

## Maximatic® 3-Way & 4-Way Air-Piloted Valves

### 3-Way Valves

Series No.	Inlet	Ports Outlet	Exhaust	Function	Cv	Flow @ 100 psig	Page
MMA-31NAS	#10-32	#10-32	#10-32	3/2	0.58	27 scfm	<a href="#">128</a>
MMA-31PAS	1/8" NPT	1/8" NPT	1/8" NPT	3/2	0.67	31 scfm	<a href="#">128</a>
MMA-32QAS	1/4" NPT	1/4" NPT	1/8" NPT	3/2	0.89	49 scfm	<a href="#">128</a>
MMA-33WAS	3/8" NPT	3/8" NPT	1/4" NPT	3/2	1.68	93 scfm	<a href="#">128</a>
MMA-34ZAS	1/2" NPT	1/2" NPT	1/2" NPT	3/2	2.79	171 scfm	<a href="#">128</a>
MMA-31NAA	#10-32	#10-32	#10-32	3/2	0.58	27 scfm	<a href="#">128</a>
MMA-31PAA	1/8" NPT	1/8" NPT	1/8" NPT	3/2	0.67	31 scfm	<a href="#">128</a>
MMA-32QAA	1/4" NPT	1/4" NPT	1/8" NPT	3/2	0.89	49 scfm	<a href="#">128</a>
MMA-33WAA	3/8" NPT	3/8" NPT	1/4" NPT	3/2	1.68	93 scfm	<a href="#">128</a>
MMA-34ZAA	1/2" NPT	1/2" NPT	1/2" NPT	3/2	2.79	171 scfm	<a href="#">128</a>

### 4-Way Valves

Series No.	Inlet	Ports Outlet	Exhaust	Function	Cv	Flow @ 100 psig	Spool Configuration		
							Closed Center	Exhaust Center	Pressure Center
MMA-41NAS	#10-32	#10-32	#10-32	5/2	0.58	27 scfm			
MMA-41PAS	1/8" NPT	1/8" NPT	1/8" NPT	5/2	0.67	31 scfm			
MMA-42QAS	1/4" NPT	1/4" NPT	1/8" NPT	5/2	0.89	49 scfm			
MMA-43WAS	3/8" NPT	3/8" NPT	1/4" NPT	5/2	1.68	93 scfm			
MMA-44ZAS	1/2" NPT	1/2" NPT	1/2" NPT	5/2	2.79	171 scfm			
MMA-41NAA	#10-32	#10-32	#10-32	5/2	0.58	27 scfm			
MMA-41PAA	1/8" NPT	1/8" NPT	1/8" NPT	5/2	0.67	31 scfm			
MMA-42QAA	1/4" NPT	1/4" NPT	1/8" NPT	5/2	0.89	49 scfm			
MMA-43WAA	3/8" NPT	3/8" NPT	1/4" NPT	5/2	1.68	93 scfm			
MMA-44ZAA	1/2" NPT	1/2" NPT	1/2" NPT	5/2	2.79	171 scfm			
MMA-41NAAC	#10-32	#10-32	#10-32	5/3	0.50	23 scfm	•		
MMA-41PAAC	1/8" NPT	1/8" NPT	1/8" NPT	5/3	0.50	23 scfm	•		
MMA-42QAAC	1/4" NPT	1/4" NPT	1/8" NPT	5/3	0.89	49 scfm	•		
MMA-43WAAC	3/8" NPT	3/8" NPT	1/4" NPT	5/3	1.00	72 scfm	•		
MMA-44ZAAC	1/2" NPT	1/2" NPT	1/2" NPT	5/3	1.68	93 scfm	•		
MMA-41NAAP	#10-32	#10-32	#10-32	5/3	0.50	23 scfm			•
MMA-41PAAP	1/8" NPT	1/8" NPT	1/8" NPT	5/3	0.50	23 scfm			•
MMA-42QAAP	1/4" NPT	1/4" NPT	1/8" NPT	5/3	0.89	49 scfm			•
MMA-43WAAP	3/8" NPT	3/8" NPT	1/4" NPT	5/3	1.00	72 scfm			•
MMA-44ZAAP	1/2" NPT	1/2" NPT	1/2" NPT	5/3	1.68	93 scfm			•
MMA-41NAAE	#10-32	#10-32	#10-32	5/3	0.50	23 scfm		•	
MMA-41PAAE	1/8" NPT	1/8" NPT	1/8" NPT	5/3	0.50	23 scfm		•	
MMA-42QAAE	1/4" NPT	1/4" NPT	1/8" NPT	5/3	0.89	49 scfm		•	
MMA-43WAAE	3/8" NPT	3/8" NPT	1/4" NPT	5/3	1.00	72 scfm		•	
MMA-44ZAAE	1/2" NPT	1/2" NPT	1/2" NPT	5/3	1.68	93 scfm		•	

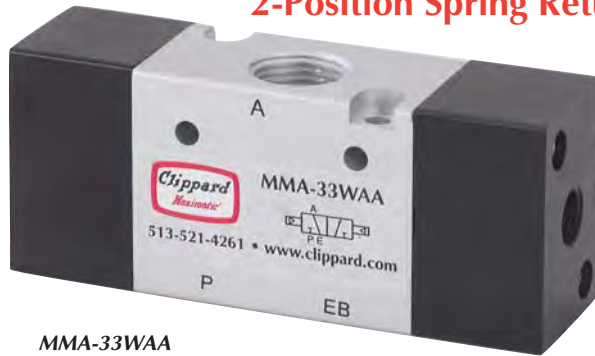
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# MAXIMATIC® 3-WAY AIR PILOT VALVES



## 2-Position Spring Return & Air Pilot Valves



MMA-33WAA



MMA-33WAS

Maximatic 3-way air piloted valves are either double pilot or single pilot, spring return in #10-32 thread to 1/2" NPT port sizes. These air piloted valves have 1/8" NPT external pilot ports.

**Type:** Spool (not bidirectional)

**Medium:** Air (40 micron filtration) or Inert Gas

**Operating Range:** Single Air Pilot: 20 to 125 psig; Double Air Pilot: 0 to 125 psig.

**Pilot Pressure:** See chart

**Maximum Pressure:** 125 psig

**Number of Ports:** 3

**Materials:** Aluminum, Stainless Steel, Thermoplastic

**Mounting:** Body Ported, Manifold Mount

**Temperature Range:** 32 to 150°F (0 to 65°C)

**Seals:** Nitrile



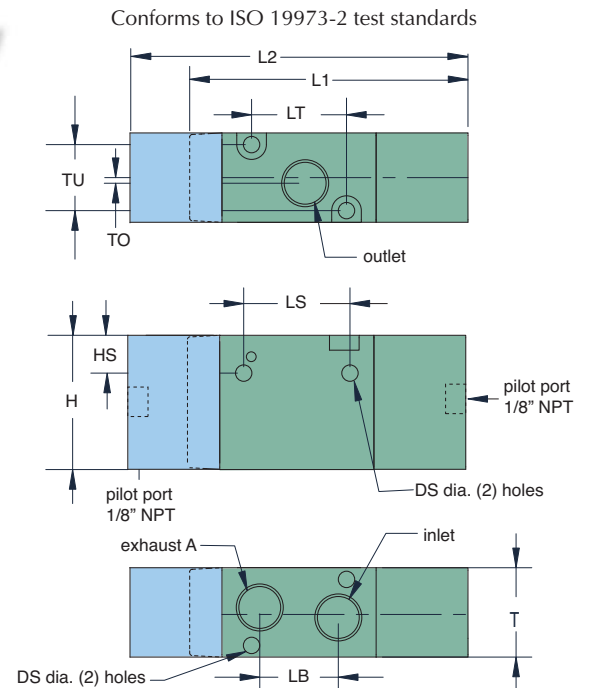
# Maximatic®

Port	Cv	Flow Rate	
		@ 50 psig	@ 100 psig
#10-32	0.58	16 scfm	27 scfm
1/8" NPT	0.67	18 scfm	31 scfm
1/4" NPT	0.89	26 scfm	49 scfm
3/8" NPT	1.68	51 scfm	93 scfm
1/2" NPT	2.79	91 scfm	171 scfm

### Minimum Pilot Pressure

	Single Pilot		Double Pilot	
Operating Pressure (psig)	20	80	20	80
Pilot Pressure (psig)	20	35	5	8

Dim.	MMA-31	MMA-32	MMA-33	MMA-34
DS	0.13	0.17	0.17	0.22
DT	0.13	0.13	0.17	0.17
H	1.07	1.38	1.58	1.97
HS	0.30	0.31	0.41	0.53
L1	2.23	3.06	3.17	3.80
L2	2.71	3.46	3.80	4.72
LB	0.63	0.71	0.94	1.42
LS	0.83	0.98	1.18	2.01
LT	0.75	1.30	1.38	1.73
T	0.71	0.86	1.06	1.34
TO	0.06	0.06	0.16	0.16
TU	0.71	0.65	1.06	1.34



Spring Return Valves		Double Air Pilot Valves		Inlet	Outlet	Exhaust	Cv/scfm*
<a href="#">MMA-31NAS</a>		<a href="#">MMA-31NAA</a>		#10-32	#10-32	#10-32	0.58/27
<a href="#">MMA-31PAS</a>		<a href="#">MMA-31PAA</a>		1/8" NPT	1/8" NPT	1/8" NPT	0.67/31
<a href="#">MMA-32QAS</a>		<a href="#">MMA-32QAA</a>		1/4" NPT	1/4" NPT	1/4" NPT	0.89/49
<a href="#">MMA-33WAS</a>		<a href="#">MMA-33WAA</a>		3/8" NPT	3/8" NPT	3/8" NPT	1.68/93
<a href="#">MMA-34ZAS</a>		<a href="#">MMA-34ZAA</a>		1/2" NPT	1/2" NPT	1/2" NPT	2.79/171

\* scfm based on flow @ 100 psig



# MAXIMATIC® 4-WAY AIR PILOT VALVES

## 2-Position Spring Return & Air Pilot Valves



MMA-42QAS



MMA-44ZAA

Maximatic® 4-way air piloted valves are either double pilot or single pilot, spring return in #10-32 thread to 1/2" NPT port sizes. These air piloted valves have 1/8" NPT pilot ports.

**Type:** Spool (not bidirectional)

**Medium:** Air (40 micron filtration) or Inert Gas

**Operating Range:** Single Air Pilot: 20 to 125 psig, Double Air Pilot: 0 to 125 psig. Refer to Minimum Pilot Pressure Chart below.

**Pilot Pressure:** See chart      **Maximum Pressure:** 125 psig

**Number of Ports:** 5      **Mounting:** Body Ported, Manifold

**Materials:** Aluminum, Stainless Steel, Thermoplastic

**Seals:** Nitrile

### Minimum Pilot Pressure

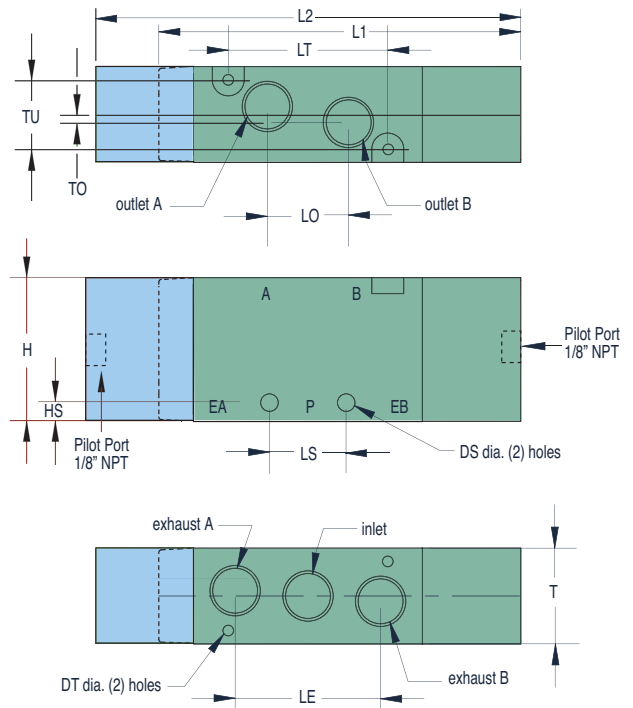
	Single Pilot	Double Pilot	Three Position
Operating Pressure (psig)	20 80	20 80	20 80
Pilot Pressure (psig)	20 35	5 8	20* 20*

\* 30 on MMA-41 Series

Dim.	MMA-41	MMA-42	MMA-43	MMA-44
DS	0.13	0.17	0.17	0.21
DT	0.13	0.13	0.17	0.17
H	1.07	1.38	1.58	1.97
HS	0.16	0.28	0.26	0.29
L1	2.71	3.06	3.76	4.87
L2	3.16	3.62	4.37	5.43
LE	1.09	1.42	1.77	2.48
LO	0.63	0.83	0.96	1.42
LS	0.63	0.79	0.95	1.11
LT	1.18	1.50	1.97	2.82
T	0.71	0.87	1.06	1.34
TO	0.11	0.12	0.16	0.19
TU	0.50	0.67	0.80	1.07

Port	Cv	Flow Rate	
		@ 50 psig	@ 100 psig
#10-32	0.58	16 scfm	27 scfm
1/8" NPT	0.67	18 scfm	31 scfm
1/4" NPT	0.89	26 scfm	49 scfm
3/8" NPT	1.68	51 scfm	93 scfm
1/2" NPT	2.79	91 scfm	171 scfm

Conforms to ISO 19973-2 test standards



Spring Return Valves		Double Air Pilot Valves		Inlet	Outlet	Exhaust	Cv/scfm*
<a href="#">MMA-41NAS</a>		<a href="#">MMA-41NAA</a>		#10-32	#10-32	#10-32	0.58/27
<a href="#">MMA-41PAS</a>		<a href="#">MMA-41PAA</a>		1/8" NPT	1/8" NPT	1/8" NPT	0.67/31
<a href="#">MMA-42QAS</a>		<a href="#">MMA-42QAA</a>		1/4" NPT	1/4" NPT	1/8" NPT	0.89/49
<a href="#">MMA-43WAS</a>		<a href="#">MMA-43WAA</a>		3/8" NPT	3/8" NPT	1/4" NPT	1.68/93
<a href="#">MMA-44ZAS</a>		<a href="#">MMA-44ZAA</a>		1/2" NPT	1/2" NPT	1/2" NPT	2.79/171

\* scfm based on flow @ 100 psig

## 3-Position Spring Centered Double Air Pilot Valves Closed Center, Pressure Center & Exhaust Center



MMA-44ZAAC

**MAXIMUM**  
Value. *Performance.*

Maximatic® 4-way 3-position double air pilot valves with closed center, pressure center or exhaust center spools are available in #10-32 thread to 1/2" NPT port sizes. These air piloted valves have 1/8" NPT external pilot ports.

**Type:** Spool (not bidirectional)

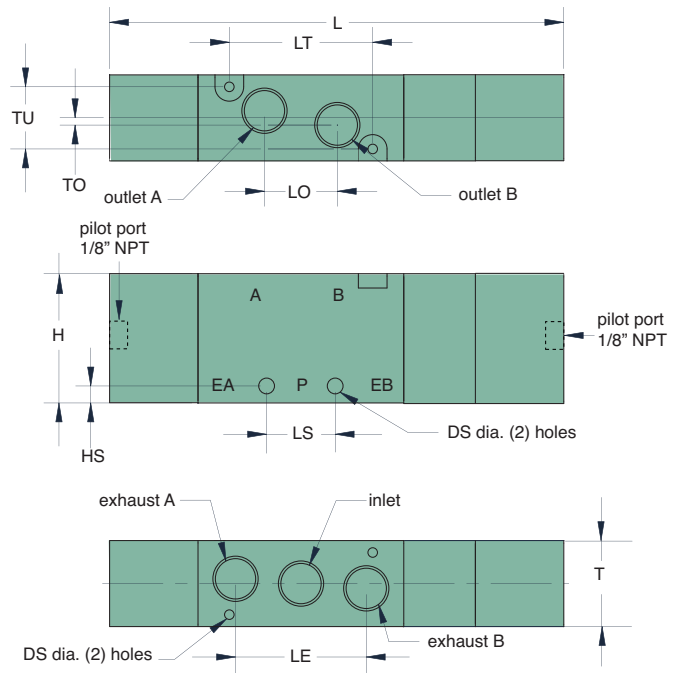
**Operating Range:** 0 to 125 psig


**Pilot Pressure:** See previous page

**Number of Ports:** 5

**Mounting:** Body Ported, Manifold Mount

Dim.	MMA-41	MMA-42	MMA-43	MMA-44
DS	0.13	0.17	0.17	0.21
DT	0.13	0.13	0.17	0.17
H	1.07	1.38	1.58	1.97
HS	0.16	0.28	0.26	0.29
L	3.78	4.37	5.13	5.43
LE	1.09	1.42	1.77	2.48
LO	0.63	0.74	0.96	1.42
LS	0.56	0.98	0.95	1.11
LT	1.18	1.40	1.97	2.82
T	0.71	0.86	1.06	1.34
TO	0.11	0.13	0.16	0.19
TU	0.50	0.65	0.80	1.07





**Exhaust Mufflers**  
For quiet system operation, see pages 154 and 326 for standard and speed control mufflers.



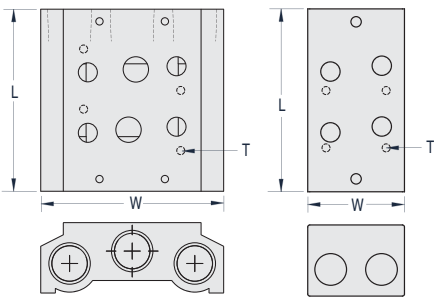
Closed Center	Pressure Center	Exhaust Center	Inlet	Outlet	Exhaust	Cv/scfm*
<u>MMA-41NAAC</u>	<u>MMA-41NAAP</u>	<u>MMA-41NAAE</u>	#10-32	#10-32	#10-32	0.50/23
<u>MMA-41PAAC</u>	<u>MMA-41PAAP</u>	<u>MMA-41PAAE</u>	1/8" NPT	1/8" NPT	1/8" NPT	0.50/23
<u>MMA-42QAAC</u>	<u>MMA-42QAAP</u>	<u>MMA-42QAAE</u>	1/4" NPT	1/4" NPT	1/8" NPT	0.89/49
<u>MMA-43WAAC</u>	<u>MMA-43WAAP</u>	<u>MMA-43WAAE</u>	3/8" NPT	3/8" NPT	1/4" NPT	1.00/72
<u>MMA-44ZAAC</u>	<u>MMA-44ZAAP</u>	<u>MMA-44ZAAE</u>	1/2" NPT	1/2" NPT	1/2" NPT	1.68/93

\* scfm based on flow @ 100 psig



# MAXIMATIC® VALVE ACCESSORIES

## Parallel Bar Manifolds



4-Way Manifold

3-Way Manifold



Valve Series	2-Station	4-Station	"L" Dimension 6-Station	8-Station	16-Station	"T" Mtg. Thread
MMA-31/41	2.24	3.73	5.25	6.75	12.69	M4
MMA-32/42	2.71	4.50	6.33	8.13	15.38	M4
MMA-33/43	3.22	5.42	7.62	9.82	18.63	M5
MMA-34/44	3.85	6.56	9.38	12.10	23.11	M5

Parallel circuit manifold bars are available for all sizes of MMA 3- and 4-way valves. **Manifolds are made in increments of two stations from two to 16**, and are supplied with mounting screws and gaskets. Spare kits are also available which include two screws and a gasket. Blank plate supplied with one gasket, two screws and metal plate.

Valve Series	Manifold Inlet/ Exhaust	Blank Plate	2-Station	4-Station	6-Station	8-Station	16-Station
<b>3-Way Valve Manifolds</b>							
MMA-31	1/8"	<a href="#">MMM-31-B</a>	<a href="#">MMM-31-02</a>	<a href="#">MMM-31-04</a>	<a href="#">MMM-31-06</a>	<a href="#">MMM-31-08</a>	<a href="#">MMM-31-16</a>
MMA-32	1/4"	<a href="#">MMM-32-B</a>	<a href="#">MMM-32-02</a>	<a href="#">MMM-32-04</a>	<a href="#">MMM-32-06</a>	<a href="#">MMM-32-08</a>	<a href="#">MMM-32-16</a>
MMA-33	3/8"	<a href="#">MMM-33-B</a>	<a href="#">MMM-33-02</a>	<a href="#">MMM-33-04</a>	<a href="#">MMM-33-06</a>	<a href="#">MMM-33-08</a>	<a href="#">MMM-33-16</a>
MMA-34	1/2"	<a href="#">MMM-34-B</a>	<a href="#">MMM-34-02</a>	<a href="#">MMM-34-04</a>	<a href="#">MMM-34-06</a>	<a href="#">MMM-34-08</a>	<a href="#">MMM-34-16</a>

<b>3-Way Spare Mounting Kit Hardware</b>							
27041-31	Hardware Kit for MMA-31 Series Valves			27041-33	Hardware Kit for MMA-33 Series Valves		
27041-32	Hardware Kit for MMA-32 Series Valves			27041-34	Hardware Kit for MMA-34 Series Valves		

Valve Series	Manifold Inlet/ Exhaust	Blank Plate	2-Station	4-Station	6-Station	8-Station	16-Station
<b>4-Way Valve Manifolds</b>							
MMA-41	1/4"	<a href="#">MMM-41-B</a>	<a href="#">MMM-41-02</a>	<a href="#">MMM-41-04</a>	<a href="#">MMM-41-06</a>	<a href="#">MMM-41-08</a>	<a href="#">MMM-41-16</a>
MMA-42	1/4"	<a href="#">MMM-42-B</a>	<a href="#">MMM-42-02</a>	<a href="#">MMM-42-04</a>	<a href="#">MMM-42-06</a>	<a href="#">MMM-42-08</a>	<a href="#">MMM-42-16</a>
MMA-43	3/8"	<a href="#">MMM-43-B</a>	<a href="#">MMM-43-02</a>	<a href="#">MMM-43-04</a>	<a href="#">MMM-43-06</a>	<a href="#">MMM-43-08</a>	<a href="#">MMM-43-16</a>
MMA-44	1/2"	<a href="#">MMM-44-B</a>	<a href="#">MMM-44-02</a>	<a href="#">MMM-44-04</a>	<a href="#">MMM-44-06</a>	<a href="#">MMM-44-08</a>	<a href="#">MMM-44-16</a>

<b>4-Way Spare Mounting Kit Hardware</b>							
<a href="#">27041-41</a>	Hardware Kit for MMA-41 Series Valves			<a href="#">27041-43</a>	Hardware Kit for MMA-43 Series Valves		
<a href="#">27041-42</a>	Hardware Kit for MMA-42 Series Valves			<a href="#">27041-44</a>	Hardware Kit for MMA-44 Series Valves		

### Rebuild Kits

Convenient rebuild kits are available which contain common maintenance items that may be needed during the life of the valve. Each contains a spool, diamond seal, two pilot seals, two pistons with seals, and spring. Consult factory for 3-position kits.

<b>Part No.</b>	
<a href="#">27040-31</a>	3-Way Kit, MMA-31
<a href="#">27040-32</a>	3-Way Kit, MMA-32
<a href="#">27040-33</a>	3-Way Kit, MMA-33
<a href="#">27040-34</a>	3-Way Kit, MMA-34
<a href="#">27040-41</a>	4-Way 2 Pos. Kit, MMA-41
<a href="#">27040-42</a>	4-Way 2 Pos. Kit, MMA-42
<a href="#">27040-43</a>	4-Way 2 Pos. Kit, MMA-43
<a href="#">27040-44</a>	4-Way 2 Pos. Kit, MMA-44