

SMALL 4-WAY

Mac Valves with 4 or 5 ports; inlet, a common exhaust (4 way) or two exhausts (5 way) and two cylinder ports, one normally open and the other normally closed. Their common application is to operate double acting cylinders.

Patents and Patents Pending

SMALL 4-WAY SOLENOID

44, 45, 700, 400, 800, and 900 SERIES (Cv 0.1 to 14)



24 SERIES



44 SERIES



45 SERIES



400 SERIES



700 SERIES



900 SERIES

OPERATIONAL BENEFITS

SERIES	44	45	700	400	800	900
Single Solenoid	Y	Y	Y	Y	Y	Y
Double Solenoid	X	Y	Y	Y	Y	Y
Inline	Y	Y	Y	Y	Y	Y
Base Mounted	Y	Y	X	Y	X	X
Stacking	X	Y	Y	X	Y	Y
Add-a-Unit Manifold	X	Y	X	X	X	X
Circuit Bar	Y	Y	X	Y	Y	X
Internal Pilot Operated	N/A	N/A	Y	Y	Y	Y
External Pilot Operated	N/A	N/A	Y	Y	Y	X
3-Position	X	X	X	Y	Y	Y
Remote Air Operated	X	Y	Y	X	Y	Y
Remote Air, Pilot Operated	N/A	N/A	Y	Y**	Y	Y
Folw Controls	N/A	Y	Y	X	Y	X
Pressure Regulator	X	Y	X	X	X	X
Flow(Cv)	0.10	0.15*	0.8	1.0	14	14

LEGEND: Y - Available | X - Not Available | * - Higher flows available with higher wattages | ** - Consult Factory | N/A - Not Applicable

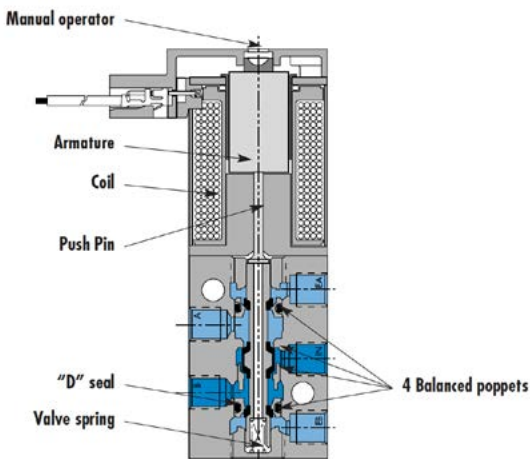
- SMALL 3-WAY
- LARGE 3-WAY
- SMALL 4-WAY
- LARGE 4-WAY
- ISO VALVES
- PPC VALVES
- PULSE VALVES
- BULLET VALVES

OPERATIONAL BENEFITS

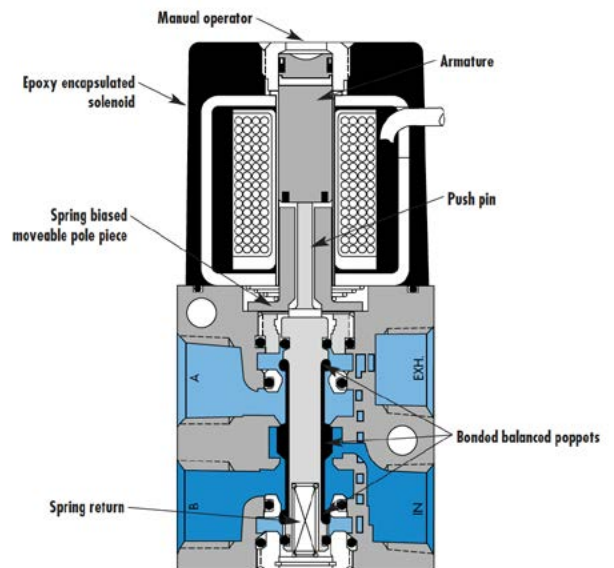
- Unique patented MACSOLENOID for fastest possible response time with its non burnout feature on AC service.
- Balanced poppet pilot valve for high flow, precise repeatability and consistent operation. (700, 400, & 900)
- Large spool or piston for maximum shifting forces even at minimum operating pressure (700, & 900)
- One piece bonded seal spool for extended life and ease of maintenance (700, 400, & 900)
- MAC spool / bore combination for wiping away contamination, eliminating sticking, & for use on lubricated/non lubricated service. (700, 400, & 900)
- Bonded balanced poppets for high flow, repeatability and consistent operation. Extremely long service life due to unique poppet cushions (44 & 45 series)
- Extremely high cycle rates (up to 250 cycles per second with certain DC solenoids)
- Extremely long service life.
- Versatility in piping. Valves can be piped as 4 way, 3 way or 2 way, N/C, N/O or can be used for vacuum, diverter or selector applications.
- Air/spring return for consistent shifting on single solenoid internal pilot, solenoid pilot operated valves. (700, 900 series)
- Optional integral individual exhaust flow controls with a single common exhaust port (45, 700 series).
- Optional individual exhaust flow controls with dual exhaust. (400, 800 & 1800 series)
- Non-locking manual operators standard on all solenoid valves; other types of manual operators available.
- NEMA 4 solenoid enclosures except for grommet type (700, 800, 900 series only). Other types of electrical enclosures, including external plug-in connectors, can also be supplied.
- Optional wattage DC coils down to 1.8watt (44, 45, 400 series) or 1.0watt (700, 900 series).
- Optional surge suppression available.
- Optional common conduit stacking valves with integral wiring space and indicator lights. (45, 700, 800, 900 series)
- Optional remote air pilot, pilot operated models. This pilot replaces the standard solenoid and is provided with a manual operator and position indicator. A minimum pilot pressure can operate the main valve regardless of the main valve pressure.
- Air only return. 4 way pilot design to maximise shifting forces in both directions. Optional memory spring is also available. (400 series)
- Circuit bar available with integral flow controls (45, 400 series).
- Circuit bar available with individual regulators (45 series).

EXHAUST

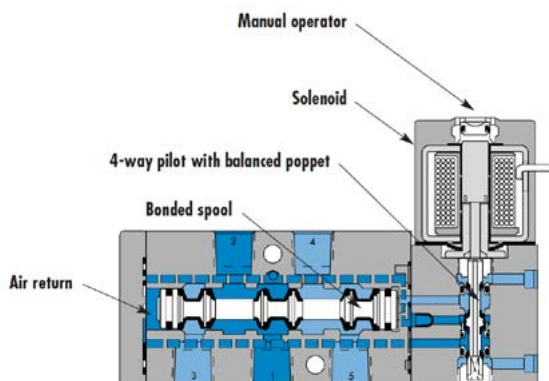
PRESSURE



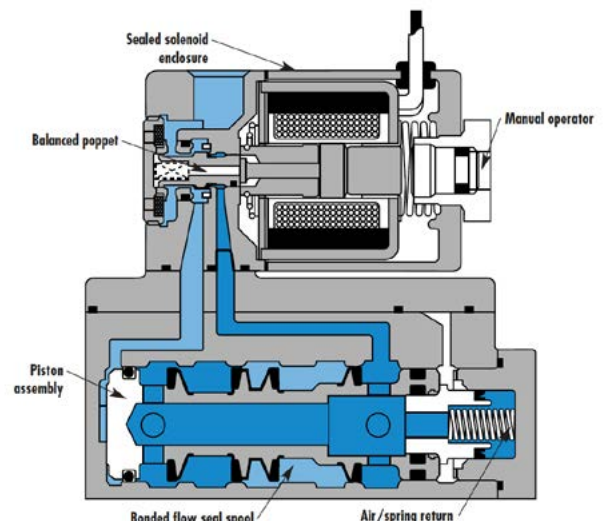
44 Series



45 Series



400 Series



900 Series

The MAC 24 series is a compact - high flow - 10mm - solenoid pilot operated 4-way spool valve. The valve offers high flow not common for a valve of its size. The valve utilises our new 8mm E-pilot with oval armature for maximised shifting forces in a small package size. The balanced design in the pilot means shifting forces are consistently high and response times are repeatable regardless of inlet pressure fluctuations. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

Stock Part Number: 24A-A1-B00-EM2-RDCA-1BA

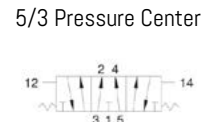
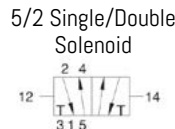
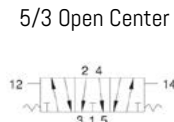
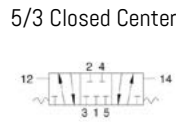
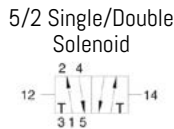
Function	Port size	Flow (Max) / (Cv/NI/min)	Pressure Range	Individual Mounting
5/2, 5/3	M5	04 / 400 Cv	2pos. int. pilot: sgle. sol.: 30 to 120 dble sol.: 20 to 120	Inline

OPERATIONAL BENEFITS

- 10mm valve – solenoid pilot operated.
- Balanced spool, immune to variations of pressure.
- Bonded spool with minimal friction.
- Wiping effect, eliminates sticking.
- Pilot valve with balanced poppet, high flow, short and consistent response times.



24 SERIES



24 SERIES INLINE

24A - $\begin{matrix} X & X \\ \hline 1 & 2 \end{matrix}$ - B00 - $\begin{matrix} EXX \\ \hline 3 \end{matrix}$ - R $\begin{matrix} XX & X & X & XX \\ \hline 4 & 5 & 6 & 7 \end{matrix}$

1 - Solenoid

Single Pressure		Dual Pressure (internal pilot only)	
A	5/2 Single Solenoid	C	5/2 Single Solenoid
B	5/2 Double Solenoid	D	5/2 Double Solenoid
E	5/3 Closed Centre	G	5/3 Pressure Centre
F	5/3 Open Centre		

2 - Pilot Air

Single Pressure		Dual Pressure (internal pilot only)	
1	Internal	2	Internal from port #3
4	External	3	Internal from port #5

SOLENOID OPERATOR

$\begin{matrix} EXX & R & XX & X & X & XX \\ \hline 3 & & 4 & 5 & 6 & 7 \end{matrix}$

3 - Pilot Type

M2 Muffled exhaust

4 - Voltage

DC 24VDC (1.8W)
DF 24VDC (4.0W)
DJ 12VDC (1.8W)
DM 12VDC (4.0W)

5 - Lead Wire Length

0* No lead wire
A 18" / 45 cm

* Not available for flying lead connectors

6 - Manual Operator

0 No manual operator
1 Recessed non locking
3 Extended non locking

7 - Electrical Connector

BA Flying leads
BB Flying leads w/ LED

Options

24A-XX-B X 0-EXX-RXX X-X XX

1 Individual base – Side ports
2 Individual base – Bottom ports (no side ports)

Note: For pilot exhaust out main exhaust mod. 0353 is required

Note: Circuit Bar options available, contact MVP for details

24 SERIES - REGULATOR

PR24A - $\begin{matrix} X & XX & X \\ T & T & T \\ 1 & 2 & 3 \end{matrix}$

1 - Sandwich Regulator (With Gauge Port)

- A Plug-In
- B Non Plug-In

2 - Pilot Air

Single Pressure (12" End)	Dual Pressure (Both Ends)
AA Internal	CA Internal
BA External	DA External

3 - Pressure Range

- A 0 to 120 PSI / 8 bar
- B 0 to 80 PSI / 5,3 bar
- C 0 to 40 PSI / 2,7 bar

Spare parts

Gauge Kit No coupling: N-42004-01

With short coupling: N-42004-02 (required with double solenoid valve)

With long coupling: N-42004-03 (required with double solenoid valve)

Sandwich flow control Plug-in with flow control on same end: FC24A-AB

Non plug-in with flow control on same end: FC24A-BB

Non plug-in with flow control on each end: FC24A-CA

Notes:

- External pilot regulator required only when supply pressure (primary) to the valve is below the minimum operating pressure of the 24 series valve.
- When an internal pilot regulator is used with the 24 series valve, the valve should be ordered as external pilot. This ensures that the pilot supply is not regulated. If an internal pilot valve is used with an internal pilot regulator, the pilot supply is regulated.



44 SERIES

The MAC 44 series is a direct solenoid operated 4-way, 10mm poppet valve. A direct operated 4-way of this small package size is unique to MAC due to patented design innovations. It features an oval armature in the solenoid, a balanced poppet and conical seats. These features translate into high shifting forces, fast consistent response times, high flow in a small package and long life. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

Stock Part Number: 44C-ABA-GDCA-1KT

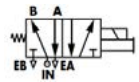
Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
5/2	M5	0.1 Cv	Vac. to 120PSI	Inline

OPERATIONAL BENEFITS

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



44 SERIES



44 SERIES - INLINE & BASE MOUNT VALVES

44B/C - $\frac{X}{1} \frac{XX}{2}$ - G XX X - X XX
L XX X - X XX

1 - Body Type

- A Individual inline
- L Base mount body

2 - Port Size And Thread Type

- 00 Base Mount Body Only
- BA Individual Body (M5)

44 SERIES - STANDARD SOLENOID OPTIONS

G $\frac{XX}{3} \frac{X}{4} - \frac{X}{5} \frac{XX}{6}$

3 - Voltage

- | | |
|---|------------------|
| AB 240 VAC (4.0W)
(Use with "HA" or
"HD" Connector) | DC 24 VDC (1.8W) |
| AC 24 VAC (4.0W) | DF 24 VDC (4.0W) |
| DA 24 VDC (1.0W) | DJ 12 VDC (1.8W) |
| | DN 12 VDC (4.0W) |
| | DS 6 VDC (3.0W) |

4 - Lead Wire Length

- 0 No Lead Wire
- A 18" Coil Leads
- P Plug-IN

5 - Manual Operator

- 1 Recessed non-locking operator
- 2 Recessed Locking Operator
- 3 Extended Non Locking Operator
- 4 Extended Locking Operator

6 - Electrical Connector

- BA Flying leads - STANDARD STOCK
Non Plug-In Valves
- GA MAC JAC Solenoid Plug-In

SMALL
3-WAY

LARGE
3-WAY

SMALL
4-WAY

LARGE
4-WAY

ISO
VALVES

PPC
VALVES

PULSE
VALVES

BULLET
VALVES

44 SERIES - PLUG-IN MANIFOLD

44B/C - $\overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} - \overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} - \text{G} \text{XX} \text{X} - \text{X} \text{XX}$
 $\text{L} \text{XX} \text{X} - \text{X} \text{XX}$
 1 2 3 4 5

1 - Body Type

- 0 Base only
- L Base mount body

2 - Manifold Style

- 0 Valve only
- S Plug-in (12" base leads)

3 - Port Size & Thread Type

- 0 Valve only
- B M5 Metric

4 - Manifold Wiring

- 0 Valve only
- A Plug-in 2 wire (latching or single solenoid)
- B Plug-in 3 wire (latching or double solenoid)
- C Plug-in 4 wire (latching)
- F M7 Manifold Port Size

5 - Manifold Configuration

- 0 Valve only
- C Side Ports
- D Bottom Ports
- E Side Ports w/flow controls
- F Bottom Ports w/flow controls
- G Bottom cylinder's w/reg. (adjusting knob)
- H Bottom cylinder's w/reg. (adjusting knob) & flow controls

Base Only Examples

44B-0SA-AC (Use with "G" Solenoid)

44 SERIES - REGULATOR

PR44A - $\overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} - \overset{\text{X}}{\text{T}}$
 1 2 3 4 5

1 - Type of Adjustment

- A Manual adjust knob

2 - Configuration

- 0 Regulator (Standard)

3 - Gauge Port Option

- A Standard (No gauge port)
- B Gage port (plugged)

4 - Pressure Range

- A 0-100 PSI
- B 0-60 PSI
- C 0-40 PSI
- D 0-15 PSI

5 - Assembly

- 9 Regulator Block Assembled to Bar

44 SERIES - CIRCUIT BAR NON PLUG-IN

EBM44A - $\overset{\text{XX}}{\text{T}} \overset{\text{X}}{\text{T}} \overset{\text{X}}{\text{T}} - \overset{\text{XX}}{\text{T}} - \overset{\text{9}}{\text{T}}$
 1 2 3 4 Valves & cover plates assembled to Valve

1 - Spacing

- 00 10.5mm Spacing

2 - Profile

- 1 12mm low profile
- 2 16mm high profile

3 - Port Size & Thread Type

- C 1/8" BSPPL
- D M5 Metric

4 - Stations

Number of Stations (02, 03, 04 etc.)



SMALL
3-WAY

LARGE
3-WAY

SMALL
4-WAY

LARGE
4-WAY

ISO
VALVES

PPC
VALVES

PULSE
VALVES

BULLET
VALVES

The MAC 45 series is a direct solenoid operated 4-way poppet valve. These feature a short stroke solenoid, a balanced poppet and conical seats. These features translate into high shifting forces, fast consistent response times, and long life.

For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

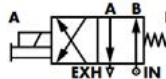
Stock Part Number: 45A-AC1-DDAJ-1KD

Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
4/2	1/8"	0.15 Cv	Vac. to 120PSI	Inline

OPERATIONAL BENEFITS

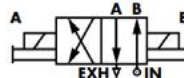
- Balanced poppet, immune to variations of pressure.
- Short stroke with high flow.
- The patented solenoid develops high shifting forces.
- Powerful return spring.
- Manual operator standard on all valves.
- Burn-out proof solenoid on AC service.

Single Operator



Double Operator

(Minimum DC wattage 54W)



45 SERIES

45 SERIES VALVE & BASE OPTIONS

45A - X X X - D XX X - X XX
1 2 3 4 5 6 7 8

1 - Body Type

Inline

- 0 Manifold base only
- A 4 port body
- B 5 port body(N/A with flow controls)
- D 4 port body o-ring mount — all bottom ports
- E 5 port body o-ring mount— 3 bottom ports
- F 4 port body o-ring mount — bottom cylinders only
- G 4 port body (double)
- H 4 port body o-ring mount — all bottom ports (double)
- J 4 port body o-ring mount — bottom cylinders only (double)

Stacking Body

- S Stacking body
- T Stacking body (double)

Base Mount Body

- 0 Base only — no valve
- L Base mount body
- M Base mount body with pressure sensing port
- N Base mount body (double)
- P Base mount body with pressure sensing port(double)

2 - Port Size And Thread Type

- 0 Base mount body only or regulator only
- C 1/8" BSPPL Side Ports
- H O-ring mount ports (inline only)

3 - Flows Controls/Regulators - Base/Manifold Types

Inline or Stacking Body

- 1 No flow control
- 2 With flow control

Manifold Base — Flow Controls & Regulators

- 0 Valve only — no base or manifold
- A Individual base
- B Individual base with flow controls
- C Manifold base
- D Manifold with flow controls
- E Manifold and regulator with slotted stem
- F Manifold With flow control and regulator with slotted stem
- G Manifold with regulator with locking slotted stem
- H Manifold with flow control and regulator with locking slotted stem

- J Manifold with regulator with locking knob
- K Manifold with regulator with locking knob with flow controls Regulators Only
- L Regulator only with slotted stem
- M Regulator only with locking slotted stem
- N Regulator only with slotted stem with flow controls
- P Regulator only with locking slotted stem w/flow controls
- R Regulator only with locking knob
- S Regulator only with locking knob with flow controls

4 - Operator

- D Solenoid
- RAIX Remote air

5 - Voltage

AA 120/60, 110/50	AC 24/60, 24/50
AF 240/50	DA 24 VDC (54w)
DB 12 VDC (54W)	DE 12 VDC (12.7W) (MOD CLSF only)
FE 12 VDC (24w)	DF 24 VDC (12.7W) (MOD CLSF only)
FF 24 VDC (24w)	

6 - Lead Wire Length

- A 18" coil leads
- J External plug-in lead

7 - Manual Operator

- 0 No operator
- 1 Non-locking manual op.
- 2 Locking manual op.
- 3 Non-locking extended op.
- 4 Locking extended operator

8 - Electrical Connector

- BA Grommet
- JB Rectangular plug-in - No Light
- JD Rectangular plug-on w/light
- JM Rectangular male only
- KA Mini plug-in - No Light
- KD Mini plug-in with light
- KJ Mini plug-in male only

*Accessories continued on next page

Accessories

M-45001-01P	End plate kit (stacking)	N-45005	Inlet and exhaust isolator (stacking)
M-45004	Spacer plate conduit kit	N-45006	Inlet isolator (stacking)
M-45005-01P	End plate kit — common conduit (stacking)	N-45007	Exhaust isolator (stacking)
M-45008-01P	End plate kit (manifold)	N-45008	Inlet & exhaust isolator (manifold)
M-45010	Blank station cover plate (manifold)	N-45009	Inlet isolator (manifold)
M-45010-01	Blank station cover plate w/pressure outlet	N-45010	Exhaust isolator (manifold)
N-45001	Top plate (individual)	N-45015	Manifold base end cover plate plain
N-45002	Flow control plate (individual)	N-45016	Manifold base end cover plate w/flow controls
N-45003	Top plate (stacking)	N-45018	Flow control needle assembly (Individual Base)
N-45004	Flow control plate (stacking)		

45 SERIES - MACONNECT ADAPTER ASSEMBLY

M - 45026 - $\begin{matrix} \text{XX} & \text{X} & \text{X} \\ \text{---} & \text{---} & \text{---} \\ \text{1} & \text{2} & \text{3} \end{matrix}$

1 - Type of Connector

09	9 Pin Sub D	20	20 Pin
10	10 Pin	24	24 Pin Amp CPC
15	15 Pin Sub D	25	25 Pin Sub D
16	16 Pin	26	26 Pin

2 - Location of Adapter

- 1 Left End
- 2 Right End

3 - Thread Type

P BSPPL Threads

Modifications

MOD 1705 Negative Commons

45 SERIES - SANDWICH REGULATOR

PR45A - $\begin{matrix} \text{X} & \text{X} & \text{X} & \text{X} \\ \text{---} & \text{---} & \text{---} & \text{---} \\ \text{1} & \text{2} & \text{3} & \text{4} \end{matrix}$ - $\frac{9}{\text{---}}$
Valves & cover plates assembled to Bar

1 - Style

- 0 Regulator Only
- A Plug-In Solenoid Block (Single Solenoid)
- B Non Plug-In Block (Double Solenoid)

2 - Adjustment

- | | |
|------------------------|------------------|
| 0 Regulator Block Only | A Adjusting Knob |
| B Slotted Stem | C Locking Stem |

3 - Gauge

- 0 No Gauge Port

4 - Pressure Range

- 0 Regulator Block Only
- A 0-120 psi

Accessories

M-45010-03	Valve Blanking Plate
M-45010-04	Valve Blanking Plate w/By-pass to "B" Port
16520	Wire Protector Connector for Plug-In Bar (Blank Station)

45 SERIES - CIRCUIT BAR NON PLUG-IN

EBM45A - $\begin{matrix} \text{XX} & \text{X} & \text{X} & \text{---} \\ \text{---} & \text{---} & \text{---} & \text{---} \\ \text{1} & \text{2} & \text{3} & \text{4} \end{matrix}$ - $\frac{9}{\text{---}}$
Valves & cover plates assembled to Bar

1 - Spacing

- | | |
|-----------------|-----------------|
| 00 21mm Spacing | 01 26mm Spacing |
|-----------------|-----------------|

2 - Configuration

- 1 Side Cylinder Ports (21mm)
- 3 Regulator with Side Cylinder Ports (21mm)
- 5 Flow Controls with Side Cylinder Ports (26mm)
- 7 Regulator and Flow Controls with Side Cylinder Ports (21mm)

3 - Port Size & Thread Type

- C 1/8" BSPPL

4 - Stations

Number of Stations (01, 02, 03, etc.)

Accessories

- M-45010 Valve Blanking Plate
- M-35005 Regulator Blanking Plate

Regulators (For Option 3)

- 35A-00L Slotted Stem
- 35A-00M Adjusting Knob
- 35A-00U Locking Stem

Regulators With Flow Controls (For option 7)

- 45A-001 Slotted Stem
- 45A-002 Adjusting Knob
- 45A-003 Locking Stem



46 SERIES

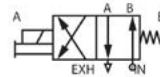
The MAC 46 series is a direct solenoid operated 4-way poppet valve. High flow in a small package, Oval armature. These feature a short stroke solenoid, a balanced poppet and conical seats. These features translate into high shifting forces, fast consistent response times, and long life. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

Stock Part Number: 46A-L00-JDAP-0FG MOD:532F

Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
4/2	1/8"	0.30 Cv	Vac. to 120PSI	Inline

OPERATIONAL BENEFITS

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



46 SERIES

46 SERIES

46A - $\begin{matrix} X & X & X \\ \downarrow & \downarrow & \downarrow \\ 1 & 2 & 3 \end{matrix}$ - $\begin{matrix} J & X & X \\ \downarrow & \downarrow & \downarrow \\ 4 & 5 & 6 \end{matrix}$ - $\begin{matrix} X & X \\ \downarrow & \downarrow \\ 7 & 8 \end{matrix}$ (G)

1 - Body Type

- Inline*
- A 4 Port Body with Side Ports
 - C 4 Port Body with Bottom Ports (No Side Ports)
 - D Bottom O-Ring Mount-All Ports (No Side Ports)
 - F Bottom O-Ring Mount-Cylinder Ports Only (Side Inlet & Exhaust)
 - G 4 Port Body - Double
 - H 4 Port Body - Double Bottom O'Ring Mount

Stacking Body

- S Stacking Body

Base Mount

- L Single Solenoid Base Mount Body
- N Double Solenoid Base Mount Body

2 - Port Size & Thread Type

- O Base Mount Body
- C 1/8" BSPPL
- G Use with O-Ring Mount Body Option "D"

3 - Configuration

- Base Mount
- O Base Mount Body
- Inline or Stacking Body*
- 1 No Flow Controls
 - 2 With Flow Controls

46 SERIES SOLENOID

$\begin{matrix} J & X & X & X & X \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 4 & 5 & 6 & 7 & 8 \end{matrix}$ (G)

4 - Operator

- J SOLENOID

5 - Voltage

- | | |
|------------------------------|------------------------------|
| AC 24VAC (54W) - MAX. Cv=0.3 | DA 24VDC (54W) - MAX. Cv=0.3 |
| DB 12VDC (54W) - MAX. Cv=0.3 | DC 24VDC (24W) |
| DD 12VDC (24W) | |

6 - Lead Wire Length

- O No Lead Wires
- A 18" Leads

7 - Manual Operator

- | | |
|--------------------|------------------------|
| 0 No Operator | 1 Non-Locking Recessed |
| 2 Locking Recessed | 3 Non-Locking Extended |
| 4 Locking Extended | |

8 - Electrical Cover Connection

- BA Flying Leads
- GA MAC Jac Solenoid Plug-In
- GB MAC Jac Solenoid Plug-In With Diode
- GC MAC Jac Solenoid Plug-In With MOV
- GD MAC Jac Solenoid Plug-In With LED
- GE MAC Jac Solenoid Plug-In With Diode & LED
- GF MAC JJac Solenoid Plug-In With MOV & LED

94 mm Pin Spacing

- | | |
|--|---------------------------------|
| KA Mini Plug-In | KB Mini Plug-In With Diode |
| KC Mini Plug-In w/MOV | KD Mini Plug-In With Light |
| KE Mini Plug-In w/Diode & Light | KF Mini Plug-In w/MOV & Light |
| KG Mini Plug-In w/Rectifier | KH Mini Plug-In w/Rect. & Light |
| KJ Mini Plug-In - Male Only | KK Mini Plug-In w/Diode M. Only |
| KL Mini Plug-In w/MOV - Male Only | KM Mini Plug-In w/Light M. Only |
| JA Square Connector | JC Square Connector w/Light |
| JJ Square Connector - Male Only | JB Rectangular Connector |
| JD Rectangular Connector With Light | JP Rectnglr. Connector w/MOV |
| JM Rectangular Connector - M. Only | |
| KN Mini Plug-In w/Diode & Light - Male Only | |
| KP Mini Plug-In w/MOV & Light - Male Only | |
| KR Mini Plug-In With Rectifier - Male Only | |
| KS Mini Plug-In With Rectifier & Light - Male Only | |

9 - Ground

- G Ground Pin/Wire

Accessories

- | | |
|-------------|-------------------------------|
| M-46001-01P | End Plate Kit (Stacking) |
| M-46002 | Blank Station Cover Plate |
| N-46001 | Body Top Cover Plate (Inline) |
| N-46002 | Body Top Cover Plate w/Flow |

Controls (Inline)

- 28493 Exhaust Isolater (Stacking)
- 28494 Inlet Isolater (Stacking)



46 SERIES REGULATOR

PR46A - $\begin{matrix} X & X & X & X \\ \hline 1 & 2 & 3 & 4 \end{matrix}$ - $\begin{matrix} 9 \\ \hline \end{matrix}$
Assembled to Valve

1 - Style

- 0 Regulator Only
- B Non Plug-In Block
- A Plug-In Block (Single Solenoid Only)

2 - Adjustment

- 0 Regulator Block Only
- B Adjusting Knob
- A Slotted Stem
- C Slotted Stem with Locknut

3 - Gauge

- 0 Regulator Block Only
- A Gauge Port Plugged

4 - Pressure Range

- 0 Regulator Block Only
- B 0-80 psi
- A 0-120 psi
- C 0-30 psi

46 SERIES - PLUG-IN MANIFOLD

46A - $\begin{matrix} X & X & X & X & X \\ \hline 1 & 2 & 3 & 4 & 5 \end{matrix}$ - $\begin{matrix} X & X \\ \hline 6 & 7 \end{matrix}$ - J $\begin{matrix} XX \\ \hline 8 \end{matrix}$ P - $\begin{matrix} X & X \\ \hline 9 & 10 \end{matrix}$ - (G)
Valves and cover plates assembled to bar

1 - Body Type

- 0 Base only
- L Single solenoid base mount body
- M Single solenoid base mount body w/ gauge port
- N Double solenoid base mount body
- P Double solenoid base mount body w/ gauge port

2 - Manifold Style

- 0 Valve only
- S Plug-in (12" base leads)

3 - Port Size & Thread Type

- 0 Valve only
- B 1/8" BSPPL

4 - Manifold Wiring

- 0 Valve only
- B Wired for double solenoid
- A Wired for single solenoid

5 - Manifold Configuration

- 0 Valve only
- D Side cylinder ports w/flow controls
- E Bottom cylinder ports w/reg. (slotted stem)
- F Bottom cylinder ports w/reg. (slotted stem) & flow controls
- L Bottom cylinder ports
- M Bottom cylinder ports w/flow controls
- C Side cylinder ports

6 - Solenoid

- J Solenoid

7 - Voltage

- AC 24 VAC (54w) - Max Cv=0.3
- DA 24 VDC (54w) - Max Cv = 0.3
- DB 12 VDC (54w) - Max Cv = 0.3
- DC 24 VDC (24w)
- DD 12 VDC (24w)

8 - Lead Wire

- P Plug-in

9 - Manual Operator

- 0 No operator
- 2 Recessed locking operator
- 4 Extended locking operator
- 1 Recessed non-locking operator
- 3 Extended non-locking operator

10 - Electrical Connection

- FA Base Plug-In
- FC Base Plug-In w/MOV
- FE Base Plug-In w/Diode and LED
- FG Base Plug-In w/Rectifier
- FB Base Plug-In with Diode
- FD Base Plug-In w/LED
- FF Base Plug-In w/MOV & LED
- FH Base Plug-In w/Rectifier & LED

11 - Ground

- G Ground wire pin

Parts/Flow Control (Sandwich)

- M-46003-01P End plate kit
- M-46002 Valve blanking plate
- 63299 Electrical Plug-In Protector
- M-46007 Valve and Electrical Blanking Plate
- 28502 Exhaust isolator
- 28501 Inlet isolator
- FC46A-AA Sandwich flow control (Plug-in)
- FC46A-BA Sandwich flow control (Non Plug-in)



46 SERIES - CIRCUIT BAR NON PLUG-IN

EBM46A - $\overset{\text{T}}{\underset{1}{\text{XX}}} \overset{\text{T}}{\underset{2}{\text{X}}} \overset{\text{T}}{\underset{3}{\text{X}}} \overset{\text{T}}{\underset{4}{\text{X}}} - \overset{\text{T}}{\underset{5}{\text{XX}}} - 9$
 Valves and cover plates assembled to bar

1 - Spacing

- 00 16.5mm Spacing
- 01 26.0mm Spacing

2 - Configuration

- A Side Cylinder Ports
- B Bottom Cylinder Ports
- C Side Cylinder Ports with Flow Controls
- D Bottom Cylinder Ports with Flow Controls
- E Side Cylinder Ports with Regulator
- F Bottom Cylinder Ports with Regulator
- G Side Cylinder Ports, Flow Controls, & Regulator
- H Bottom Cylinder Ports, Flow Controls & Regulator

3 - Style

- A Standard

4 - Port Size & Thread Type

- B 1/8" BSPPL

5 - Stations

- Number of Stations (01, 02, 03, etc.)
- M - 46002 Blank Station Cover Plate

Note: Regulator must be ordered separately.

46 SERIES - ECD PLUG-IN CIRCUIT BAR

ECD46A - $\overset{\text{T}}{\underset{1}{\text{XX}}} \overset{\text{T}}{\underset{2}{\text{X}}} \overset{\text{T}}{\underset{3}{\text{X}}} \overset{\text{T}}{\underset{4}{\text{X}}} - \overset{\text{T}}{\underset{5}{\text{XX}}} - \overset{\text{T}}{\underset{6}{\text{XX}}} - 9$
 Valves and cover plates assembled to bar

1 - Spacing

- 00 16.5mm Spacing

2 - Configuration

- A Side Cylinder Ports
- B Bottom Cylinder Ports
- C Bottom Cylinder Ports with Regulator
- D Side Cylinder Ports with Flow Controls
- E Bottom Cylinder Ports with Flow Controls
- F Bottom Cylinder Ports with Regulator & Flow Controls

3 - Style

- A Standard

4 - Port Size & Thread Type

- B 1/8" BSPPL

5 - Lights

- A0 Standard (No Light)

6 - Stations

- Number of Stations (01, 02, 03, etc.)

Note: Regulator must be ordered separately

Accessories

- 63299 Wire Connector Protector
- M-46002 Valve Blanking Plate
- M-46007 Valve and Electrical Blanking Plate



The MAC 47 series is a direct solenoid operated 4-way poppet valve. High flow in a small package, oval armature. These feature a short stroke solenoid, a balanced poppet and conical seats. These features translate into high shifting forces, fast consistent response times, and long life. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

Stock Part Number: 47A-L10-HDA0-1KD

Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
5/2	1/8"-1/4"	0.5Cv	Vac. to 120PSI	Inline

OPERATIONAL BENEFITS

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



47 SERIES

47 SERIES

47A - $\begin{matrix} X & X & X \\ \hline 1 & 2 & 3 \end{matrix}$ - H $\begin{matrix} XX \\ \hline 4 \end{matrix}$ $\begin{matrix} X \\ \hline 5 \end{matrix}$ - $\begin{matrix} X \\ \hline 6 \end{matrix}$ $\begin{matrix} XX \\ \hline 7 \end{matrix}$

1 - Body Type

- 0 Base Only
- A Inline 5 Port
- B Inline Body 5 Port with Flow Controls
- C Inline Body Namur Mount

2 - Port Size & Thread Type

- C 1/8 BSPPL
- D 1/4 BSPPL
- L Other - See MVP

3 - Base Type

- 0 Inline / Stacking/ Valve Only
- A Individual Base Non Plug-In
- B Individual Base Non Plug-In w/ Flow Controls
- J Manifold Base Side Ports (Middle Station)
- K Manifold Base Bottom Ports (Middle Station)
- L Right End Manifold Base, Side Ports
- M Right End Manifold Base, Bottom Ports
- N Left End Manifold Base, Side Ports
- P Left End Manifold Base, Bottom Ports

Accessories

- N-47005-01 Fastening Kit (Manifold)
- 28447 Isolator Plate - Inlet and Exhaust (Manifold)
- M-47001 Blank Station Cover Plate
- N-47004 Cover Plate Assembly with Flow Controls (Inline)
- M-47013-01P End Plate Kit (Stacking)
- N-47009 Exhaust Isolator Plate Assembly (Stacking)
- 28451 Inlet Isolator Plate (Stacking)

47 SERIES STANDARD SOLENOID OPTIONS

H $\begin{matrix} XX \\ \hline 4 \end{matrix}$ $\begin{matrix} X \\ \hline 5 \end{matrix}$ - $\begin{matrix} X \\ \hline 6 \end{matrix}$ $\begin{matrix} XX \\ \hline 7 \end{matrix}$

4 - Voltage (*Requires full wave rectifier in cover)

- | | |
|---------------------|-------------------|
| AC 240 VAC (5.8w) * | DF 12 VDC (5.2w) |
| AD 24 VAC (7.8w) * | DG 12 VDC (24w) |
| DA 24 VDC (5.2w) | DH 12 VDC (1.8w) |
| DB 24 VDC (24w) | DJ 12 VDC (1.0w) |
| DD 24 VDC (1.0w) | DL 120 VDC (6.3w) |

5 - Lead Wire Length

- | | |
|------------------|-------------------|
| 0 NO LEAD WIRE | E 72" Coil Leads |
| A 18" Coil Leads | F 96" Coil Leads |
| B 24" Coil Leads | G 120" Coil Leads |
| C 36" Coil Leads | H 144" Coil Leads |
| D 48" Coil Leads | P Plug-In |

Note: Use "0" With MJ, MM & K Type Connectors

6 - Manual Operator

- | | |
|-----------------------------|---------------------------------|
| 0 NO OPERATOR | 1 Recessed Non Locking Operator |
| 2 Recessed Locking Operator | 3 Extended Non Locking Operator |
| 4 Extended Locking Operator | |

7 - Electrical Connector

- BA Flying Leads
- BB Flying Leads w/ground
- BC Flying Leads w/LED Light
- BD Flying Leads w/LED Light & Ground
- BE Flying Leads w/Suppression Diode
- BF Flying Leads w/Suppression Diode & Ground
- BG Flying Leads w/Suppression Diode Plus LED Light
- BH Flying Leads w/Suppression Diode Plus LED Light & Ground
- KD Mini plug-in with light
- KJ Mini plug-in male only

47 SERIES REGULATOR & FLOW CONTROL

PR47A - $\begin{matrix} X & X & X & X & X \\ \hline T & T & T & T & T \\ 1 & 2 & 3 & 4 & 5 \end{matrix}$

1 - Adjustment Method

Manual Adjust w/ Screwdriver Slot

- A Plug-In
- B Non Plug-In
- C Regulator Only

Manual Adjust w/ Knob

- E Plug-In
- F Non Plug-In
- G Regulator Only

Manual Adjust w/ Screwdriver Slot and Locknut

- J Plug-In
- K Non Plug-In
- L Regulator Only

2 - Configuration

- O Regulator Only
- A Sandwich Regulator Block

3 - Gauge Port Option

- A No Gauge Port
- B Gauge Port (plugged)
- C Gauge (order separately)

4 - Pressure Range

- A 0 to 120 psi
- B 0 to 80 psi
- C 0 to 30 psi

5 - Assembly

- 9 Assembled to Valve/Bar

Gauges

- 24165-150 15mm 0to150 psi
- 24177-160 23mm 0to160 psi
- 24177-100 23mm 0to100 psi
- 24177-060 23mm 0to60 psi

Flow Control Pricing

- FC47A-AA Plug-In Sandwich Flow Control Block
- FC47A-BA Non Plug-In Sandwich Flow Control Block

47 SERIES EBM CIRCUIT BAR

EBM47A - $\begin{matrix} XX & X & X & X & X \\ \hline T & T & T & T & T \\ 1 & 2 & 3 & 4 & 5 \end{matrix}$ - $\begin{matrix} XX \\ \hline T \\ 9 \end{matrix}$ Valves and cover plates assembled to bar

1 - Spacing

- 01 20mm spacing

2 - Configuration

- A Bottom cylinder ports
- B Bottom cylinder ports w/ flow controls
- C No cylinder ports
- D No cylinder ports w/ flow controls
- E Bottom cylinder ports
- F Bottom cylinder ports w/ flow controls
- G No cylinder ports
- H No cylinder ports w/ flow controls
- J Side cylinder ports
- K Side cylinder ports w/ regulator
- L Bottom cylinder ports
- M Bottom cylinder ports w/ regulator
- N No cylinder ports
- P No cylinder ports w/ regulator

3 - Style

- A Standard bar
- B Add-On-Style (includes end plate)
- C Add-A-Unit (single station)

4 - Cylinder Port Size and Thread Type

- C 1/8" BSPPL
- D 1/4" BSPPL
- L BSPPL Commons

5 - Stations

- Number of stations (01, 02, 03, etc.)

Accessories

- M-47001 Blank station cover plate (17.5mm)
- M-47002 Blank station cover plate (19.5mm)
- M-47004-01P Right hand end plate kit (35mm)
- M-47005-01P Right hand end plate kit (44mm)

Note: Regulators must be ordered separately.

47 SERIES ECD CIRCUIT BAR

ECD47A - $\begin{matrix} XX & X & X & X & X \\ \hline T & T & T & T & T \\ 1 & 2 & 3 & 4 & 5 \end{matrix}$ - $\begin{matrix} XX \\ \hline T \\ 6 \end{matrix}$ - $\begin{matrix} XX \\ \hline T \\ 9 \end{matrix}$ Valves and cover plates assembled to bar

1 - Spacing

- 00 18mm Spacing
- 01 30mm Spacing

2 - Configuration

- A Side Cylinder Ports
- B Bottom Cylinder Ports
- C Bottom Cylinder Ports with Regulator

3 - Style

- A Standard bar
- B Add-On-Style (Includes end plate)
- C Add-A-Unit (single station)

4 - Port Size & Thread Type

- C 1/8" BSPPL
- D 1/4" BSPPL

5 - Terminal Strip/Lights

- A0 Standard (No Light)
- AB Standard w/Light (240 Volt)
- AD Standard w/Light (24 Volt)

6 - Stations

- Number of Stations (01, 02, 03, etc.)

Accessories

- M-47001 Blank station cover plate (17.5mm)
- M-47003-01P End plate kit
- 16520 Wire connector protector for blank station

Note: Regulator must be ordered separately.

The MAC 48 Series is a high flow 16mm 4-way spool valve with a unique integral four way pilot. The short stroke solenoid utilizes an oval armature for maximized shifting forces in a small area. The 4-way pilot means a low minimum operating pressure – no pistons – and minimal resistance to shifting. The balanced design in the pilot means shifting forces are consistently high and response times are repeatable regardless of inlet pressure fluctuations. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

Stock Part Number: 47A-ADO-HDAA-1BA

Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
5/2, 5/3	1/8"	1.1Cv	Vac. to 120PSI	Sub-base Non Plug-In

OPERATIONAL BENEFITS

- 4-way valve with 4-way integral pilot.
- 16 mm valve (stacks on 16.5 mm centers).
- High flow (up to 1.1 Cv).
- Fast repeatable response times.
- Maximum shifting forces in both directions.
- Long life.



48 SERIES - SINGLE PRESSURE MODELS

48B - X M X - XXX - G XX X - X XX
 1 2 3 4 5 6 7

1 - Body Type

- A 5/2 Single Solenoid
- B 5/2 Double Solenoid
- E 5/3 Closed Center
- F 5/3 Open Center
- C 5/2 Single Solenoid (Duel Pressure Model)
- D 5/2 Double Solenoid (Duel Pressure Model)
- H 5/3 Pressure Centre (Duel Pressure Model)

2 - Pilot Air

- A Internal
- B Internal - Supply #3 Port (Duel Pressure Model)
- C Internal - Supply #5 Port (Duel Pressure Model)
- D External

3 - Base Type

- 000 Internal (Valve Less Base)
- AAL Internal 1/8" NPTF
- AAM External 1/8" NPTF

4 - Voltage

- | | |
|-------------------|------------------|
| AA 120 VAC (2.5W) | DC 24 VDC (1.8W) |
| DD 24 VDC (2.5W) | DF 24 VDC (4.0W) |

5 - Wire Length

- A 18"
- B 24"
- C 36"

6 - Manual Operator

- 1 Non-locking recessed
- 2 Locking recessed

7 - Electrical Connection

- BA Flying leads
- BT Flying leads with light
- GA MAC JAC solenoid plug-in
- KA Plug-in wire assembly
- KT Plug-in wire assembly w/light
- KD Plug-in wire assembly w/rectifier & light & ground

Note : AC voltage requires connector with rectifier.



The MAC 400 series is a 4-way spool valve pilot operated by a small direct operated 4-way solenoid valve - a one-off in air valve manufacturing. The 4-way pilot means a low minimum operating pressure - no pistons - and minimal resistance to shifting. The balanced design in the pilot means shifting forces are constantly high and response times are repeatable regardless of inlet pressure fluctuations. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

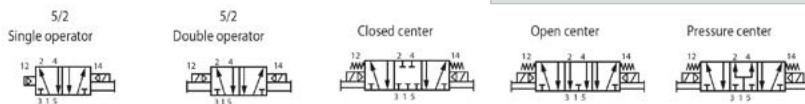
Stock Part Number: 411A-D0A-DM-DDAJ-1JD

Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
5/2, 5/3	1/8"-1/4"	1.0 Cv	Int. 2 pos.: 20-120PSI (w/mem. spring: 30-120PSI) 3 pos.: 35-120PSI, Ext.: vac. to 120PSI	Inline



OPERATIONAL BENEFITS

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



400 SERIES

4 X X A - X X X - XX - D XX X - X XX
1 2 3 4 5 6 7 8 9 10

1 - Spool Type - Valve Function

- | | |
|---|-----------------------------|
| 0 Base only | 1 Single op., sgl. pressure |
| 2 Double op., sgl. pressure | 3 Single op., dual pressure |
| 4 Double operator, dual pressure | 5 3-Position closed center |
| 6 3-Position open center | |
| 7 3-Position single pressure, pressure center | |
| 8 3-Position dual pressure, pressure center | |

2 - Body Type

- | | |
|-------------------------------|------------------------------|
| 0 Base only | 1 Inline 5-port |
| 3 Manifold body | 4 Inline 5-port w/mem.spring |
| 6 Manifold body w/mem. spring | |

3 - Port Size And Thread Type

- | | |
|-----------------|--------------|
| 0 Manifold body | C 1/8" BSPPL |
| D 1/4" BSPPL | |

4 - Body/Base Type

- | | |
|--|-----------------------|
| 0 Inline or manifold body | A Base standard ports |
| B Base standard ports with flow controls | |

5 - Internal/External Pilot

- | | |
|---------------------------------------|-----------------------------------|
| A Internal pilot | B External pilot (inline body) |
| C Internal pilot (dual pressure only) | D Common ext. pilot (circuit bar) |

6 - Pilot Type

- | | |
|--------------------|------------------|
| DM Muffled Exhaust | DP Piped Exhaust |
|--------------------|------------------|

400 SERIES: DM PILOT OPTIONS

DM - D XX X - X XX
7 8 9 10

7 - Voltage (Other Options Available)

- | | |
|---------------------------------|----------------------------------|
| JA 120/60, 110/50 | JF 240/50 |
| JC 24/60, 24/50 | DA 24 VDC (54W) |
| DB 12 VDC (54W) | DC 12VDC (7.5W) |
| DD 24VDC (7.3W) | DE 12VDC (12.7W) (MOD CLSF ONLY) |
| DF 24VDC (12.7W)(MOD CLSF ONLY) | |
| FE 12VDC (24W) | FF 24VDC (24W) |

8 - Lead Wire Length

- | | |
|------------------|------------------------------|
| A 18" Coil leads | J External plug-in connector |
|------------------|------------------------------|

9 - Manual Operator

- | | |
|-----------------------------|-------------------------------|
| 0 No operator | 1 Non-locking manual operator |
| 2 Locking manual operator | 3 Non-locking ext. operator |
| 4 Locking extended operator | |

10 - Electrical Connector

- | | |
|-------------------------------|-------------------------|
| BA Grommet | JB Rectangular plug |
| JD Rectangular plug w/ light | JM Rectangular male |
| KA Mini plug-in | KD Mini plug with light |
| KK Mini plug-in male w/diode | |
| KL Mini plug-in male w/M.O.V. | |

Pilot Valves - Bodies and Assemblies

- | | |
|----------------|--|
| DMB-A1 | 4 Way Pilot Body (Muffled Exhaust) |
| DPB-A1 | 4 Way Pilot Body (Piped Exhaust) |
| DUB-A1 | 4 Way Pilot Body (Pilot Exhaust to Main Exhaust) |
| DMB-DXXX-XXX-1 | Complete Pilot Valve |
| DPB-DXXX-XXX-1 | Complete Pilot Valve |
| DUB-DXXX-XXX-1 | Complete Pilot Valve |
| DXXX-XXX 1 | Solenoid and Cover Assembly |
| DMB-RA11 | Complete Remote Air Pilot Valve (4 Way) |

400 SERIES REMOTE AIR

4 X X A - X X X - RA
T T T T T
1 2 3 4 5

1 - Spool Type

- 1* Single Operator, Single Pressure
- 2 Double Operator, Single Pressure
- 4 Double Operator, Dual Pressure
- 5 3 Position Closed Center
- 6 3 Position Open Center
- 7 3 Position Single Pressure, Pressure Center
- 8 3 Position Dual Pressure, Pressure Center

2 - Body Type

- 1 Inline 5 Port
- 3 Manifold Body

3 - Port Size And Thread Type

- 0 Manifold Body
- C 1/8" BSPPL
- D 1/4" BSPPL

4 - Configuration

- 0 Inline or Manifold Body
- A Base Standard Ports
- B Base Standard Ports w/ Flow Controls

5 - Pilot Port

- J Pilot Port Size M5 (Metric)

6 - Style

- RA Remote Air

* - Note: For Single Operator Valves, Use MOD 1493



The MAC 700 series is a versatile 4-way solenoid piloted spool valve. This series features our balanced poppet in the pilot and an air/spring return for consistent shifting regardless of inlet pressure fluctuations. Versatility in Piping means the valve can be piped as a 4-way, 3-way, or 2-way, normally closed or normally open or can be used for vacuum, diverter or selector applications. Our one piece bonded seal spool means longer life and easy maintenance. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

Stock Part Number: 711C-14-PI-391JD

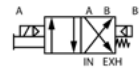
Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
4/2, 5/3	1/8"-1/4"	0.8 Cv	Int.: sgle. op.: 20-150PSI, dble. op.: 10-150 PSI, Ext.: vac. to 150PSI	Inline

OPERATIONAL BENEFITS

- Balanced spool, immune to variations of pressure.
- Short stroke with high flow.
- The piston (booster) provides maximum shifting forces.
- Powerful return force thanks to the combination of mechanical and air springs.
- Bonded spool with minimum friction, shifting in a glass-like finished bore.
- Wiping effect eliminates sticking.
- Pilot valve with balanced poppet, high flow, short and consistent response times.
- Long service life.



700 SERIES



700 SERIES



1 - Operator	
1 Single Operator	2 Double Operator
2 - Flow Control	
1 Without Flow Controls	2 With Flow Controls
3 - Port Size	
11 1/8 BSP	14 1/4 BSP
4 - Pilot Air	
PI Internal	PE External

5 - Voltage			
AC Voltage		DC Voltage	
11	120/60, 110/50	50	24VDC (6W)
22	24/50-60	57	12VDC (2.5W)
39	240/50	60	12VDC (8.5W)
55		59	24VDC (2.5W)
61		61	24VDC (8.5W)
6 - Manual Operator Indicator Lights			
0	No Operator	1	Non-Locking Recessed (Std.)
2	Locking Recessed	3	Non-Locking Extended
4	Locking Extended		
7 - Enclosure			
BA	Grommet	JB	Rectangle - No Light
CA	Conduit 1/2" NPS	JC	Square With Light
JA	Square - No Light	JD	Rectangle With Light

OPTIONS



- For bottom ports (1/8" only) replace by 2.

Solenoid Pilot Operated Models (Sample Options)	
<i>Individual Models</i>	
711C-14-PI-111BA	1/4" BSPP threads
721C-14-PI-111BA*	1/4" BSPP threads
<i>Individual Models With Flow Controls</i>	
712C-14-PI-111BA	1/4" BSPP threads
722C-14-PI-111BA*	1/4" BSPP threads
<i>Stacking Models</i>	
713C-14-PI-111BA	1/4" BSPP Threads
723C-14-PI-111BA*	1/4" BSPP Threads
<i>Stacking Models With Flow Controls</i>	
714C-14-PI-111BA	1/4" BSPP Thread

Remote Air Pilot Operated Models (Sample Options)	
<i>Individual Models</i>	
711C-14-RA	1/4" BSPP threads
721C-14-RA	1/4" BSPP threads
<i>Individual Models With Flow Controls</i>	
712C-14-RA	1/4" BSPP threads
722C-14-RA	1/4" BSPP threads
<i>Stacking Models</i>	
713C-14-RA	1/4" BSPP threads
723C-14-RA	1/4" BSPP threads
<i>Stacking Models With Flow Controls</i>	
714C-14-RA	1/4" BSPP threads
724C-14-RA	1/4" BSPP threads
<i>Accessories</i>	
M-07001-01-01P	End Plate Kit – Internal Pilot
M-07001-02-01P	End Plate Kit – External Pilot
N-07005	Isolator Kit – Inlet/Exhaust
N-07006	Isolator Kit – Inlet Only
N-07007	Isolator Kit – Exhaust Only

The MAC 900 series is a versatile 4-way solenoid piloted spool valve. This features our balanced poppet in the pilot and an air/spring return for constant shifting regardless of inlet pressure fluctuations. Versatility in piping means the valve can be piped as a 4-way, 3-way, or 2-way, normally closed or normally open or can be used for vacuum, diverter or selector applications. Our one piece bonded seal spool means longer life and easy maintenance. For more information regarding certifications (such as UL, CSA, RoHS and CE) please ask our team at Mac Valves Pacific.

Stock Part Number: 911B-PM-391JD

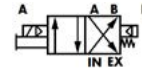
Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
4/2	1/8"-1/4"	1.2 Cv	Sgls. op.: 25-150PSI, Dble. op.: 10-150PSI	Inline

OPERATIONAL BENEFITS

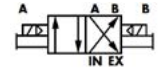
- Balanced spool, immune to variations of pressure.
- Short stroke with high flow.
- Large spool area provides maximum shifting forces.
- Powerful return force thanks to the combination of mechanical and air springs.
- Bonded spool with minimum friction, shifting in a glass-like finished bore.
- Wiping effect eliminates sticking.
- Pilot valve with balanced poppet, high flow, short and consistent response times.
- Long service life.



Single Operator



Double Operator



900 SERIES

9 X X B - XX - XX X XX
 1 2 3 4 5 6

1 - Operator

- 1 Single Solenoid
- 2 Double Solenoid

2 - Port Size

- 5 1/8 BSP
- 6 1/4 BSP

3 - Pilot Exhaust

- PM Pilot Exh. Muffled

4 - Voltage

AC Voltage		DC Voltage	
11	120/60, 110/50	50	24VDC (6W)
22	24/50-60	55	12VDC (6W)
26	400/50	57	12VDC (2.5W)
39	240/50	59	24VDC (2.5W)
		60	12VDC (8.5W)
		61	24VDC (8.5W)

5 - Manual Operator Indicator Lights

- | | |
|--------------------|-------------------------------|
| 0 No Operator | 1 Non-Locking Recessed (Std.) |
| 2 Locking Recessed | 3 Non-Locking Extended |
| 4 Locking Extended | |

6 - Enclosure

- | | |
|----------------------|----------------------|
| BA Grommet | CA Conduit 1/2" NPS |
| JA Square w/No Light | JB Rectangle |
| JC Square w/Light | JD Rectangle w/Light |

Solenoid Models - Example

Individual Models

- 916B - PM -111BA Single 1/4" BSPP
- 926B - PM -111BA* Double 1/4" BSPP - *Use 100 Solenoid Options

Stacking Models

- 917B - PM -111BA 1/8" BSPP
- 918B - PM -111BA 1/4" BSPP

Modifications

- 0158 Heavy Duty Spring

Accessories

- M-09001-01P End Plate Kit
- N-09002 Inlet and Exhaust Isolator Kit
- N-09003 Exhaust Isolator Kit
- N-09004A Inlet Isolator Kit

Remote Air Operated Models - Example

Individual Models

- 916A - RA Single 1/4" BSPP
- 926B - RA Double 1/4" BSPP

Stacking Models

- 918B - RA 1/4" BSPP
- 928B - RA 1/4" BSPP