☐ 2	Locking Recessed
☐ x	Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH FLOW CONTROLS **

ECE45A-xxxx-xx-xx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	26	-----	☐ ECE45A-016A-C0-xx
# 10-32 UNF	26	-----	☐ ECE45A-016B-C0-xx
1/8" NPTF	30	☐ ECE45A-035A-C0-xx	-----
# 10-32 UNF	30	☐ ECE45A-035B-C0-xx	-----

Number of stations (03=3 stations)

End plate kit required : M-45017

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory (add - 9 to the model number).

- ☐ C0 = terminal strip
- ☐ CA = terminal strip w/light (120V)
- ☐ CB = terminal strip w/light (240V)
- ☐ CD = terminal strip w/light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	2 mm
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	Nema 4
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W
Response times :	24 VDC (5.4W) Energize : 6 ms De-energize : 2 ms 120 VAC Energize : 3-8 ms De-energize : 2-7 ms

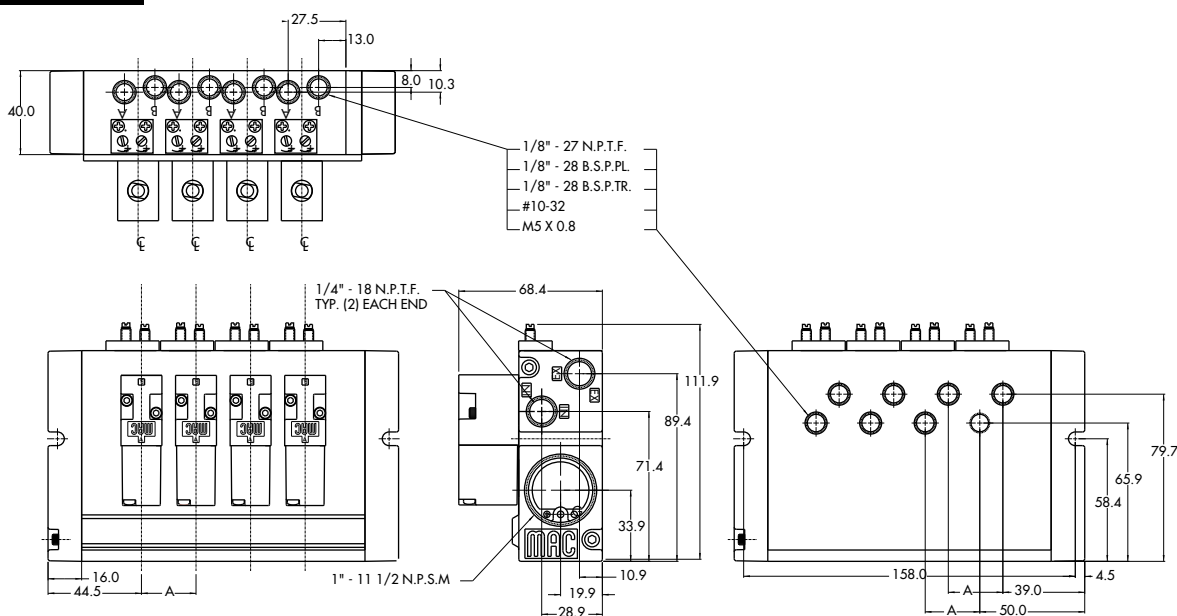
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14 C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Dim.	A
STANDARD SPACING	26.0
OPTIONAL SPACING	30.0

Note: Bottom & side cylinder ports not available on the same station

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
4/2	1/8" NPTF - #10-32 UNF	0.10C_v	plug-in with integral terminal strip with Pr. Reg. and F. C.

OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.

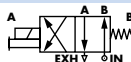
Reset

HOW TO ORDER

45A-xxx-DxxJ-xFM

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING "PLUG-IN"

Single operator



- ☐ 45A-L00-DxxJ-xFM
- ☐ 45A-M00-DxxJ-xFM

Valve less base

Valve less base w/ gage port



SOLENOID OPERATOR ➤

D **xx** J- **x** FM

xx Voltage

- ☐ **AA** 120/60, 110/50
- ☐ **AB** 240/60, 220/50
- ☐ **AC** 24/60, 24/50
- ☐ **FB** 24VDC (1.8 W)
- ☐ **DA** 24VDC (5.4 W)
- ☐ **DF** 24VDC (12.7 W)
- ☐ **xx** Other Options

x Manual operator

- ☐ **1** Non-locking Recessed
- ☐ **2** Locking Recessed
- ☐ **x** Other Options

ECE45A-xxxx-xx-xx

HOW TO ORDER "PLUG-IN" CIRCUIT BAR WITH PRESSURE AND FLOW CONTROLS (TO BE ORDERED SEPARATELY) **

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	26	☐ ECE45A-017A-C0-xx
# 10-32 UNF	26	☐ ECE45A-017B-C0-xx
1/8" NPTF	40	☐ ECE45A-027A-C0-xx
# 10-32 UNF	40	☐ ECE45A-027B-C0-xx

Number of stations (03=3 stations)

End plate kit required : M-45017

Note : ☐ clic for valves and regulators mounted to circuit bar at the factory (add - 9 to the model number).
Use 40 mm spacing for valves w/ gage port.

** Pressure Regulators :

- 45A-001 (Slotted stem)
- 45A-002 (Adjusting knob)
- 45A-003 (Locking stem)

☐ C0 = terminal strip

☐ CA = terminal strip w/light (120V)

☐ CB = terminal strip w/light (240V)

☐ CD = terminal strip w/light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Vacuum to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Orifice :	2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.8 W : 0.08 C _v , 5.4 W : 0.1 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Nema 4		
Power :	120 VAC/60 = Inrush : 10.9 VA (0.09 AMPS) Holding : 7.7 VA (0.06 AMPS) DC VOLTS = 1.8 W to 12.7 W		
Response times :	24 VDC (5.4W)	Energize : 6 ms	De-energize : 2 ms
	120 VAC	Energize : 3-8 ms	De-energize : 2-7 ms

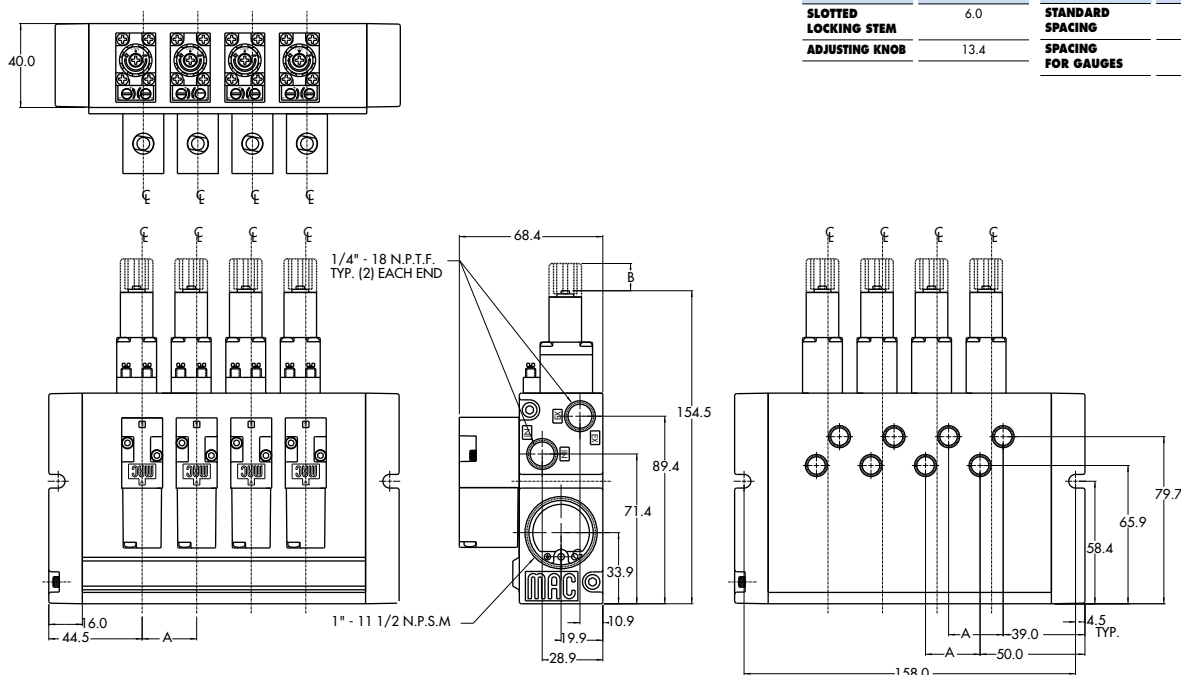
Spare parts :

- Solenoid operator (power ≥ 5.4 W) : DXXJ-XFM, including mounting screws 35013.
- Seal between solenoid and valve body : 16402. • Seal between base and valve : 16453.
- Valve mounting screw (x2) : 35020. • Blanking plate valve : M-45010. • Blanking plate regulator : M-35005.

Options :

- BSPP threads. • High flow up to 0.14C_v, according to wattage. • Isolation of inlet and/or exhaust.

DIMENSIONS



Dim.	B	Dim.	A
SLOTTED LOCKING STEM	6.0	STANDARD SPACING	26.0
ADJUSTING KNOB	13.4	SPACING FOR GAUGES	40.0



Section 2

Options



0 p t i o n s

Codification table for voltages / Wire length / Manual operators / Electrical connections

VALVE CODE ➤

-D XX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- Solenoid valves 35 & 45 Series

1. VOLTAGE

- D XX	X - X XX	VOLTAGE
☐ AD		24/60
☐ AE		200/60
☐ AF		240/50
☐ AG		100/50, 100/60, 110/60
☐ DB		12 VDC (5.4 W)
☐ DC		12 VDC (7.5 W)
☐ DD		24 VDC (7.3 W)
☐ DE		12 VDC (12.7 W) CLSF
☐ DK		110 VDC (5.8 W)
☐ DL		64 VDC (6.0 W)
☐ DM		36 VDC (5.8 W)
☐ DN		6 VDC (6.0 W)
☐ DP		48 VDC (5.8 W)
☐ DU		24 VDC (6.0 W)
☐ EA		12 VDC (6.0 W)
☐ FA		12 VDC (1.8 W)
☐ FE		12 VDC (2.4 W)
☐ FF		24 VDC (2.4 W)

2. WIRE LENGTH

- D XX	X - X XX	WIRE LENGTH
☐ B		24"
☐ C		36"
☐ D		48"
☐ E		72"
☐ F		96"

3. MANUAL OPERATOR

- D XX X - X XX MANUAL OPERATOR

☐	0	No operator
☐	1	Non-locking recessed
☐	2	Locking recessed
☐	3	Non-locking extended
☐	4	Locking extended

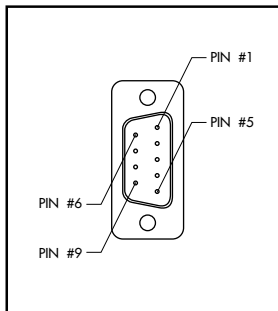
4. ELECTRICAL CONNECTION

- D XX X - X XX ELECTRICAL CONNECTION

☐	BA	Flying leads
☐	BK	BA with protection diode
☐	BL	BA with protection varistor
☐	CA	1/2" NPS conduit
☐	*FN	Plug-in with diode
☐	*FP	Plug-in with M.O.V.
☐	JB	Rectangular connector
☐	JD	Rectangular connector with light
☐	JM	Rectangular connector, male only
☐	KA	Square connector
☐	KB	Square connector with protection diode
☐	KC	Square connector with protection varistor
☐	KD	Square connector with light
☐	KE	Square connector with light and protection diode
☐	KF	Square connector with light and protection varistor
☐	KJ	Square connector (male only)
☐	KK	Square connector with protection diode (male only)
☐	KL	Square connector with protection varistor (male only)
☐	TA	Dual tabs
☐	TB	TA with protection diode
☐	TD	TA with light
☐	TE	TA with light and protection diode
☐	TJ	Dual tabs (male only)
☐	TK	TJ with protection diode
☐	TM	TJ with light
☐	TN	TJ with light and protection diode

* For use with the ECD and ECE style circuit bars.

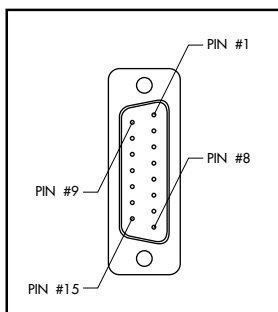
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

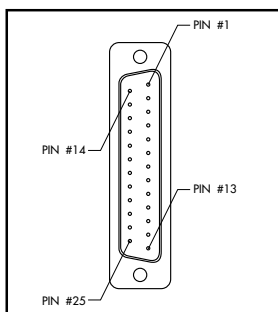
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

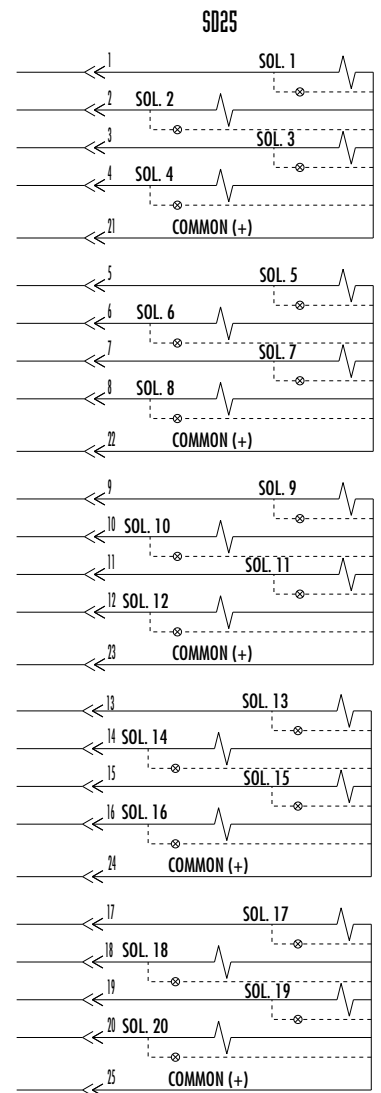
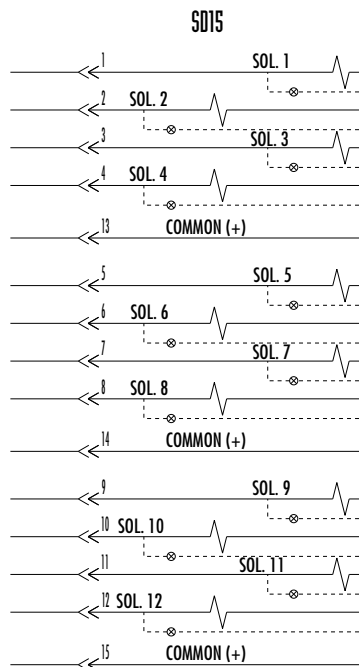
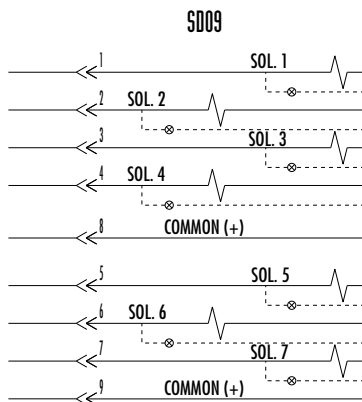
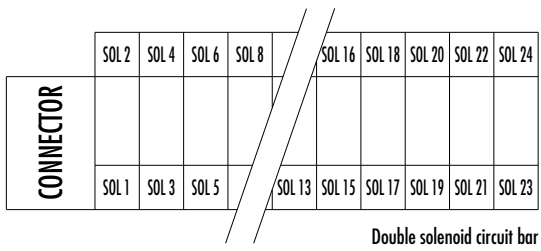
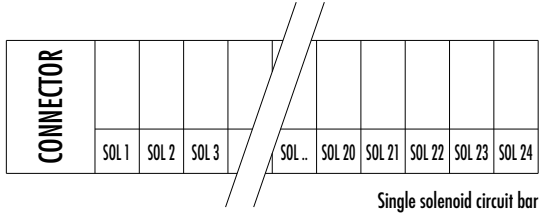


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

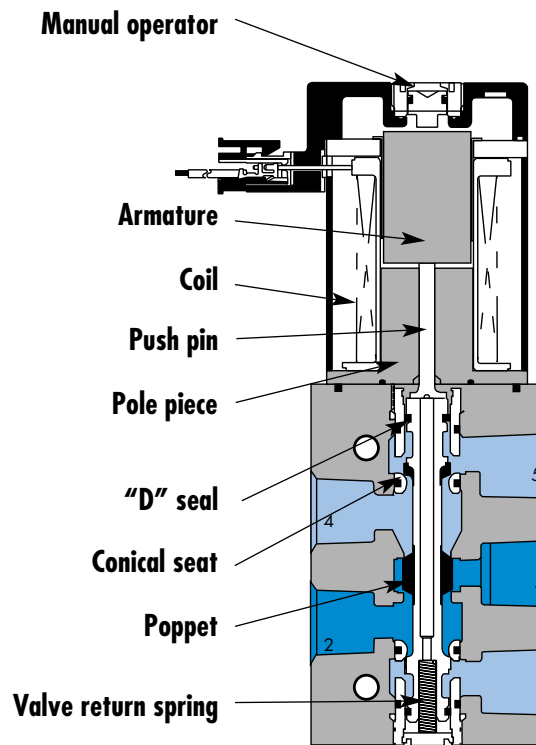
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

non plug-in cyl. ports in valve with opt. F. C.	non plug-in cyl. ports in base with opt. F. C.	add-on style non plug-in cyl. ports in valve with opt. F. C.	add-on style non plug-in cyl. ports in base with opt. F. C.	non plug-in cyl. ports in valve with opt. Pr. Reg.	non plug-in cyl. ports in base	non plug-in cyl. ports in base with Pr. Reg.	add-on style non plug-in cyl. ports in base
add-on style non plug-in cyl. ports in base with Pr. Reg.	plug-in	plug-in with Pr. Reg.	add-on style plug-in	add-on style plug-in with Pr. Reg.	plug-in add-a-unit stations	plug-in add-a-unit stations with Pr. Reg.	



SERIES FEATURES

- Short stroke solenoid produces high energization shifting force.
- High force return spring due to high force solenoid maximizes both energization and de-energization shifting forces.
- Built-in wear compensation - valve stroke is shorter than solenoid stroke.
- Four (4) bonded balanced poppets on a one-piece valve stem.
- End poppets seal first on conical seats and cushion inlet poppet, eliminating cutting.
- Exhaust seals are not under inlet pressure thus reducing friction.
- Short stroking balanced poppet allows for direct solenoid operation with high shifting forces, minimized friction, fast response and high flow in a small package.

Function	Port size (Inlet & Exhaust)	Flow [Max]	Circuit bar mounting	Profile
5/2	3/8"	0.5C_v	non plug-in cyl. ports in valve with opt. F. C.	29 mm

OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

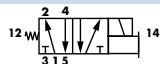
Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Valve port size	Valve less base
1/8" NPTF	 ☐ 47A-MG0-Hxxx-xxx
1/4" NPTF	☐ 47A-MH0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx'**

xx Voltage	x Wire length	x Manual operator	xx Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ 1 Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM47A-xxxxxx-xx

Port size COMMON INLET & EXHAUST	Without flow controls (20 mm)	With flow controls (20 mm)
3/8" NPTF	☐ EBM47A-01CAK-xx	☐ EBM47A-01DAK-xx

Number of stations (03=3 stations)

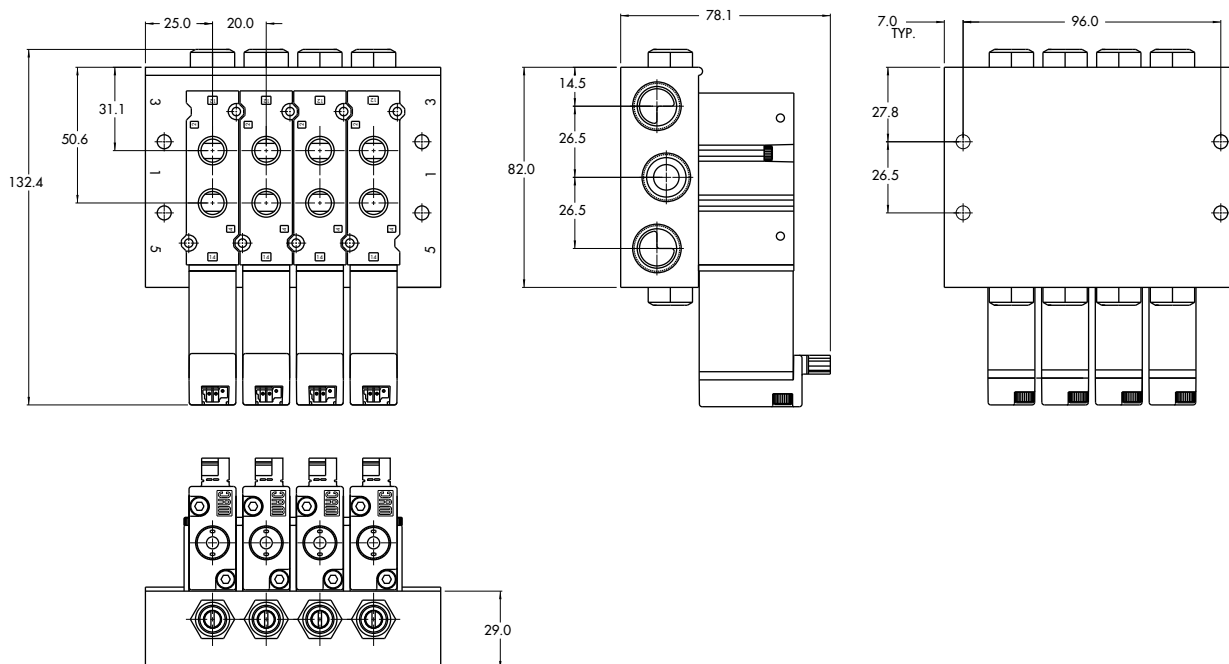
Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47002.
• Flow control kit (x2) : N-37001.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting	Profile
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	non plug-in cyl. ports in base with opt. F. C.	29 mm

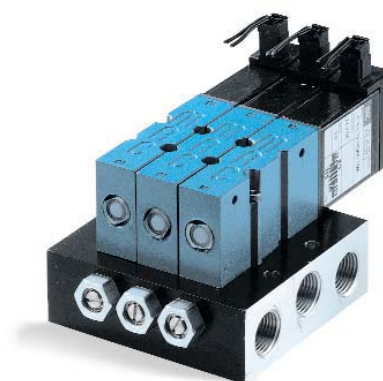
OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

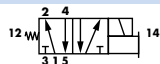
Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Valve
Valve less base	 ☐ 47A-LI0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx'**

xx Voltage	x Wire length	x Manual operator	xx Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM47A-xxxxx-xx

Port size	Bottom cylinder ports (18 mm)	Bottom cylinder ports with flow controls (18 mm)
1/8" NPTF	☐ EBM47A-00AAA-xx	☐ EBM47A-00BAA-xx
1/4" NPTF	☐ EBM47A-00AAB-xx	☐ EBM47A-00BAB-xx
6 mm tube receptacle	☐ EBM47A-00AAG-xx	☐ EBM47A-00BAG-xx

Number of stations (03=3 stations)

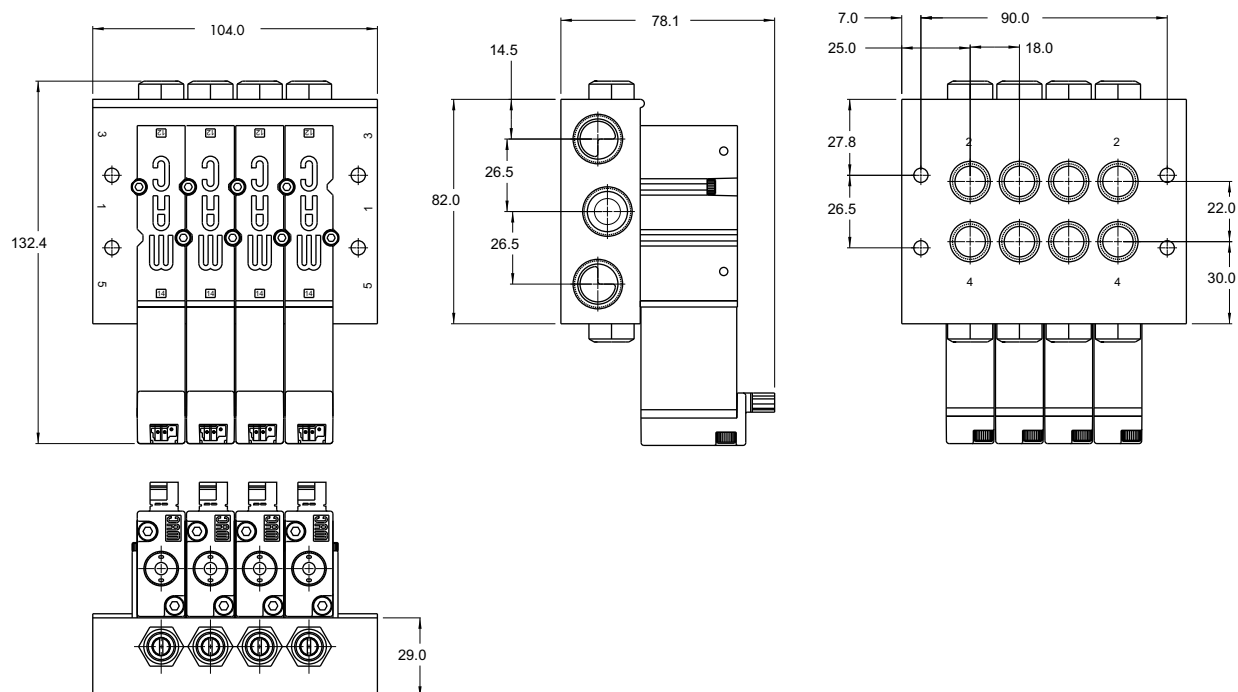
Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16629.
 - Mounting screw (x2) : 35043.
 - Valve blanking plate : M-47001.
 - Flow control kit (x2) : N-37001.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory.
 - BSPP Threads.

DIMENSIONS



Function	Port size (Inlet & Exhaust)	Flow [Max]	Circuit bar mounting	Profile
5/2	3/8"	0.5C_v	add-on style non plug-in cyl. ports in valve with opt. F. C.	35 mm

OPERATIONAL BENEFITS

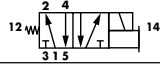
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Valve port size	Valve
	
1/8" NPTF	☐ 47A-MG0-Hxxx-xxx
1/4" NPTF	☐ 47A-MH0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx'**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM47A-xxxxxx-xx

Port size COMMON INLET & EXHAUST	Without flow controls (20 mm)	With flow controls (20 mm)
3/8" NPTF	☐ EBM47A-01GBK-xx	☐ EBM47A-01HBK-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
add-a-unit stations may be added to above bars.
Maximum length for add-a-unit is 4 stations.

OPTIONS

EBM47A-01GBK-xx

- ☐ clic replace with "C" for add-a-unit.

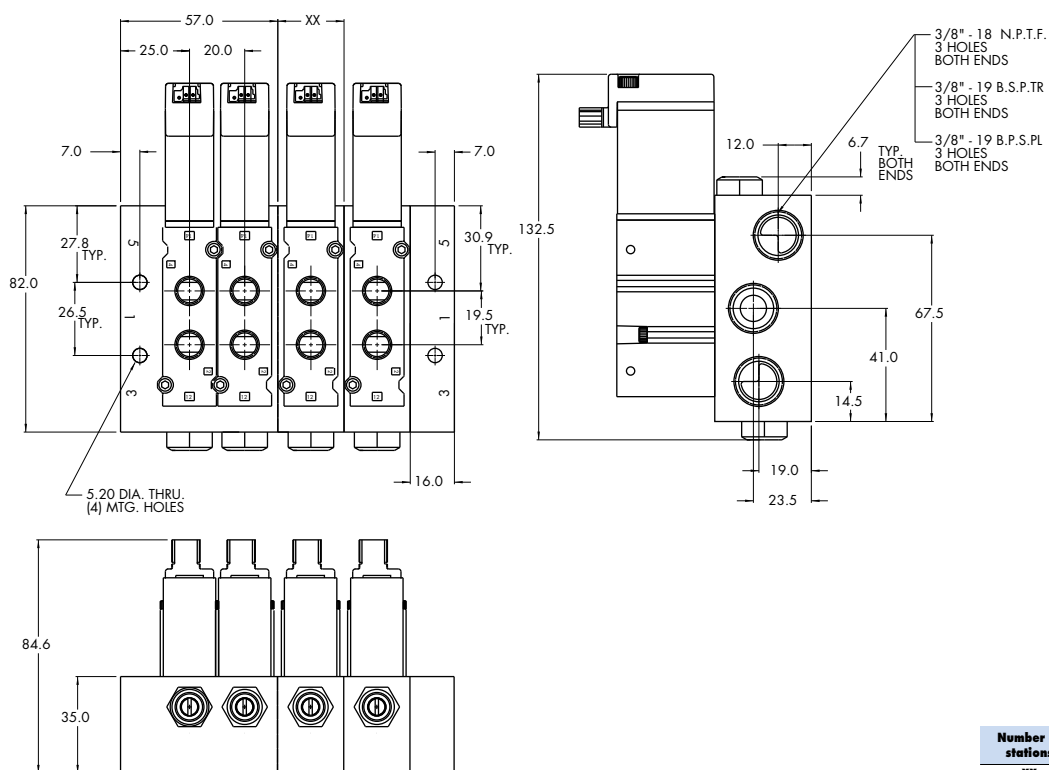
Consult "Precautions" before use, installation or service of MAC Valves.

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47002.
• Flow control kit (x2) : N-37001. End plate kit : M-47004-01.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Number of stations	1	2	3	4
XX	24.0	44.0	64.0	84.0

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	add-on style non plug-in cyl. ports in base with opt. F. C.	35 mm

OPERATIONAL BENEFITS

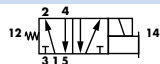
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Valve
Valve less base	 ☐ 47A-LI0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx'**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire Assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire Assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM47A-xxxxx-xx

Port size	Bottom cylinder ports (18 mm)	Bottom cylinder ports with flow controls (18 mm)
1/8" NPTF	☐ EBM47A-00EBA-xx	☐ EBM47A-00FBA-xx
1/4" NPTF	☐ EBM47A-00EBB-xx	☐ EBM47A-00FBB-xx
6 mm tube receptacle	☐ EBM47A-00EBG-xx	☐ EBM47A-00FBG-xx

Number of stations (03=3 stations)

Note: ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
add-a-unit stations may be added to above bars. Maximum length for add-a-unit is 4 stations.

OPTIONS

EBM47A-00EBA-xx

- ☐ clic replace with "C" for add-a-unit.

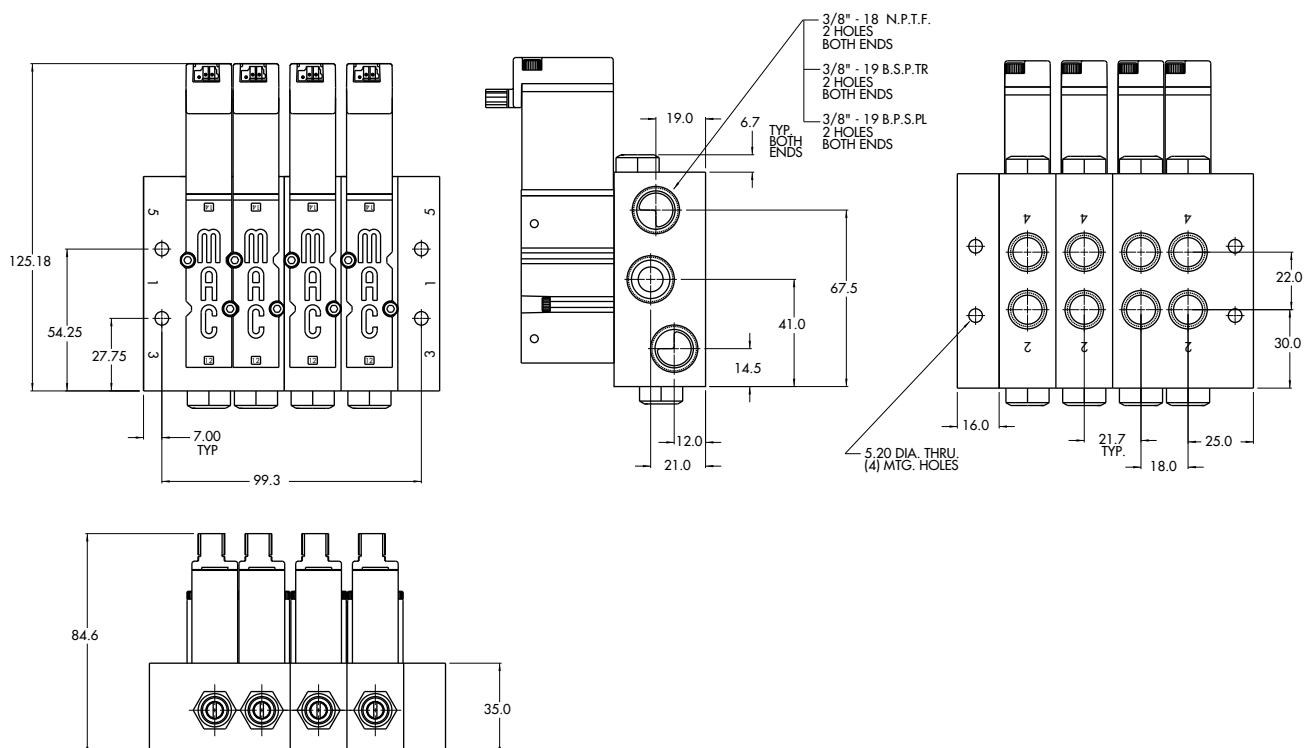
Consult "Precautions" before use, installation or service of MAC Valves.

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
 - Flow control kit (x2) : N-37001. End plate kit : M-47004-01.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Function	Port size (Inlet & Exhaust)	Flow [Max]	Circuit bar mounting	Profile
5/2	3/8"	0.5C_v	non plug-in cyl. ports in valve with opt. Pr. Reg.	44 mm

OPERATIONAL BENEFITS

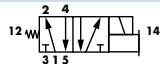
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Valve port size	Valve
	
1/8" NPTF	☐ 47A-MG0-Hxxx-xxx
1/4" NPTF	☐ 47A-MH0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx'**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR (REGULATOR ORDERED SEPARATELY)**

EBM47A-xxxxxx-xx

Port size COMMON INLET & EXHAUST	Without regulator (20 mm)	With regulator (20 mm)
3/8" NPTF	☐ EBM47A-01NAK-xx	☐ EBM47A-01PAK-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

** Pressure Regulators :

PR47A-GOAx

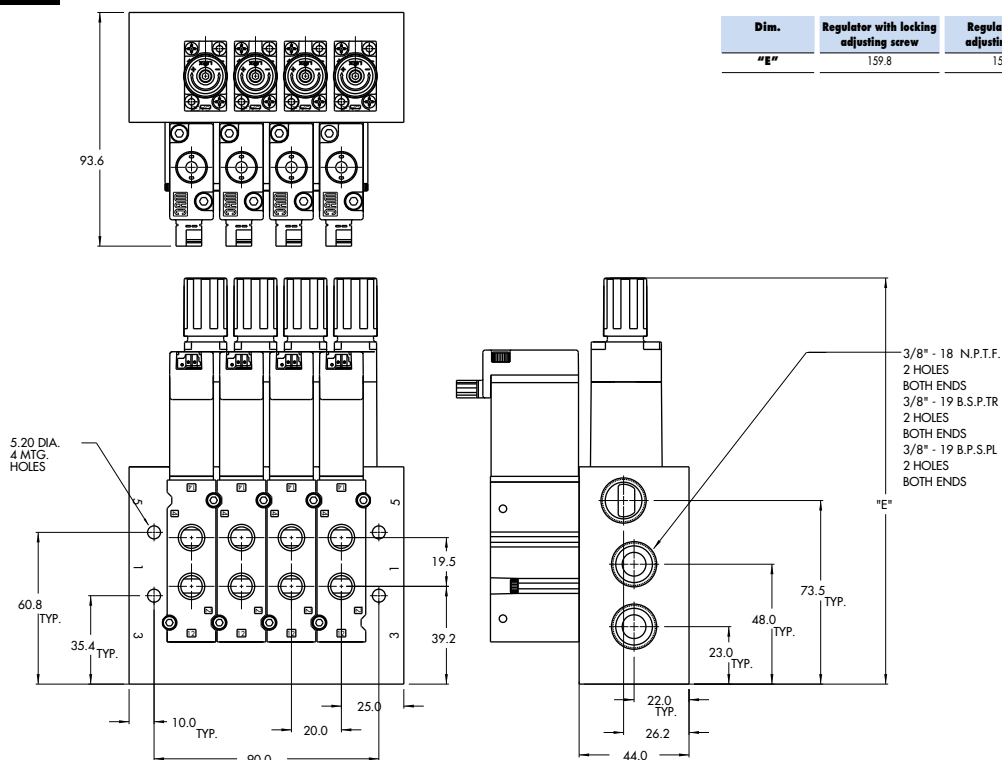
- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47002.
• Regulator blanking plate : R-47003.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS



Function	Port size	Flow [Max]	Circuit bar mounting	Profile
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	non plug-in cyl. ports in base	44 mm

OPERATIONAL BENEFITS

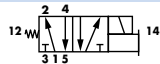
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Valve
Valve less base	 ☐ 47A-LI0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx x- x xx'**

xx Voltage	x Wire length	x Manual operator	xx Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM47A-xxxxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	☐ EBM47A-00JAA-xx	☐ EBM47A-00LAA-xx
1/4" NPTF	☐ EBM47A-00JAB-xx	☐ EBM47A-00LAB-xx
6 mm tube receptacle	☐ EBM47A-00JAG-xx	☐ EBM47A-00LAG-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

**TECHNICAL
DATA**

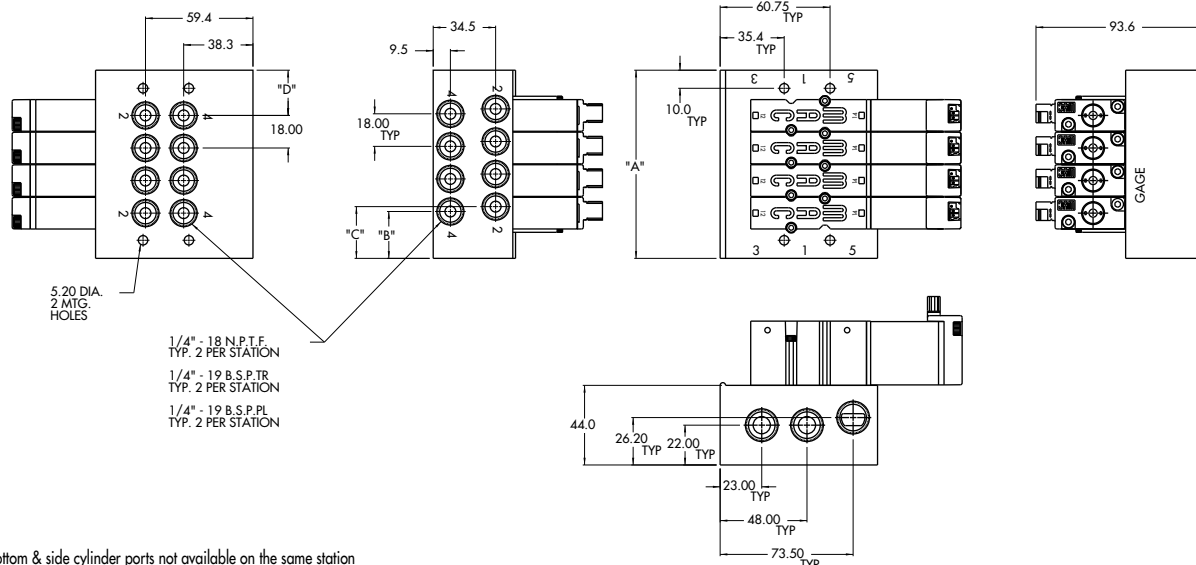
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note : • Valve and coil are not interchangeable.
- Spare parts : • Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
- Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"A"	-	68.0	86.0	104.0	122.0	140.0	158.0	178.0	194.0	212.0
"B"	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90
"C"	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60
"D"	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
1/4" Port	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
M6 Carstick port					N/A					

Dimensions are based on
18 mm centerline spacing



Note: Bottom & side cylinder ports not available on the same station

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	non plug-in cyl. ports in base with Pr. Reg.	44 mm

OPERATIONAL BENEFITS

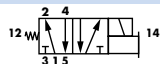
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Valve
Valve less base	 ☐ 47A-LI0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **xx** X- X **xx***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ C 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR (REGULATOR ORDERED SEPARATELY)**

EBM47A-xxxxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	☐ EBM47A-00KAA-xx	☐ EBM47A-00MAA-xx
1/4" NPTF	☐ EBM47A-00KAB-xx	☐ EBM47A-00MAB-xx
6 mm tube receptacle	☐ EBM47A-00KAG-xx	☐ EBM47A-00MAG-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

** Pressure Regulators :

PR47A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

**TECHNICAL
DATA**

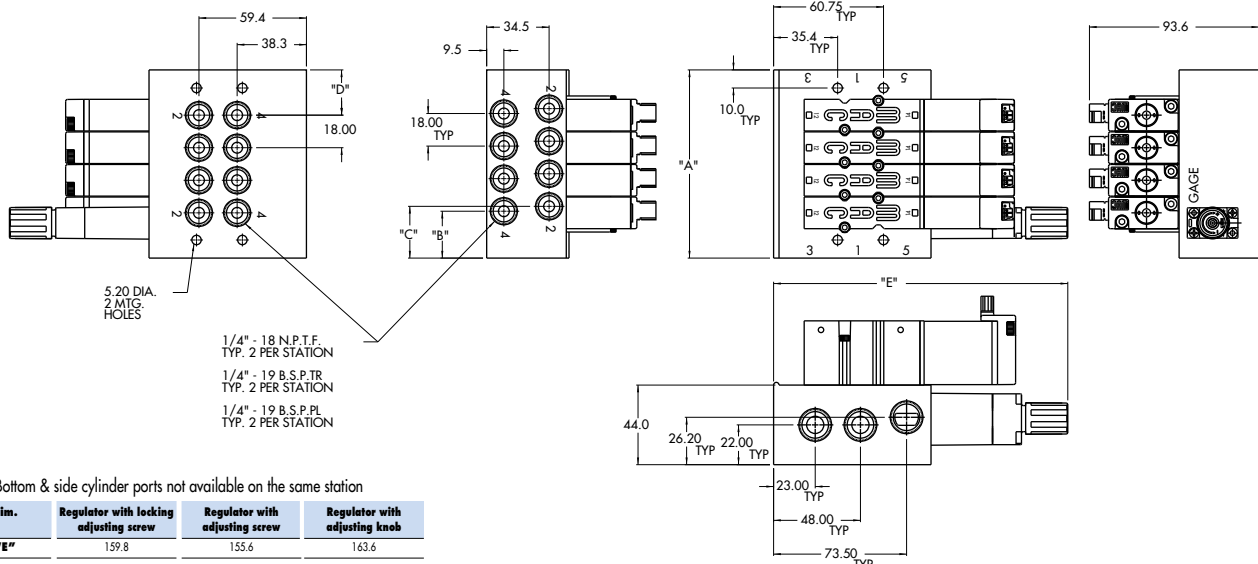
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
 - Regulator blanking plate : R-47003.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"A"	-	68.0	86.0	104.0	122.0	140.0	158.0	178.0	194.0	212.0
"B"	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90
"C"	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60
"D"	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
1/4" Port										
M6 Carstick port						N/A				

Dimensions are based on
18 mm centerline spacing



Note: Bottom & side cylinder ports not available on the same station

Dim.	Regulator with locking adjusting screw	Regulator with adjusting screw	Regulator with adjusting knob
"E"	159.8	155.6	163.6

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting	Profile
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	add-on style non plug-in cyl. ports in base	44 mm

OPERATIONAL BENEFITS

1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Valve
Valve less base	 ○ 47A-LI0-Hxxx-xxx

SOLENOID OPERATOR ➤

H **XX X-X XX'**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
○ DA 24VDC (5.2 W)	○ A 18"	○ I Non-locking	○ BA Flying leads
○ DB 24VDC (2.4 W)	○ C 36"		○ BC Flying leads with light
○ DC 24VDC (1.8 W)	○ x Other Options		○ MA Plug-in wire assy
○ DD 24VDC (1.0 W)			○ MC Plug-in wire assy with light
○ AA 120VAC (must use with rectified connector)			○ HA Plug-in connector with rectifier and light
○ xx Other Options			○ xx Other Options

HOW TO ORDER CIRCUIT BAR

EBM47A-xxxxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	○ EBM47A-00JBA-xx	○ EBM47A-00LBA-xx
1/4" NPTF	○ EBM47A-00JBB-xx	○ EBM47A-00LBB-xx
6 mm tube receptacle	○ EBM47A-00JBG-xx	○ EBM47A-00LBG-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
add-a-unit stations may be added to above bars. Maximum length for add-a-unit is 4 stations.

OPTIONS

EBM47A-00JBA-xx

- ☐ clic replace with "C" for add-a-unit.

Consult "Precautions" before use, installation or service of MAC Valves.

**TECHNICAL
DATA**

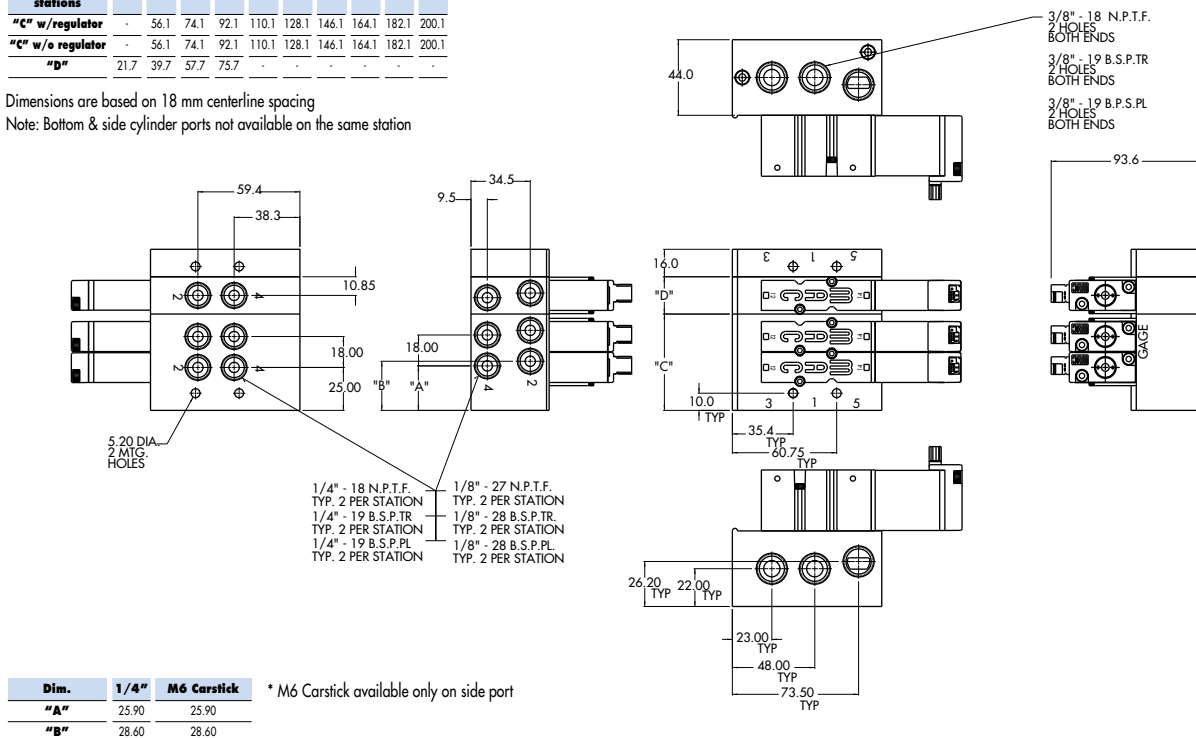
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
 - End plate kit : M-47005-01.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"C" w/regulator	-	56.1	74.1	92.1	110.1	128.1	146.1	164.1	182.1	200.1
"C" w/o regulator	-	56.1	74.1	92.1	110.1	128.1	146.1	164.1	182.1	200.1
"D"	21.7	39.7	57.7	75.7	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing
Note: Bottom & side cylinder ports not available on the same station



Function	Port size	Flow [Max]	Circuit bar mounting	Profile
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	add-on style non plug-in cyl. ports in base with Pr. Reg.	44 mm

OPERATIONAL BENEFITS

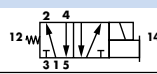
1. Direct solenoid operated valve.
2. Balanced poppet, immune to variations of pressure.
3. Short stroke with high flow.
4. The patented solenoid develops high shifting forces.
5. Powerful return spring.
6. Manual operator standard on all valves.

Reset

HOW TO ORDER

47A-xxx-Hxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size (see base)	Valve
Valve less base	 ☐ 47A-LI0-Hxxx-xxx

SOLENOID OPERATOR ►

H **xx** **x** - **x** **xx***

xx Voltage	x Wire length	x Manual operator	xx Electrical connection
☐ DA 24VDC (5.2 W)	☐ A 18"	☐ I Non-locking	☐ BA Flying leads
☐ DB 24VDC (2.4 W)	☐ c 36"		☐ BC Flying leads with light
☐ DC 24VDC (1.8 W)	☐ x Other Options		☐ MA Plug-in wire assy
☐ DD 24VDC (1.0 W)			☐ MC Plug-in wire assy with light
☐ AA 120VAC (must use with rectified connector)			☐ HA Plug-in connector with rectifier and light
☐ xx Other Options			☐ xx Other Options

HOW TO ORDER CIRCUIT BAR (REGULATOR ORDERED SEPARATELY)**

EBM47A-xxxxxx-xx

Port size	Side cylinder ports (18 mm)	Bottom cylinder ports (18 mm)
1/8" NPTF	☐ EBM47A-00KBA-xx	☐ EBM47A-00MBA-xx
1/4" NPTF	☐ EBM47A-00KBB-xx	☐ EBM47A-00MBB-xx
6 mm tube receptacle	☐ EBM47A-00KBB-xx	☐ EBM47A-00MBG-xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
add-a-unit stations may be added to above bars. Maximum length for add-a-unit is 4 stations.

OPTIONS

EBM47A-00KBA-xx

- ☐ clic replace with "C" for add-a-unit.

** Pressure Regulators :

PR47A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

TECHNICAL DATA

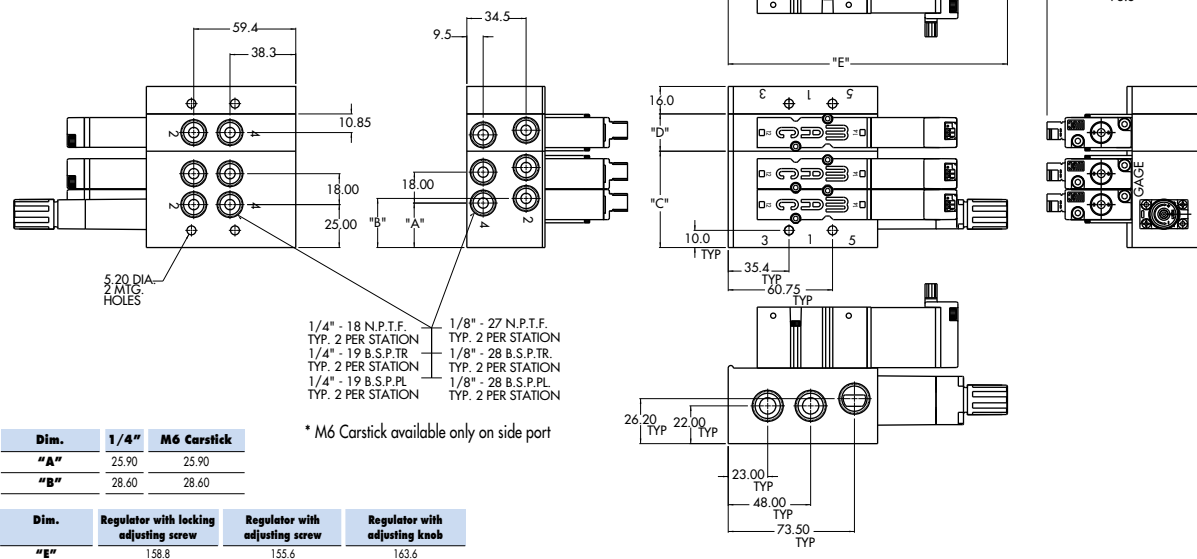
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
 - End plate kit : M-47005-01. • Regulator blanking plate : R-47003.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"C" w/regulator	-	56.1	74.1	92.1	110.1	128.1	146.1	164.1	182.1	200.1
"C" w/o regulator	-	56.1	74.1	92.1	110.1	128.1	146.1	164.1	182.1	200.1
"D"	21.7	39.7	57.7	75.7	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing
Note: Bottom & side cylinder ports not available on the same station



Function	Port size	Flow [Max]	Circuit bar mounting
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	plug-in

OPERATIONAL BENEFITS

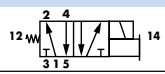
1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Direct solenoid operated.

Reset

HOW TO ORDER

47A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Valve less base	Valve
	
	☐ 47A-LI0-HxxP-xxx

SOLENOID OPERATOR ➤

H **xx** P- **x** **xx***

xx Voltage	x Manual operator	xx Electrical connection
☐ DA 24VDC (5.2 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DC 24VDC (1.8 W)		☐ FE Plug-in with suppression diode
☐ DD 24VDC (1.0 W)		☐ FG Plug-in with suppression diode with LED light
☐ AA 120VAC (Mod. No. required see below)		
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR

ECD47A-xxxxxx-xxxx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	18	☐ ECD47A-00AAA-A0xx	☐ ECD47A-00BAA-A0xx
1/4" NPTF	18	☐ ECD47A-00AAB-A0xx	☐ ECD47A-00BAB-A0xx
6 mm tube receptacle	18	☐ ECD47A-00AAG-A0xx	☐ ECD47A-00BAG-A0xx
1/8" NPTF	30	☐ ECD47A-01AAA-C0xx	☐ ECD47A-01BAA-C0xx
1/4" NPTF	30	☐ ECD47A-01AAB-C0xx	☐ ECD47A-01BAB-C0xx
6 mm tube receptacle	30	☐ ECD47A-01AAG-C0xx	☐ ECD47A-01BAG-C0xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
for AC voltage use mod. FWR2 after circuit bar model number.
for multi-pin connector (9, 15 or 25).

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

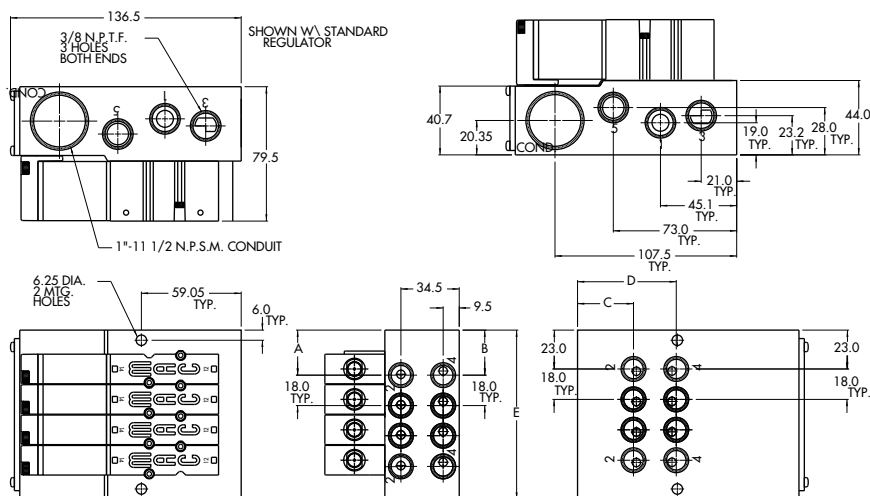
- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
 - Base wire plug-in protector : 16520.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"E"	46.0	64.0	82.0	100.0	118.0	136.0	154.0	172.0	190.0	208.0

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Dim.	1/4"	1/8"	6 mm Legris
"A"	26.65	26.15	25.65
"B"	26.65	24.2	25.65
"C"	33.1	34.8	34.8
"D"	58.4	55.9	55.9

Function	Port size	Flow [Max]	Circuit bar mounting
5/2	1/8" - 1/4"	0.5C_v	plug-in with Pr. Reg.

OPERATIONAL BENEFITS

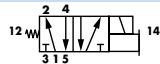
1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Direct solenoid operated.

Reset

HOW TO ORDER

47A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Valve less base	Valve
	
	☐ 47A-LI0-HxxP-xxx

SOLENOID OPERATOR ➤

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DC 24VDC (1.8 W)		☐ FE Plug-in with suppression diode
☐ DD 24VDC (1.0 W)		☐ FG Plug-in with suppression diode with LED light
☐ AA 120VAC (Mod. No. required see below)		☐ xx Other Options
☐ xx Other Options		

HOW TO ORDER "PLUG-IN" CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

ECD47A-xxxxxx-xxxx

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	18	☐ ECD47A-00CAA-A0xx
1/4" NPTF	18	☐ ECD47A-00CAB-A0xx
1/8" NPTF	30	☐ ECD47A-01CAA-C0xx
1/4" NPTF	30	☐ ECD47A-01CAB-C0xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
for AC voltage use mod. FWR2 after circuit bar model number.
for multi-pin connector (9, 15 or 25).

** Pressure Regulators :

PR47A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)
- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

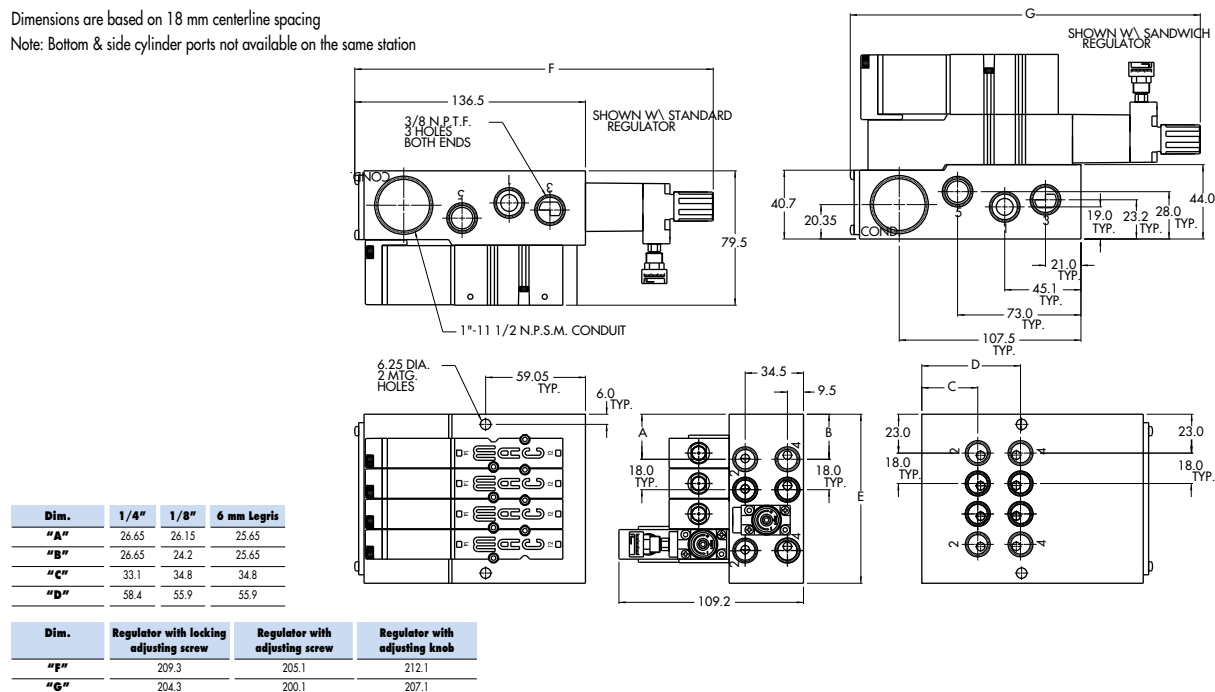
- Note :
- Valve and coil are not interchangeable.
- Spare parts :
- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
 - Base wire plug-in protector : 16520. • Regulator blanking plate : R-47003.
- Options :
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"E"	46.0	64.0	82.0	100.0	118.0	136.0	154.0	172.0	190.0	208.0

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Function	Port size	Flow [Max]	Circuit bar mounting
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	add-on style plug-in

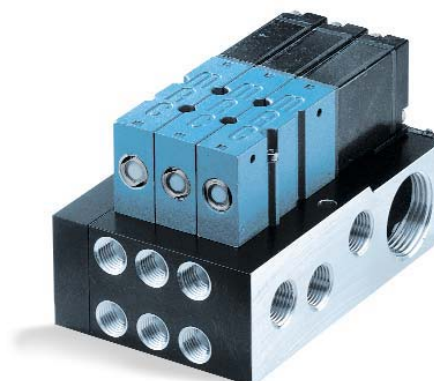
OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Direct solenoid operated.

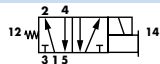
Reset

HOW TO ORDER

47A-xxx-HxxP-xxx



HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Valve

☐ 47A-LI0-HxxP-xxx

SOLENOID OPERATOR ►

H **xx** P- **x** **xx**

xx Voltage	x Manual operator	xx Electrical connection
☐ DA 24VDC (5.2 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DC 24VDC (1.8 W)		☐ FE Plug-in with suppression diode
☐ DD 24VDC (1.0 W)		☐ FG Plug-in with suppression diode with LED light
☐ AA 120VAC (Mod. No. required see below)		☐ xx Other Options
☐ xx Other Options		

HOW TO ORDER "PLUG-IN" CIRCUIT BAR

ECD47A-xxxxx-xxxx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	18	☐ ECD47A-00ABA-A0xx	☐ ECD47A-00BBA-A0xx
1/4" NPTF	18	☐ ECD47A-00ABB-A0xx	☐ ECD47A-00BBB-A0xx
6 mm tube receptacle	18	☐ ECD47A-00ABG-A0xx	☐ ECD47A-00BBG-A0xx
1/8" NPTF	30	☐ ECD47A-01ABA-C0xx	☐ ECD47A-01BBA-C0xx
1/4" NPTF	30	☐ ECD47A-01ABB-C0xx	☐ ECD47A-01BBB-C0xx
6 mm tube receptacle	30	☐ ECD47A-01ABG-C0xx	☐ ECD47A-01BBG-C0xx

Number of stations (03=3 stations)

Note: ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
for AC voltage use mod. FWR2 after circuit bar model number.
for multi-pin connector (9, 15 or 25).
add-a-units may be added to above bars.

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

Note :

- Valve and coil are not interchangeable.

Spare parts :

- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
- Base wire plug-in protector : 16520. • Isolator disc between add-a-units : 28438.

Options :

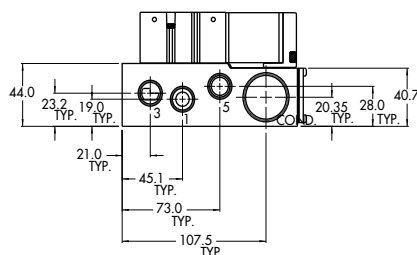
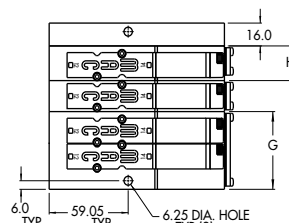
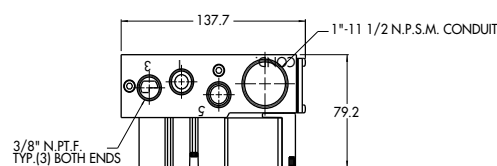
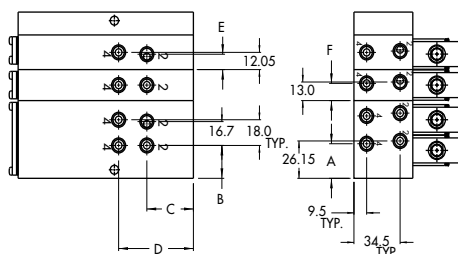
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"G"	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"H"	21.70	39.70	57.70	75.70	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Dim.	1/8"	1/4"	6 mm Legris
"A"	24.20	24.20	25.65
"B"	23.00	23.00	23.00
"C"	34.80	33.10	34.80
"D"	55.90	58.40	55.90
"E"	-	-	-
"F"	12.05	12.00	14.00

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2	1/8" - 1/4"	0.5C_v	add-on style plug-in with Pr. Reg.

OPERATIONAL BENEFITS

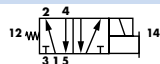
1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Direct solenoid operated.

Reset

HOW TO ORDER

47A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Valve

☐ 47A-LI0-H xx P- xxx

SOLENOID OPERATOR ➤

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DC 24VDC (1.8 W)		☐ FE Plug-in with suppression diode
☐ DD 24VDC (1.0 W)		☐ FG Plug-in with suppression diode with LED light
☐ AA 120VAC (Mod. No. required see below)		
☐ xx Other Options		☐ xx Other Options

HOW TO ORDER "PLUG-IN" CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

ECD47A-xxxxxx-xxxx

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	18	☐ ECD47A-00CBA-A0 xx
1/4" NPTF	18	☐ ECD47A-00CBB-A0 xx
1/8" NPTF	30	☐ ECD47A-01CBA-C0 xx
1/4" NPTF	30	☐ ECD47A-01CBB-C0 xx

Number of stations (03=3 stations)

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
for AC voltage use mod. FWR2 after circuit bar model number.
for multi-pin connector (9, 15 or 25).
add-a-units may be added to above bars.

** Pressure Regulators :

PR47A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
• Base wire plug-in protector : 16520. • Regulator blanking plate : R-47003. • Isolator disc between add-a-units : 28438.

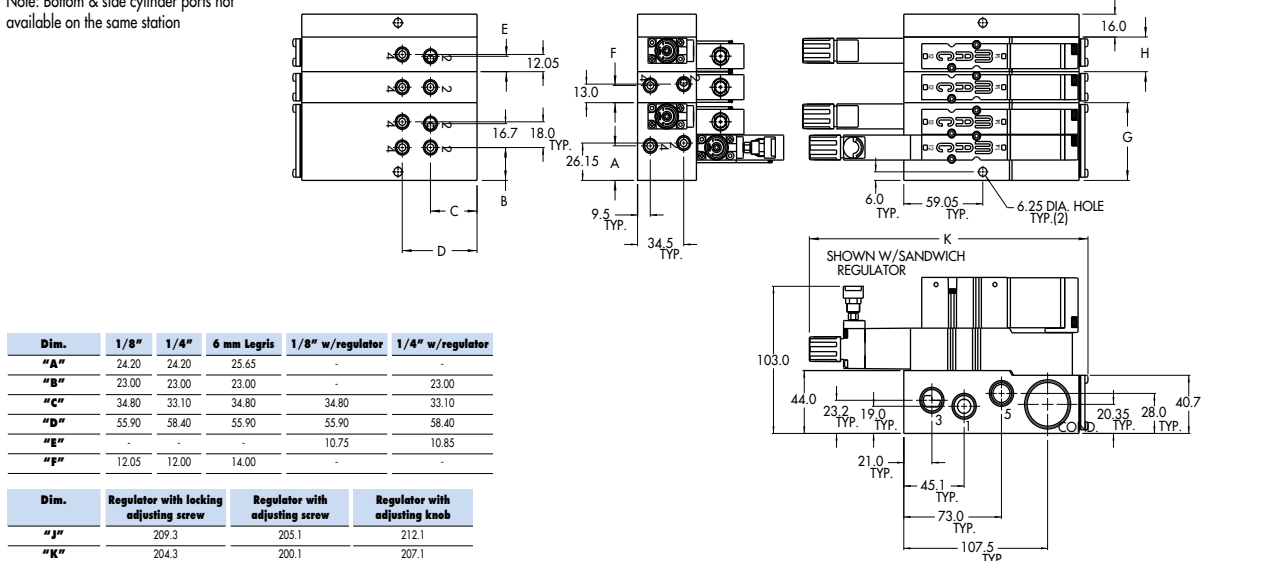
Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"G" w/regulator	-	54.40	72.40	90.40	108.40	126.40	144.40	162.40	180.40	199.40
"G" w/o regulator	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"H" w/regulator	24.25	42.25	60.25	78.25	-	-	-	-	-	-
"H" w/o regulator	21.70	39.70	57.70	75.70	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2	1/8" - 1/4" 6 mm tube receptacle	0.5C_v	plug-in add-a-unit stations

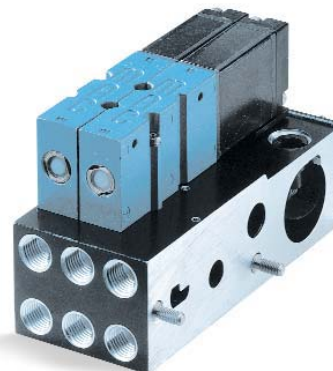
OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Direct solenoid operated.

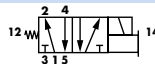
Reset

HOW TO ORDER

47A-xxx-HxxP-xxx



HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Valve

☐ 47A-LI0-HxxP-xxx

SOLENOID OPERATOR ►

H **XX** P- **X** **XX***

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DC 24VDC (1.8 W)		☐ FE Plug-in with suppression diode
☐ DD 24VDC (1.0 W)		☐ FG Plug-in with suppression diode with LED light
☐ AA 120VAC (Mod. No. required see below)		☐ xx Other Options
☐ xx Other Options		

HOW TO ORDER "PLUG-IN" CIRCUIT BAR

ECD47A-xxxxxx-xxxx

Port size	Spacing mm	Side cylinder ports	Bottom cylinder ports
1/8" NPTF	18	☐ ECD47A-00ACA-A0xx	☐ ECD47A-00BCA-A0xx
1/4" NPTF	18	☐ ECD47A-00ACB-A0xx	☐ ECD47A-00BCB-A0xx
6 mm tube receptacle	18	☐ ECD47A-00ACG-A0xx	☐ ECD47A-00BCG-A0xx
1/8" NPTF	30	☐ ECD47A-01ACA-C0xx	☐ ECD47A-01BCA-C0xx
1/4" NPTF	30	☐ ECD47A-01ACB-C0xx	☐ ECD47A-01BCB-C0xx
6 mm tube receptacle	30	☐ ECD47A-01ACG-C0xx	☐ ECD47A-01BCG-C0xx

Number of stations (01=1 station). Maximum length is 4 stations .
 Note: ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD SD03 should be included with add-a-unit model number.
 for AC voltage use mod. FWR2 after circuit bar model number.

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

Note :

- Valve and coil are not interchangeable.

Spare parts :

- Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
- O-ring port seal (x3) : 17015-01 • Tie rod (x2) : 79007-01 (one station length).

Options :

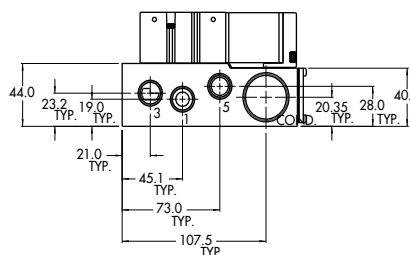
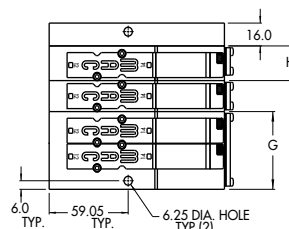
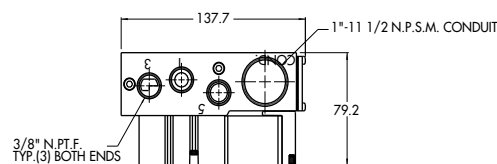
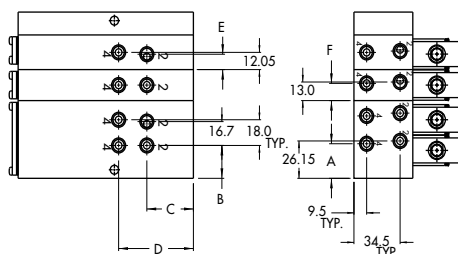
- Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

Number of stations	1	2	3	4	5	6	7	8	9	10
"G"	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"H"	21.70	39.70	57.70	75.70	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station



Dim.	1/8"	1/4"	6 mm Legris
"A"	24.20	24.20	25.65
"B"	23.00	23.00	23.00
"C"	34.80	33.10	34.80
"D"	55.90	58.40	55.90
"E"	-	-	-
"F"	12.05	12.00	14.00

Function	Port size	Flow [Max]	Circuit bar mounting
5/2	1/8" - 1/4"	0.5C_v	plug-in add-a-unit stations with Pr. Reg.

OPERATIONAL BENEFITS

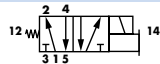
1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Direct solenoid operated.

Reset

HOW TO ORDER

47A-xxx-HxxP-xxx

HOW TO ORDER VALVE FOR "PLUG-IN" CIRCUIT BAR

Valve

☐ 47A-LI0-HxxP-xxx

SOLENOID OPERATOR ➤

XX Voltage	X Manual operator	XX Electrical connection
☐ DA 24VDC (5.2 W)	☐ 1 Non-locking	☐ FA Plug-in
☐ DB 24VDC (2.4 W)		☐ FC Plug-in with light
☐ DC 24VDC (1.8 W)		☐ FE Plug-in with suppression diode
☐ DD 24VDC (1.0 W)		☐ FG Plug-in with suppression diode with LED light
☐ AA 120VAC (Mod. No. required see below)		☐ xx Other Options
☐ xx Other Options		

HOW TO ORDER "PLUG-IN" CIRCUIT BAR (REGULATORS ORDERED SEPARATELY)**

ECD47A-xxxxxx-xxxx

Port size	Spacing mm	Bottom cylinder ports
1/8" NPTF	18	☐ ECD47A-00CCA-A0xx
1/4" NPTF	18	☐ ECD47A-00CCB-A0xx
1/8" NPTF	30	☐ ECD47A-01CCA-C0xx
1/4" NPTF	30	☐ ECD47A-01CCB-C0xx

Number of stations (01=1 station). Maximum length is 4 stations .
 Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
 when add-a-unit stations are added to bars with a multi-pin connector,
 MOD SD03 should be included with add-a-unit model number.
 for AC voltage use mod. FWR2 after circuit bar model number.

** Pressure Regulators :

PR47A-GOAx

- ☐ X=A (0 to 120 PSI)
- ☐ X=B (0 to 80 PSI)
- ☐ X=C (0 to 30 PSI)

- ☐ A0 = without light
- ☐ AA = with light (120V)
- ☐ AB = with light (240V)
- ☐ AD = with light (24V)
- ☐ C0 = terminal strip
- ☐ CA = terminal strip with light (120V)
- ☐ CB = terminal strip with light (240V)
- ☐ CD = terminal strip with light (24V)

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Orifice :	4.3 mm
Flow (at 6 bar, ΔP=1bar) :	5.2 W : 0.50C _v , 2.4 W : 0.30C _v , 1.8 W : 0.25C _v , 1.0 W : 0.25C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Power :	5.2 W - 2.4 W - 1.8 W - 1.0 W
Response times :	Energize : 14.0 ms
(with 5.2 W coil)	De-energize : 5.0 ms

Note : • Valve and coil are not interchangeable.

Spare parts : • Seal between valve and bar : 16629. • Mounting screw (x2) : 35043. • Valve blanking plate : M-47001.
• O-ring port seal (x3) : 17015-01 • Tie rod (x2) : 79007-01 (one station length). • Regulator blanking plate : R-47003.

Options : • Isolation of inlet and/or exhaust. Special bar. Consult factory. • BSPP Threads.

DIMENSIONS

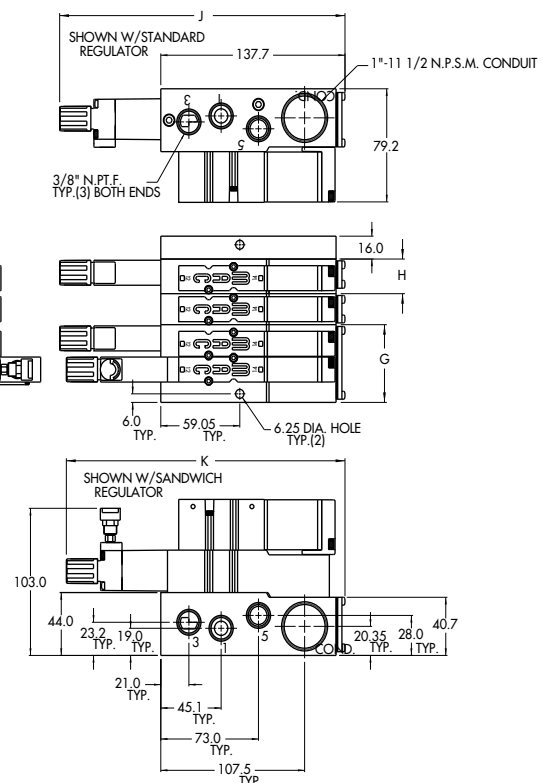
Number of stations	1	2	3	4	5	6	7	8	9	10
"G" w/regulator	-	54.40	72.40	90.40	108.40	126.40	144.40	162.40	180.40	199.40
"G" w/o regulator	-	51.85	69.85	87.85	105.85	123.85	141.85	159.85	177.85	195.85
"H" w/regulator	24.25	42.25	60.25	78.25	-	-	-	-	-	-
"H" w/o regulator	21.70	39.70	57.70	75.70	-	-	-	-	-	-

Dimensions are based on 18 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station

Dim.	1/8"	1/4"	6 mm Legris	1/8" w/regulator	1/4" w/regulator
"A"	24.20	24.20	25.65	-	-
"B"	23.00	23.00	23.00	-	23.00
"C"	34.80	33.10	34.80	34.80	33.10
"D"	55.90	58.40	55.90	55.90	58.40
"E"	-	-	-	10.75	10.85
"F"	12.05	12.00	14.00	-	-

Dim.	Regulator with locking adjusting screw	Regulator with adjusting screw	Regulator with adjusting knob
"J"	209.3	205.1	212.1
"K"	204.3	200.1	207.1





Section 2

Options



0 p t i o n s

Codification table for voltages / Wire length / Manual operators / Electrical connections

VALVE CODE ➤

-HXX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- Solenoid valves 37 & 47 Series

1. VOLTAGE

- H XX X - X XX VOLTAGE

DC Options	
☐ DA	24 VDC (5.2 W)
☐ DB	24 VDC (2.4 W)
☐ DC	24 VDC (1.8 W)
☐ DD	24 VDC (1.0 W)
☐ DF	12 VDC (5.2 W)
☐ DG	12 VDC (2.4 W)
☐ DH	12 VDC (1.8 W)
☐ DJ	12 VDC (1.0 W)
☐ DL	120 VDC (6.3 W)
AC Options (50/60hz)	
☐ AA	120 VAC (6.7 W)
☐ AB	220 VAC (5.6 W)
☐ AC	240 VAC (5.8 W)
☐ AD	24 VAC (7.8 W)

Note : AC Voltages only available with "H" & "F" type connectors. MOD FWR2 must be used with the "F" type connectors.

2. WIRE LENGTH

- H XX X - X XX WIRE LENGTH

☐ O	No lead wire
☐ A	18"
☐ B	24"
☐ C	36"
☐ D	48"
☐ E	72"
☐ F	96"
☐ G	120"
☐ H	144"
☐ P	Plug-in (used only with "F" type connector Opts.)

Use "O" with MJ & MM Opts.

3. MANUAL OPERATOR

- H XX X - X XX MANUAL OPERATOR

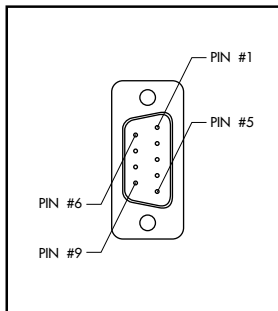
☐ 0	No operator
☐ 1	Non-locking recessed
☐ 2	Locking recessed
☐ 3	Non-locking extended
☐ 4	Locking extended

4. ELECTRICAL CONNECTION

- H XX	X - X XX	ELECTRICAL CONNECTION
☐	BA	Flying leads
☐	BB	Flying leads with ground wire
☐	BC	Flying leads with led light
☐	BD	Flying leads with led light & ground wire
☐	BE	Flying leads with suppression diode
☐	BF	Flying leads with suppression diode & ground wire
☐	BG	Flying leads with suppression diode plus led light
☐	BH	Flying leads with suppression diode plus led light & ground wire
☐	*BN	Flying leads with suppression diode plus blocking diode
☐	*BP	Flying leads with suppression diode plus blocking diode & ground wire
☐	*BR	Flying leads with suppression diode plus blocking diode & led light
☐	*BS	Flying leads with suppression diode plus blocking diode & led light & ground wire
☐	FA	Plug-in
☐	FB	Plug-in with ground wire
☐	FC	Plug-in with led light
☐	FD	Plug-in with led light & ground wire
☐	FE	Plug-in with suppression diode
☐	FF	Plug-in with suppression diode & ground wire
☐	FG	Plug-in with suppression diode plus led light
☐	FH	Plug-in with suppression diode plus led light & ground wire
Note : FA ---- FH options for use with ECD type circuit bars		
☐	HA	Circuit board plug-in with full wave rectifier & led light
☐	HB	Circuit board with full wave rectifier & led with ground wire
☐	HC	Same as "HA" without lead wires
☐	HD	Same as "HB" without lead wires
☐	HL	Circuit board plug-in with suppression diode plus blocking diode & led light
☐	HN	Same as "HL" without lead wires
☐	MA	Plug-in wire assembly
☐	MB	Plug-in wire assembly with ground wire
☐	MC	Plug-in wire assembly with led light
☐	MD	Plug-in wire assembly led light & ground wire
☐	ME	Plug-in wire assembly with suppression diode
☐	MF	Plug-in wire assembly with suppression diode & ground wire
☐	*MG	Plug-in wire assembly suppression diode plus led light
☐	*MH	Plug-in wire assembly suppression diode plus led light & ground wire
☐	*MN	Plug-in wire assembly with suppression diode plus blocking diode
☐	*MP	Plug-in wire assembly with suppression diode plus blocking diode & ground wire
☐	MR	Plug-in wire assembly with suppression diode plus blocking diode & led light
☐	MS	Plug-in wire assembly with suppression diode plus blocking diode & led light & ground wire
☐	MJ	Plug-in housing w/o wire assembly ("MA" option without wire assembly)
☐	MM	Plug-in housing w/o wire assembly ("MB" option without wire assembly)

* Blocking diode is in lead wire.

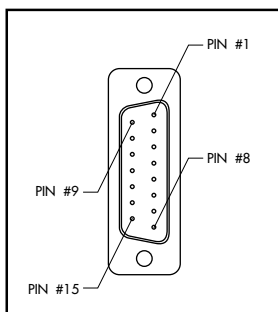
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

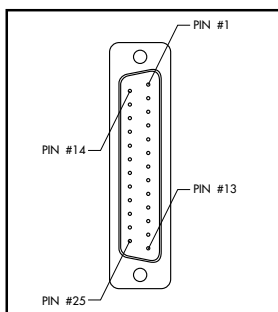
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

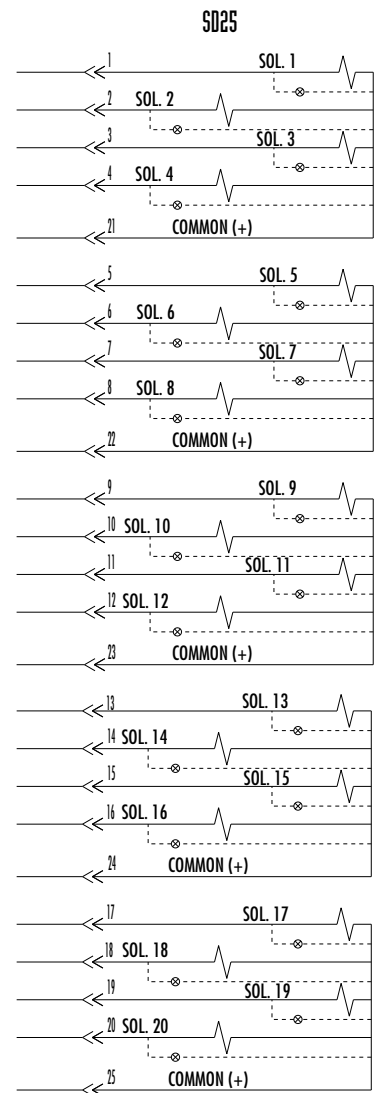
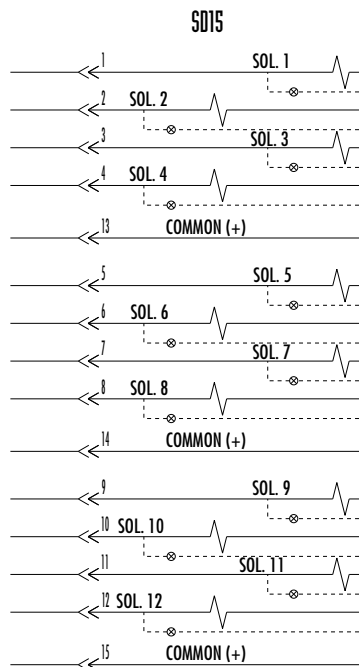
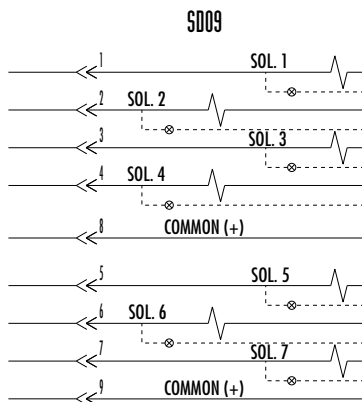
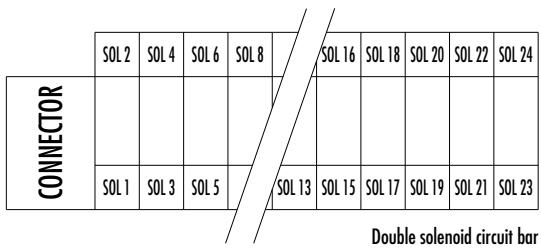
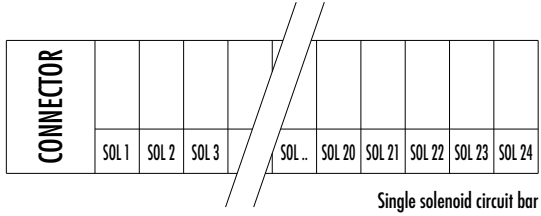


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

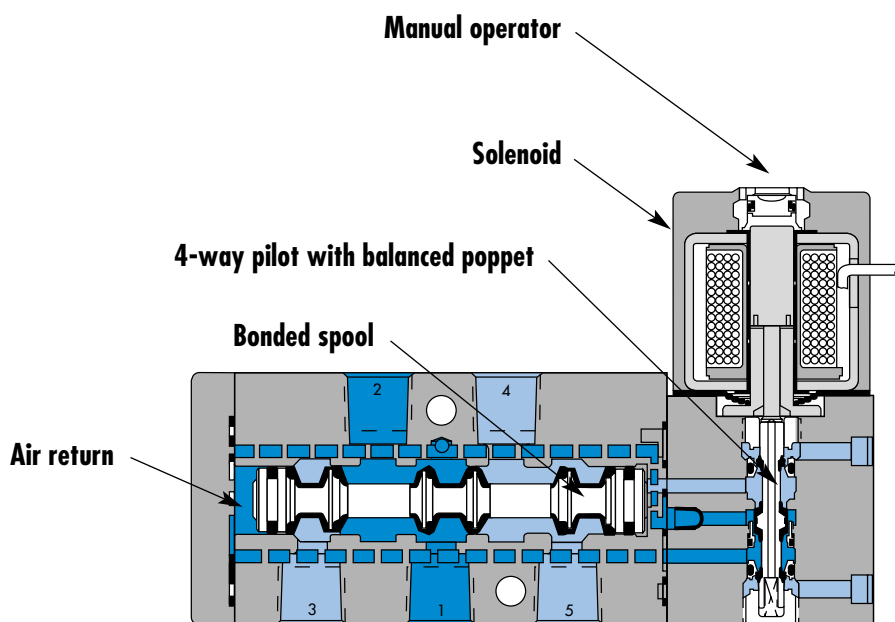
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

low profile cylinder ports in valve	low profile cylinder ports in base	mid profile cylinder ports in valve	mid profile - add on style cylinder ports in valve	add-a-unit stations for CBM403A bar	mid profile cylinder ports in base	mid profile - add on style cylinder ports in base	add-a-unit stations for CBM404A bar
high profile cylinder ports in base	high profile - add on style cylinder ports in base	add-a-unit stations for CBM405A bar					



SERIES FEATURES

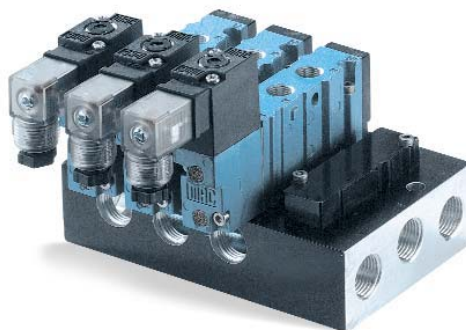
- Patented MACSOLENOID® for fastest possible response times and virtually burn-out proof AC solenoid operation.
- Optional low watt DC solenoids.
- Various manual operators.
- Optional memory spring.
- 2 position or 3 position valve configurations.
- Internal or external pilot.

Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	low profile cylinder ports in valve

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

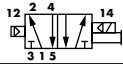
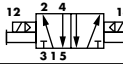
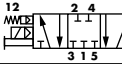
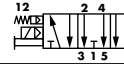
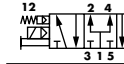
Reset



HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size	Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
						
1/8" NPT	Internal	☐ 411A-AOA-DM-Dxxx-xxx	☐ 421A-AOA-DM-Dxxx-xxx	☐ 451A-AOA-DM-Dxxx-xxx	☐ 461A-AOA-DM-Dxxx-xxx	☐ 471A-AOA-DM-Dxxx-xxx
1/4" NPT		☐ 411A-BOA-DM-Dxxx-xxx	☐ 421A-BOA-DM-Dxxx-xxx	☐ 451A-BOA-DM-Dxxx-xxx	☐ 461A-BOA-DM-Dxxx-xxx	☐ 471A-BOA-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX** X- X **XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR **

CBM401A-xxxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm w/o flow controls	Spacing standard 19,5 mm w/ flow controls	Spacing 26 mm (Rectangular connector) w/o flow controls	Spacing 26 mm (Rectangular connector) w/ flow controls
3/8" NPTF	Internal	☐ CBM401A-00AAA-xx	☐ CBM401A-00BAA-xx	☐ CBM401A-02AAA-xx	☐ CBM401A-02BAA-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

OPTIONS

411A-AOA-DM-Dxxx-xxx

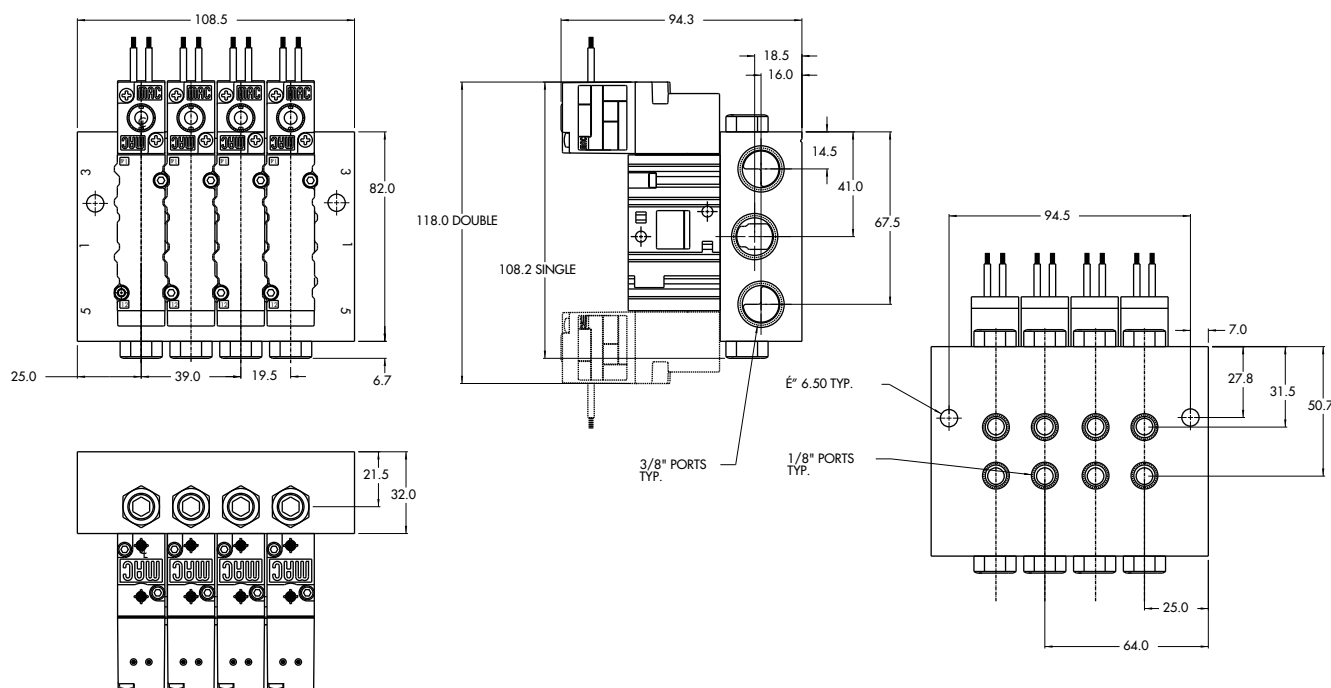
- ☐ clic with memory spring (replace by 4).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	20 - 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow :	1.0C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/6 W	Energize : 8-12 ms	De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.
- Accessories : • Blanking plate : M-04001. • Flow control (x2) : N-04001. • Seal (x2) : 17013-01, (x1) : 17015-01.
• Mounting screw (x2) : 35043.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8"	1.0C_v	low profile cylinder ports in base

OPERATIONAL BENEFITS

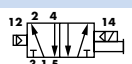
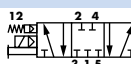
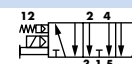
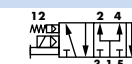
1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
Internal	☐ 413A-OOA-DM-Dxxx-xxx	☐ 423A-OOA-DM-Dxxx-xxx	☐ 453A-OOA-DM-Dxxx-xxx	☐ 463A-OOA-DM-Dxxx-xxx	☐ 473A-OOA-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X- X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR (BOTTOM CYLINDER PORTS) **

CBM402A-xxxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm w/o flow controls	Spacing standard 19,5 mm w/ flow controls	Spacing 26 mm (Rectangular connector) w/o flow controls	Spacing 26 mm (Rectangular connector) w/ flow controls
1/8" NPTF	Internal	☐ CBM402A-00AAA-xx	☐ CBM402A-00BAA-xx	☐ CBM402A-02AAA-xx	☐ CBM402A-02BAA-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

OPTIONS

413A-OOA-DM-Dxxx-xxx

- ☐ clic with memory spring (replace by 6).

**TECHNICAL
DATA**

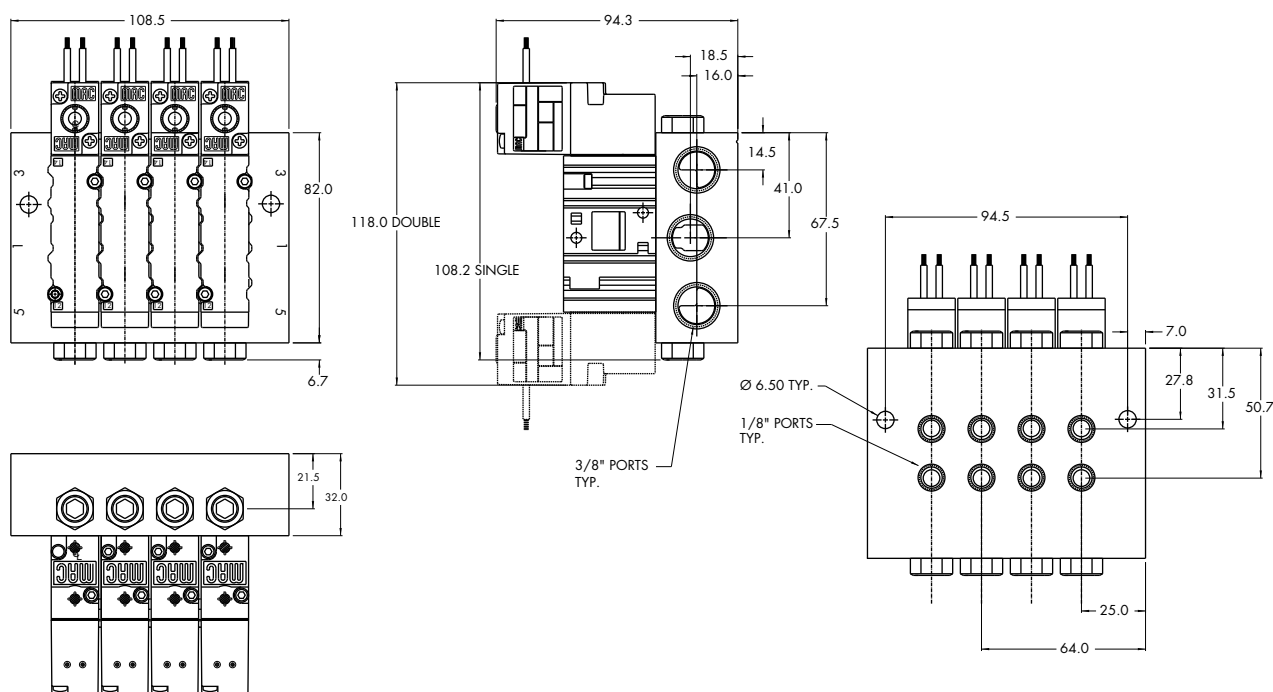
Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	20 - 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow :	1.0C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/ 6 W	Energize : 8-12 ms	De-energize : 7-11 ms

Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.

Accessories : • Blanking plate : M-04002. • Flow control (x2) : N-04001. • Seal : 16525.
• Mounting screw (x2) : 35043.

Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	mid profile cylinder ports in valve

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

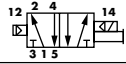
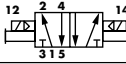
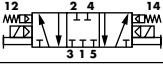
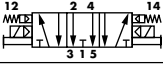
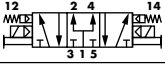
Reset



HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size	Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
						
1/8" NPT	Internal	☐ 411A-AOA-DM-Dxxx-xxx	☐ 421A-AOA-DM-Dxxx-xxx	☐ 451A-AOA-DM-Dxxx-xxx	☐ 461A-AOA-DM-Dxxx-xxx	☐ 471A-AOA-DM-Dxxx-xxx
1/4" NPT	Internal	☐ 411A-BOA-DM-Dxxx-xxx	☐ 421A-BOA-DM-Dxxx-xxx	☐ 451A-BOA-DM-Dxxx-xxx	☐ 461A-BOA-DM-Dxxx-xxx	☐ 471A-BOA-DM-Dxxx-xxx
1/8" NPT	External	☐ 411A-AOD-DM-Dxxx-xxx	☐ 421A-AOD-DM-Dxxx-xxx	☐ 451A-AOD-DM-Dxxx-xxx	☐ 461A-AOD-DM-Dxxx-xxx	☐ 471A-AOD-DM-Dxxx-xxx
1/4" NPT	External	☐ 411A-BOD-DM-Dxxx-xxx	☐ 421A-BOD-DM-Dxxx-xxx	☐ 451A-BOD-DM-Dxxx-xxx	☐ 461A-BOD-DM-Dxxx-xxx	☐ 471A-BOD-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D XX X- X XX*

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR **

CBM403A-xxxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm w/o flow controls	Spacing standard 19,5 mm w/ flow controls	Spacing 26 mm (Rectangular connector) w/o flow controls	Spacing 26 mm (Rectangular connector) w/ flow controls
3/8" NPTF	Internal	☐ CBM403A-00AAA-xx	☐ CBM403A-00BAA-xx	☐ CBM403A-02AAA-xx	☐ CBM403A-02BAA-xx
	Common external	☐ CBM403A-00CAA-xx	☐ CBM403A-00DAA-xx	☐ CBM403A-02CAA-xx	☐ CBM403A-02DAA-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

OPTIONS

411A-AOA-DM-Dxxx-xxx

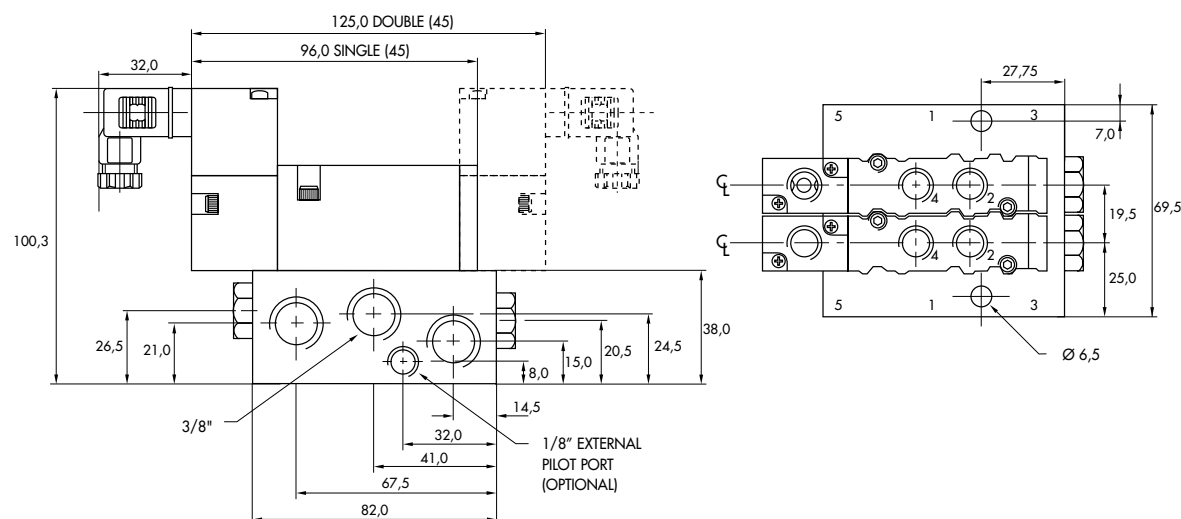
- ☐ clic with memory spring (replace by 4).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum - 150 PSI
Pilot pressure :	20 - 150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	6.2 mm
Flow :	1.0C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W
Response times :	24 V= / 5.4 W Energize : 7.3 ms De-energize : 5.3ms 60Hz/ 6 W Energize : 8-12 ms De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.
- Accessories : • Blanking plate : M-04001. • Flow control (x2) : N-04001. • Seal (x2) : 17013-01, (x1) : 17015-01.
• Mounting screw (x2) : 35043.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS

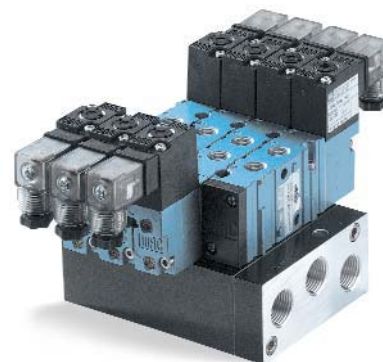


Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	mid profile - add on style cylinder ports in valve

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

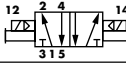
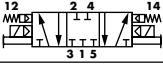
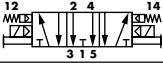
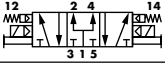
Reset



HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size	Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
						
1/8" NPT	Internal	☐ 411A-AOA-DM-Dxxx-xxx	☐ 421A-AOA-DM-Dxxx-xxx	☐ 451A-AOA-DM-Dxxx-xxx	☐ 461A-AOA-DM-Dxxx-xxx	☐ 471A-AOA-DM-Dxxx-xxx
1/4" NPT	Internal	☐ 411A-BOA-DM-Dxxx-xxx	☐ 421A-BOA-DM-Dxxx-xxx	☐ 451A-BOA-DM-Dxxx-xxx	☐ 461A-BOA-DM-Dxxx-xxx	☐ 471A-BOA-DM-Dxxx-xxx
1/8" NPT	External	☐ 411A-AOD-DM-Dxxx-xxx	☐ 421A-AOD-DM-Dxxx-xxx	☐ 451A-AOD-DM-Dxxx-xxx	☐ 461A-AOD-DM-Dxxx-xxx	☐ 471A-AOD-DM-Dxxx-xxx
1/4" NPT	External	☐ 411A-BOD-DM-Dxxx-xxx	☐ 421A-BOD-DM-Dxxx-xxx	☐ 451A-BOD-DM-Dxxx-xxx	☐ 461A-BOD-DM-Dxxx-xxx	☐ 471A-BOD-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX** X- X **XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR **

CBM403A-xxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm w/o flow controls	Spacing standard 19,5 mm w/ flow controls	Spacing 26 mm (Rectangular connector) w/o flow controls	Spacing 26 mm (Rectangular connector) w/ flow controls
3/8" NPTF	Internal	☐ CBM403A-00ABA-xx	☐ CBM403A-00BBA-xx	☐ CBM403A-02ABA-xx	☐ CBM403A-02BBA-xx
	Common external	☐ CBM403A-00CBA-xx	☐ CBM403A-00DBA-xx	☐ CBM403A-02CBA-xx	☐ CBM403A-02DBA-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note: add-a-unit stations may be added to above bars.

OPTIONS

411A-AOA-DM-Dxxx-xxx

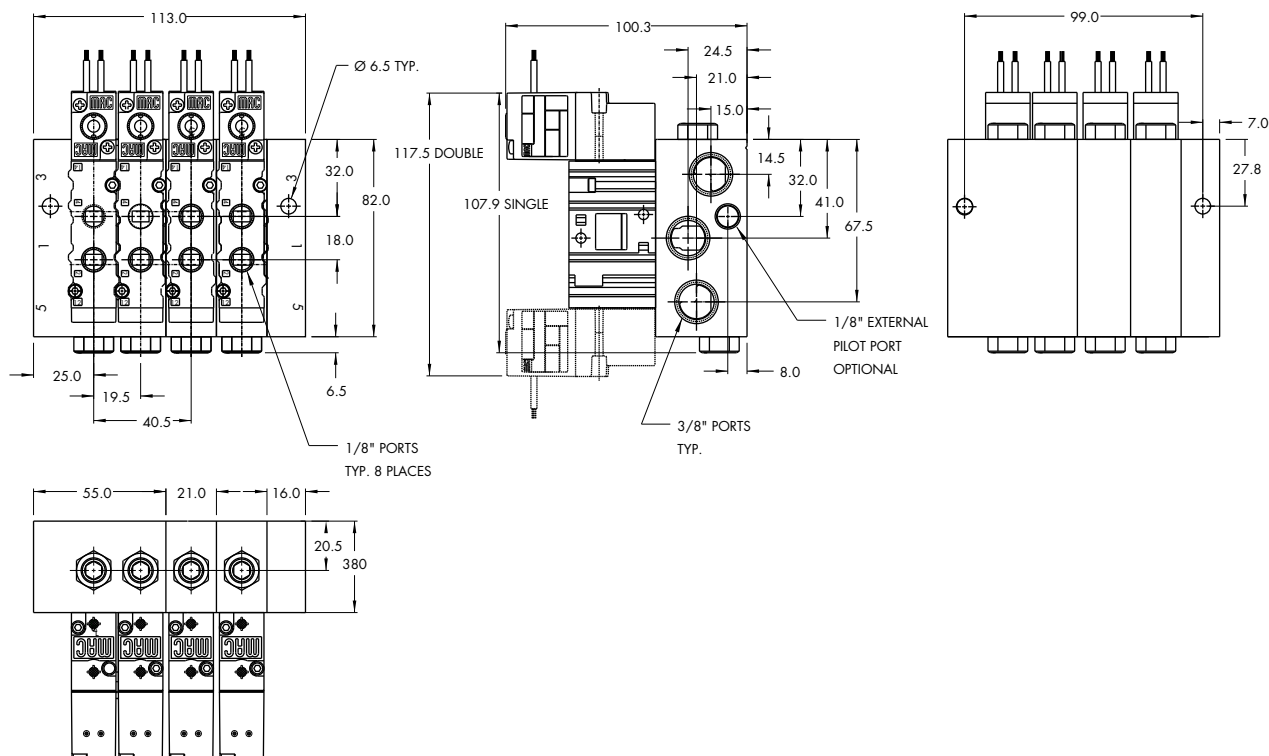
- ☐ clic with memory spring (replace by 4).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum - 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow :	1.0C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/6 W	Energize : 8-12 ms	De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.
- Accessories : • Blanking plate : M-04001. • Flow control (x2) : N-04001. • Seal (x2) : 17013-01, (x1) : 17015-01.
• Mounting screw (x2) : 35043. • End plate kit : M-04003-01. • End plate kit for common external : M-04004-01.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	add-a-unit stations for CBM403A bar

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

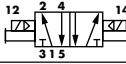
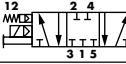
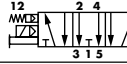
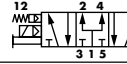
Reset



HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size	Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
						
1/8" NPT	Internal	☐ 411A-AOA-DM-Dxxx-xxx	☐ 421A-AOA-DM-Dxxx-xxx	☐ 451A-AOA-DM-Dxxx-xxx	☐ 461A-AOA-DM-Dxxx-xxx	☐ 471A-AOA-DM-Dxxx-xxx
1/4" NPT	Internal	☐ 411A-BOA-DM-Dxxx-xxx	☐ 421A-BOA-DM-Dxxx-xxx	☐ 451A-BOA-DM-Dxxx-xxx	☐ 461A-BOA-DM-Dxxx-xxx	☐ 471A-BOA-DM-Dxxx-xxx
1/8" NPT	External	☐ 411A-AOD-DM-Dxxx-xxx	☐ 421A-AOD-DM-Dxxx-xxx	☐ 451A-AOD-DM-Dxxx-xxx	☐ 461A-AOD-DM-Dxxx-xxx	☐ 471A-AOD-DM-Dxxx-xxx
1/4" NPT	External	☐ 411A-BOD-DM-Dxxx-xxx	☐ 421A-BOD-DM-Dxxx-xxx	☐ 451A-BOD-DM-Dxxx-xxx	☐ 461A-BOD-DM-Dxxx-xxx	☐ 471A-BOD-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX** X- X **XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR **

CBM403A-xxxxx-xx

Port size	Pilot air	Spacing 21 mm w/o flow controls	Spacing 21 mm w/ flow controls	Spacing 26 mm (Rectangular connector) w/o flow controls	Spacing 26 mm (Rectangular connector) w/ flow controls
3/8" NPTF	Internal	☐ CBM403A-01AEA-xx	☐ CBM403A-01BEA-xx	☐ CBM403A-02AEA-xx	☐ CBM403A-02BEA-xx
	Common external	☐ CBM403A-01CEA-xx	☐ CBM403A-01DEA-xx	☐ CBM403A-02CEA-xx	☐ CBM403A-02DEA-xx

Number of stations (01, 02, 03, or 04)

** Other options available. Consult factory.

OPTIONS

411A-AOA-DM-Dxxx-xxx

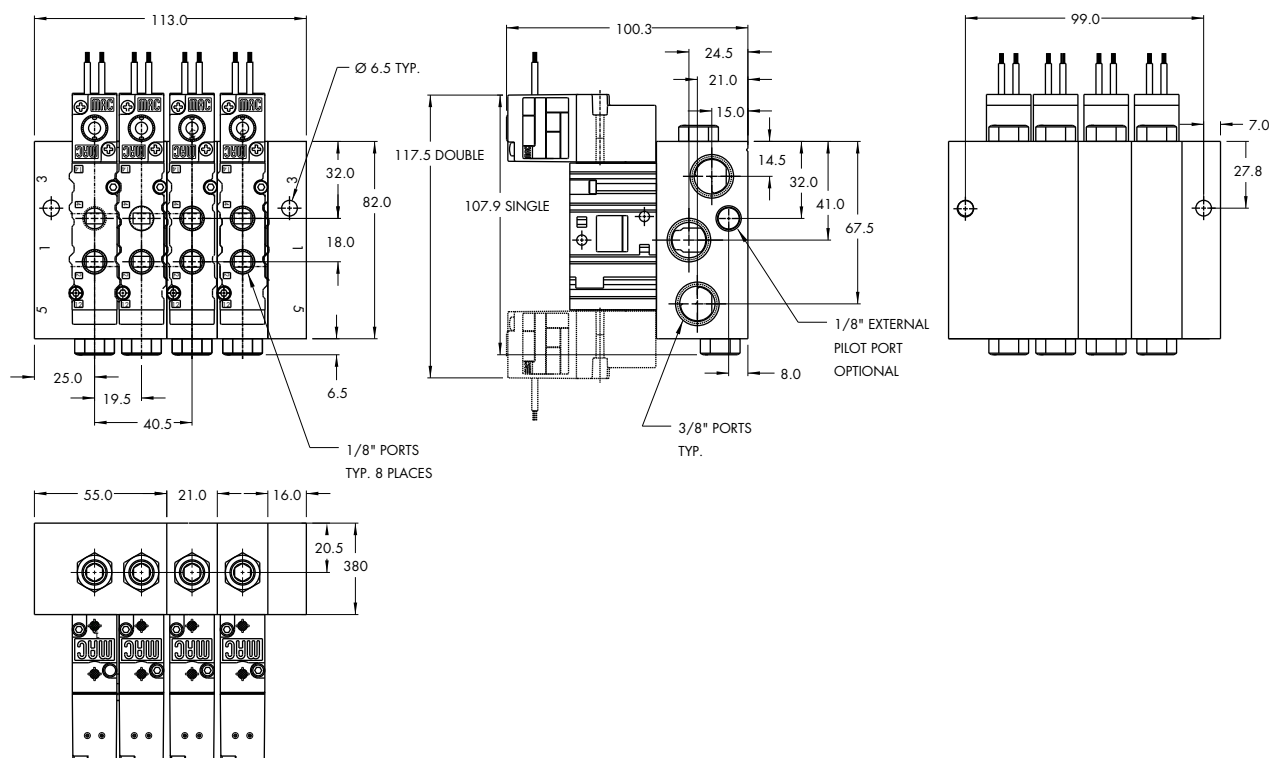
- ☐ clic with memory spring (replace by 4).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum - 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow :	1.0C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/ 6 W	Energize : 8-12 ms	De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.
- Accessories : • Blanking plate : M-04001. • Flow control (x2) : N-04001. • Seal (x2) : 17013-01, (x1) : 17015-01.
• Mounting screw (x2) : 35043. • End plate kit : M-04003-01. • End plate kit for common external : M-04004-01.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	mid profile cylinder ports in base

OPERATIONAL BENEFITS

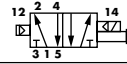
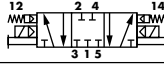
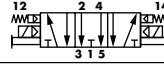
1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
Internal	☐ 413A-OOA-DM-Dxxx-xxx	☐ 423A-OOA-DM-Dxxx-xxx	☐ 453A-OOA-DM-Dxxx-xxx	☐ 463A-OOA-DM-Dxxx-xxx	☐ 473A-OOA-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X- X XX**

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR (BOTTOM CYLINDER PORTS) **

CBM404A-xxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm		Spacing 26 mm (Rectangular connector)	
		w/o flow controls	w/ flow controls	w/o flow controls	w/ flow controls
1/8" NPTF	Internal	☐ CBM404A-00AAA-xx	☐ CBM404A-00BAA-xx	☐ CBM404A-02AAA-xx	☐ CBM404A-02BAA-xx
1/4" NPTF	Internal	☐ CBM404A-00AAD-xx	☐ CBM404A-00BAD-xx	☐ CBM404A-02AAD-xx	☐ CBM404A-02BAD-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

OPTIONS

413A-OOA-DM-Dxxx-xxx

- ☐ clic with memory spring (replace by 6).

**TECHNICAL
DATA**

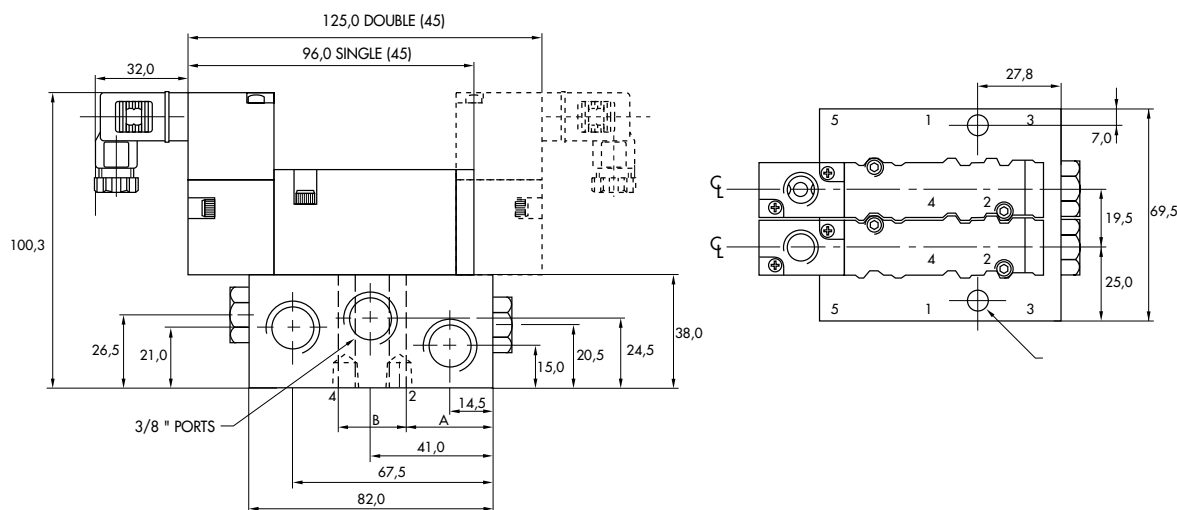
Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	20 - 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow :	1.0C _v		
:			
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V=5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/6 W	Energize : 8-12 ms	De-energize : 7-11 ms

Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.

Accessories : • Blanking plate : M-04002. • Flow control (x2) : N-04001. • Seal : 16525.
• Mounting screw (x2) : 35043.

Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Port size	A	B
1/8"	31.5	19.0
1/4"	32.0	20.0

Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	mid profile - add on style cylinder ports in base

OPERATIONAL BENEFITS

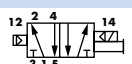
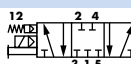
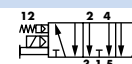
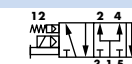
1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
Internal	☐ 413A-OOA-DM-Dxxx-xxx	☐ 423A-OOA-DM-Dxxx-xxx	☐ 453A-OOA-DM-Dxxx-xxx	☐ 463A-OOA-DM-Dxxx-xxx	☐ 473A-OOA-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX** X- X **XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR (BOTTOM CYLINDER PORTS) **

CBM404A-xxxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm w/o flow controls	Spacing standard 19,5 mm w/ flow controls	Spacing 26 mm (Rectangular connector) w/o flow controls	Spacing 26 mm (Rectangular connector) w/ flow controls
1/8" NPTF	Internal	☐ CBM404A-00ABA-xx	☐ CBM404A-00BBA-xx	☐ CBM404A-02ABA-xx	☐ CBM404A-02BBA-xx
1/4" NPTF	Internal	☐ CBM404A-00ABD-xx	☐ CBM404A-00BBD-xx	☐ CBM404A-02ABD-xx	☐ CBM404A-02BBD-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note: add-a-unit stations may be added to above bars.

OPTIONS

413A-OOA-DM-Dxxx-xxx

- ☐ clic with memory spring, replace by 6.

**TECHNICAL
DATA**

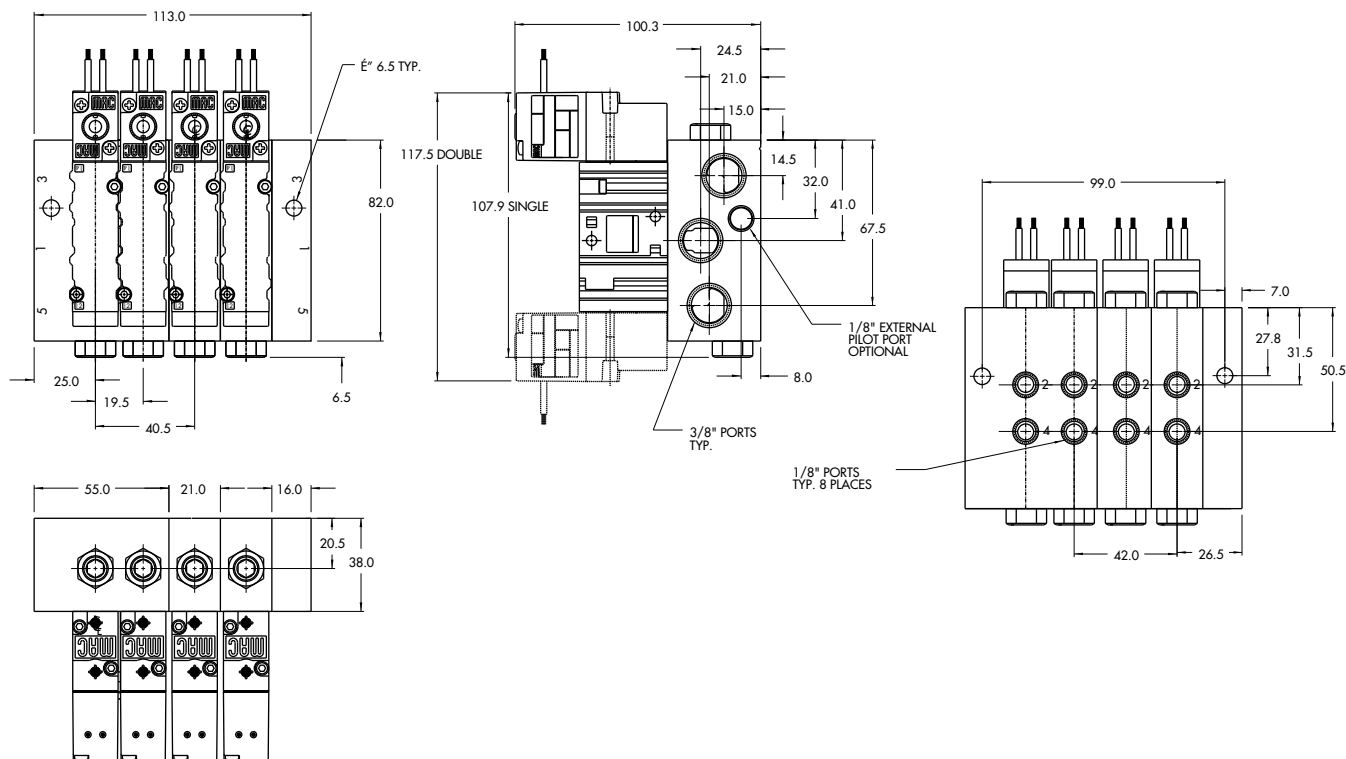
Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	20 - 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow :	1.0C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/ 6 W	Energize : 8-12 ms	De-energize : 7-11 ms

Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.

Accessories : • Blanking plate : M-04002. • Flow control (x2) : N-04001. • Seal : 16525.
• Mounting screw (x2) : 35043. • End plate kit : M-04003-01.

Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	add-a-unit stations for CBM404A bar

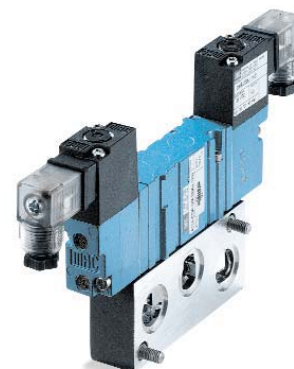
OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

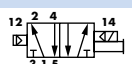
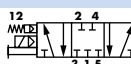
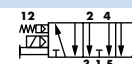
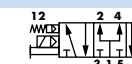
Reset

HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
Internal	☐ 413A-OOA-DM-Dxxx-xxx	☐ 423A-OOA-DM-Dxxx-xxx	☐ 453A-OOA-DM-Dxxx-xxx	☐ 463A-OOA-DM-Dxxx-xxx	☐ 473A-OOA-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X-X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR (BOTTOM CYLINDER PORTS) **

CBM404A-xxxxx-xx

Port size	Pilot air	Spacing 21 mm w/o flow controls	Spacing 21 mm w/ flow controls	Spacing 26 mm (Rectangular connector) w/o flow controls	Spacing 26 mm (Rectangular connector) w/ flow controls
1/8" NPTF	Internal	☐ CBM404A-01AEA-xx	☐ CBM404A-01BEA-xx	☐ CBM404A-02AEA-xx	☐ CBM404A-02BEA-xx
1/4" NPTF	Internal	☐ CBM404A-01AED-xx	☐ CBM404A-01BED-xx	☐ CBM404A-02AED-xx	☐ CBM404A-02BED-xx

Number of stations (01, 02, 03, or 04)

** Other options available. Consult factory.

OPTIONS

413A-OOA-DM-Dxxx-xxx

- ☐ clic with memory spring (replace by 6).

**TECHNICAL
DATA**

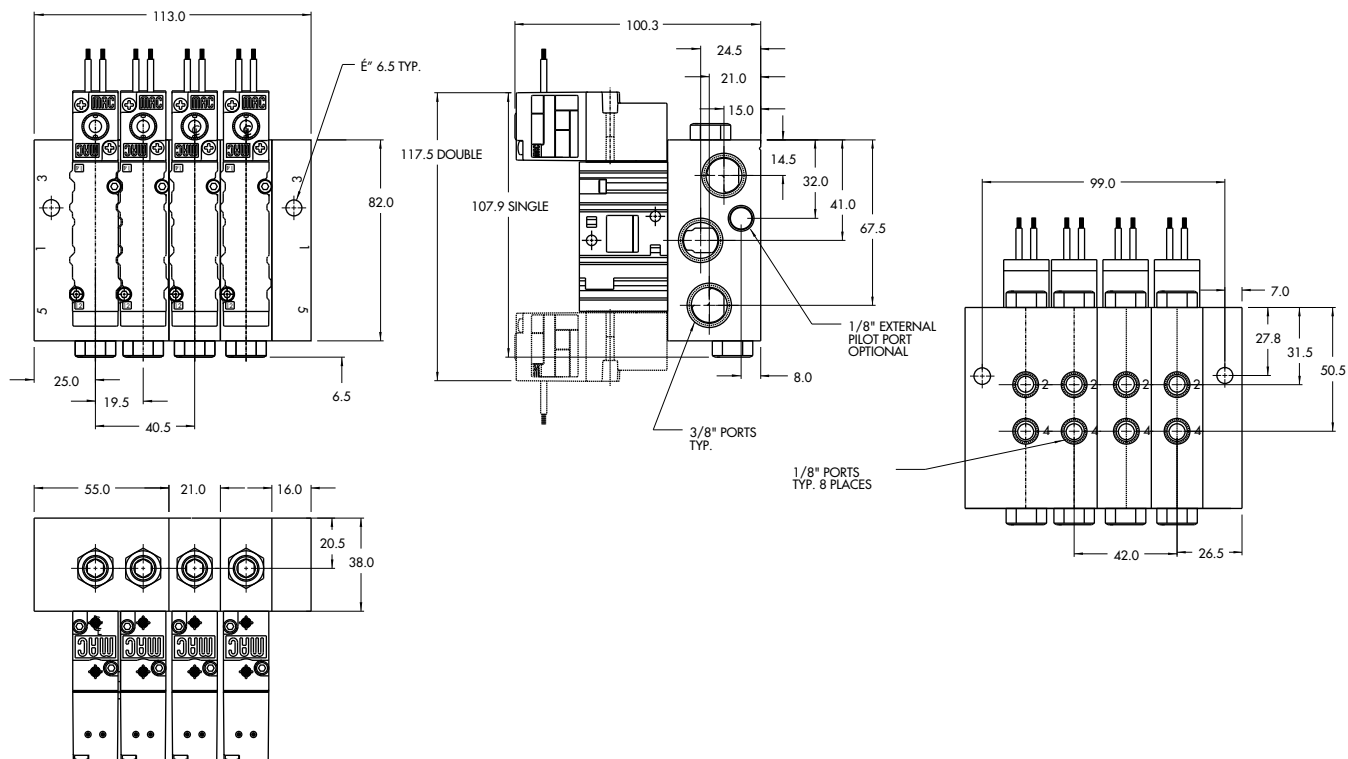
Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	20 - 150 PSI		
Pilot pressure :	20 - 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow :	1.0C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W	Energize : 7.3 ms	De-energize : 5.3ms
	60Hz/ 6 W	Energize : 8-12 ms	De-energize : 7-11 ms

Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.

Accessories : • Blanking plate : M-04002. • Flow control (x2) : N-04001. • Seal : 16525.
• Mounting screw (x2) : 35043. • End plate kit : M-04003-01.

Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	high profile cylinder ports in base

OPERATIONAL BENEFITS

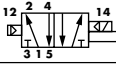
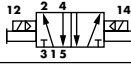
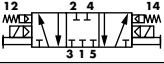
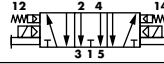
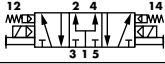
1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
Internal	☐ 413A-OOA-DM-Dxxx-xxx	☐ 423A-OOA-DM-Dxxx-xxx	☐ 453A-OOA-DM-Dxxx-xxx	☐ 463A-OOA-DM-Dxxx-xxx	☐ 473A-OOA-DM-Dxxx-xxx
External	☐ 413A-OOD-DM-Dxxx-xxx	☐ 423A-OOD-DM-Dxxx-xxx	☐ 453A-OOD-DM-Dxxx-xxx	☐ 463A-OOD-DM-Dxxx-xxx	☐ 473A-OOD-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X- X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR (SIDE CYLINDER PORTS) **

CBM405A-xxxxxx-xx

Port size	Pilot air	Spacing standard 19,5 mm	Spacing 26 mm (Rectangular connector)
1/8" NPTF	Internal	☐ CBM405A-00AAA-xx	☐ CBM405A-02AAA-xx
	Common external	☐ CBM405A-00BAA-xx	☐ CBM405A-02BAA-xx
1/4" NPTF	Internal	☐ CBM405A-00AAD-xx	☐ CBM405A-02AAD-xx
	Common external	☐ CBM405A-00BAD-xx	☐ CBM405A-02BAD-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

OPTIONS

413A-OOA-DM-Dxxx-xxx

☐ clic with memory spring (replace by 6).

TECHNICAL
DATA

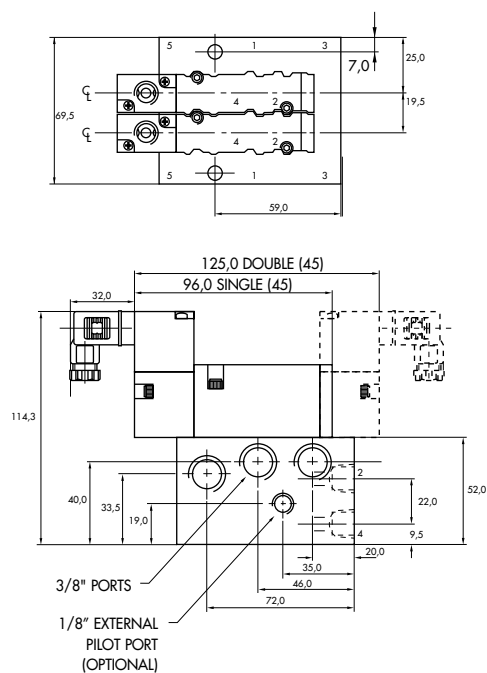
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum - 150 PSI
Pilot pressure :	20 - 150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	6.2 mm
Flow :	1.0C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W
Response times :	24 V= / 5.4 W Energize : 7.3 ms De-energize : 5.3ms 60Hz/ 6 W Energize : 8-12 ms De-energize : 7-11 ms

Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.

Accessories : • Blanking plate : M-04002. • Seal : 16525. • Mounting screw (x2) : 35043.

Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	high profile - add on style cylinder ports in base

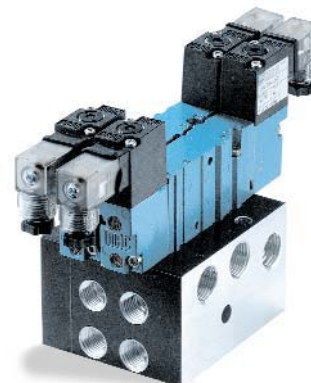
OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

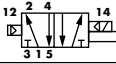
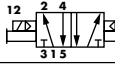
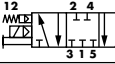
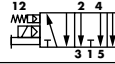
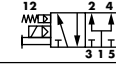
Reset

HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
Internal	☐ 413A-OOA-DM-Dxxx-xxx	☐ 423A-OOA-DM-Dxxx-xxx	☐ 453A-OOA-DM-Dxxx-xxx	☐ 463A-OOA-DM-Dxxx-xxx	☐ 473A-OOA-DM-Dxxx-xxx
External	☐ 413A-OOD-DM-Dxxx-xxx	☐ 423A-OOD-DM-Dxxx-xxx	☐ 453A-OOD-DM-Dxxx-xxx	☐ 463A-OOD-DM-Dxxx-xxx	☐ 473A-OOD-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX** X- X **XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

CBM405A-xxxxxx-xx

HOW TO ORDER CIRCUIT BAR (SIDE CYLINDER PORTS) **

Port size	Pilot air	Spacing standard 19,5 mm	Spacing 26 mm (Rectangular connector)
1/8" NPTF	Internal	☐ CBM405A-00ABA-xx	☐ CBM405A-02ABA-xx
	Common external	☐ CBM405A-00BCA-xx	☐ CBM405A-02BCA-xx
1/4" NPTF	Internal	☐ CBM405A-00ABD-xx	☐ CBM405A-02ABD-xx
	Common external	☐ CBM405A-00BCD-xx	☐ CBM405A-02BCD-xx

Number of stations (03=3 stations)

** Other options available. Consult factory.

Note: add-a-unit stations may be added to above bars.

OPTIONS

413A-OOA-DM-Dxxx-xxx

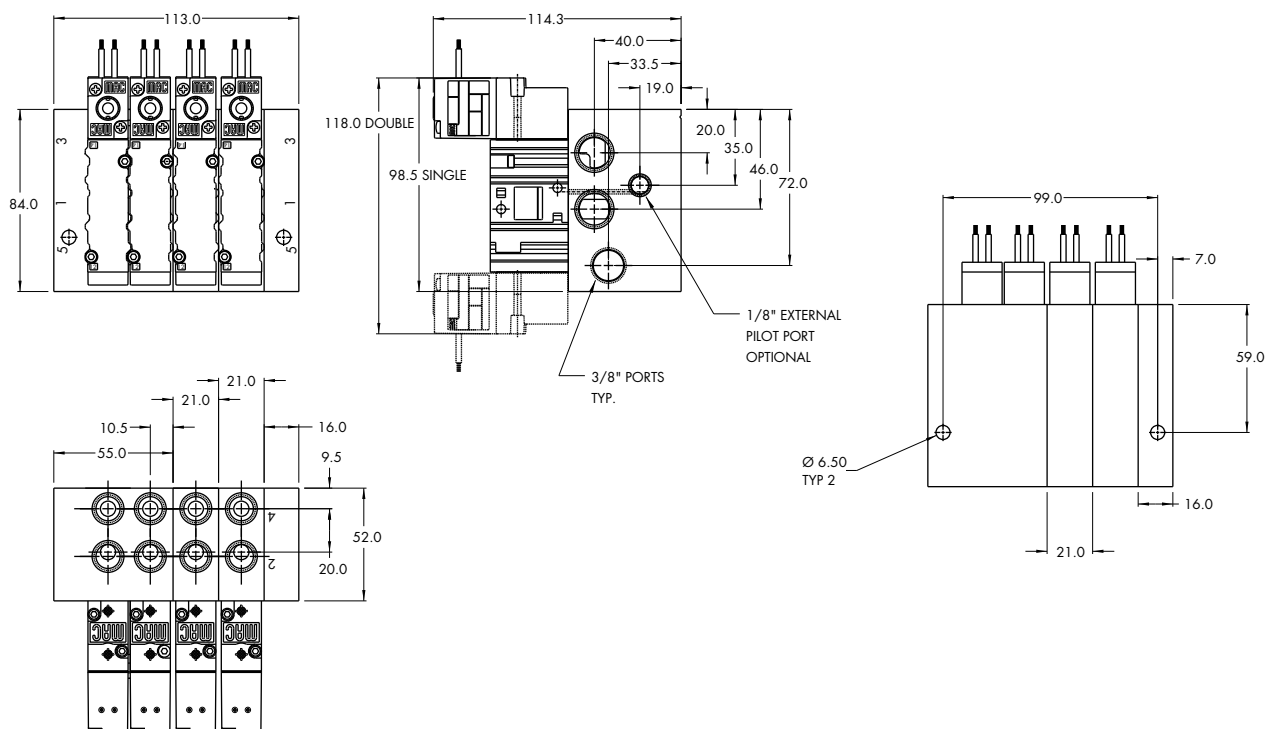
- ☐ clic with memory spring (replace by 6).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum - 150 PSI
Pilot pressure :	20 - 150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	6.2 mm
Flow :	1.0C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W
Response times :	24 V=/5.4 W Energize : 7.3 ms De-energize : 5.3ms 60Hz/6 W Energize : 8-12 ms De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.
- Accessories : • Blanking plate : M-04002. • Seal : 16525. • Mounting screw (x2) : 35043.
• End plate kit : M-04005-01. • End plate kit for common external pilot : M-04006-01.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS



Function	Port size (NPTF)	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/8" - 1/4"	1.0C_v	add-a-unit stations for CBM405A bar

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

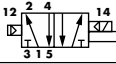
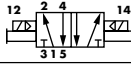
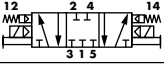
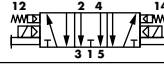
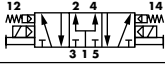
Reset

HOW TO ORDER

xxxx-xxx-DM-Dxxx-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Pilot air	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
Internal	☐ 413A-OOA-DM-Dxxx-xxx	☐ 423A-OOA-DM-Dxxx-xxx	☐ 453A-OOA-DM-Dxxx-xxx	☐ 463A-OOA-DM-Dxxx-xxx	☐ 473A-OOA-DM-Dxxx-xxx
External	☐ 413A-OOD-DM-Dxxx-xxx	☐ 423A-OOD-DM-Dxxx-xxx	☐ 453A-OOD-DM-Dxxx-xxx	☐ 463A-OOD-DM-Dxxx-xxx	☐ 473A-OOD-DM-Dxxx-xxx

SOLENOID OPERATOR ➤

D **XX X- X XX***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
☐ JB 240/60, 220/50	☐ A 18" (Flying leads)	☐ 1 Non-locking	☐ KA Square connector
☐ JA 120/60, 110/50	☐ J Connector	☐ 2 Locking	☐ KD Square connector with light
☐ JC 24/60, 24/50	☐ x Other Options	☐ x Other Options	☐ JB Rectangular connector
☐ FB 24VDC (1.8 W)			☐ JD Rectangular connector with light
☐ DA 24VDC (5.4 W)			☐ BA Flying leads
☐ DF 24VDC (12.7 W)			☐ xx Other Options
☐ xx Other Options			

HOW TO ORDER CIRCUIT BAR (SIDE CYLINDER PORTS) **

CBM405A-xxxxx-xx

Port size	Pilot air	Spacing 21 mm	Spacing 26 mm (Rectangular connector)
1/8" NPTF	Internal	☐ CBM405A-01AEA-xx	☐ CBM405A-02AEA-xx
	Common external	☐ CBM405A-01BEA-xx	☐ CBM405A-02BEA-xx
1/4" NPTF	Internal	☐ CBM405A-01AED-xx	☐ CBM405A-02AED-xx
	Common external	☐ CBM405A-01BED-xx	☐ CBM405A-02BED-xx

Number of stations (01, 02, 03, or 04)

** Other options available. Consult factory.

OPTIONS

413A-OOA-DM-Dxxx-xxx

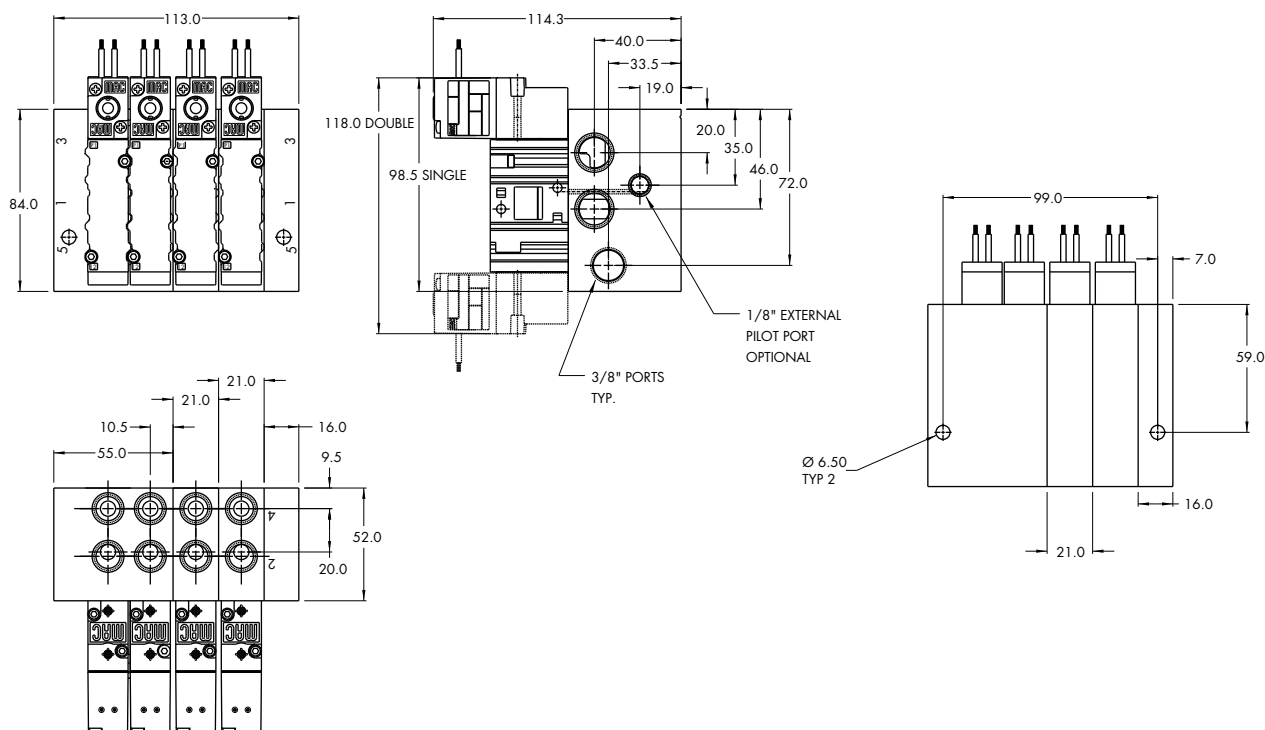
- ☐ clic with memory spring (replace by 6).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 - 150 PSI External pilot : vacuum - 150 PSI
Pilot pressure :	20 - 150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	6.2 mm
Flow :	1.0C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 10.9 VA Holding : 7.7 VA = 1.8 to 12.7 W
Response times :	24 V= / 5.4 W Energize : 7.3 ms De-energize : 5.3ms 60Hz/6 W Energize : 8-12 ms De-energize : 7-11 ms

- Spare parts : • Pilot valve : DMB-DXXX-XXX-1, including mounting screws 35069 and seal 16524.
- Accessories : • Blanking plate : M-04002. • Seal : 16525. • Mounting screw (x2) : 35043.
• End plate kit : M-04005-01. • End plate kit for common external pilot : M-04006-01.
- Options : • BSPP threads. • Isolation of inlet and/or exhaust.

DIMENSIONS





Section 2

Options



0 p t i o n s

Codification table for voltages / Wire length / Manual operator / Electrical connection

VALVE CODE ➤

DM-DXX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- pilot operated valves 400, 52 & 92 Series

1. VOLTAGE

- D XX	X - X XX	VOLTAGE
☐ DB		12 VDC (5.4 W)
☐ DC		12 VDC (7.5 W)
☐ DD		24 VDC (7.3 W)
☐ DE		12 VDC (12.7 W)
☐ DK		110 VDC (5.8 W)
☐ DJ		28 VDC (5.7 W)
☐ DL		64 VDC (6.0 W)
☐ DM		36 VDC (5.8 W)
☐ DN		6 VDC (6.0 W)
☐ DR		90 VDC (6.6 W)
☐ DS		110 VDC (7.3 W), 100 VDC (6.0 W)
☐ DT		75 VDC (5.6 W)
☐ DP		48 VDC (5.8 W)
☐ FA		12 VDC (1.8 W)
☐ FE		12 VDC (2.4 W)
☐ FF		24 VDC (2.4 W)
☐ JD		100/60, 100/50, 110/60

2. WIRE LENGTH

- D XX	X - X XX	WIRE LENGTH
☐ B		24"
☐ C		36"
☐ D		48"
☐ E		72"
☐ F		96"

3. MANUAL OPERATOR

- D XX X - X XX MANUAL OPERATOR

☐	0	No operator
☐	1	Non-locking recessed
☐	2	Locking recessed
☐	3	Non-locking extended
☐	4	Locking extended

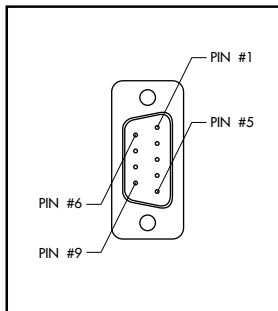
4. ELECTRICAL CONNECTION

- D XX X - X XX ELECTRICAL CONNECTION

☐	BA	Flying leads
☐	BK	BA with protection diode
☐	BL	BA with protection varistor
☐	CA	1/2" NPS conduit
☐	JB	Rectangular connector
☐	JD	Rectangular connector with light
☐	JM	Rectangular connector, male only
☐	KA	Square connector
☐	KB	Square connector with protection diode
☐	KC	Square connector with protection varistor
☐	KD	Square connector with light
☐	KE	Square connector with light and protection diode
☐	KF	Square connector with light and protection varistor
☐	KJ	Square connector (male only)
☐	KK	Square connector with protection diode (male only)
☐	KL	Square connector with protection varistor (male only)
☐	TA	Dual tabs
☐	TB	TA with protection diode
☐	TD	TA with light
☐	TE	TA with light and protection diode
☐	TJ	Dual tabs (male only)
☐	TK	TJ with protection diode
☐	TM	TJ with light
☐	TN	TJ with light and protection diode
☐	*DN	Plug-in with diode
☐	*DP	Plug-in with M.O.V.
☐	*DH	Plug-in with diode & ground
☐	*DJ	Plug-in with M.O.V & ground

* These options only apply to the 92 series. All others are for the 400 and 52 series.

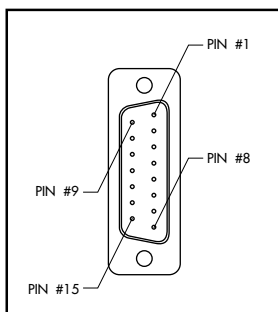
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

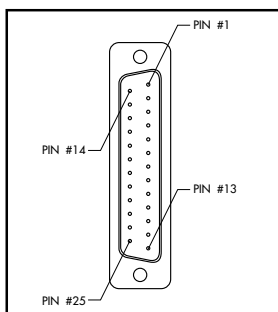
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

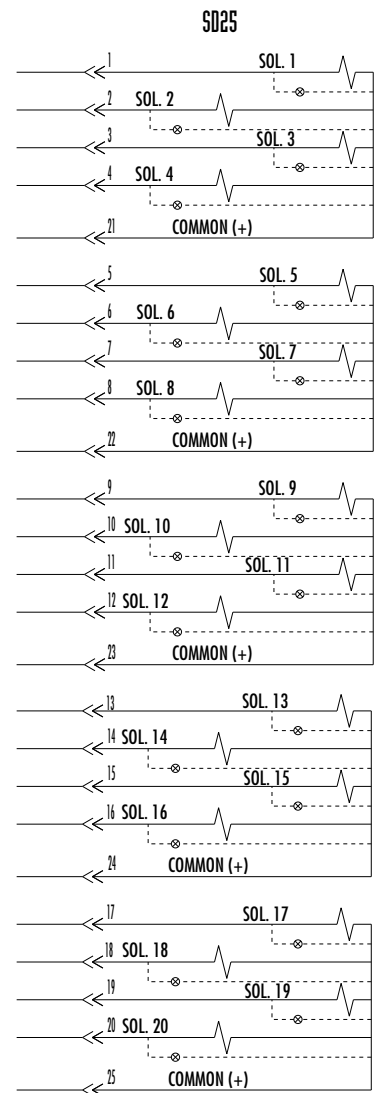
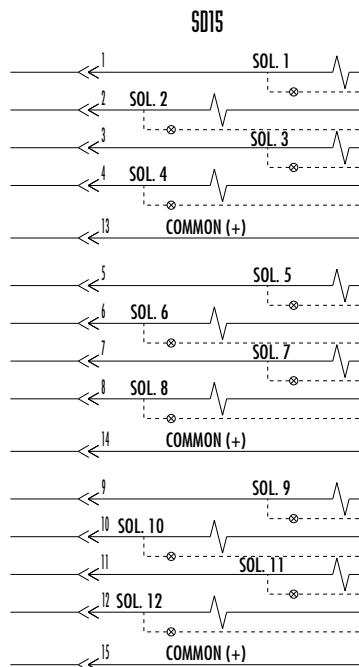
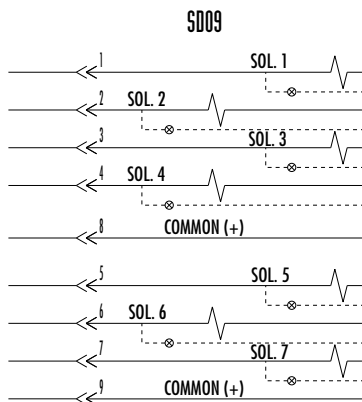
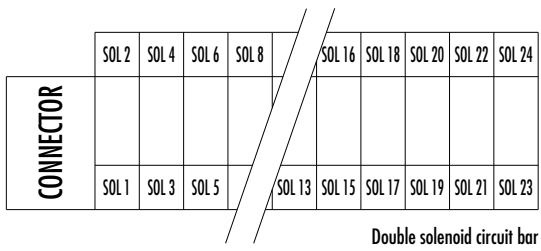
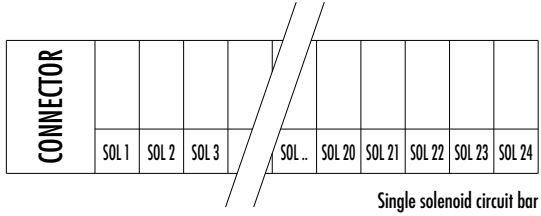


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

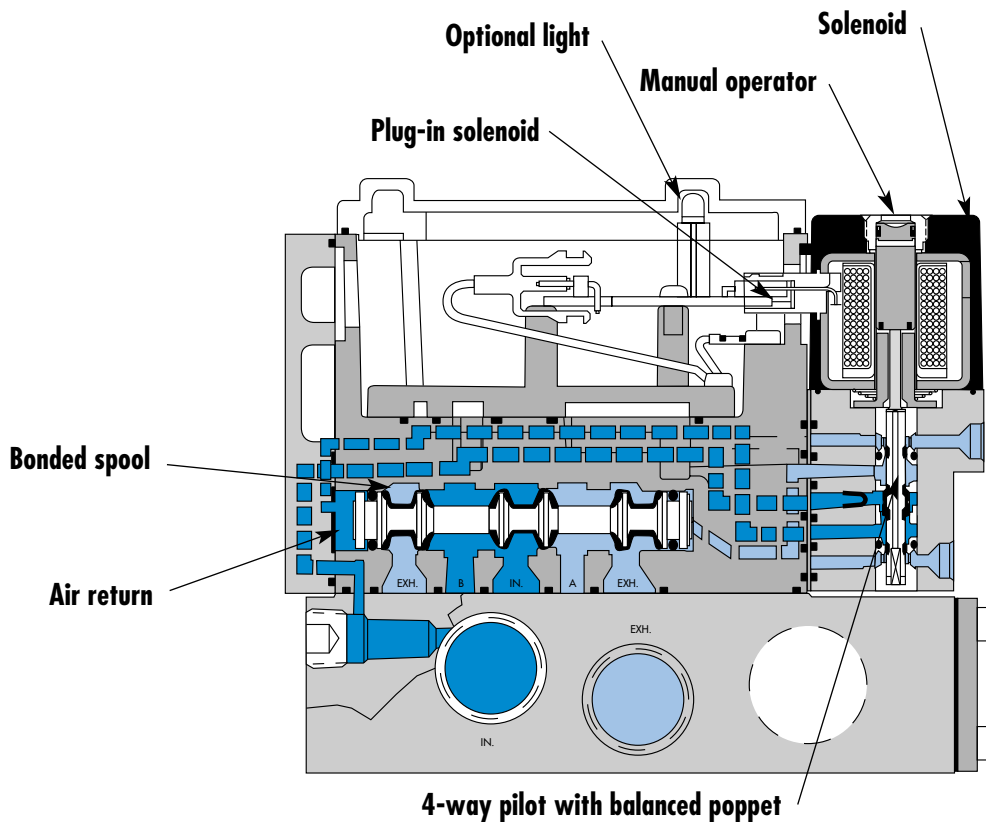
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

standard	add-on style	add-a-unit stations for CBM092B
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SERIES FEATURES

- Patented MACSOLENOID[®] for fastest possible response times and virtually burn-out proof AC solenoid operation.
- Optional low watt DC solenoids.
- Optional memory spring.
- Plug-in design of valves and bases for ease of maintenance.
- 2 position or 3 position valve configurations.

Function Port size Flow [Max] Circuit bar mounting

5/2 - 5/3 - 3/2

1/8 - 1/4 - 3/8

1.0C_v

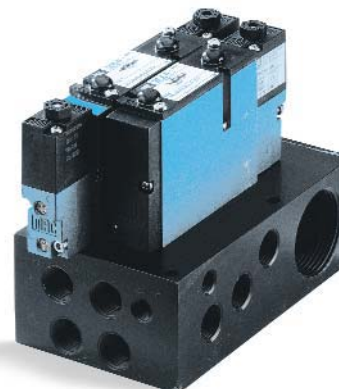
standard

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded seal spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

92B-xxx-000-DM-DxxP-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

SINGLE PRESSURE MODELS

Port size (see circuit bar)	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
Valve less base	92B-AAA-000-DM-DxxP-xxx	92B-BAA-000-DM-DxxP-xxx	92B-EAA-000-DM-DxxP-xxx	92B-FAA-000-DM-DxxP-xxx	92B-GAA-000-DM-DxxP-xxx

DUAL PRESSURE MODELS (REQUIRES SANDWICH PRESSURE REGULATOR)

Port size (see circuit bar)	5/2 Single operator	5/2 Double operator
Valve less base	92B-CAA-000-DM-DxxP-xxx	92B-DAA-000-DM-DxxP-xxx

SOLENOID OPERATOR >

DM-DxxP-xxx

XX Voltage	X Manual operator	XX Electrical connection
JB 240/60, 220/50	1 Non-locking	DM Plug-in
JA 120/60, 110/50	2 Locking	DG Plug-in w/ground
JC 24/60, 24/50	xx Other Options	Note : Ground wire required for solenoids 30 volts and above.
FB 24VDC (1.8 W)		xx Other Options
DA 24VDC (5.4 W)		
DF 24VDC (12.7 W)		
xx Other Options		

HOW TO ORDER CIRCUIT BAR

CBM092B-01xxx-AOxx

Port size	Pilot air	Side cylinder ports (25 mm)	Bottom cylinder ports (25 mm)
1/8 NPTF	Internal	CBM092B-01AAA-A0*xx	CBM092B-01BAA-A0*xx
	Common external	CBM092B-01CAA-A0*xx	CBM092B-01DAA-A0*xx
1/4 NPTF	Internal	CBM092B-01AAD-A0*xx	CBM092B-01BAD-A0*xx
	Common external	CBM092B-01CAD-A0*xx	CBM092B-01DAD-A0*xx
3/8 NPTF	Internal	CBM092B-01AAG-A0*xx	CBM092B-01BAG-A0*xx
	Common external	CBM092B-01CAG-A0*xx	CBM092B-01DAG-A0*xx

Number of stations (03=3 stations)

Note : clic for valves mounted on base at the factory (add - 9 to the model number).
for multi-pin connector (9, 15 or 25).

* If replaced by BO : circuit bar for single operator valves only.

Consult "Precautions" before use, installation or service of MAC Valves.

OPTIONS

Sandwich flow controls available, consult factory.

92B-AAA-000-DM-DXXP-1DM

- For lights on valve, replace by B.
- For lights and diode on valve, replace by F.
- For lights and MOV on valve, replace by H.

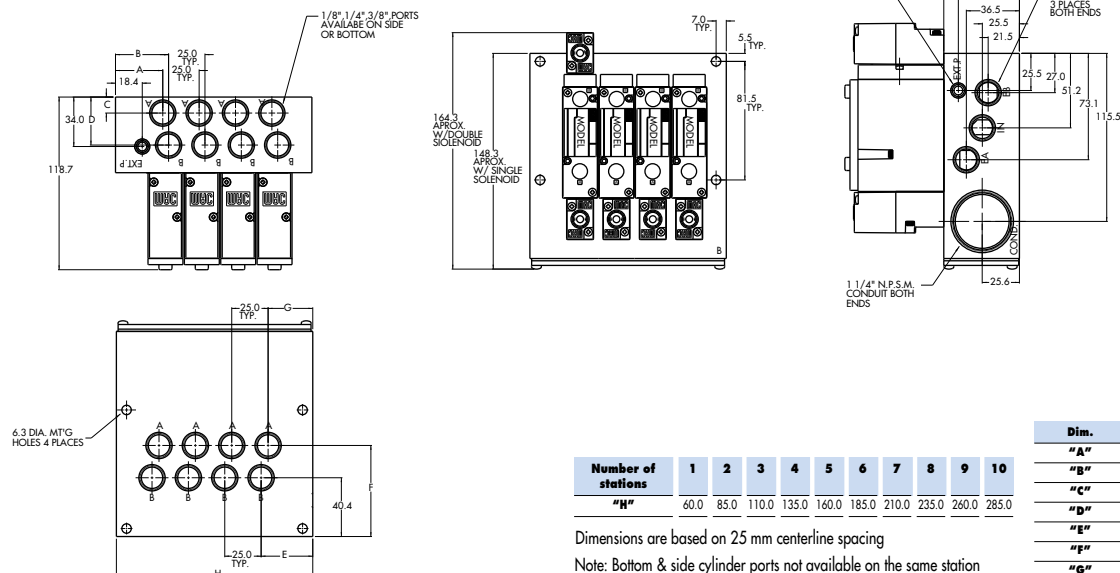
TECHNICAL

DATA	
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : 20 to 120 PSI 3 positions : 35 to 120 PSI External pilot : vacuum to 120 PSI 3 positions : 35 to 120 PSI
Pilot pressure :	20 to 120 PSI 3 positions : 35 to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Orifice :	6.2 mm
Flow (at 6 bar, ΔP=1bar) :	1.0 C _v
Coil :	General purpose class A, continuous duty, encapsulated
Voltage range :	-15% to +10% of nominal voltage
Protection :	NEMA 4
Power :	~ Inrush : 7.6 VA Holding : 4.8 VA = 1.8 to 12.7 W
Response times :	24 V= / 5.4 W Energize : 8 ms De-energize : 7 ms 60Hz/2.9 W Energize : 7-13 ms De-energize : 12-20 ms

Spare parts :
 • Pilot valve : DMB-DXXP-XXX-1 including mounting screws 35069 (x2) and seal 16544.
 • Pressure seal between valve and base : 16543. • Mounting screws valve to base (x2) : 35050. • Blanking plate : M-92002.

Options :
 • BSPP threads. • Isolation of inlet and/or exhaust. • Circuit bar for number of stations > 24.

DIMENSIONS



Number of stations	1	2	3	4	5	6	7	8	9	10
"H"	60.0	85.0	110.0	135.0	160.0	185.0	210.0	235.0	260.0	285.0

Dimensions are based on 25 mm centerline spacing
 Note: Bottom & side cylinder ports not available on the same station

Dim.	1/8"	1/4"	3/8"
"A"	30.0	30.0	32.5
"B"	39.0	39.0	36.5
"C"	10.0	10.0	11.0
"D"	33.0	33.0	34.0
"E"	40.9	36.9	35.5
"F"	61.1	61.1	62.6
"G"	30.1	30.9	30.7

Consult "Precautions" before use, installation or service of MAC Valves.

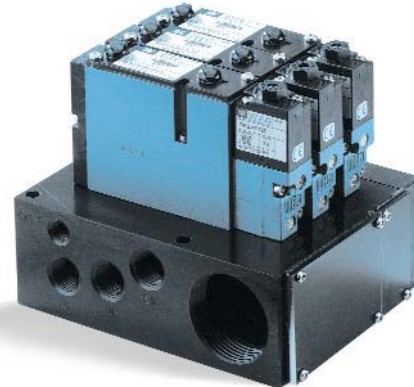
Function	Port size	Flow [Max]	Circuit bar mounting
5/2 - 5/3 - 3/2	1/8 - 1/4 - 3/8	1.0C_v	add-on style

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded seal spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

92B-xxx-000-DM-DxxP-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

SINGLE PRESSURE MODELS

Port size (see circuit bar)	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
Valve less base	92B-AAA-000-DM-DxxP-xx	92B-BAA-000-DM-DxxP-xx	92B-EAA-000-DM-DxxP-xx	92B-FAA-000-DM-DxxP-xx	92B-GAA-000-DM-DxxP-xx

DUAL PRESSURE MODELS (REQUIRES SANDWICH PRESSURE REGULATOR)

Port size (see circuit bar)	5/2 Single operator	5/2 Double operator
Valve less base	92B-CAA-000-DM-DxxP-xxx	92B-DAA-000-DM-DxxP-xxx

SOLENOID OPERATOR >

DM-DxxP- x xx*

XX Voltage	X Manual operator	XX Electrical connection
JB 240/60, 220/50	1 Non-locking	DM Plug-in
JA 120/60, 110/50	2 Locking	DG Plug-in w/ground
JC 24/60, 24/50	xx Other Options	Note : Ground wire required for solenoids 30 volts and above.
FB 24VDC (1.8 W)		xx Other Options
DA 24VDC (5.4 W)		
DF 24VDC (12.7 W)		
xx Other Options		

HOW TO ORDER CIRCUIT BAR

CBM092B-01xxx-AOxx

Port size	Pilot air	Side cylinder ports (25 mm)	Bottom cylinder ports (25 mm)
1/8 NPTF	Internal	CBM092B-01ABA-A0*xx	CBM092B-01BBA-A0*xx
	Common external	CBM092B-01CBA-A0*xx	CBM092B-01DBA-A0*xx
1/4 NPTF	Internal	CBM092B-01ABD-A0*xx	CBM092B-01BBD-A0*xx
	Common external	CBM092B-01CBD-A0*xx	CBM092B-01DBD-A0*xx
3/8 NPTF	Internal	CBM092B-01ABG-A0*xx	CBM092B-01BBG-A0*xx
	Common external	CBM092B-01CBG-A0*xx	CBM092B-01DBG-A0*xx

* If replaced by BO : circuit bar for single operator valves only.

Number of stations (03=3 stations)

Note : clic for valves mounted on base at the factory (add - 9 to the model number).
for multi-pin connector (9, 15 or 25).

Note : add-a-unit stations may be added to above bars. See
page for model numbers

Consult "Precautions" before use, installation or service of MAC Valves.

OPTIONS

Sandwich flow controls available, consult factory.

92B-AAA-000-DM-DXXP-1DM

- For lights on valve, replace by B.
- For lights and diode on valve, replace by F.
- For lights and MOV on valve, replace by H.

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : 20 to 120 PSI 3 positions : 35 to 120 PSI External pilot : vacuum to 120 PSI 3 positions : 35 to 120 PSI		
Pilot pressure :	20 to 120 PSI 3 positions : 35 to 120 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	6.2 mm		
Flow (at 6 bar, ΔP=1bar) :	1.0 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 7.6 VA Holding : 4.8 VA = 1.8 to 12.7 W		
Response times :	24 V= / 5.4 W Energize : 8 ms De-energize : 7 ms 60Hz/2.9 W Energize : 7-13 ms De-energize : 12-20 ms		

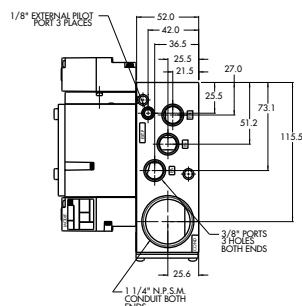
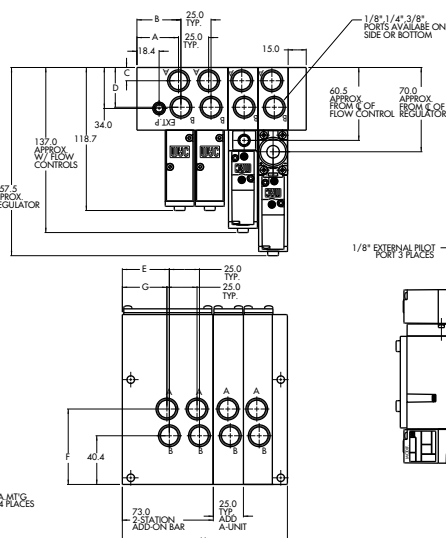
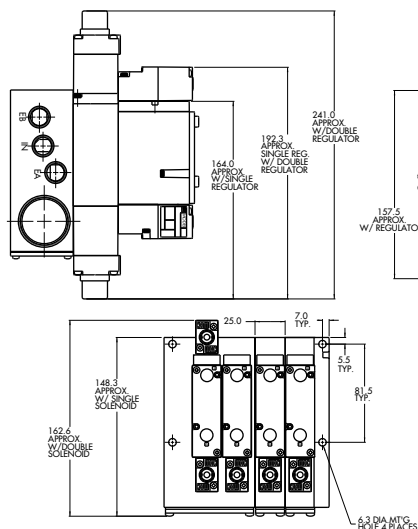
Spare parts :

- Pilot valve : DMB-DXXP-XXX-1 including mounting screws 35069 (x2) and seal 16544.
- Pressure seal between valve and base : 16543. • Mounting screws valve to base (x2) : 35050. • Blanking plate : M-92002.
- End plate kit : M-92001-01 • Isolator disc between add-a-units : 28413.

Options :

- BSPP threads. • Isolation of inlet and/or exhaust. • Circuit bar for number of stations > 24.

DIMENSIONS



Number of stations	1	2	3	4	5	6	7	8	9	10
"H"	63.0	88.0	113.0	138.0	163.0	188.0	213.0	238.0	263.0	288.0

Dimensions are based on 25 mm centerline spacing

Note: Bottom & side cylinder ports not available on the same station

Dim.	1/8"	1/4"	3/8"
"A"	32.0	32.0	34.5
"B"	39.0	39.0	36.5
"C"	10.0	10.0	11.0
"D"	33.4	33.4	33.0
"E"	40.9	37.9	36.5
"F"	61.1	61.1	62.6
"G"	30.1	31.9	34.5

Consult "Precautions" before use, installation or service of MAC Valves.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2 - 5/3 - 3/2	1/8 - 1/4 - 3/8	1.0C_v	add-a-unit stations for CBM092B

OPERATIONAL BENEFITS

1. The 4-way pilot develops maximum shifting forces both ways.
2. Memory spring available.
3. Balanced spool, immune to variations of pressure, also provides high flow.
4. Short stroke with high flow.
5. Bonded seal spool with minimum friction, shifting in a glass-like finished bore.
6. Pilot with balanced poppet, high flow, short and consistent response times.
7. Wiping effect eliminates sticking.
8. Long service life.

Reset

92B-xxx-000-DM-DxxP-xxx



HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

SINGLE PRESSURE MODELS

Port size (see circuit bar)	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
Valve less base	92B-AAA-000-DM-DxxP-xx	92B-BAA-000-DM-DxxP-xx	92B-EAA-000-DM-DxxP-xx	92B-FAA-000-DM-DxxP-xx	92B-GAA-000-DM-DxxP-xx

DUAL PRESSURE MODELS (REQUIRES SANDWICH PRESSURE REGULATOR)

Port size (see circuit bar)	5/2 Single operator	5/2 Double operator
Valve less base	92B-CAA-000-DM-DxxP-xxx	92B-DAA-000-DM-DxxP-xxx

SOLENOID OPERATOR >

DM-DxxP-xxx

XX Voltage	X Manual operator	XX Electrical connection
JB 240/60, 220/50	1 Non-locking	DM Plug-in
JA 120/60, 110/50	2 Locking	DG Plug-in w/ground
JC 24/60, 24/50	xx Other Options	Note : Ground wire required for solenoids 30 volts and above.
FB 24VDC (1.8 W)		xx Other Options
DA 24VDC (5.4 W)		
DF 24VDC (12.7 W)		
xx Other Options		

HOW TO ORDER CIRCUIT BAR

CBM092B-01xxx-AOxx

Port size	Side cylinder ports (25 mm)	Bottom cylinder ports (25 mm)
1/8 NPTF	CBM092B-01ACA-A0*xx	CBM092B-01BCA-A0*xx
1/4 NPTF	CBM092B-01ACD-A0*xx	CBM092B-01BCD-A0*xx
3/8 NPTF	CBM092B-01ACG-A0*xx	CBM092B-01BCG-A0*xx

Number of stations (01=1 stations). Available in one (1) or two (2) station lengths.

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).
when add-a-units are added to bars with a multi-pin connector, MOD SD03 should be included with add-a-unit model number.

* If replaced by BO : circuit bar for single operator valves only.



Section 2

Options



0 p t i o n s

Codification table for voltages / Wire length / Manual operator / Electrical connection

VALVE CODE ➤

DM-DXX X - X XX
1 2 3 4

OPTIONS AVAILABLE FOR

- pilot operated valves 400, 52 & 92 Series

1. VOLTAGE

- D XX	X - X XX	VOLTAGE
☐ DB		12 VDC (5.4 W)
☐ DC		12 VDC (7.5 W)
☐ DD		24 VDC (7.3 W)
☐ DE		12 VDC (12.7 W)
☐ DK		110 VDC (5.8 W)
☐ DJ		28 VDC (5.7 W)
☐ DL		64 VDC (6.0 W)
☐ DM		36 VDC (5.8 W)
☐ DN		6 VDC (6.0 W)
☐ DR		90 VDC (6.6 W)
☐ DS		110 VDC (7.3 W), 100 VDC (6.0 W)
☐ DT		75 VDC (5.6 W)
☐ DP		48 VDC (5.8 W)
☐ FA		12 VDC (1.8 W)
☐ FE		12 VDC (2.4 W)
☐ FF		24 VDC (2.4 W)
☐ JD		100/60, 100/50, 110/60

2. WIRE LENGTH

- D XX	X - X XX	WIRE LENGTH
☐ B		24"
☐ C		36"
☐ D		48"
☐ E		72"
☐ F		96"

3. MANUAL OPERATOR

- D XX X - X XX MANUAL OPERATOR

☐	0	No operator
☒	1	Non-locking recessed
☐	2	Locking recessed
☐	3	Non-locking extended
☐	4	Locking extended

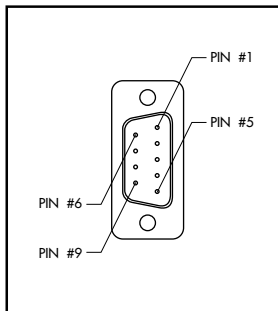
4. ELECTRICAL CONNECTION

- D XX X - X XX ELECTRICAL CONNECTION

☐	BA	Flying leads
☐	BK	BA with protection diode
☐	BL	BA with protection varistor
☒	CA	1/2" NPS conduit
☐	JB	Rectangular connector
☐	JD	Rectangular connector with light
☐	JM	Rectangular connector, male only
☐	KA	Square connector
☐	KB	Square connector with protection diode
☐	KC	Square connector with protection varistor
☐	KD	Square connector with light
☐	KE	Square connector with light and protection diode
☐	KF	Square connector with light and protection varistor
☐	KJ	Square connector (male only)
☐	KK	Square connector with protection diode (male only)
☐	KL	Square connector with protection varistor (male only)
☐	TA	Dual tabs
☐	TB	TA with protection diode
☐	TD	TA with light
☐	TE	TA with light and protection diode
☐	TJ	Dual tabs (male only)
☐	TK	TJ with protection diode
☐	TM	TJ with light
☐	TN	TJ with light and protection diode
☐	*DN	Plug-in with diode
☐	*DP	Plug-in with M.O.V.
☐	*DH	Plug-in with diode & ground
☐	*DJ	Plug-in with M.O.V & ground

* These options only apply to the 92 series. All others are for the 400 and 52 series.

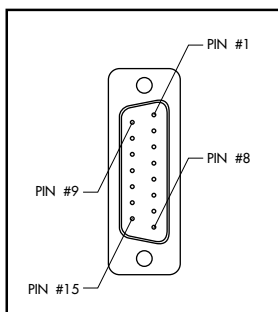
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

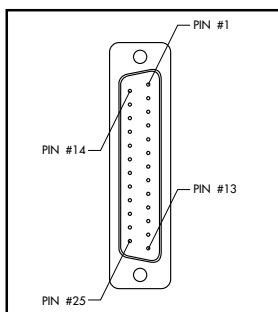
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

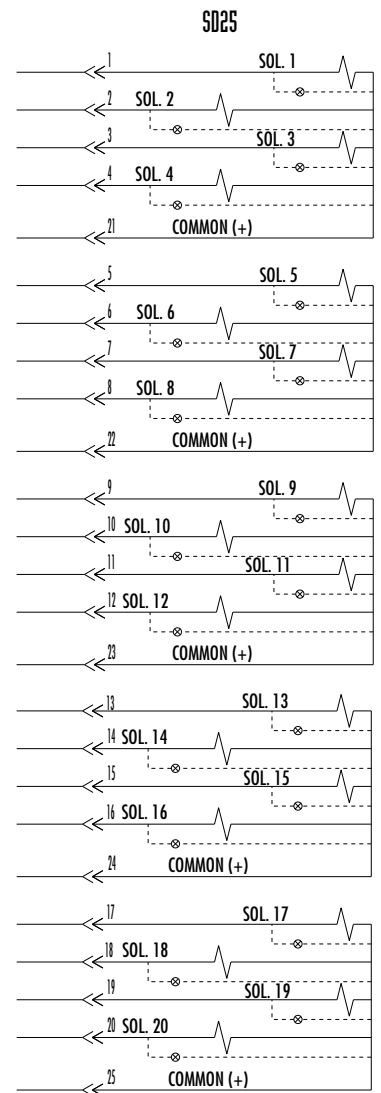
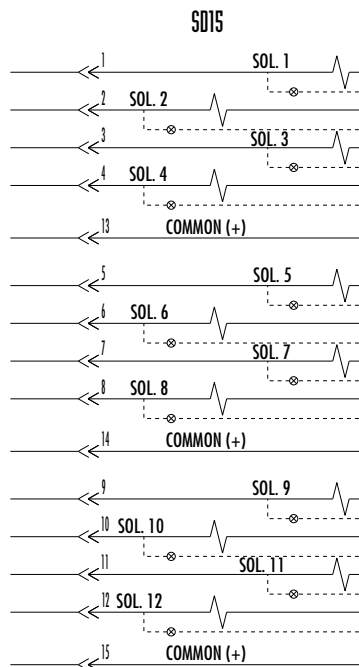
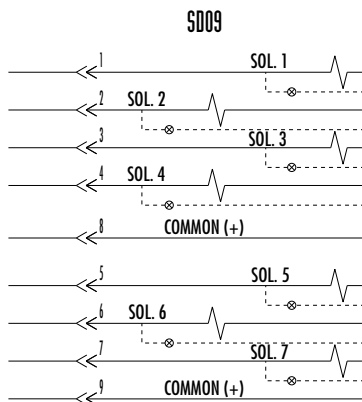
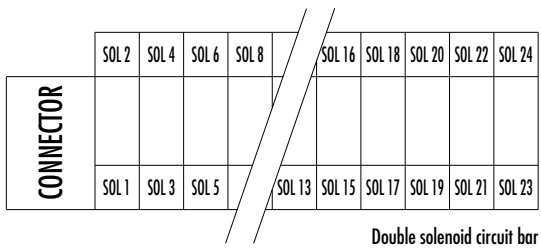
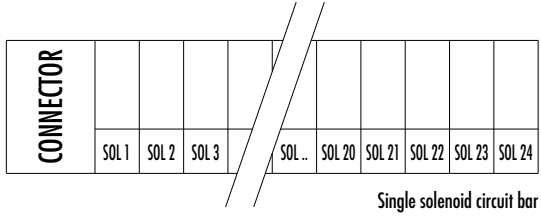


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

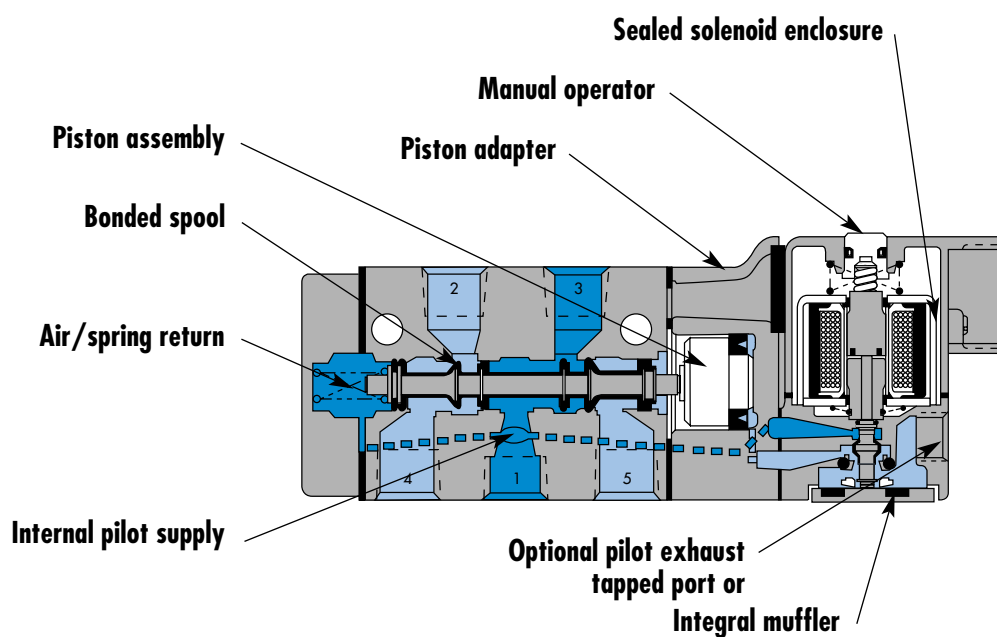
Note : Use desired MOD. number after circuit bar part number

Connector termination details



Circuit bar mounting

cylinder ports in valve	with shut-off valve



SERIES FEATURES

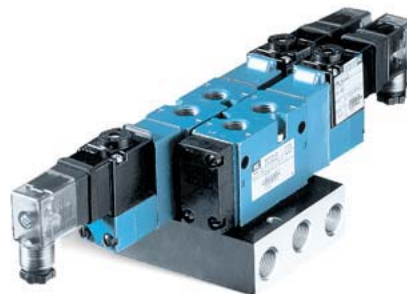
- Patented MACSOLENOID® with its non-burn out feature on AC service.
- Air/spring return on single solenoid valves.
- Use for lube or non-lube service.
- Optional low wattage DC solenoids down to 1 watt.
- Various types of manual operators and solenoid enclosures.
- 2 position or 3 position valve configurations.

Function	Port size	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/4"	1.3C_v	cylinder ports in valve

OPERATIONAL BENEFITS

1. Balanced spool, immune to variations of pressure.
2. Short stroke with high flow.
3. The piston (booster) provides maximum shifting forces.
4. Powerful return force thanks to the combination of mechanical and air springs.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Wiping effect eliminates sticking.
7. Pilot valve with balanced poppet, high flow, short and consistent response times.
8. Long service life.

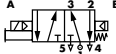
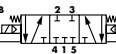
Reset



HOW TO ORDER

xxxx-PM-xxxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
1/4" NPTF	☐ 811C-PM- xyzz -172	☐ 821C-PM- xyzz -172	☐ 825C-PM- xyzz -572	☐ 825C-PM- xyzz -672	☐ 825C-PM- xyzz -872

SOLENOID OPERATOR ➤

XX Y ZZ*

Voltage	Manual operator	Electrical connection
☐ 11 120/60, 110/50	☐ 1 Non-locking	☐ JB Rectangular connector
☐ 12 240/60, 220/50	☐ 2 Locking	☐ JD Rectangular connector with light
☐ 22 24/50, 24/60	☐ xx Other Options	☐ BA Flying leads (18")
☐ 59 24VDC (2.5 W)		☐ xx Other Options
☐ 87 24VDC (17.1 W)		
☐ 61 24VDC (8.5 W)		
☒ xx Other Options		

HOW TO ORDER CIRCUIT BAR**

EBM800A-xxxx-xx

Port size (Spacing 31 mm)	Standard circuit bar	Circuit bar with flow controls (2 per station)
3/8" NPTF	☐ EBM800A-001A-xx	☐ EBM800A-002A-xx

Number of stations (03=3 stations)

Other options available. Consult factory.

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : single operator and 3 positions : 20 to 150 PSI double operator : 10 to 150 PSI External pilot : vacuum to 200 PSI		
Pilot pressure :	Single operator and 3 positions : 20 to 150 PSI Double operator : 20 to 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	7 mm		
Flow (at 6 bar, ΔP=1bar) :	1/4" : 1.3 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 14.8 VA Holding : 10.9 VA = 1 to 17.1 W		
Response times :	24 V=8.5 W	Energize : 8 ms	De-energize : 10ms
	60Hz/6 W	Energize : 5-11 ms	De-energize : 9-16 ms

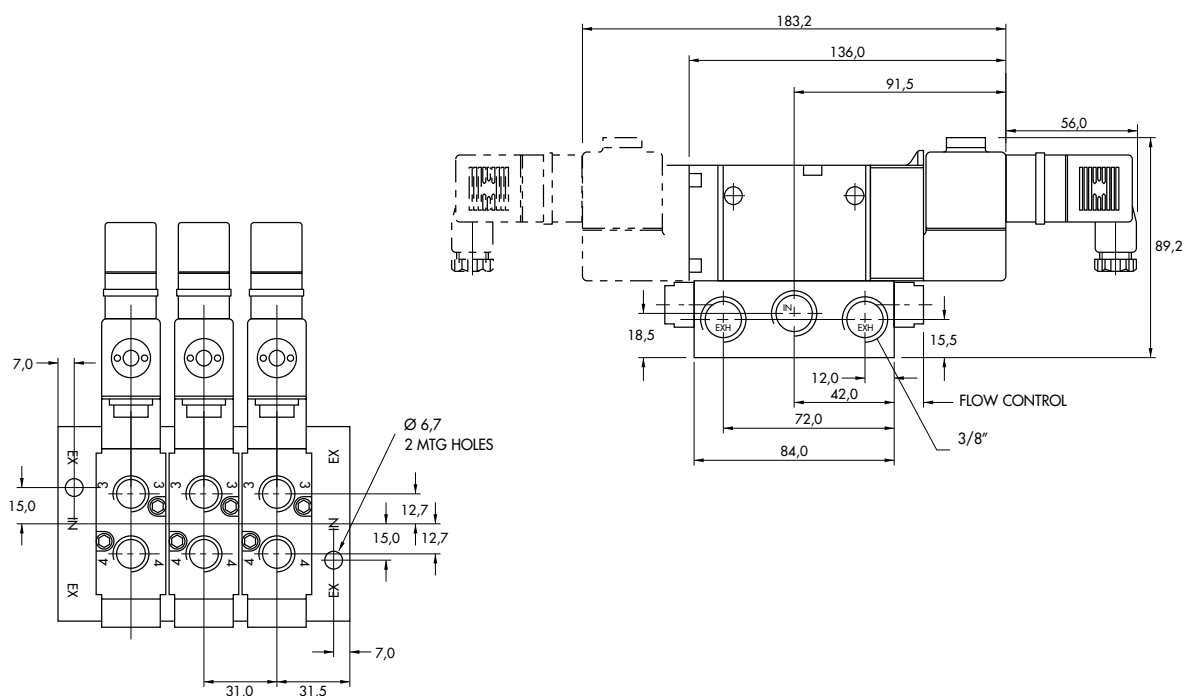
Spare parts :

- Pilot valve : PME-XYZZ.
- Mounting screw pilot to main valve : 34364.
- Blanking plate : M-08008.
- Mounting screw valve to bar (x2) : 35249.
- Flow control : N08006.

Options :

- BSPP threads.
- Isolation of inlet and/or exhaust.
- Explosion-proof model.

DIMENSIONS

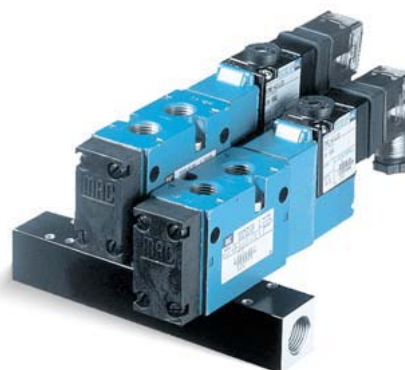


Function	Port size	Flow [Max]	Circuit bar mounting
5/2 - 5/3	1/4"	1.3C_v	with shut-off valve

OPERATIONAL BENEFITS

1. Balanced spool, immune to variations of pressure.
2. Short stroke with high flow.
3. The piston (booster) provides maximum shifting forces.
4. Powerful return force thanks to the combination of mechanical and air springs.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Wiping effect eliminates sticking.
7. Pilot valve with balanced poppet, high flow, short and consistent response times.
8. Long service life.

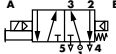
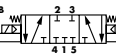
Reset



HOW TO ORDER

xxxx-PM-xxxxx-xxx

HOW TO ORDER VALVE FOR CIRCUIT BAR MOUNTING

Port size	5/2 Single operator	5/2 Double operator	5/3 Closed center	5/3 Open center	5/3 Pressure center
					
1/4" NPTF	☐ 811C-PM- xyzz -172	☐ 821C-PM- xyzz -172	☐ 825C-PM- xyzz -572	☐ 825C-PM- xyzz -672	☐ 825C-PM- xyzz -872

SOLENOID OPERATOR ➤

XX Y ZZ*

Voltage	Manual operator	Electrical connection
☐ 11 120/60, 110/50	☐ 1 Non-locking	☐ JB Rectangular connector
☐ 12 240/60, 220/50	☐ 2 Locking	☐ JD Rectangular connector with light
☐ 22 24/50, 24/60	☐ xx Other Options	☐ BA Flying leads (18")
☐ 59 24VDC (2.5 W)		☐ xx Other Options
☐ 87 24VDC (17.1 W)		
☐ 61 24VDC (8.5 W)		
☐ xx Other Options		

HOW TO ORDER CIRCUIT BAR**

EBI800A-xxxx-xx

Port size (Spacing 31 mm)	w/o inlet shut-off valve	w/ inlet shut-off valve
3/8" NPTF	☐ EBI800A-001A-xx	☐ EBI800A-002A-xx

Number of stations (03=3 stations)

Other options available. Consult factory.

Note : ☐ clic for valves mounted on base at the factory (add - 9 to the model number).

**TECHNICAL
DATA**

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : single operator and 3 positions : 20 to 150 PSI double operator : 10 to 150 PSI External pilot : vacuum to 200 PSI		
Pilot pressure :	Single operator and 3 positions : 20 to 150 PSI Double operator : 20 to 150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to +50°C)		
Orifice :	7 mm		
Flow (at 6 bar, ΔP=1bar) :	1/4" : 1.3 C _v		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	NEMA 4		
Power :	~ Inrush : 14.8 VA Holding : 10.9 VA = 1 to 17.1 W		
Response times :	24 V= / 8.5 W	Energize : 8 ms	De-energize : 10ms
	60Hz/6 W	Energize : 5-11 ms	De-energize : 9-16 ms

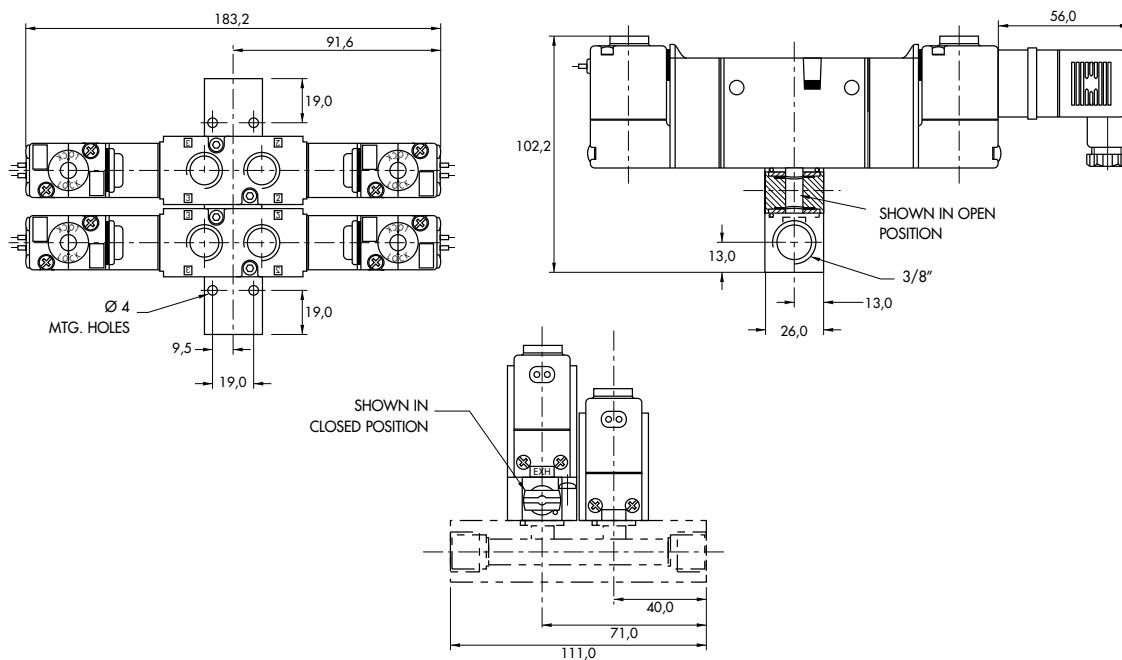
Spare parts :

- Pilot valve : PME-XYZZ.
- Mounting screw pilot to main valve : 34364.
- Blanking plate : M-08011.
- Shut-off valve : M-08010.
- Mounting screw valve to bar (x2): 35249.

Options :

- BSPP threads.
- Isolation of inlet and/or exhaust.
- Explosion-proof model.

DIMENSIONS





Section 2

Options



0 p t i o n s

Codification table for voltages / Manual operator / Electrical connection / Wire length

VALVE CODE ➤

-XX Y ZZ (-VV)
1 2 3 4

OPTIONS AVAILABLE FOR

- valves type 800 Series

1. VOLTAGE

- XX Y ZZ	VOLTAGE
☐ 11	120/60 - 110/50
☐ 12	240/60 - 220/50
☐ 13	100/60 - 100/50
☐ 15	200/60 - 200 V~/50 Hz
☐ 16	10/60
☐ 20	6/60
☐ 21	12/50 - 12/60
☐ 22	24/60 - 24/50
☐ 23	32/60 - 32/50
☐ 24	48/60 - 42/50
☐ 26	380/50, 440/50 - 440/60, 480/60-CLSF
☐ 29	200/60
☐ 34	127/50 - 120/50
☐ 35	48/50
☐ 36	16/60
☐ 81	24/50
☐ 50	24 VDC (6W)
☐ 51	24 VDC (4W)
☐ 54	12 VDC (4W)
☐ 55	12 VDC (6W)
☐ 57	12 VDC (2.5W)
☐ 59	24 VDC (2.5W)
☐ 60	12 VDC (8.5W)
☐ 61	24 VDC (8.5W)
☐ 64	6 VDC (6W)
☐ 65	32 VDC (7W)
☐ 66	48 VDC (5.8W)
☐ 67	64 VDC (7.5W)
☐ 68	120 VDC (6.4W)
☐ 75	90 VDC (8.8W)
☐ 76	100 VDC (6.9W)
☐ 84	125 VDC (10.9W)
☐ 87	24 VDC (17.1W)
☐ 88	12 VDC (17.4W)
☐ 89	36 VDC (18.8W)
☐ 90	28 VDC (8.2W)
☐ 91	6 VDC (10.6W)
☐ 92	190 VDC (6.5W)
☐ 94	3 VDC (7W)
☐ 95	38 VDC (6.4W)
☐ A1	24 VDC (1.0W)
☐ A2	12 VDC (1.0W)
☐ A3	9 VDC (1.0W)

MOD. DD01 : Protection diode (DC)

MOD. MOV1 : Protection varistor (AC)

MOD. DD01 : max. 8,5 W

MOD. MOV1 : max. 8,5 W

* Voltages are CLSF only

2. MANUAL OPERATOR

- XX Y ZZ	MANUAL OPERATOR
☐ 0	No operator
☐ 1	Non-locking recessed
☐ 2	Locking recessed
☐ 3	Non-locking extended
☐ 4	Locking extended

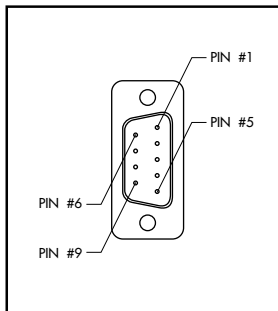
3. ELECTRICAL CONNECTION

- XX Y ZZ	ELECTRICAL CONNECTION
☐ AA	Wiring box with 1/2" NPS conduit
☐ BA	Flying leads
☐ CA	1/2" NPS conduit
☐ CC	1/2" NPT conduit
☐ FA	Military type 2 PIN
☐ GA	Military type 3 PIN
☐ HA	AA with ground wire
☐ JA	Square connector
☐ JB	Rectangular connector
☐ JC	Square connector with light
☐ JD	Rectangular connector with light
☐ JJ	Square connector, male only
☐ JM	Rectangular connector, male only
☐ NA	CA with ground wire
☐ NC	CC with ground wire
☐ RA	3/8" NPS conduit
☐ CD	20 mm conduit

4. WIRE LENGTH

- XX Y ZZ (-VV)	WIRE LENGTH
☐ AA	18"
☐ AB	24"
☐ AD	36"
☐ AE	48"
☐ AF	72"
☐ AG	6"
☐ AR	12"
☐ AU	120"
☐ BA	60"
☐ BB	144"

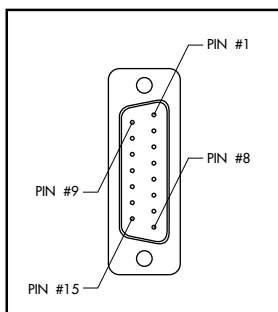
MOD. S009



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 9
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 7 max.
- Max. 24 V=/5.4 W per solenoid
- 2 common wires

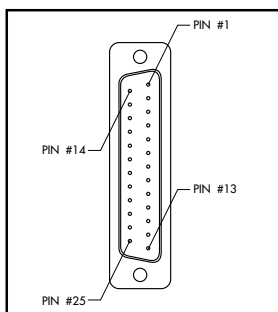
MOD. S015



TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 15
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 12 max.
- Max. 24 V=/5.4 W per solenoid
- 3 common wires

MOD. S025

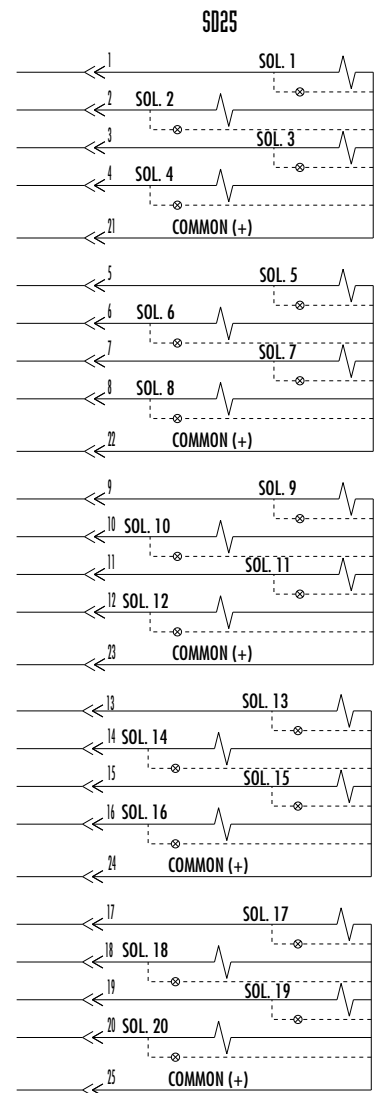
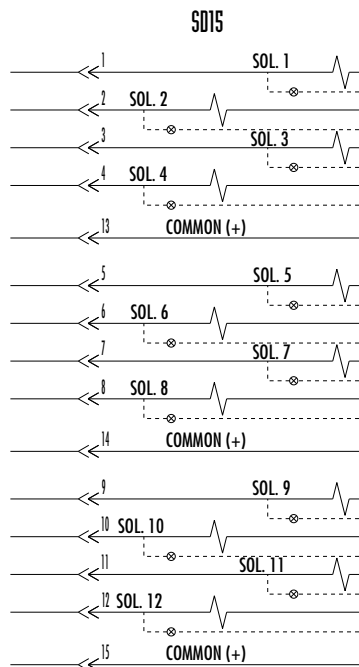
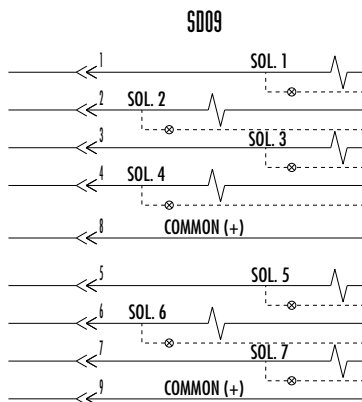
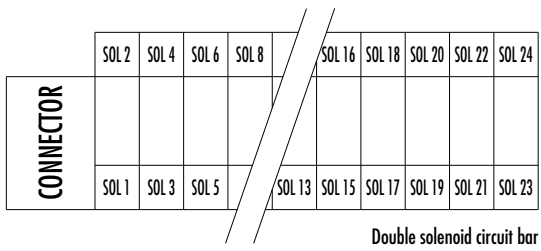
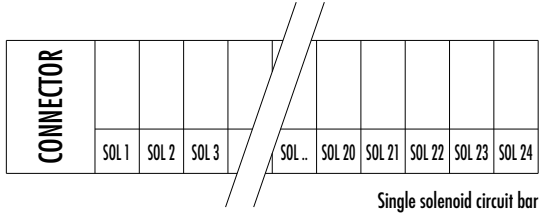


TECHNICAL DATA

- Type «SUB_D»
- Number of contacts : 25
- Solder termination (Dia. 0.6 mm/0.14 mm²/26-22 AWG)
- Operating current 5 A/contact
- Rated voltage 125 V~
- Temp. range -40° to +125°C
- Insulation resistance $\geq 5.0^9 \Omega$
- Protection class IP40 (DIN 40050)
- Number of solenoids : 20 max.
- Max. 24 V=/5.4 W per solenoid
- 5 common wires

Note : Use desired MOD. number after circuit bar part number

Connector termination details



PRECAUTIONS AND WARNINGS CONCERNING THE APPLICATION, INSTALLATION AND SERVICE OF MAC VALVES AND OTHER MAC VALVES PRODUCTS

The warnings and precautions below are important to be read and understood before designing into a system any MAC Valves products, and before installing or servicing any MAC Valves product. Improper use, installation or servicing of any MAC Valves product in some systems could create a hazard to personnel or equipment. No distinction in importance should be made between the terms warnings and precautions.

WARNING :

Under no circumstances are MAC Valves products to be used in any application or in any manner where failure of the MAC Valves product to operate as intended could in any way jeopardize the safety of the operator or any other person or property.

- Do not operate outside of pressure range listed on a valve label or outside of the designated temperature range.
- Air supply must be clean and dry. Moisture or contamination can affect proper operation of the valve.
- Before attempting to repair, adjust or clean a MAC Valves product, consult catalog, parts & operation sheet, or factory for proper maintenance procedures, lubrication and cleaning agents. Never attempt to repair or perform other maintenance with air pressure to the valve.
- If air line lubrication is used do not use any lubrication other than those recommended in the catalog, parts & operation sheet or by the factory.

APPLICATION PRECAUTIONS :

INDUSTRIAL USE -

- MAC Valve products are intended for general use in industrial pneumatic and/or vacuum systems. They are general purpose industrial products with literally thousands of different applications in industrial systems. These products are not inherently dangerous, but they are only a component of an overall system. The system in which they are used must provide adequate safeguards to prevent injury or damage in the event failure occurs, whether it be failure of switches, regulators, cylinders, valves or any other component.

POWER PRESSES -

MAC Valve products are not designed nor intended to be used to operate and/or control the operation of clutch and/or brake systems on power presses. There are special products on the market for such use.

2-POSITION VALVES -

Some MAC valves are 2-position, 4-way valves. When air is supplied to the inlet port(s) of these valves, there will always be a flow path from the inlet to one of the outlets regardless of which of the two positions the valve is situated. Therefore, if pressurized air retained in the system would present a hazard in the application or servicing of the valve or system, a separate method in the system must be provided to remove the trapped air.

3- POSITION VALVES-

Some MAC valves are 3-position, 4-way valves. These valves are either double solenoid or double remote air operated.

If either of the two operators is in control, air supplied to the inlet port(s) will pass through the valve to one of the outlets as on 2-position, 4-way valves. However, if neither operator is in control, the valve moves to a center position. Listed below are the various center position functions :

A. CLOSED CENTER-

With this type valve, when in the center position all ports are blocked (inlets and exhausts) meaning the air at both outlet ports is trapped. If trapping the air in both outlet ports would present a hazard in the application or servicing, a separate method in the system must be provided to remove the trapped air or this type valve should not be used.

B. OPEN CENTER-

With this type valve, when in the center position, the inlet port(s) is blocked and the two outlet ports are open to the exhaust port(s) of the valve. If having no air in either outlet port would present a hazard in the application or servicing, this type valve should not be used.

C. PRESSURE CENTER-

With this type valve, when in the center position, the inlet port(s) is connected to both outlet ports of the valve. If having pressurized air to either or both outlet ports would present a hazard in the application or servicing of the valve or system, a separate method in the system must be provided to remove the retained air or this type valve should not be used.

OPERATING SPECIFICATIONS -

MAC Valves products are to be installed only on applications that meet all operating specifications described in the MAC catalog for the MAC Valves product.

MANUAL OPERATORS-

Most MAC valves can be ordered with manual operators. Manual operators when depressed, are designed to shift the valve to the same position as would the corresponding solenoid or remote air pilot operator if it were activated. Care must be taken to order a type, if any, that will be safe for the physical location of the manual operator in the system. If intentional or accidental operation of a valve by a manual operator could cause personal injury or property damage, a manual operator should not be used.

REMOTE AIR OPERATED VALVES

Pilot valves supplying signal pressure to remote air operated valves should be 3-way valves with adequate supply and exhaust capacity to provide positive pressurizing and exhausting of the pilot supply line. Pilot lines should be open to exhaust when valves are deenergized.

INSTALLATION PRECAUTIONS :

- Do not install any MAC Valves product without first turning off air (bleed system completely) and electricity to the machine.
- MAC Valves products should only be installed by qualified, knowledgeable personnel who understand how the specific valve is to be pneumatically piped and electrically connected (where applicable). Flow paths through the valve are shown in the catalog and on the valve by use of ANSI or ISO type standard graphic symbols. Do not install unless these symbols and the valve functions and operations are thoroughly understood.
- If air line lubrication is used do not use any lubrication other than those recommended in the catalog, parts & operation sheet or by the factory.

SERVICE PRECAUTIONS :

- Do not service or remove from service any MAC Valves product without first shutting off both the air and electricity to the valve and making certain no pressurized air which could present a hazard is retained in the system.
- MAC Valves products should only be serviced or removed from service by qualified, knowledgeable personnel who understand how the specific product is used and/or how the specific valve is piped and used and whether there is air retained in the connecting lines to the valve or electric power still connected to the valve.
- Before attempting to repair, adjust or clean a MAC Valves product, consult catalog, parts & operation sheet, or factory for proper maintenance procedures, lubrication and cleaning agents. Never attempt to repair or perform other maintenance with air pressure to the valve.
- MAC Valves products are never to be stepped on while working on a machine. Damage to a MAC valve, or other product or lines to the product (either air or electrical lines) or accidental activation of a manual operator on the valve could result in personal injury or property damage.

LIMITATION OF GUARANTEE

This Guarantee is limited to the replacement or rebuilding of any valve or other product which should fail to operate properly. Valves or other products, under the MAC Guarantee, must be returned (with or without bases) transportation prepaid and received at our factory within the Guarantee period. They will be returned to the customer at the expense of MAC Valves, Inc., and will carry the same guarantee as provided under the Flat Rate Rebuild Program.

DISCLAIMER OF GUARANTEE

No claims for labor, material, time, damage, or transportation are allowable nor will any valve or other product be replaced or rebuilt under this guarantee which has been damaged by the purchaser not in the normal course of its use and maintenance during the warranty period. The guarantee does not apply to loss or damage caused by fire, theft, riot, explosion, labor dispute, act of God, or other causes beyond the control of MAC Valves, Inc. MAC Valves, Inc. shall in no event be liable for remote, special or consequential damages under the MAC Guarantee, nor under any implied warranties, including the implied warranty of merchantability.

The above Guarantee is our manner of extending the engineering and service resources of the MAC Valves, Inc. organization to assure our customer long, and continued satisfaction.