

Maximatic®



Maximatic Air Pilot Valves

Clippard's Maximatic Air Pilot Valves are available in three- and four-way configurations in port sizes from #10-32 thread to 1/2" NPT. They are spool type valves with single or double air pilots with pressure ranges from 0 to 125 psig. Some of the many features of the valve include small size, high flow and competitive pricing.

These valves offer maximum flow in a small package, and are constructed of aluminum, stainless steel and thermoplastic materials. They have a 1/8" NPT external pilot port.

This new line of valves is especially well-suited for packaging, factory automation and OEM fluid power applications.

Type: Spool

Medium: Air (40 micron filtration) and Inert Gas

Operating Range: Single Air Pilot: 20 to 125 psig; all others: see chart below

Materials: Aluminum, Stainless Steel, Thermoplastic

Mounting: Body Ported, Manifold Mount

Maximum Pressure: 125 psig

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

Seals: Buna-N

Minimum Pilot Pressure

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

Three- & Four-Way Valves

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



Maximatic® Air Pilot Valves

Three-Way Valves

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

Four-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		•	

Three-Way 2-Position Spring Return & Double Air Pilot Valves



MMA-33WAA



MMA-33WAS

Maximatic® three-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.

Operating Range: Single Air Pilot: 20 to 125 psig; all others: 0 to 125 psig. Refer to Minimum Pilot Pressure Chart on [Page 12](#).

Number of Ports: 3

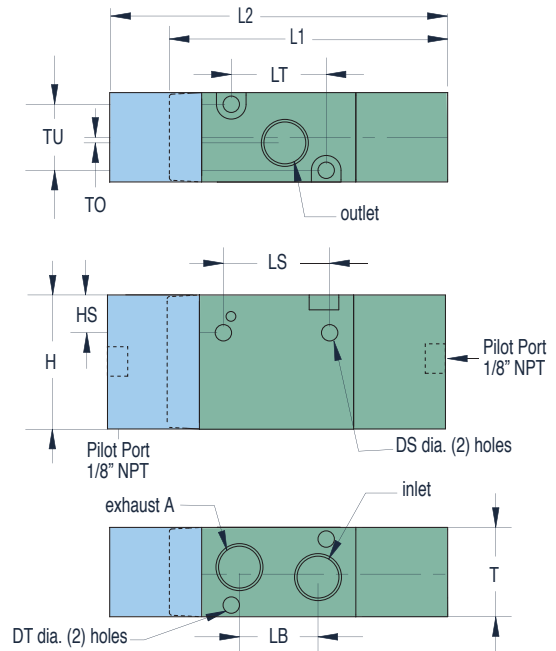
Mounting: Body Ported, Manifold Mount



Base Mounted Manifolds
For a complete offering of Manifolds and other accessories, see [page 17](#).

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Dim.	MMA-31	MMA-32	MMA-33	MMA-34
DS	0.13 (3.3)	0.17 (4.3)	0.17 (4.3)	0.22 (5.6)
DT	0.13 (3.3)	0.13 (3.3)	0.17 (4.3)	0.17 (4.3)
H	1.07 (27.2)	1.38 (35.1)	1.58 (40.1)	1.97 (50.0)
HS	0.30 (7.6)	0.31 (7.9)	0.41 (10.4)	0.53 (13.5)
L1	2.23 (56.6)	3.06 (77.7)	3.17 (80.5)	3.80 (96.5)
L2	2.71 (68.8)	3.46 (87.9)	3.80 (96.5)	4.72 (119.9)
LB	0.63 (16.0)	0.71 (18.0)	0.94 (23.9)	1.42 (36.1)
LS	0.83 (21.1)	0.98 (24.9)	1.18 (30.0)	2.01 (51.1)
LT	0.75 (19.1)	1.30 (33.0)	1.38 (35.1)	1.73 (43.9)
T	0.71 (18.0)	0.86 (22.1)	1.06 (26.9)	1.34 (34.0)
TO	0.06 (1.5)	0.06 (1.5)	0.16 (4.1)	0.16 (4.1)
TU	0.71 (18.0)	0.87 (22.1)	1.06 (26.9)	1.34 (34.0)



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

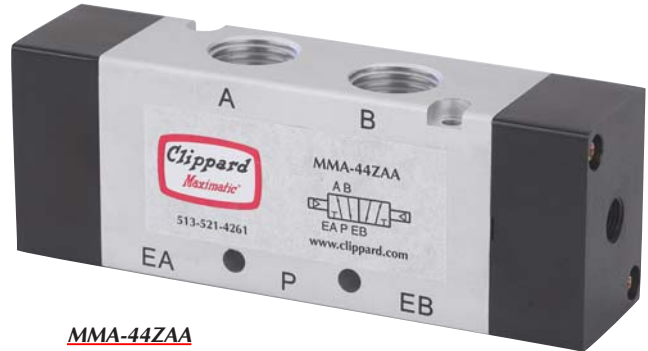
* scfm based on flow @ 100 psig



Four-Way 2-Position Spring Return & Double Air Pilot Valves



MMA-42QAS



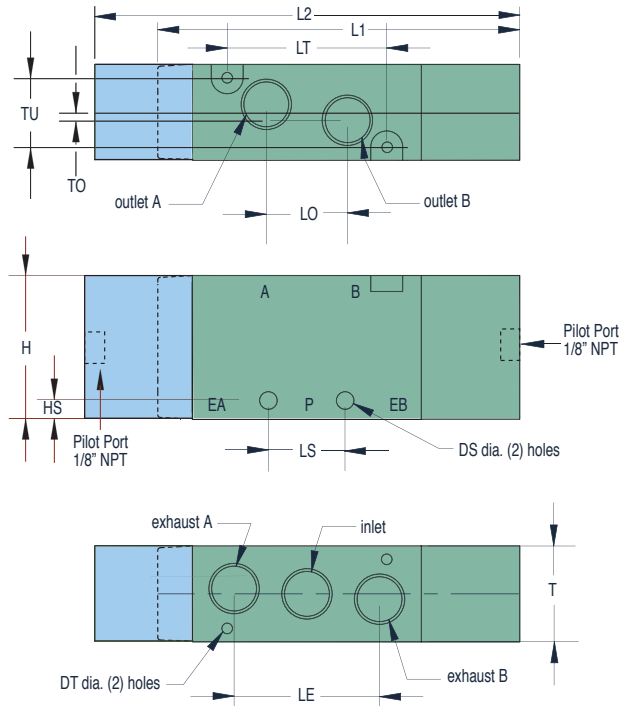
MMA-44ZAA

Maximatic® four-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.

Operating Range: Single Air Pilot: 20 to 125 psig; all others: 0 to 125 psig. Refer to Minimum Pilot Pressure Chart on [Page 12](#).

Number of Ports: 5

Mounting: Body Ported, Manifold Mount



Dim.	MMA-41	MMA-42	MMA-43	MMA-44
DS	0.13 (3.3)	0.17 (4.3)	0.17 (4.3)	0.21 (5.3)
DT	0.13 (3.3)	0.13 (3.3)	0.17 (4.3)	0.17 (4.3)
H	1.07 (27.2)	1.38 (35.1)	1.58 (40.1)	1.97 (50.0)
HS	0.16 (4.1)	0.28 (7.1)	0.26 (6.6)	0.29 (7.4)
L1	2.71 (68.8)	3.06 (77.7)	3.76 (95.5)	4.87 (123.7)
L2	3.16 (80.3)	3.62 (91.9)	4.37 (111.0)	5.43 (137.9)
LE	1.09 (27.7)	1.42 (36.1)	1.77 (45.0)	2.48 (63.0)
LO	0.63 (16.0)	0.74 (18.8)	0.96 (24.4)	1.42 (36.1)
LS	0.63 (16.0)	0.98 (24.9)	0.95 (24.1)	1.11 (28.2)
LT	1.18 (30.0)	1.40 (35.6)	1.97 (50.0)	2.82 (71.6)
T	0.71 (18.0)	0.86 (21.8)	1.06 (26.9)	1.34 (34.0)
TO	0.11 (2.8)	0.13 (3.3)	0.16 (4.1)	0.19 (4.8)
TU	0.50 (12.7)	0.65 (16.5)	0.80 (20.3)	1.07 (27.2)

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

* scfm based on flow @ 100 psig

Four-Way 3-Position Double Air Pilot Valves

Closed Center, Pressure Center & Exhaust Center



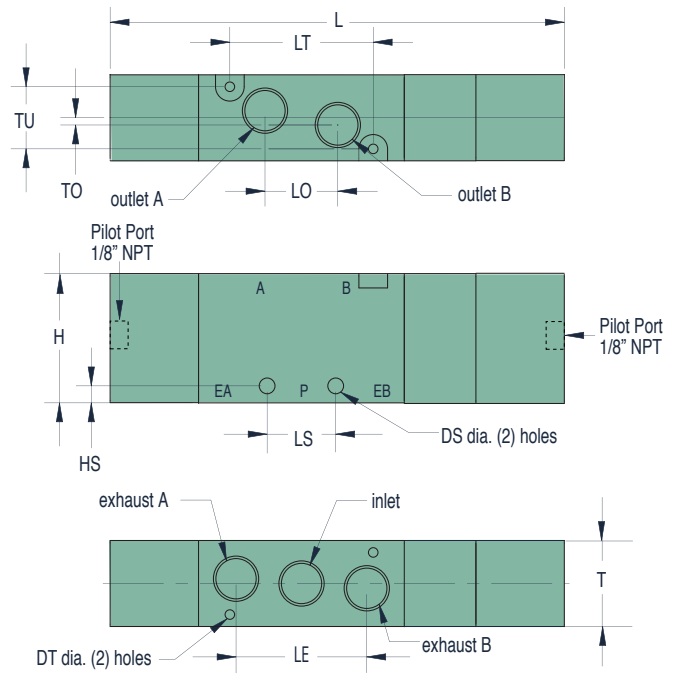
MMA-44ZAAC

Maximatic® four-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.

Operating Range: 0 to 125 psig
Number of Ports: 5
Mounting: Body Ported, Manifold Mount

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Dim.	MMA-41	MMA-42	MMA-43	MMA-44
DS	0.13 (3.3)	0.17 (4.3)	0.17 (4.3)	0.21 (5.3)
DT	0.13 (3.3)	0.13 (3.3)	0.17 (4.3)	0.17 (4.3)
H	1.07 (27.2)	1.38 (35.1)	1.58 (40.1)	1.97 (50.0)
HS	0.16 (4.1)	0.28 (7.1)	0.26 (6.6)	0.29 (7.4)
L	3.78 (96.0)	4.37 (111.0)	5.13 (130.3)	5.43 (137.9)
LE	1.09 (27.7)	1.42 (36.1)	1.77 (45.0)	2.48 (63.0)
LO	0.63 (16.0)	0.74 (18.8)	0.96 (24.4)	1.42 (36.1)
LS	0.56 (14.2)	0.98 (24.9)	0.95 (24.1)	1.11 (28.2)
LT	1.18 (30.0)	1.40 (35.6)	1.97 (50.00)	2.82 (71.6)
T	0.71 (18.0)	0.86 (21.8)	1.06 (26.9)	1.34 (34.0)
TO	0.11 (2.8)	0.13 (3.3)	0.16 (4.1)	0.19 (4.8)
TU	0.50 (12.7)	0.65 (16.5)	0.80 (20.3)	1.07 (27.2)



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

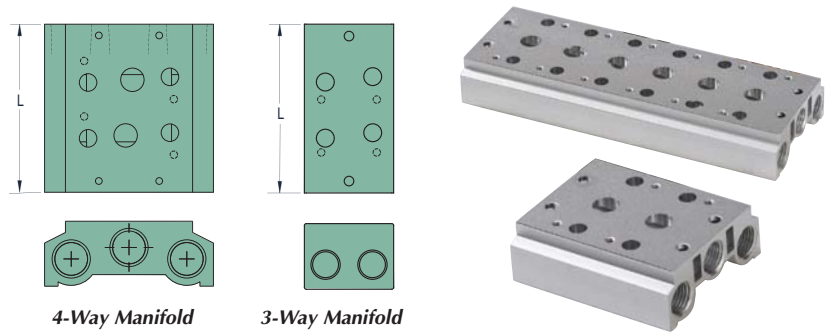
* scfm based on flow @ 100 psig

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.

Part No.	
27040-31	3-Way Kit, MME/MMA-31
27040-32	3-Way Kit, MME/MMA-32
27040-33	3-Way Kit, MME/MMA-33
27040-34	3-Way Kit, MME/MMA-34
27040-41	4-Way 2 Pos. Kit, MME/MMA-41
27040-42	4-Way 2 Pos. Kit, MME/MMA-42
27040-43	4-Way 2 Pos. Kit, MME/MMA-43
27040-44	4-Way 2 Pos. Kit, MME/MMA-44

Parallel Bar Manifolds



Valve Series	"L" Dimensions				
	2-Station	4-Station	6-Station	8-Station	16-Station
MME/MMA-31/41	2.24 (56.9)	3.73 (94.7)	5.25 (133.4)	6.75 (171.5)	12.69 (322.3)
MME/MMA-32/42	2.71 (68.8)	4.50 (114.3)	6.33 (160.8)	8.13 (206.5)	15.38 (390.7)
MME/MMA-33/43	3.22 (81.8)	5.42 (137.7)	7.62 (193.5)	9.82 (249.4)	18.63 (473.2)
MME/MMA-34/44	3.85 (97.8)	6.56 (166.6)	9.38 (238.3)	12.10 (307.3)	23.11 (587.0)

Parallel circuit manifold bars are available for all sizes of MMA/MME three- and four-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.

Inlet/Exhaust	Valve Series	Blank Plate	2-Station	4-Station	6-Station	8-Station	16-Station
Three-Way Valve Manifolds							
1/4"	MME/MMA-31	MMM-31-B	MMM-31-02	MMM-31-04	MMM-31-06	MMM-31-08	MMM-31-16
1/4"	MME/MMA-32	MMM-32-B	MMM-32-02	MMM-32-04	MMM-32-06	MMM-32-08	MMM-32-16
3/8"	MME/MMA-33	MMM-33-B	MMM-33-02	MMM-33-04	MMM-33-06	MMM-33-08	MMM-33-16
1/2"	MME/MMA-34	MMM-34-B	MMM-34-02	MMM-34-04	MMM-34-06	MMM-34-08	MMM-34-16

Three-Way Spare Mounting Kit Hardware

27041-31	Hardware Kit for MME/MMA-31 Series Valves	27041-33	Hardware Kit for MME/MMA-33 Series Valves
27041-32	Hardware Kit for MME/MMA-32 Series Valves	27041-34	Hardware Kit for MME/MMA-34 Series Valves

Inlet/Exhaust	Valve Series	Blank Plate	2-Station	4-Station	6-Station	8-Station	16-Station
Four-Way Valve Manifolds							
1/4"	MME/MMA-41	MMM-41-B	MMM-41-02	MMM-41-04	MMM-41-06	MMM-41-08	MMM-41-16
1/4"	MME/MMA-42	MMM-42-B	MMM-42-02	MMM-42-04	MMM-42-06	MMM-42-08	MMM-42-16
3/8"	MME/MMA-43	MMM-43-B	MMM-43-02	MMM-43-04	MMM-43-06	MMM-43-08	MMM-43-16
1/2"	MME/MMA-44	MMM-44-B	MMM-44-02	MMM-44-04	MMM-44-06	MMM-44-08	MMM-44-16

Four-Way Spare Mounting Kit Hardware

27041-41	Hardware Kit for MME/MMA-41 Series Valves	27041-43	Hardware Kit for MME/MMA-43 Series Valves
27041-42	Hardware Kit for MME/MMA-42 Series Valves	27041-44	Hardware Kit for MME/MMA-44 Series Valves

Replacement Coils



Description	2.5 Watt	3.0 Watt	6.5 Watt
	#10-32 & 1/8"	1/4", 3/8" & 1/2"	Direct-Acting
DIN Connectors			
12-Volt DC	27001-D012	27065-D012	27002-D012
24-Volt DC	27001-D024	27065-D024	27002-D024
110-Volt AC	27001-D110	27065-D110	27002-D110
220-Volt AC	27001-D220	27065-D220	27002-D220
24-Volt AC	27001-D24A	27065-D24A	27002-D24A
Wire Leads			
12-Volt DC	27001-W012	27065-W012	27002-W012
24-Volt DC	27001-W024	27065-W024	27002-W024
110-Volt AC	27001-W110	27065-W110	27002-W110
220-Volt AC	27001-W220	27065-W220	27002-W220
24-Volt AC	27001-W24A	27065-W24A	27002-W24A

Replacement coils for solenoid valves are available in voltages from 12 VDC to 220 VAC with either DIN connector or 18" wire leads.