

The MAC 93 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 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: 93A-AAB-000-DM-DDAP-1DG

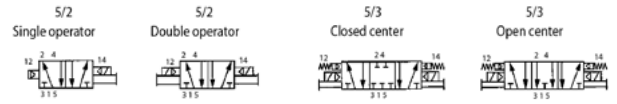
Function	Port size	Flow (Max)	Pressure Range	Individual Mounting
5/2, 5/3	3/8" - 1/2"	3.8 Cv	Int.: 20-120PSI Ext.: Vac. to 120PSI	Inline

OPERATIONAL BENEFITS

- Unique patented Macsolenoid® for fastest possible response times and virtually burn-out proof solenoid operation.
- Balanced poppet 4-way pilot valve provides maximum shifting forces, precise repeatability and consistent operation.
- Air only return. Optional memory spring is also available.
- Optional low wattage DC solenoid down to 1 watt.
- MAC spool and bore combination wipes away contamination, eliminates sticking and allows for use on non-lube service.



93 SERIES



93 SERIES - VALVE OPTIONS

93A - X X X - X X X - XX - D XX X - X XX
 1 2 3 4 5 6 7 8 9 10 11

1 - Spool Type - Valve Function

- 0 Base Only
- A Single Solenoid Single Pressure
- B Double Solenoid Single Pressure
- C Single Solenoid Dual Pressure
- D Double Solenoid Dual Pressure
- E Double Solenoid 3 Position Closed Center
- F Double Solenoid 3 Position Open Center
- H Double Solenoid 3 Position Dual Pres., Pres. Center
- L Single Solenoid Single Pressure w/ Memory Spring
- K Double Solenoid 3 Position Dual Pres. Open Center
- J Double Solenoid 3 Position Dual Pres. Closed Center
- N Single Solenoid Dual Pressure w/ Memory Spring
- R Universal Spool, Single Solenoid
- S Universal Spool, Double Solenoid

2 - Plug-In/Non Plug-In - Pilot Exhaust

- 0 Base Only
- A Plug-In Standard Exhaust
- B Non Plug-In Standard Exhaust
- J Inline Body

3 - Body Options

- 0 Base Only/Inline
 - A No Light in Top
 - B Light in Top
- | | | |
|---------|-------------|--------|
| 110V AC | 220/240V AC | 24V AC |
| 12V DC | 24V DC | |

4 - Port Size And Thread Type

- 0 Basic Valve Only
- E 3/8" BSPPL
- F 1/2" BSPPL

5 - Base/Manifold Configurations

- 0 Basic Valve Only/Inline
- A Side Ports (Individual Base)
- B Bottom Ports Only (3/8" only) (Indiv. Base)
- C Side & Bottom Ports (3/8" only) (Indiv. Base)
- D Side Inlet & Exhaust, Bottom Cylinder Ports (3/8" only) (Individual Base)
- J Side Cyl. Ports (Manifold Base)
- K Bottom Cyl. Ports (Manifold Base)

6 - Internal/External Pilot - Base Light Options

- 0 Basic Valve Only
- A Internal Pilot - No Light In Base
- B Internal Pilot - Single Light In Base
- C Internal Pilot - Double Light In Base
- D External Pilot - No Light In Base
- E External Pilot - Single Light In Base
- F External Pilot Double Light In Base
- G Non Plug-In Internal Pilot
- H Non Plug-In External Pilot
- J Internal Pilot (Inline Valve)
- K External Pilot (Inline Valve)

7 - Pilot Body Exhaust Options

- DM Pilot Valve w/muffled exhaust
- DP Pilot Valve w/piped exhaust
- DU Pilot Valve w/exhaust to main exhaust

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93 SERIES - BASE OPTIONS

93A - X X X - X X X - XX - D XX X - X XX
 T T T T T T T T T T T T T T T T T T
 1 2 3 4 5 6 7 8 9 10 11

8 - Voltage

JA*	120/60, 110/50
JC	24/60, 24/50
JF*	240/50
DA	24 VDC (54W)
DB	12 VDC (54W)
DE	12 VDC (12.7W) (CLSF)
DF	24 VDC (12.7W) (CLSF)
FE	12 VDC (24w)
FF	24 VDC (24W)

* Must use electrical connection with ground wire

9 - Lead Wire Length

P	Plug-in 8" Standard
1	18" Base Leads
0	No Wires
A	18" Coil Leads
J	External Plug-In Lead (use with "J" or "K" type electrical connector)

10 - Manual Operator

0	No Operator
1	Non-Locking Manual Operator
2	Locking Manual Operator
3	Non-Locking Extended Manual Operator
4	Locking Extended Manual Operator

Flow Control Module

FC93A-AA	Plug-in Flow Control w/ Screwdriver slot
FC93A-AB	Plug-in Flow Control w/ Locking Knob
FC93A-BA	Non Plug-in Flow Control w/ Screwdriver slot
FC93A-BB	Non Plug-in Flow Control w/ Locking Knob

Note: If flow control module is to be installed between valve and base at the factory, add -9 after the flow control module number.

For example: FC93A-AA-9

Pilot Valves - Bodies and Assemblies

DMB-A1	4-Way Pilot Body (Muffled Exhaust)
DPB-A1	4-Way Pilot body (Piped Exhaust)

11 - Electrical Connector

JB	Rectangular Plug-In
BA	Grommet
DG	Plug-In w/ Ground
JD	Rectangular Plug-In w/Light
JM	Rectangular Male Only
JA	Square Plug-In
JC	Square Plug-In with light
JJ	Square Male Only
KA	Mini Plug-In
KB	Mini Plug-In w/Diode
KC	Mini Plug-In w/M.O.V.
KD	Mini Plug-In w/Light
KE	Mini Plug-In w/Light & Diode
KF	Mini Plug-In w/Light & M.O.V.
KG	Mini Plug-In w/LED Light & Diode
KJ	Mini Plug-In Male Only
KK	Mini Plug-In Male Only w/Diode
KL	Mini Plug-In Male Only w/M.O.V.

Note: Further Voltage & Plug-In options available

Manifold Accesories

M-93001-01-01P	(BSPPL) Manifold End Plate Kit Internal Pilot
M-93001-02-01P	(BSPPL) Manifold End Plate Kit External Pilot
M-93002	Blank Station Cover Plate Kit
M-93002-01	Blank Station Cover Plate Kit - Inlet to Cyl B
M-93002-02	Blank Station Cover Plate Kit - Inlet to Cyl A & B
N-93008	Isolator Disc For Inlet and/or Exhausts

