

Individual mounting

Sub-base non "plug-in"	Sub-base "plug-in"	Sub-base/manifold base non "plug-in" with latching solenoid	Sub-base/manifold base "plug-in" with latching solenoid
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Manifold mounting

Manifold base "plug-in"	Sub-base/manifold base non "plug-in" with latching solenoid	Sub-base/manifold base "plug-in" with latching solenoid
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Series

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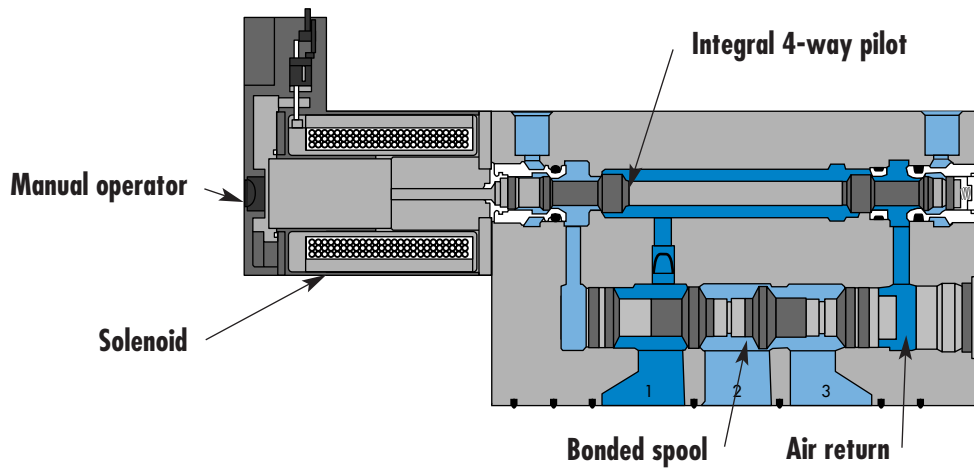
ISO 01

ISO 02

ISO 1

ISO 2

ISO 3



**SERIES FEATURES**

- High force MACSOLENOID®.
- Integral 4-way pilot design.
- Internal or external pilot.
- Normally open or normally closed function.
- Universal function (external pilot).
- Rectified AC voltage.
- Latching solenoid technology.



# Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow [Max]	Individual mounting	Series
<b>3/2 NO-NC</b>	<b>1/8"</b>	<b>1.2 C<sub>v</sub></b>	Sub-base non "plug-in"	

### OPERATIONAL BENEFITS

1. 3-way valve with 4-way integral pilot.
2. 10 mm valve (stacks on 16.5 mm centers).
3. High flow (up to 1.2 Cv).
4. Fast, repeatable response times.
5. Maximum shifting forces in both directions.



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### HOW TO ORDER

Port size	Pilot air	NO valve	NC valve	Universal valve
<b>Valve less base</b>	Internal	38B-BMA-000-G <b>XXX-XXX</b>	38B-AMA-000-G <b>XXX-XXX</b>	38B-GMB-000-G <b>XXX-XXX</b>
	External	38B-BMB-000-G <b>XXX-XXX</b>	38B-AMB-000-G <b>XXX-XXX</b>	
<b>1/8" NPTF</b>	Internal	38B-BMA-AAL-G <b>XXX-XXX</b>	38B-AMA-AAL-G <b>XXX-XXX</b>	38B-GMB-AAM-G <b>XXX-XXX</b>
	External	38B-BMB-AAM-G <b>XXX-XXX</b>	38B-AMB-AAM-G <b>XXX-XXX</b>	

Note : Above codes are for side port.

### STANDARD SOLENOID OPERATOR >

G **XXX-XXX\***

XX Voltage	X Wire length	X Manual operator	XX Electrical connection
AA 120 VAC (2.5W)	A 18"	1 Non-locking recessed	BA Flying leads
DA 24 VDC (1.0W)	B 24"	2 Locking recessed	BT Flying leads with light
DC 24 VDC (1.8W)	C 36"		GA MAC JAC Solenoid plug-in w/Diode
DD 24 VDC (2.5W)			GB MAC JAC Solenoid plug-in w/Rectifier
DF 24 VDC (4.0W)			GC MAC JAC Solenoid plug-in w/MOV
			GD MAC JAC Solenoid plug-in w/LED
			GE MAC JAC Solenoid plug-in w/Diode & LED
			GF MAC JAC Solenoid plug-in w/MOV & LED
			GG MAC JAC Solenoid plug-in w/Rectifier
			GH MAC JAC Solenoid plug-in w/Rectifier & LED
			KA Plug-in wire assembly
			KT Plug-in wire assembly with light
			KD Plug-in wire assembly with rectifier & light & ground

Note : AC voltage requires connector with rectifier.

\* Other options available, see page 311.

Latching solenoid also available, see page 59.

With MAC JAC electrical connector washdown capability is possible.

Consult factory for modification number.

### OPTIONS

Pilot/Base Configuration :

38B-**M**-**X**-**A**-G**XXX-XXX**

- A** Individual base – Side port
- B** Individual base – Bottom port
- M** Pilot exhaust muffled
- P** Pilot exhaust piped (# 10-32)
- U** Pilot exhaust to main exhaust

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ISO 01

ISO 02

ISO 1

ISO 2

ISO 3

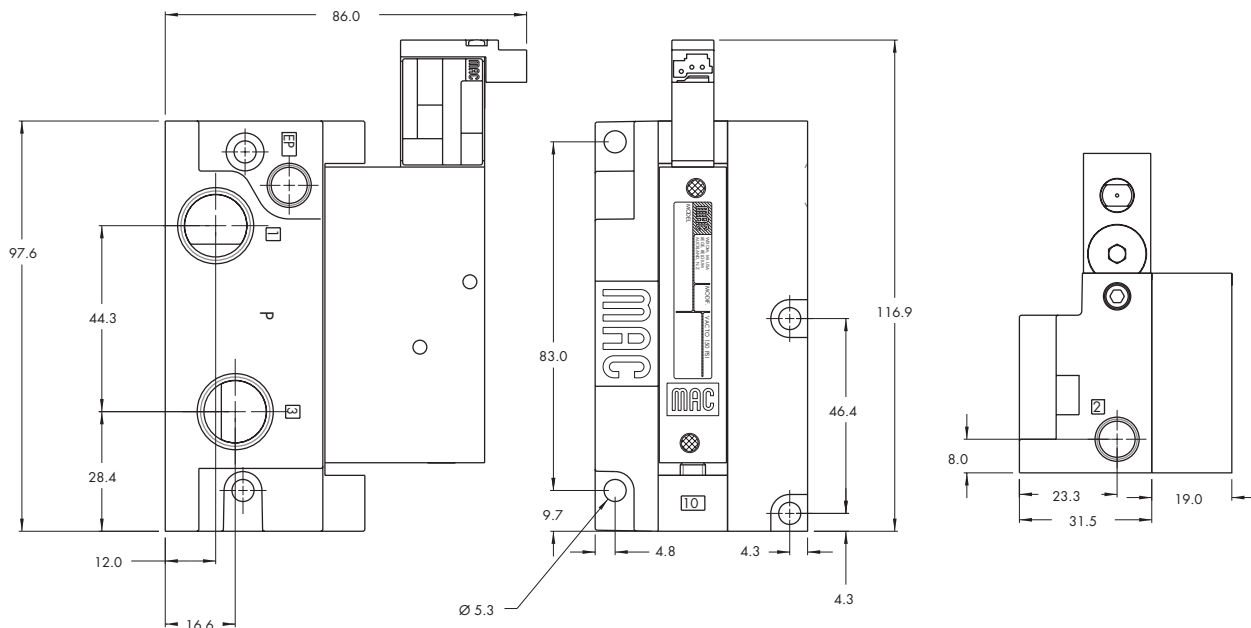
**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Internal Pilot : 20 to 120 PSI External Pilot : Vacuum to 120 PSI
<b>Pilot pressure :</b>	20 to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 μ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1/8" bottom port: (1.2 C <sub>v</sub> ) - 1/8" side port: (1.0 C <sub>v</sub> )
<b>Coil :</b>	Class A wire (#22 AWG x 18), continuous duty
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Power :</b>	1.0 to 4.0 W
<b>Response times : (with 4 W coil)</b>	Energize : 6 ms De-energize : 6 ms

Options : • BSPP threads

**DIMENSIONS**

Dimensions shown are metric (mm)



Function	Port size	Flow [Max]	Individual mounting	Series
<b>3/2 NO-NC</b>	<b>1/8" - 1/4" O.D. tube receptacle</b>	<b>1.2 C<sub>v</sub></b>	Sub-base "plug-in"	

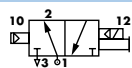
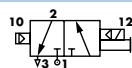
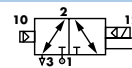
**OPERATIONAL BENEFITS**

1. 3-way valve with 4-way integral pilot.
2. 10 mm valve (stacks on 16.5 mm centers).
3. High flow (up to 1.2 C<sub>v</sub>).
4. Fast, repeatable response times.
5. Maximum shifting forces in both directions.



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**HOW TO ORDER**

Port size	Pilot air	NO valve	NC valve	Universal valve
				
<b>Valve less base</b>	Internal	38B-BMA-000-G <b>XX</b> P- <b>XXX</b>	38B-AMA-000-G <b>XX</b> P- <b>XXX</b>	
	External	38B-BMB-000-G <b>XX</b> P- <b>XXX</b>	38B-AMB-000-G <b>XX</b> P- <b>XXX</b>	38B-GMB-000-G <b>XX</b> P- <b>XXX</b>
<b>1/8" NPTF</b>	Internal	38B-BMA-AAA-G <b>XX</b> P- <b>XXX</b>	38B-AMA-AAA-G <b>XX</b> P- <b>XXX</b>	
	External	38B-BMB-AAB-G <b>XX</b> P- <b>XXX</b>	38B-AMB-AAB-G <b>XX</b> P- <b>XXX</b>	38B-GMB-BAB-G <b>XX</b> P- <b>XXX</b>
<b>1/4" O.D. Tube receptacle</b>	Internal	38B-BMA-EAA-G <b>XX</b> P- <b>XXX</b>	38B-AMA-EAA-G <b>XX</b> P- <b>XXX</b>	
	External	38B-BMB-EAB-G <b>XX</b> P- <b>XXX</b>	38B-AMB-EAB-G <b>XX</b> P- <b>XXX</b>	38B-GMB-EAB-G <b>XX</b> P- <b>XXX</b>

Note : Above codes are for side port.

STANDARD SOLENOID OPERATOR >

G **XX** P-**XXX**\*

<b>XX</b> Voltage	<b>X</b> Manual operator	<b>XX</b> Electrical connection
<b>AA</b> 120 VAC (2.5W)	<b>1</b> Non-locking recessed	<b>SA</b> Base plug-in
<b>DA</b> 24 VDC (1.0W)	<b>2</b> Locking recessed	<b>SJ</b> Base plug-in with light
<b>DC</b> 24 VDC (1.8W)		<b>SS</b> Base plug-in with rectifier & light & ground
<b>DD</b> 24 VDC (2.5W)		
<b>DF</b> 24 VDC (4.0W)		

Note : AC voltage requires connector with rectifier.  
\* Other options available, see page 311.  
Latching solenoid also available, see page 61.

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**OPTIONS**

Pilot/Base Configuration :

38B-**xM**-**xA**-**xG****XX** P-**XXX**

- A** Individual base – Side port
- B** Individual base – Bottom port
- M** Pilot exhaust muffled
- P** Pilot exhaust piped (# 10-32)
- U** Pilot exhaust to main exhaust

Washdown capability is possible, consult factory for modification number.

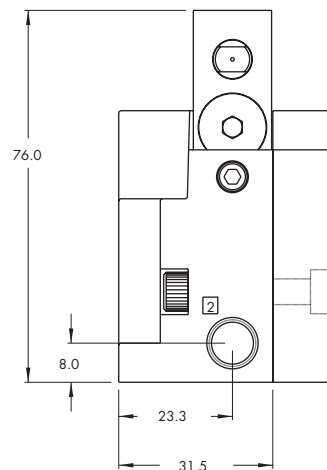
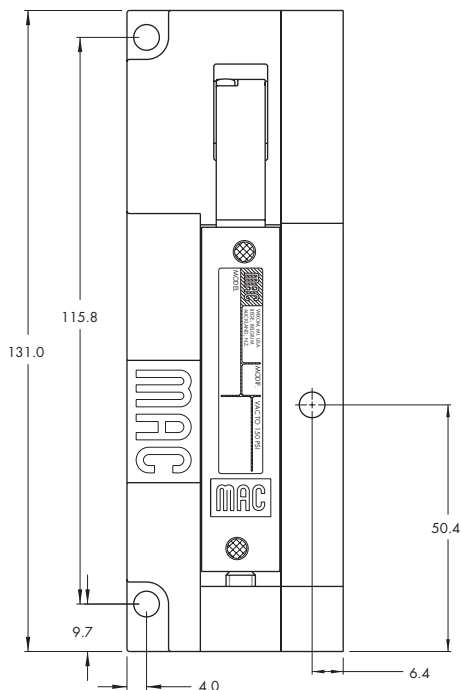
**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Internal Pilot : 20 to 120 PSI External Pilot : Vacuum to 120 PSI
<b>Pilot pressure :</b>	20 to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 μ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1/8" bottom port: (1.2 C <sub>v</sub> ) - 1/8" side port: (1.0 C <sub>v</sub> ) - 1/4" tube receptacle: (0.85 C <sub>v</sub> )
<b>Coil :</b>	Class A continuous duty, #22 AWG x 12 base leads
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Power :</b>	1.0 to 4.0 W
<b>Response times : (with 4 W coil)</b>	Energize : 6 ms De-energize : 6 ms

Options : • BSPP threads

**DIMENSIONS**

Dimensions shown are metric (mm)



Function	Port size	Flow [Max]	Manifold mounting	Series
<b>3/2 NO-NC</b>	<b>1/8" - 1/4" O.D. tube receptacle</b>	<b>1.2 C<sub>v</sub></b>	Manifold base "plug-in"	

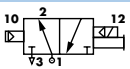
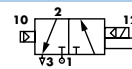
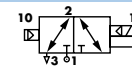
### OPERATIONAL BENEFITS

1. 3-way valve with 4-way integral pilot.
2. 10 mm valve (stacks on 16.5 mm centers).
3. High flow (up to 1.2 C<sub>v</sub>).
4. Fast, repeatable response times.
5. Maximum shifting forces in both directions.



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### HOW TO ORDER

Port size	Pilot air	NO valve	NC valve	Universal valve
				
<b>Valve less base</b>	Internal	38B-BMA-000-G <b>XX</b> P- <b>XXX</b>	38B-AMA-000-G <b>XX</b> P- <b>XXX</b>	
	External	38B-BMB-000-G <b>XX</b> P- <b>XXX</b>	38B-AMB-000-G <b>XX</b> P- <b>XXX</b>	38B-GMB-000-G <b>XX</b> P- <b>XXX</b>
<b>1/8" NPTF</b>	Internal	38B-BMA-AJA-G <b>XX</b> P- <b>XXX</b>	38B-AMA-AJA-G <b>XX</b> P- <b>XXX</b>	
	External	38B-BMB-AJB-G <b>XX</b> P- <b>XXX</b>	38B-AMB-AJB-G <b>XX</b> P- <b>XXX</b>	38B-GMB-BJB-G <b>XX</b> P- <b>XXX</b>
<b>1/4" O.D. Tube receptacle</b>	Internal	38B-BMA-EJA-G <b>XX</b> P- <b>XXX</b>	38B-AMA-EJA-G <b>XX</b> P- <b>XXX</b>	
	External	38B-BMB-EJB-G <b>XX</b> P- <b>XXX</b>	38B-AMB-EJB-G <b>XX</b> P- <b>XXX</b>	38B-GMB-EJB-G <b>XX</b> P- <b>XXX</b>

Note : Above codes are for side port.

### STANDARD SOLENOID OPERATOR >

G **XX** P-**XXX**\*

<b>XX</b> Voltage	<b>X</b> Manual operator	<b>XX</b> Electrical connection
<b>AA</b> 120 VAC (2.5W)	<b>1</b> Non-locking recessed	<b>SA</b> Base plug-in
<b>DA</b> 24 VDC (1.0W)	<b>2</b> Locking recessed	<b>SJ</b> Base plug-in with light
<b>DC</b> 24 VDC (1.8W)		<b>SS</b> Base plug-in with rectifier & light & ground
<b>DD</b> 24 VDC (2.5W)		
<b>DF</b> 24 VDC (4.0W)		

Note : AC voltage requires connector with rectifier.

\* Other options available, see page 311.

Latching solenoid also available, see page 61.

Washdown capability is possible, consult factory for modification number.

### OPTIONS

Base only :

38B-000-**xxx**  
(i.e. 38B-000-AJA)

Base Configuration :

38B-**xxx-xJx-Gxx** P-**xxx**

- J** Manifold base – Side port
- K** Manifold base – Bottom port
- L** Left end manifold base – Side port
- M** Left end manifold base – Bottom port
- N** Right end manifold base – Side port
- P** Right end manifold base – Bottom port

Note : Manifold assemblies consist of (1) left end manifold, (1) right end manifold and middle station manifolds (options "J" or "K").

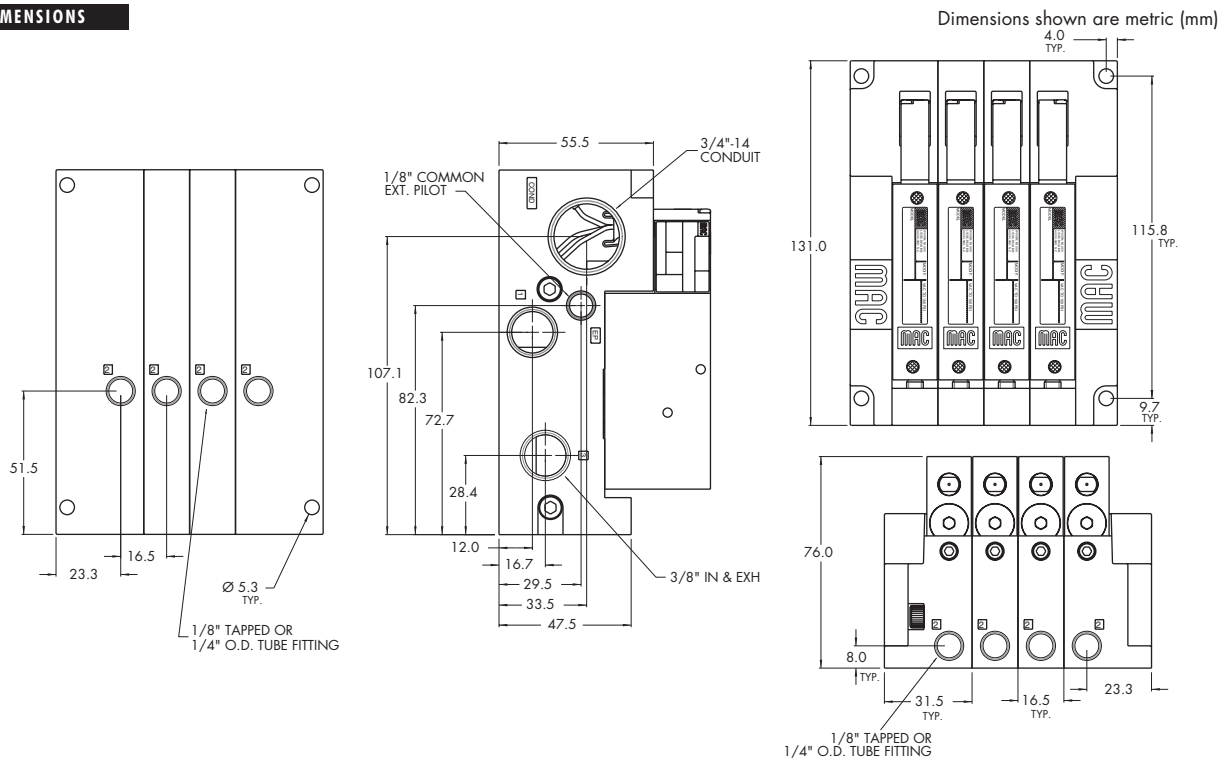
48  
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ISO 01  
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**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Internal Pilot : 20 to 120 PSI External Pilot : Vacuum to 120 PSI
<b>Pilot pressure :</b>	20 to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 μ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1/8" bottom port: (1.2 C <sub>v</sub> ) - 1/8" side port: (1.0 C <sub>v</sub> ) - 1/4" tube receptacle: (0.85 C <sub>v</sub> )
<b>Coil :</b>	Class A continuous duty, #22 AWG x 12 base leads
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Power :</b>	1.0 to 4.0 W
<b>Response times : (with 4 W coil)</b>	Energize : 6 ms De-energize : 6 ms

Options : • BSPP threads

**DIMENSIONS**



Function	Port size	Flow [Max]	Individual/Manifold mounting	Series
<b>3/2 NO-NC</b>	<b>1/8" - 1/4" O.D. tube receptacle</b>	<b>1.2 C<sub>v</sub></b>	Sub-base/ manifold base non "plug-in" with latching solenoid	

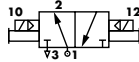
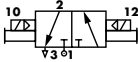
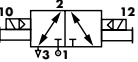
**OPERATIONAL BENEFITS**

1. 3-way valve with 4-way integral pilot.
2. 10 mm valve (stacks on 16.5 mm centers).
3. High flow (up to 1.2 C<sub>v</sub>).
4. Fast, repeatable response times.
5. Maximum shifting forces in both directions.



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**HOW TO ORDER**

Port size	Pilot air	NO valve	NC valve	Universal valve
				
<b>Valve less base</b>	Internal	38A-BMA-000-Lxxx-xxx	38A-AMA-000-Lxxx-xxx	
	External	38A-BMB-000-Lxxx-xxx	38A-AMB-000-Lxxx-xxx	38A-GMB-000-Lxxx-xxx
<b>1/8" NPTF</b>	Internal	38A-BMA-AAL-Lxxx-xxx	38A-AMA-AAL-Lxxx-xxx	
	External	38A-BMB-AAM-Lxxx-xxx	38A-AMB-AAM-Lxxx-xxx	38A-GMB-AAM-Lxxx-xxx
<b>1/4" O.D. Tube receptacle</b>	Internal	38A-BMA-EAL-Lxxx-xxx	38A-AMA-EAL-Lxxx-xxx	
	External	38A-BMB-EAM-Lxxx-xxx	38A-AMB-EAM-Lxxx-xxx	38A-GMB-EAM-Lxxx-xxx

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Note : Above codes are for individual base and side port.

LATCHING SOLENOID OPERATOR >

L <b>xxx-xxx</b> *			
XX Voltage	X Wire length	X Manual operator	XX Electrical connection**
<b>DF</b> 24 VDC (4.0W)	<b>A</b> 18"	<b>0</b> No operator	<b>BA</b> 2 Wire Flying leads
<b>HA</b> 24 VDC (1.95W)	<b>B</b> 24"		<b>BJ</b> 4 Wire Flying leads
	<b>C</b> 36"		<b>KA</b> 2 Wire Plug-in Assembly
			<b>KE</b> 4 Wire Plug-in Assembly
			<b>LA</b> 3 Wire plug-in assembly (Polarity Switching Cover)

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\* Other options available, see page 319.

\*\* Latching 38 series with non plug-in base configuration must use "B", "K" or "L" type electrical connector.

**OPTIONS**

Pilot/Base Configuration :

38A-xMx-xAx-Lxxx-xxx

- A** Individual base – Side port
- B** Individual base – Bottom port
- J** Manifold base – Side port
- K** Manifold base – Bottom port
- M** Pilot exhaust muffled
- P** Pilot exhaust piped (#10-32)
- U** Pilot exhaust to main exhaust

Note : Manifold assemblies require an end plate kit : M-38003-01-01 (internal pilot)  
M-38003-02-01 (external pilot)

ISO 01  
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ISO 1  
ISO 2  
ISO 3



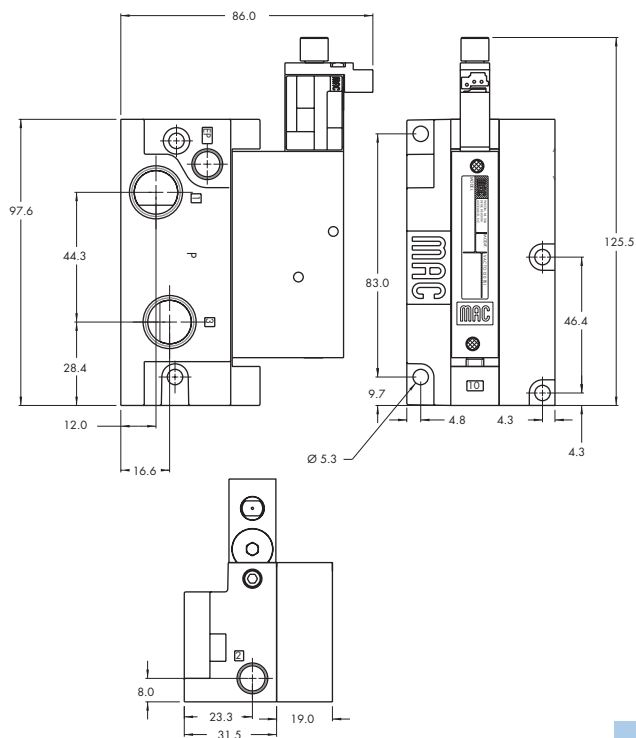
**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Internal Pilot : 20 to 120 PSI External Pilot : Vacuum to 120 PSI
<b>Pilot pressure :</b>	20 to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 μ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1/8" bottom port: (1.2 C <sub>v</sub> ) - 1/8" side port: (1.0 C <sub>v</sub> ) - 1/4" tube receptacle: (0.85 C <sub>v</sub> )
<b>Coil :</b>	Class A wires (#22 AWG x 18), continuous duty
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Power :</b>	1.95 to 4.0 W
<b>Response times : (with 4 W coil)</b>	Energize : 6 ms De-energize : 6 ms

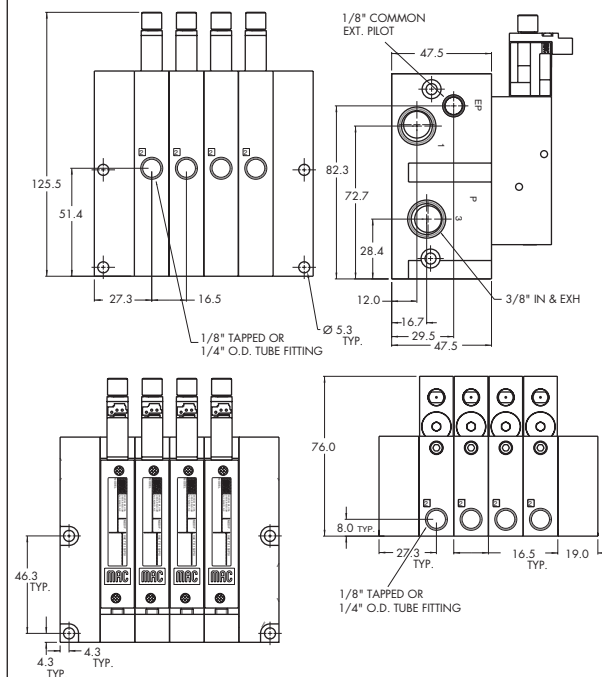
Options : • BSPP threads

**DIMENSIONS**

**Individual base**



**Manifold base**





# Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow [Max]	Individual/Manifold mounting	Series
<b>3/2 NO-NC</b>	<b>1/8" - 1/4" O.D. tube receptacle</b>	<b>1.2 C<sub>v</sub></b>	Sub-base/ manifold base "plug-in" with latching solenoid	

### OPERATIONAL BENEFITS

1. 3-way valve with 4-way integral pilot.
2. 10 mm valve (stacks on 16.5 mm centers).
3. High flow (up to 1.2 C<sub>v</sub>).
4. Fast, repeatable response times.
5. Maximum shifting forces in both directions.



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- 38**
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- 48P

### HOW TO ORDER

Port size	Pilot air	NO valve	NC valve	Universal valve
<b>Valve less base</b>	Internal	38A-BMA-000-LxxP-xxx	38A-AMA-000-LxxP-xxx	
	External	38A-BMB-000-LxxP-xxx	38A-AMB-000-LxxP-xxx	38A-GMB-000-LxxP-xxx
<b>1/8" NPTF</b>	Internal	38A-BMA-AAA-LxxP-xxx	38A-AMA-AAA-LxxP-xxx	
	External	38A-BMB-AAB-LxxP-xxx	38A-AMB-AAB-LxxP-xxx	38A-GMB-AAB-LxxP-xxx
<b>1/4" O.D. Tube receptacle</b>	Internal	38A-BMA-EAA-LxxP-xxx	38A-AMA-EAA-LxxP-xxx	
	External	38A-BMB-EAB-LxxP-xxx	38A-AMB-EAB-LxxP-xxx	38A-GMB-EAB-LxxP-xxx

Note : Above codes are for individual base and side port.

### LATCHING SOLENOID OPERATOR >

L **XX** P-**XXX**\*

XX Voltage	X Manual operator	XX Electrical connection**
<b>DF</b> 24 VDC (4.0W)	<b>0</b> No operator	<b>DA</b> Base/Manifold Plug-in
<b>HA</b> 24 VDC (1.95W)		<b>DB</b> Base/Manifold Plug-in w/Ground
		<b>DC</b> Base/Manifold Plug-in w/ Led
		<b>DD</b> Base/Manifold Plug-in w/ Led and Ground
		<b>EA</b> Base/Manifold Plug-in 3 Pin (Polarity Switching Cover)

\* Other options available, see page 319.  
 \*\* 2 and 4 wire bases must use "D" type electrical connector.  
 3 wire base must use "EA" type electrical connector.

### OPTIONS

Manifold/Base Configuration :

38A-xxx-x <b>A</b> -LxxP-xxx
<b>A</b> Individual base – Side port
<b>B</b> Individual base – Bottom port
<b>J</b> Manifold base – Side port
<b>K</b> Manifold base – Bottom port
<b>L</b> Left end manifold base – Side port
<b>M</b> Left end manifold base – Bottom port
<b>N</b> Right end manifold base – Side port
<b>P</b> Right end manifold base – Bottom port

Manifold/Base Int./Ext. Pilot : (Wire options)

38A-xxx-xx <b>A</b> -LxxP-xxx
<b>A</b> Plug-In Int. Pilot (2 Wire)**
<b>B</b> Plug-In Ext. Pilot (2 Wire)**
<b>C</b> Plug-In Int. Pilot (3 Wire)**
<b>D</b> Plug-In Ext. Pilot (3 Wire)**
<b>E</b> Plug-In Int. Pilot (4 Wire)**
<b>F</b> Plug-In Ext. Pilot (4 Wire)**

Note : Manifold assemblies consist of (1) left end manifold, (1) right end manifold, and middle station manifolds (option J or K).

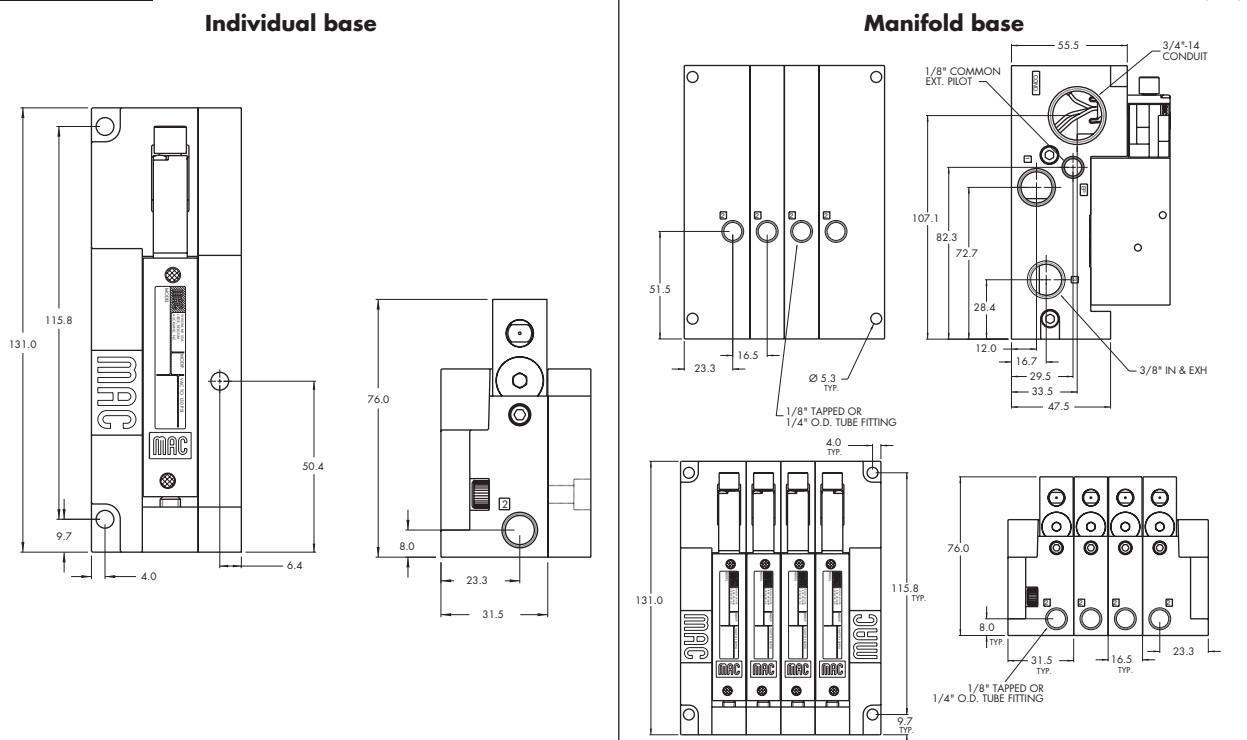
- 48
- 400
- 92
- 93
- ISO 01
- ISO 02
- ISO 1
- ISO 2
- ISO 3

**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Internal Pilot : 20 to 120 PSI External Pilot : Vacuum to 120 PSI
<b>Pilot pressure :</b>	20 to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 μ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1/8" bottom port: (1.2 C <sub>v</sub> ) - 1/8" side port: (1.0 C <sub>v</sub> ) - 1/4" tube receptacle: (0.85 C <sub>v</sub> )
<b>Coil :</b>	Class A continuous duty, #22 AWG x 12 base leads
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Power :</b>	1.95 to 4.0 W
<b>Response times : (with 4 W coil)</b>	Energize : 6 ms De-energize : 6 ms

Options : • BSPP threads

**DIMENSIONS**



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**Codification table for voltages / Manual operator / Electrical connection**

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VALVE CODE > **G XX X-X XX**  
**1 2 3 4**

**OPTIONS AVAILABLE FOR**

- Solenoid valves 32, 34, 38, 42, 44 & 48 Series

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### 1. VOLTAGE

G-XX X-X XX	VOLTAGE	
<b>AA</b>	120 VAC (2.5W)	Requires electrical connector with rectifier
<b>AC</b>	24 VAC (4.0W)	Requires electrical connector with rectifier
<b>DA</b>	24 VDC (1.0W)	
<b>DC</b>	24 VDC (1.8W)	
<b>DD</b>	24 VDC (2.5W)	
<b>DE</b>	24 VDC (3.0W)	
<b>DF</b>	24 VDC (4.0W)	
<b>DG</b>	12 VDC (1.0W)	
<b>DJ</b>	12 VDC (1.8W)	
<b>DK</b>	12 VDC (2.5W)	
<b>DM</b>	12 VDC (3.0W)	
<b>DN</b>	12 VDC (4.0W)	
<b>DR</b>	6 VDC (1.8W)	
<b>DS</b>	6 VDC (3.0W)	
<b>EB</b>	48 VDC (1.8W)	
<b>EC</b>	48 VDC (3.0W)	
<b>ED</b>	120 VDC (2.5W)	
<b>GD</b>	12 VDC (0.5W)	34 series only
<b>GE</b>	24 VDC (0.5W)	34 series only

### 2. WIRE LENGTH

G-XX X-X XX	WIRE LENGTH	
<b>0</b>	No lead wires	(used only with "KJ" & "KM" connectors)
<b>A</b>	18" coil leads	
<b>B</b>	24" coil leads	
<b>C</b>	36" coil leads	
<b>D</b>	48" coil leads	
<b>E</b>	72" coil leads	
<b>F</b>	96" coil leads	
<b>G</b>	120" coil leads	
<b>H</b>	144" coil leads	
<b>1</b>	18" base leads	
<b>2</b>	24" base leads	
<b>3</b>	36" base leads	
<b>4</b>	48" base leads	
<b>5</b>	72" base leads	
<b>6</b>	96" base leads	
<b>7</b>	120" base leads	

### 3. MANUAL OPERATOR

G-XX X-X XX	MANUAL OPERATOR	
<b>1</b>	Non-locking recessed	
<b>2</b>	Locking recessed	
<b>3</b>	Non-locking extended	
<b>4</b>	Locking extended	

### 4. ELECTRICAL CONNECTION

G-XX X-X XX	ELECTRICAL CONNECTION	
<b>BA</b>	Flying leads	
<b>BB</b>	BA with ground wire	
<b>BC</b>	BA with light	
<b>BD</b>	BA with light and ground wire	
<b>BE</b>	BA with suppression diode	
<b>BF</b>	BA with suppression diode and ground wire	
<b>BG</b>	BA with suppression diode and light	
<b>BH</b>	BA with suppression diode, light and ground wire	
<b>BN</b>	BA with suppression diode and blocking diode	
<b>BP</b>	BA with suppression diode, blocking diode and ground wire	
<b>BR</b>	BA with suppression diode, blocking diode and light	
<b>BS</b>	BA with suppression diode, blocking diode, light and ground wire	
<b>GA</b>	MAC JAC Solenoid plug-in	
<b>GB</b>	MAC JAC Solenoid plug-in w/Diode	
<b>GC</b>	MAC JAC Solenoid plug-in w/MOV	
<b>GD</b>	MAC JAC Solenoid plug-in w/LED	
<b>GE</b>	MAC JAC Solenoid plug-in w/Diode & LED	
<b>GF</b>	MAC JAC Solenoid plug-in w/MOV & LED	
<b>GG</b>	MAC JAC Solenoid plug-in w/Rectifier	
<b>GH</b>	MAC JAC Solenoid plug-in w/Rectifier & LED	
<b>KA</b>	Solenoid plug-in wire assembly	
<b>KB</b>	KA with ground	
<b>KC</b>	KA with rectifier and light	
<b>KD</b>	KA with rectifier, light and ground	
<b>KE</b>	KA with suppression diode	
<b>KF</b>	KA with suppression diode and ground	
<b>KJ</b>	Solenoid plug-in housing without wire assembly	
<b>KM</b>	Solenoid plug-in housing with ground pin without wire assembly	
<b>KN</b>	KA with suppression diode and blocking diode	
<b>KP</b>	KA with suppression diode, blocking diode and ground	
<b>KT</b>	KA with light	
<b>KU</b>	KA with light and ground	
<b>KV</b>	KA with suppression diode and light	
<b>KW</b>	KA with suppression diode, light and ground	
<b>KX</b>	KA with suppression diode, blocking diode and light	
<b>KY</b>	KA with suppression diode, blocking diode, light & ground	

### ELECTRICAL CONNECTION FOR PLUG-IN VALVES

G-XX X-X XX	PLUG-IN OPTIONS	
<b>SB</b>	Base plug-in with ground	
<b>SC</b>	Base plug-in with suppression and blocking diode	
<b>SD</b>	Base plug-in with suppression and blocking diode and ground	
<b>SE</b>	Base plug-in with MOV	
<b>SF</b>	Base plug-in with MOV and ground	
<b>SG</b>	Base plug-in with rectifier	
<b>SH</b>	Base plug-in with rectifier and ground	
<b>SK</b>	Base plug-in with light and ground	
<b>SL</b>	Base plug-in with suppression and blocking diode and light	
<b>SM</b>	Base plug-in with suppression and blocking diode with light and ground	
<b>SN</b>	Base plug-in with MOV and light	
<b>SP</b>	Base plug-in with MOV and light with ground	
<b>SR</b>	Base plug-in with rectifier and light	



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**Codification table for voltages / Manual operators / Electrical connections**

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VALVE CODE > **L XX X-X XX**  
**1 2 3 4**

**OPTIONS AVAILABLE FOR**

- Solenoid valves 32, 38, 42, 44, 47 & 48 Series

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1. VOLTAGE (32, 38, 42, 44, 48 SERIES)		1. VOLTAGE (47 SERIES)	
L-XX X-X XX	VOLTAGE	L-XX X-X XX	VOLTAGE
DF	24VDC (4.0W)	DA	24VDC (5.2W)
DN	12VDC (4.0W)	DF	12VDC (5.2W)
HA	24VDC (1.95W)		
HE	12VDC (1.95W)		

2. WIRE LENGTH (all series)	
L-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"

3. MANUAL OPERATOR (all series)	
L-XX X-X XX	MANUAL OPERATOR
O	No operator

4. ELECTRICAL CONNECTOR (32, 38, 42, 44 & 48 series)	
L-XX X-X XX	NON PLUG-IN
BA	2 wire flying leads
BB	2 wire flying leads with ground wire
BC	2 wire flying leads with light
BD	2 wire flying leads with light & ground wire
BJ	4 wire flying leads
BK	4 wire flying leads with ground
BL	4 wire flying leads with light
BM	4 wire flying leads with light & ground wire
KA	2 wire plug-in assembly
KB	2 wire plug-in assembly with ground wire
KC	2 wire plug-in assembly with light
KD	2 wire plug-in assembly with light and ground wire
KE	4 wire plug-in assembly
KF	4 wire plug-in assembly with ground wire
KG	4 wire plug-in assembly with light
KH	4 wire plug-in assembly and ground wire
LA	3 wire plug-in assembly (polarity switching cover)

L-XX X-X XX	PLUG-IN
*DA	Base plug-in
*DB	Base plug-in with ground pin
*DC	Base plug-in with light
*DD	Base plug-in with light & ground pin
**EA	Base plug-in 3 pin (Polarity switching cover)

4. ELECTRICAL CONNECTOR (47 series)	
L-XX X-X XX	NON PLUG-IN
BA	2 wire flying leads
BB	2 wire flying leads with ground wire
BC	2 wire flying leads with light
BD	2 wire flying leads with light & ground wire
BJ	4 wire flying leads
BK	4 wire flying leads with ground
BL	4 wire flying leads with light
BM	4 wire flying leads with light & ground wire
LA	3 wire plug-in assembly (Polarity switching cover)
MA	2 wire plug-in assembly
MB	2 wire plug-in assembly with ground wire
MC	2 wire plug-in assembly with light
MD	2 wire plug-in assembly with light and ground wire
ME	4 wire plug-in assembly
MF	4 wire plug-in assembly with ground wire
MG	4 wire plug-in assembly with light
MH	4 wire plug-in assembly with light and ground wire

L-XX X-X XX	PLUG-IN
EA	Base plug-in 3 pin (Polarity switching cover)
FA	Base plug-in with ground
FB	Base plug-in with ground & light
FC	Base plug-in 4 wire with ground
FD	Base plug-in 4 wire with light & ground

\* Use these options for plug-in base with 2 or 4 wire assemblies

\*\* Use this option for plug-in bases with 3 wire assemblies