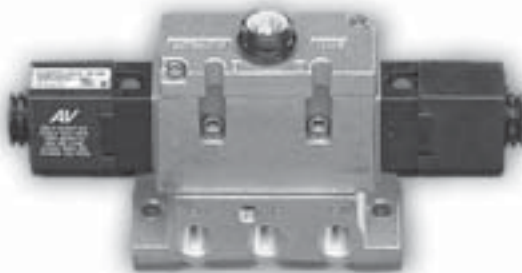
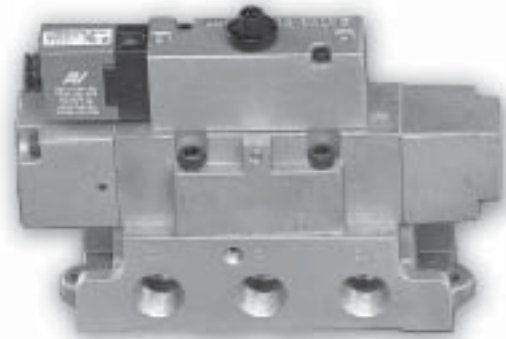
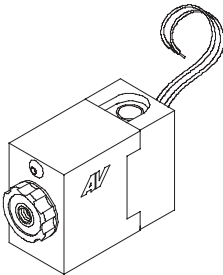
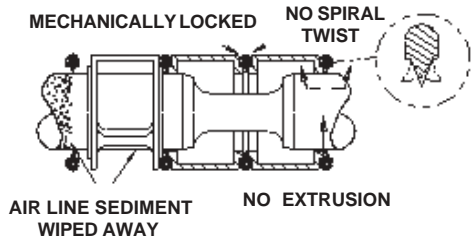


ISO 9001  
**AV** **AUTOMATIC**  
**VALVE**



**SAE SPOOL VALVES**

## DESIGN FEATURES



### VALVES

- Conforms to SAE J2051 specifications for series 125, 250, 500, and 1000.
- Flow from 2 to 20 Cv.
- Complete range of bases and operators available.

#### TAPERED TEE-SEAL ..... Eats Dirt

- Bi-directional tapered Tee-Seal flexes to clean spool. Eliminates Monday morning sticking problems.
- Tested tough and proven reliable according to SAE specifications: Rust and water injected every 864,000 cycles for 20 million cycles.

#### SOLENOID ... Guaranteed Against Burnout

- Three-way pilot uses full air line pressure to shift the valve.
- Pilot is internally supplied when the pressure at port one is 35 to 150 PSIG (240 to 1030 kPa).
- Coil is hermetically sealed as an integral watertight molded unit.
- Intrinsically-safe and explosion-proof versions available.

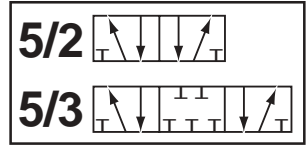
#### PRODUCTS CERTIFIED TO

- CSA - (C22.2)
- UL - (STD 429)
- ATEX - (2018x)
- PTB - (EEExIICT5), (EEExIICT6)
- CE - (73/23/EEC), (89/336/EEC)

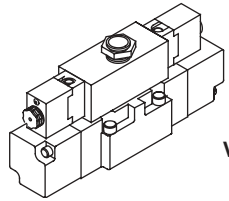
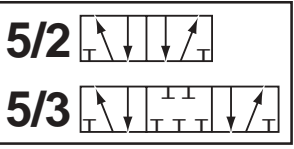
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# SPECIFICATIONS

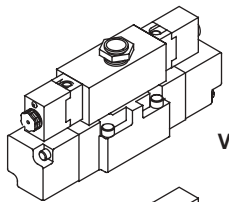


VALVE OPERATION			
<p><b>A04</b>                      <b>A06</b></p>		<p><b>5/3 BLOCK</b> - 4 way 3 position blocked center valves operate like 5/2 double valves except shift when a maintained signal is applied to either 1-2 or 1-4. Valves reset to center position when signal is removed with all ports blocked.</p>	
<p><b>5/2 SINGLE</b> - 4 way 2 position single operator valves shift, apply pressure from port 1 to 4, and exhaust pressure from port 2 to 3 when a maintained signal is applied to operator 1-4. Valves reset, apply pressure from port 1 to 2, exhaust pressure from port 4 to 5 when the signal is removed.</p>		<p><b>5/3 EXHAUST</b> - 4 way 3 position exhaust center valves operate like 5/2 double valves except shift when a maintained signal is applied to either 1-2 or 1-4. Valves reset to center position when signal is removed with port 2 open to 3, port 4 open to 5, and port 1 blocked.</p>	
<p><b>5/2 DOUBLE</b> - 4 way 2 position double operator valves shift, apply pressure from port 1 to 4, and exhaust pressure from 2 to 3 when a momentary signal is applied to operator 1-4. Valves shift, apply pressure from port 1 to 2, and exhaust pressure from 4 to 5 when a momentary signal is applied to operator 1-2.</p>		<p><b>5/3 PRESURE</b> - 4 way 3 position pressure center valves operate like 5/2 double valves except shift when a maintained signal is applied to either 1-2 or 1-4. Valves reset to center position when signal is removed with port 1 open to ports 2 and 4, and ports 3 and 5 are blocked.</p>	
<p><b>OPERATING TEMPERATURES</b></p>	<p><b>SOLENOID PILOT OPERATED</b></p> <p>Standard</p> <p>High Temp Coil (Option T)</p>	<p><b>TREATED BUNA-N SEALS (TREATED NBR, Standard)</b></p> <p>-18°C to +52°C (0°F to +125°F)</p> <p>-18°C to +82°C (0°F to +180°F)</p>	<p><b>FLUOROELASTOMER SEALS (FPM (FKM), Option A)</b></p> <p>-18°C to +52°C (0°F to +125°F)</p> <p>-18°C to +82°C (0°F to +180°F)</p>
	<p><b>OPERATING PRESSURES</b></p>	<p><b>SOLENOID PILOT OPERATED</b></p> <p>Standard 2 Position</p> <p>Standard 3 Position</p> <p>External Pilot (Option B)</p>	<p><b>INLET PORT</b></p> <p>240 - 1030 kPa (35 - 150 PSIG)</p> <p>345 - 1030 kPa (50 - 150 PSIG)</p> <p>Vacuum - 240 kPa (Vacuum - 35 PSIG)</p>
<p><b>FILTRATION AND LUBRICATION</b></p>	<p><b>MEDIA - AIR OR INERT GAS</b></p> <p>Lubrication of Automatic Valve products is not required but is recommended to maximize service life. Oils should be compatible with seal material, have an ISO 32 viscosity, and have an aniline range of 82°C (180°F) and 99°C (210°F). Refer to Maintenance section of catalog for recommended lubricants.</p> <p>Filter to 50 microns or better.</p> <p>For temperatures below 40°F, air must be dry to prevent formation of ice.</p>		



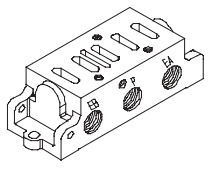
Valve Only

= 407 (A04, A06, A10, A20)



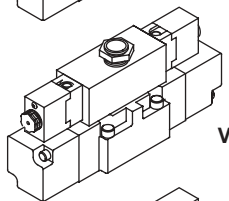
Valve

+



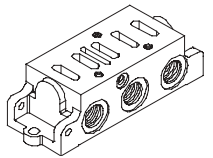
Sub-base

= 409 (A04, A06, A10, A20)



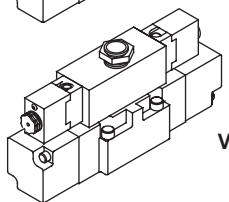
Valve

+



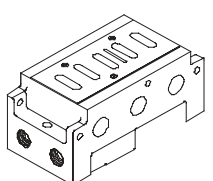
Manifold  
(Bottom  
Cylinder Ports)

= 413 (A04, A06, A10)



Valve

+



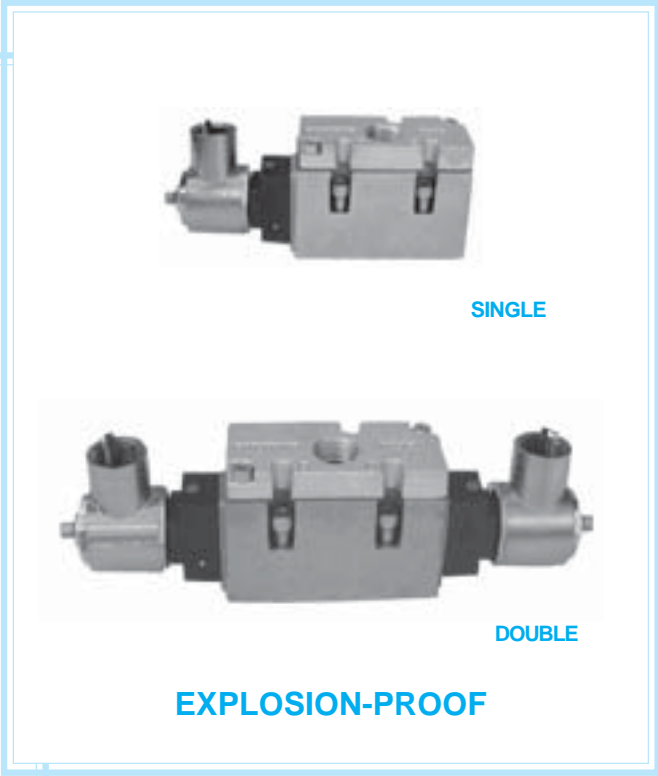
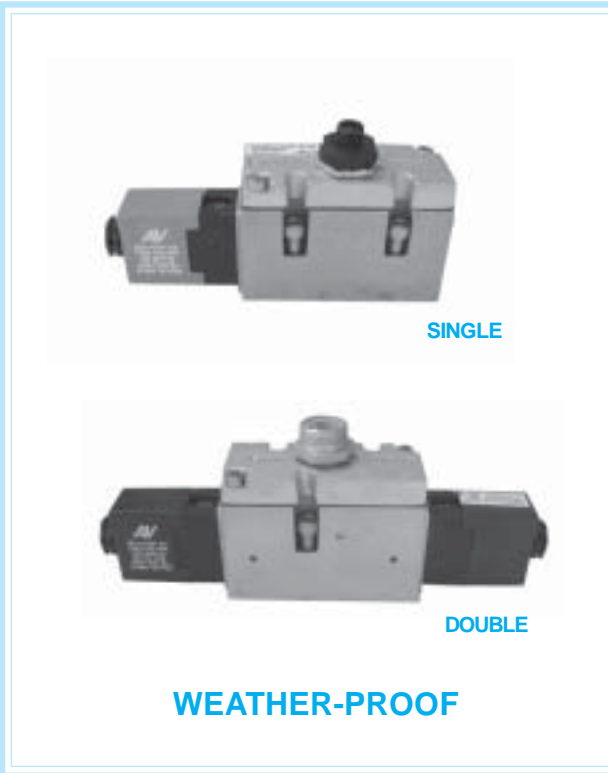
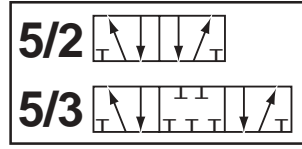
Manifold  
(Bottom/Side  
Cylinder Ports)

= 416 (A04, A06)

## MODEL NUMBER CHART

VALVE SERIES (SAE)	BODY TYPE	FUNCTION	SERIES		OPERATOR 1 (PB)	CENTER OPERATOR (USE WITH 3 POSITION ONLY)	OPERATOR 2 (PA)	VOLTAGE		OPTIONS			
			NO.	PORT SIZE (IN.)									
A04 (125)	407	VALVE ONLY	B	4 WAY	43	-	S3	WEATHER-PROOF SOLENOID	AA	110/50	A	FLUOROELASTEMER SEALS	
	409	VALVE WITH SUB-BASE	C	2 POSITION	42	1/4	Y3	EXPLOSION-PROOF SOLENOID	AB	120/60	B	EXTERNAL PILOT	
	413	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	D	4 WAY	43	3/8	1A	AIR PILOT	DA	220/50, 240/60, 125VDC	D	DUSTPROOF	
			E	3 POSITION EXHAUST	42	1/4	3B	HAND LEVER (A04 AND A06 ONLY)	DB	22/50, 24/60, 12VDC	Y	EXPLOSION-PROOF	
416	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)	E	4 WAY	43	3/8			DBL	24VDC LOW WATT-(Y)	0	GM - 5 PIN MICRO		
A06 (250)	407	VALVE ONLY			67	-					1	FORD - 5 PIN MICRO	
	409	VALVE WITH SUB-BASE			65	1/2					2	CHRYSLER - 5 PIN MICRO AC/DC	
	413	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)			67	3/4					3	GM - 5 PIN MINI	
					60	1					4	FORD - 5 PIN MINI	
416	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)			65	1/2					5	CHRYSLER - 5 PIN MINI		
A10 (500)	407	VALVE ONLY			87	-					6	GM - 4 PIN MICRO DC	
	409	VALVE WITH SUB-BASE			85	1/2					7	FORD - 4 PIN MICRO DC	
	413	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)			87	3/4							
					81	1							
A20 (1000)	407	VALVE ONLY			12	-							
	409	VALVE WITH SUB-BASE			10	1							
					12	1 1/4							
				15	1 1/2								

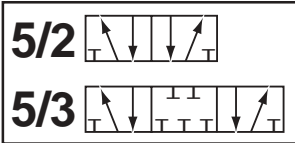
# STANDARD SOLENOID MODELS - A04 (125 SERIES)



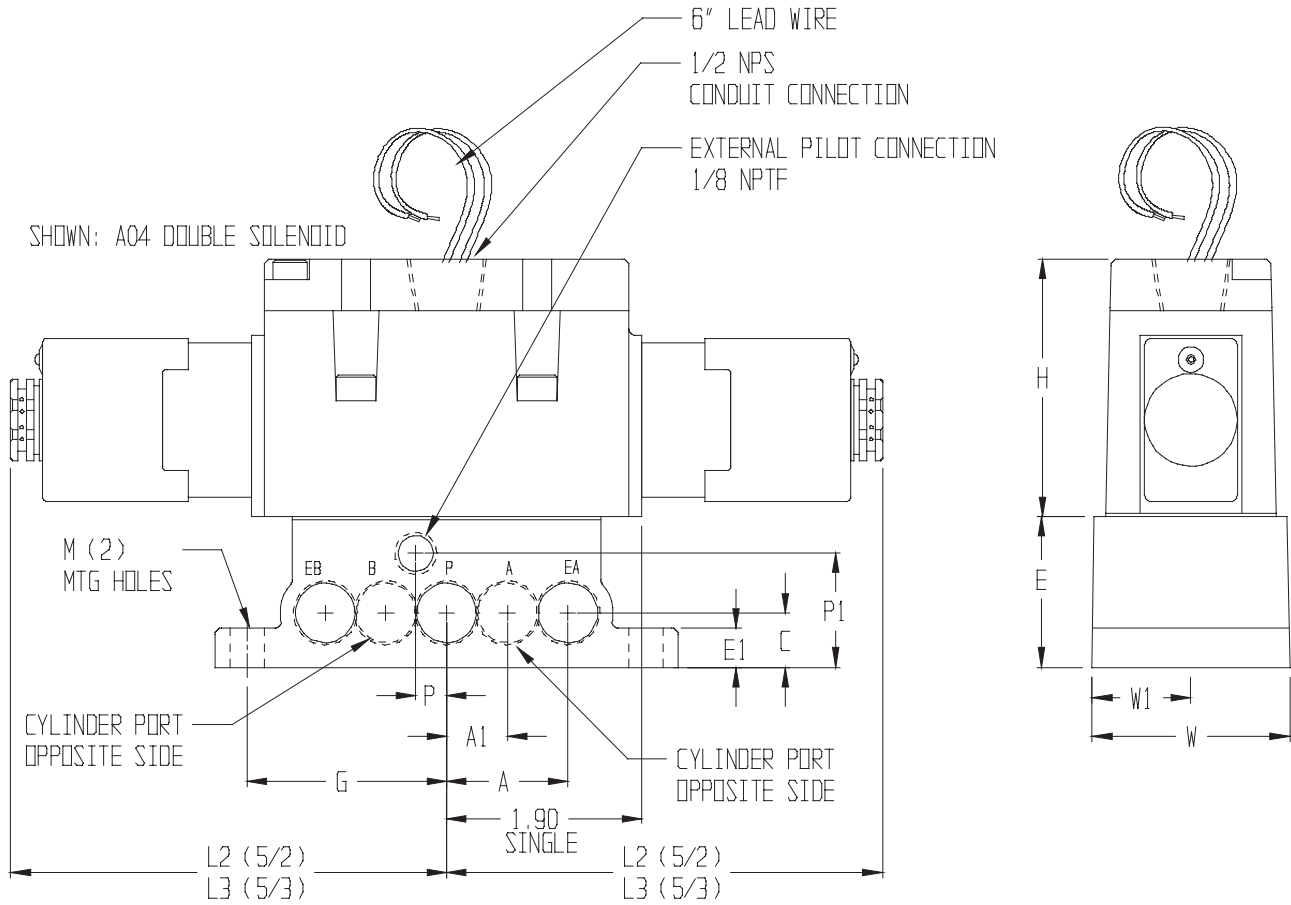
## MODEL NUMBERS

SERIES AV (SAE)	BODY TYPE	PORT LOC.	PORT SIZE	SOL. TYPE	5/2		5/3			BODY MAT.	SEAL MAT.	Kg (LB)
					SINGLE	DOUBLE	BLOCK	EXHAUST	PRESSURE			
A04 (125)  2.4 (2360)	VALVE ONLY	BASE	-	W-P E-P	407B43S39A* 407B43Y39A*	407B43S3S3* 407B43Y3Y3*	407C43S39DS3* 407C43Y39DY3*	407D43S39DS3* 407D43Y39DY3*	407E43S39DS3* 407E43Y39DY3*	ALUM.	NBR	2.2 (4.5)
	VALVE WITH SUB-BASE	BASE	1/4	W-P E-P	409B42S39A* 409B42Y39A*	409B42S3S3* 409B42Y3Y3*	409C42S39DS3* 409C42Y39DY3*	409D42S39DS3* 409D42Y39DY3*	409E42S39DS3* 409E42Y39DY3*	ALUM.	NBR	2.4 (5.4)
			3/8	W-P E-P	409B43S39A* 409B43Y39A*	409B43S3S3* 409B43Y3Y3*	409C43S39DS3* 409C43Y39DY3*	409D43S39DS3* 409D43Y39DY3*	409E43S39DS3* 409E43Y39DY3*			
	VALVE WITH MANIFOLD (BOTTOM SIDE CYL. PORTS)	BASE	1/4	W-P E-P	413B42S39A* 413B42Y39A*	413B42S3S3* 413B42Y3Y3*	413C42S39DS3* 413C42Y39DY3*	413D42S39DS3* 413D42Y39DY3*	413E42S39DS3* 413E42Y39DY3*	ALUM.	NBR	2.5 (5.5)
			3/8	W-P E-P	413B43S39A* 413B43Y39A*	413B43S3S3* 413B43Y3Y3*	413C43S39DS3* 413C43Y39DY3*	413D43S39DS3* 413D43Y39DY3*	413E43S39DS3* 413E43Y39DY3*			
	VALVE WITH MANIFOLD (BOTTOM SIDE CYL. PORTS)	BASE	1/4	W-P E-P	416B42S39A* 416B42Y39A*	416B42S3S3* 416B42Y3Y3*	416C42S39DS3* 416C42Y39DY3*	416D42S39DS3* 416D42Y39DY3*	416E42S39DS3* 416E42Y39DY3*	ALUM.	NBR	2.6 (5.9)
			3/8	W-P E-P	416B43S39A* 416B43Y39A*	416B43S3S3* 416B43Y3Y3*	416C43S39DS3* 416C43Y39DY3*	416D43S39DS3* 416D43Y39DY3*	416E43S39DS3* 416E43Y39DY3*			

\*Specify voltage. Refer to Electrical Section for selection.



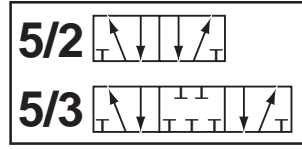
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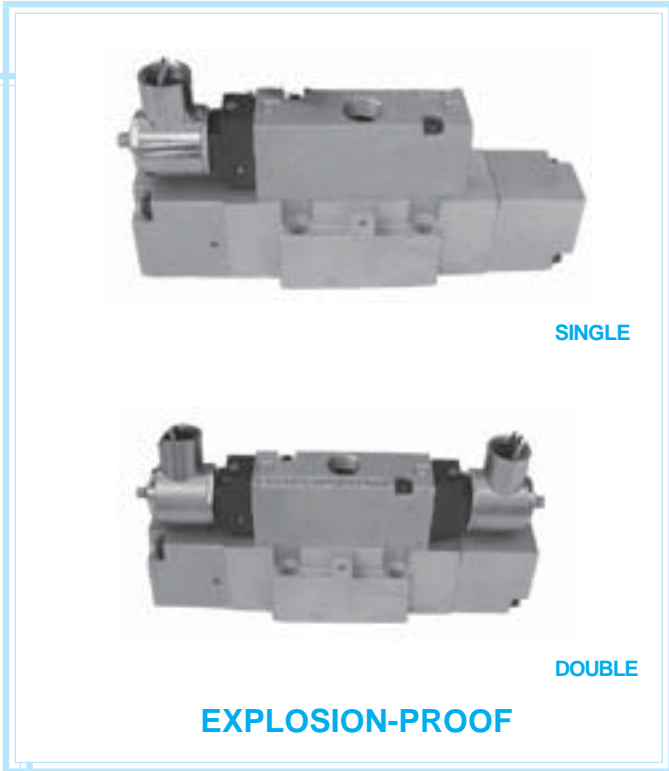
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SERIES AV (SAE)	BODY TYPE	A	A1	C	E	E1	G	H	L2	L3	M	P	P1	W	W1
<b>A04 (125)</b>	VALVE ONLY	-	-	-	-	-	-	64,3 2.53	109 4.29	109 4.29	-	-	-	-	-
	VALVE WITH SUB-BASE	30,0 1.18	15,0 .59	13,5 .53	36,6 1.44	9,5 .38	49,3 1.94	-	109 4.29	109 4.29	8,7 .34	7,6 .30	28,2 1.11	48,8 1.92	24,4 .96
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	34,9 1.38	17,5 .69	17,5 .69	46,0 1.81	9,5 .38	57,2 2.25	-	109 4.29	109 4.29	,71 .28	,76 .30	36,5 1.44	46,3 1.82	23,1 .91
	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)	34,9 1.38	19,1 .75	28,6 1.12	52,4 2.06	-	-	-	109 4.29	109 4.29	-	,76 .30	46,0 1.81	50,8 2.00	25,4 1.00

Units of Measure: Top - mm, Bottom - inches



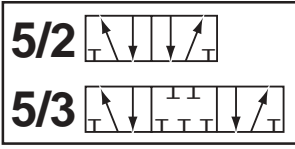
# STANDARD SOLENOID MODELS - A06 (250 SERIES)



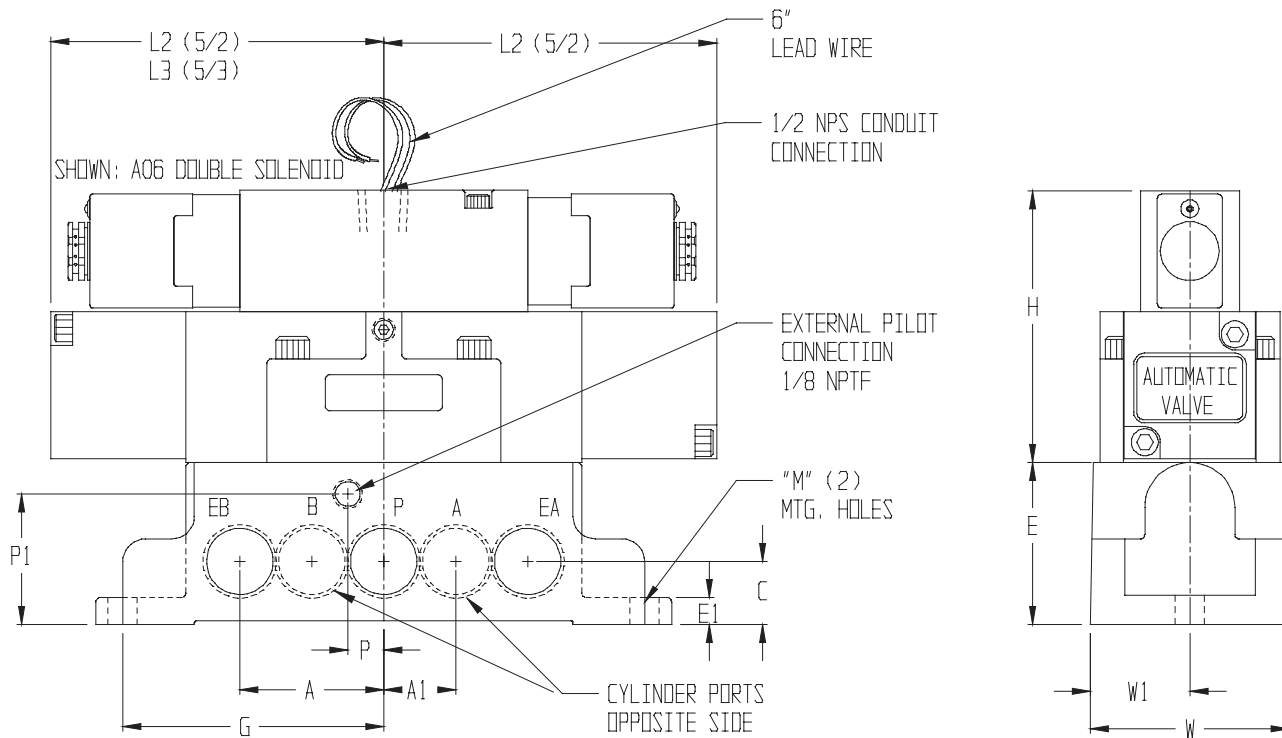
## MODEL NUMBERS

SERIES AV (SAE)  Cv (l/min)	BODY TYPE	PORT LOC.	PORT SIZE	SOL. TYPE	5/2		5/3			BODY MAT.	SEAL MAT.	Kg (LB)
					SINGLE	DOUBLE	BLOCK	EXHAUST	PRESSURE			
A06 (250)	VALVE ONLY	BASE	-	W-P E-P	407B67S39A* 407B67Y39A*	407B67S3S3* 407B67Y3Y3*	407C67S39DS3* 407C67Y39DY3*	407D67S39DS3* 407D67Y39DY3*	407E67S39DS3* 407E67Y39DY3*	ALUM.	NBR	3,9 (8.3)
	VALVE WITH SUB-BASE	BASE	1/2	W-P E-P	409B65S39A* 409B65Y39A*	409B65S3S3* 409B65Y3Y3*	409C65S39DS3* 409C65Y39DY3*	409D65S39DS3* 409D65Y39DY3*	409E65S39DS3* 409E65Y39DY3*	ALUM.	NBR	5,0 (11.0)
			3/4	W-P E-P	409B67S39A* 409B67Y39A*	409B67S3S3* 409B67Y3Y3*	409C67S39DS3* 409C67Y39DY3*	409D67S39DS3* 409D67Y39DY3*	409E67S39DS3* 409E67Y39DY3*			
8.6 (8460)	VALVE WITH MANIFOLD (BOTTOM CYL. PORTS)	BASE	1/2	W-P E-P	413B65S39A* 413B65Y39A*	413B65S3S3* 413B65Y3Y3*	413C65S39DS3* 413C65Y39DY3*	413D65S39DS3* 413D65Y39DY3*	413E65S39DS3* 413E65Y39DY3*	ALUM.	NBR	5,0 (11.0)
			3/4	W-P E-P	413B67S39A* 413B67Y39A*	413B67S3S3* 413B67Y3Y3*	413C67S39DS3* 413C67Y39DY3*	413D67S39DS3* 413D67Y39DY3*	413E67S39DS3* 413E67Y39DY3*			
	VALVE WITH MANIFOLD (BOTTOM/SIDE CYL. PORTS)	BASE	1/2	W-P E-P	416B65S39A* 416B65Y39A*	416B65S3S3* 416B65Y3Y3*	416C65S39DS3* 416C65Y39DY3*	416D65S39DS3* 416D65Y39DY3*	416E65S39DS3* 416E65Y39DY3*	ALUM.	NBR	4,6 (10.1)
3/4	W-P E-P	416B67S39A* 416B67Y39A*	416B67S3S3* 416B67Y3Y3*	416C67S39DS3* 416C67Y39DY3*	416D67S39DS3* 416D67Y39DY3*	416E67S39DS3* 416E67Y39DY3*						

\*Specify voltage. Refer to Electrical Section for selection.



# DIMENSIONAL INFORMATION

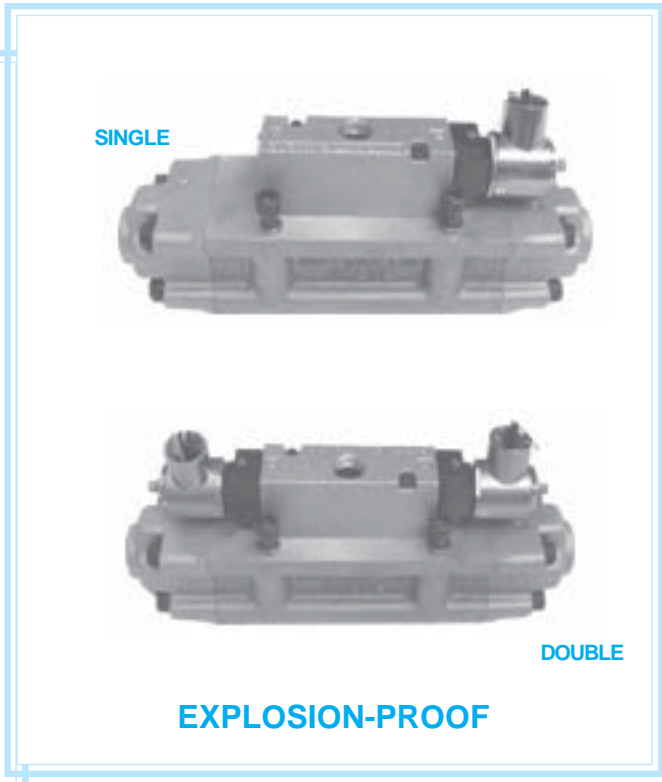
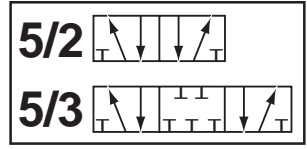


SERIES AV (SAE)	BODY TYPE	A	A1	C	E	E1	G	H	L2	L3	M	P	P1	W	W1
A06 (250)	VALVE ONLY	-	-	-	-	-	-	97,5 3.84	117 4.61	162 6.37	-	-	-	-	-
	VALVE WITH SUB-BASE	50,8 2.00	25,4 1.00	22,2 .88	57,2 2.25	10,3 .41	92,1 3.63	-	117 4.61	162 6.37	10,2 .41	12,7 .50	46,0 1.81	70,3 2.77	35,1 1.38
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	50,8 2.00	25,4 1.00	22,2 .88	57,2 2.25	10,3 .41	92,1 3.63	-	117 4.61	162 6.37	10,2 .41	12,7 .50	46,0 1.81	65,1 2.56	32,5 1.28
	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)	50,8 2.00	25,4 1.00	50,8 2.00	82,6 3.25	-	79,4 3.12	-	117 4.61	162 6.37	8,7 .34	12,7 .50	71,5 2.81	88,9 3.50	44,5 1.75

Units of Measure: Top - mm, Bottom - inches



# STANDARD SOLENOID MODELS - A10 (500 SERIES)

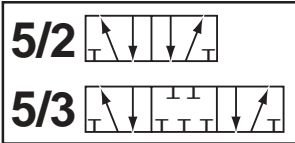


## MODEL NUMBERS

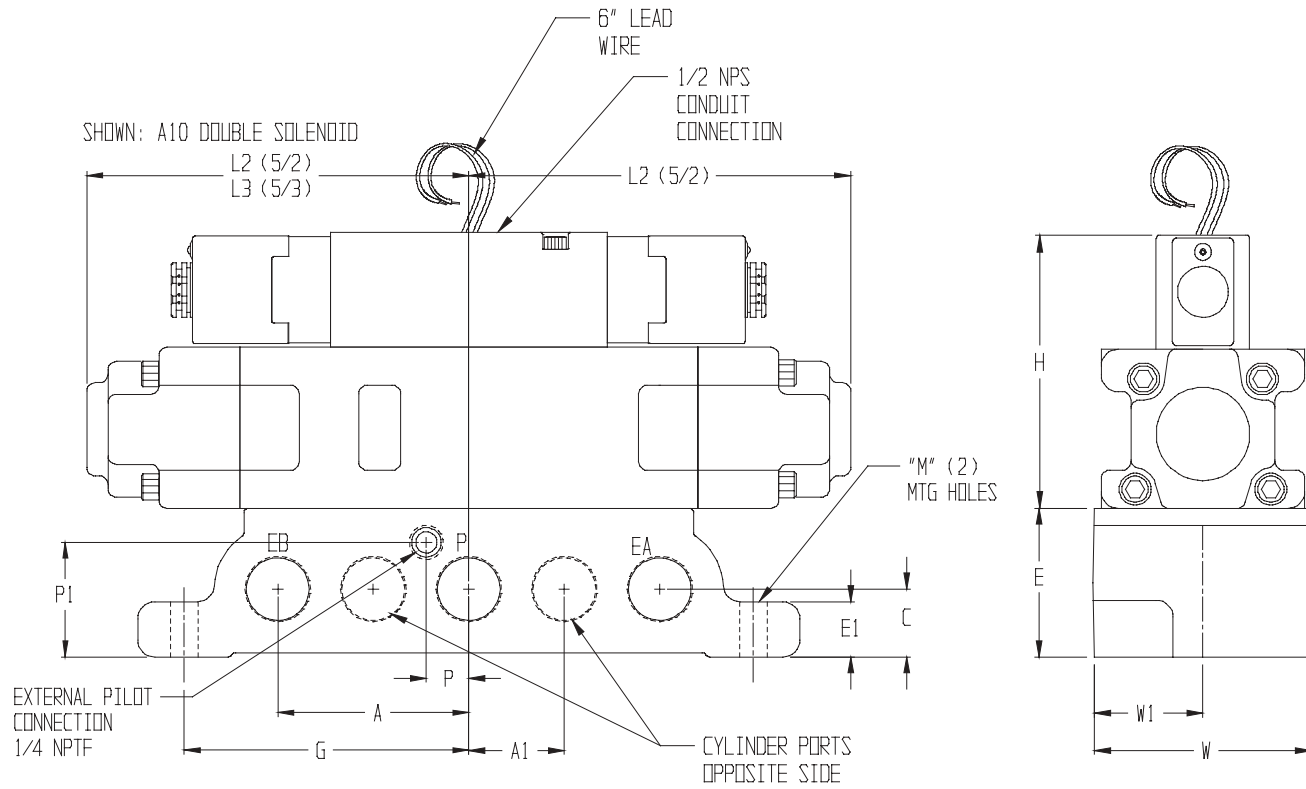
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SERIES AV (SAE)  Cv (l/min)	BODY TYPE	PORT LOC.	PORT SIZE	SOL. TYPE	5/2		5/3			BODY MAT.	SEAL MAT.	Kg (LB)
					SINGLE	DOUBLE	BLOCK	EXHAUST	PRESSURE			
A10 (500)  13.7 (13480)	VALVE ONLY	BASE	-	W-P E-P	407B87S39A* 407B87Y39A*	407B87S3S3* 407B87Y3Y3*	407C87S39DS3* 407C87Y39DY3*	407D87S39DS3* 407D87Y39DY3*	407E87S39DS3* 407E87Y39DY3*	ALUM.	NBR	5,3 (11.4)
	VALVE WITH SUB-BASE	BASE	1/2	W-P E-P	409B85S39A* 409B85Y39A*	409B85S3S3* 409B85Y3Y3*	409C85S39DS3* 409C85Y39DY3*	409D85S39DS3* 409D85Y39DY3*	409E85S39DS3* 409E85Y39DY3*	ALUM.	NBR	6,9 (15.2)
			3/4	W-P E-P	409B87S39A* 409B87Y39A*	409B87S3S3* 409B87Y3Y3*	409C87S39DS3* 409C87Y39DY3*	409D87S39DS3* 409D87Y39DY3*	409E87S39DS3* 409E87Y39DY3*			
			1	W-P E-P	409B81S39A* 409B81Y39A*	409B81S3S3* 409B81Y3Y3*	409B81S39DS3* 409B81Y39DY3*	409D81S39DS3* 409D81Y39DY3*	409E81S39DS3* 409E81Y39DY3*			
VALVE WITH MANIFOLD (BOTTOM CYL. PORTS)	BASE	1/2	W-P E-P	413B85S39A* 413B85Y39A*	413B85S3S3* 413B85Y3Y3*	413C85S39DS3* 413C85Y39DY3*	413D85S39DS3* 413D85Y39DY3*	413E85S39DS3* 413E85Y39DY3*	ALUM.	NBR	6,4 (14.1)	
		3/4	W-P E-P	413B87S39A* 413B87Y39A*	413B87S3S3* 413B87Y3Y3*	413C87S39DS3* 413C87Y39DY3*	413D87S39DS3* 413D87Y39DY3*	413E87S39DS3* 413E87Y39DY3*				

\*Specify voltage. Refer to Electrical Section for selection.



# DIMENSIONAL INFORMATION

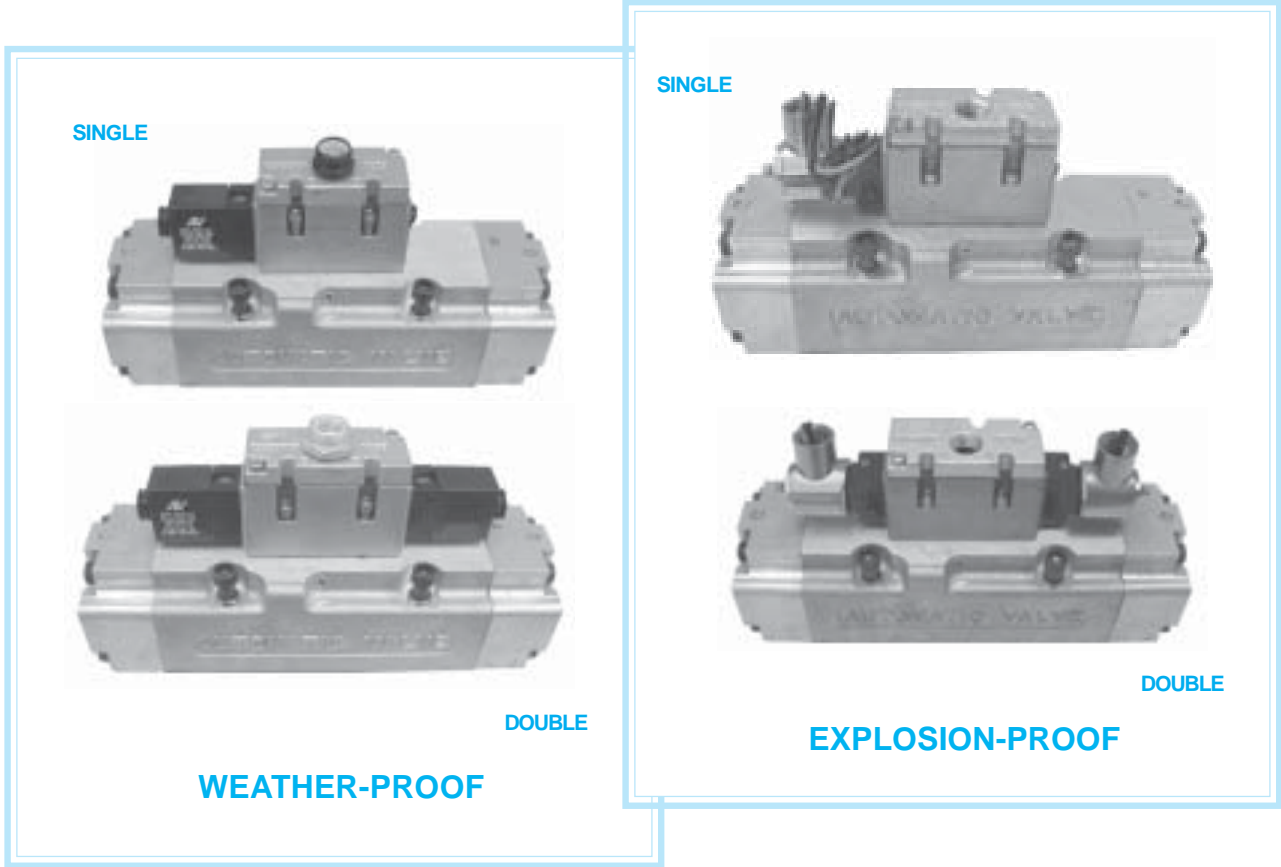
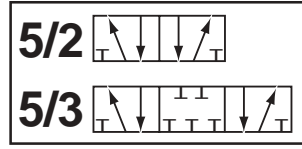


F

SERIES AV (SAE)	BODY TYPE	A	A1	C	E	E1	G	H	L2	L3	M	P	P1	W	W1
A10 (500)	VALVE ONLY	-	-	-	-	-	-	105 4.12	143 5.63	105 5.63	-	-	-	-	-
	VALVE WITH SUB-BASE	71,4 2.81	34,9 1.38	25,4 1.00	55,6 2.19	20,6 .81	106 4.19	-	143 5.63	143 5.63	10,3 .41	20,6 .81	42,9 1.69	82,6 3.25	41,2 1.62
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	69,9 2.75	31,8 1.25	20,6 .81	50,8 2.00	12,7 .50	103 4.06	-	143 5.63	143 5.63	7,9 .31	15,9 .63	40,5 1.60	82,6 3.25	41,3 1.63

Units of Measure: Top - mm, Bottom - inches

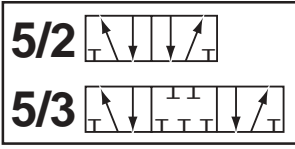
# STANDARD SOLENOID MODELS - A20 (1000 SERIES)



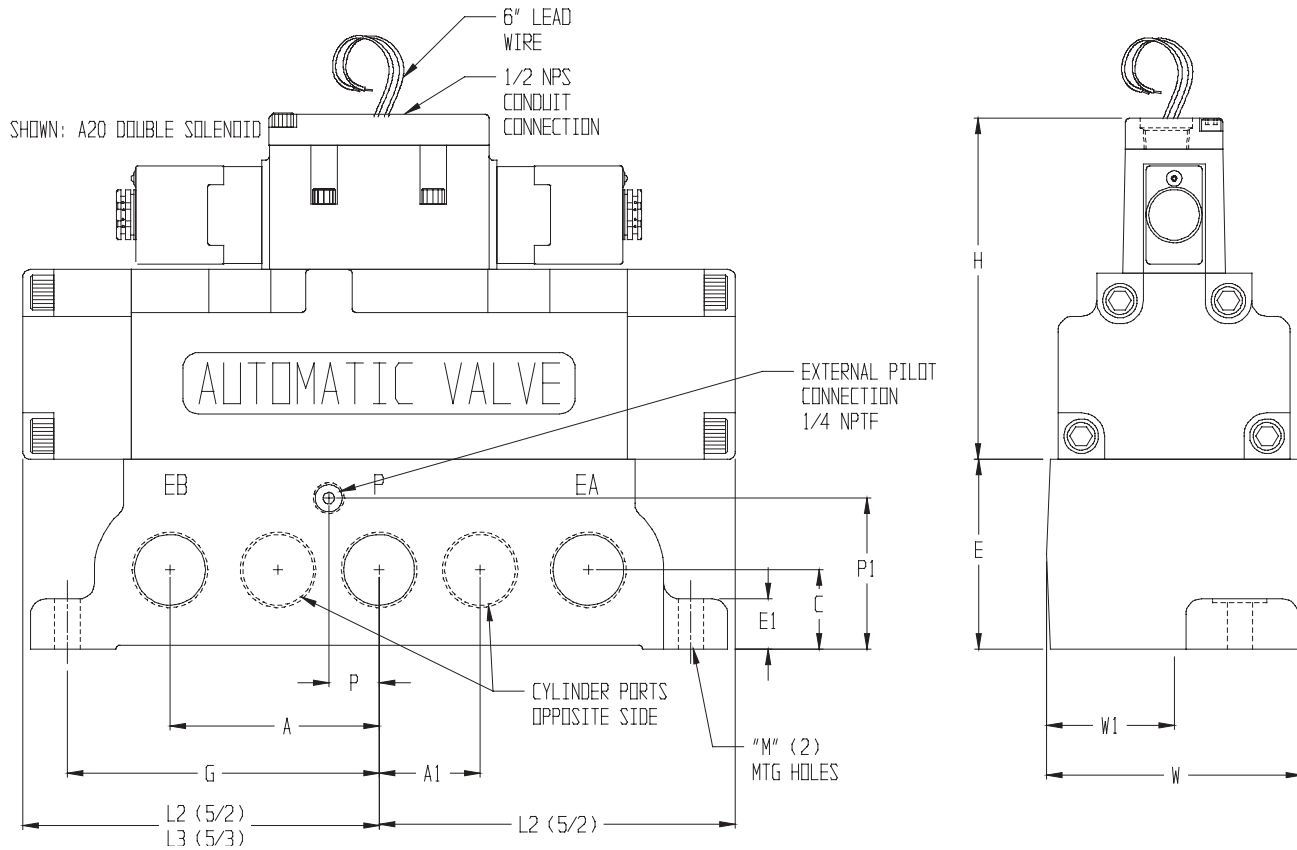
## MODEL NUMBERS

SERIES AV (SAE)	BODY TYPE	PORT LOC.	PORT SIZE	SOL. TYPE	5/2		5/3			BODY MAT.	SEAL MAT.	Kg (LB)
					SINGLE	DOUBLE	BLOCK	EXHAUST	PRESSURE			
A20 (1000)	VALVE ONLY	BASE	-	W-P	407B12S39A*	407B12S3S3*	407C12S39DS3*	407D12S39DS3*	407E12S39DS3*	ALUM.	NBR	8,9 (19.4)
				E-P	407B12Y39A*	407B12Y3Y3*	407C12Y39DY3*	407D12Y39DY3*	407E12Y39DY3*			
				W-P	409B10S39A*	409B10S3S3*	409C10S39DS3*	409D10S39DS3*	409E10S39DS3*			
	VALVE WITH SUB-BASE	BASE	1	E-P	409B10Y39A*	409B10Y3Y3*	409C10Y39DY3*	409D10Y39DY3*	409E10Y39DY3*			
				W-P	409B12S39A*	409B12S3S3*	409C12S39DS3*	409D12S39DS3*	409E12S39DS3*			
				E-P	409B12Y39A*	409B12Y3Y3*	409C12Y39DY3*	409D12Y39DY3*	409E12Y39DY3*			
22.7 (22340)	VALVE WITH SUB-BASE	BASE	1 1/4	W-P	409B15S39A*	409B15S3S3*	409C15S39DS3*	409D15S39DS3*	409E15S39DS3*	ALUM.	NBR	12,1 (26.7)
				E-P	409B15Y39A*	409B15Y3Y3*	409C15Y39DY3*	409D15Y39DY3*	409E15Y39DY3*			

\*Specify voltage. Refer to Electrical Section for selection.



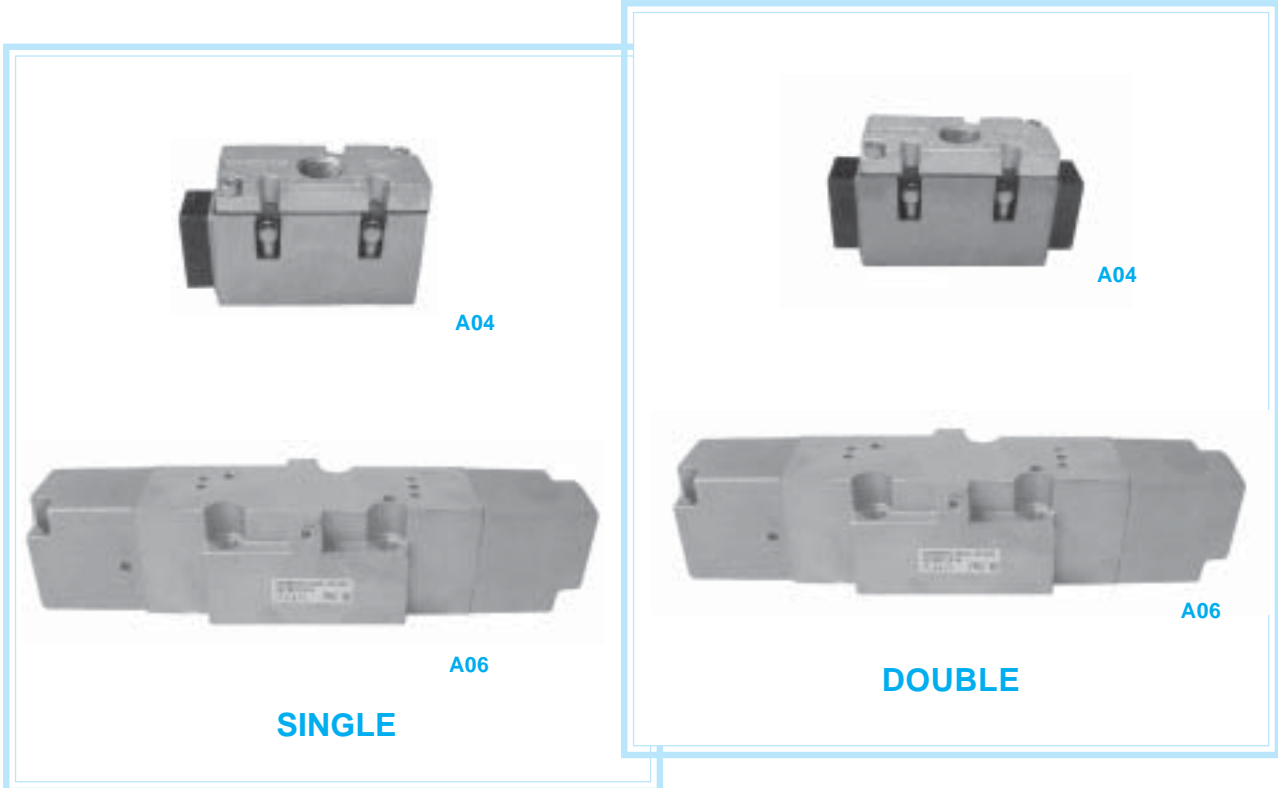
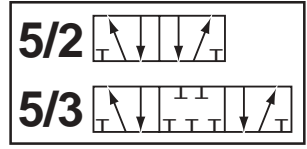
# DIMENSIONAL INFORMATION



SERIES AV (SAE)	BODY TYPE	A	A1	C	E	E1	G	H	L2	L3	M	P	P1	W	W1
A20 (1000)	VALVE ONLY	-	-	-	-	-	-	140 5.50	146 5.75	146 5.75	-	-	-	-	-
	VALVE WITH SUB-BASE	85,7 3.38	41,3 1.63	32,5 1.28	77,8 3.06	20,6 .81	128 5.03	-	146 5.75	146 5.75	10,3 .41	20,6 .81	61,9 2.44	105 4.12	26,9 1.06

Units of Measure: Top - mm, Bottom - inches

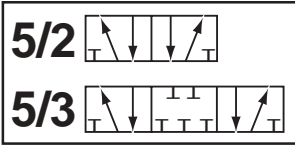
# AIR PILOT MODELS A04 AND A06 (125 AND 250 SERIES)



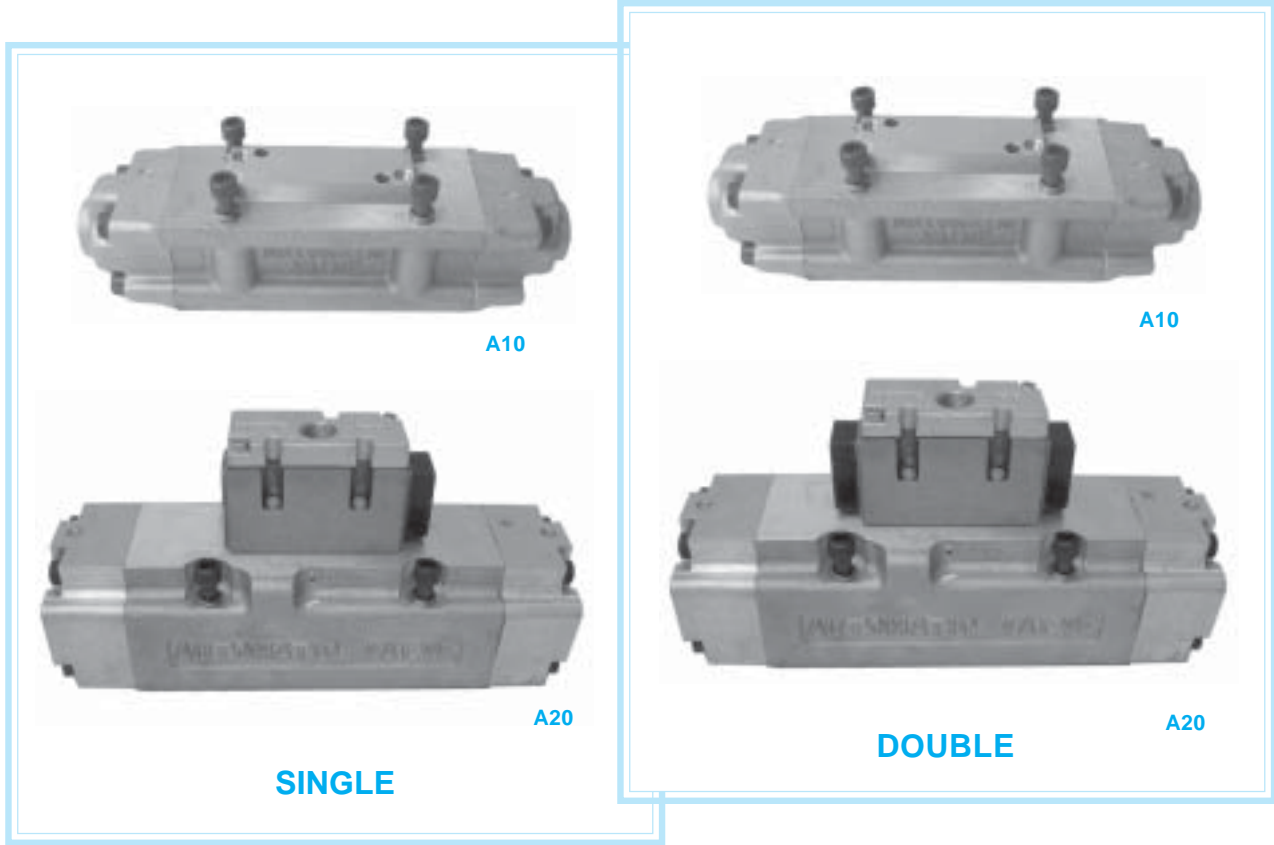
## MODEL NUMBERS

SERIES AV (SAE)	BODY TYPE	PORT LOC.	PORT SIZE	5/2		5/3			BODY MAT.	SEAL MAT.	Kg (LB)
				SINGLE	DOUBLE	BLOCK	EXHAUST	PRESSURE			
A04 (125)	VALVE ONLY	BASE	-	407B431A9A	407B431A1A	407C431A9D1A	407D431A9D1A	407E431A9D1A	ALUM.	NBR	1,1 (2.3)
	VALVE WITH SUB-BASE		1/4	409B421A9A	409B421A1A	409C421A9D1A	409D421A9D1A	409E421A9D1A			1,4 (3.2)
			3/8	409B431A9A	409B431A1A	409C431A9D1A	409D431A9D1A	409E431A9D1A			1,5 (3.31)
	VALVE WITH MANIFOLD (BOTTOM CYL. PORTS)		1/4	413B421A9A	413B421A1A	413C421A9D1A	413D421A9D1A	413E421A9D1A			
			3/8	413B431A9A	413B431A1A	413C431A9D1A	413D431A9D1A	413E431A9D1A			
	VALVE WITH MANIFOLD (BOTTOM/ SIDE CYL. PORTS)		1/4	416B421A9A	416B421A1A	416C421A9D1A	416D421A9D1A	416E421A9D1A			
3/8		416B431A9A	416B431A1A	416C431A9D1A	416D431A9D1A	416E431A9D1A					
A06 (250)	VALVE ONLY	BASE	-	407B671A9A	407B671A1A	407C671A9D1A	407D671A9D1A	407E671A9D1A	ALUM.	NBR	3,5 (7.8)
	VALVE WITH SUB-BASE		1/2	409B651A9A	409B651A1A	409C651A9D1A	409D651A9D1A	409E651A9D1A			4,7 (10.5)
			3/4	409B671A9A	409B671A1A	409C671A9D1A	409D671A9D1A	409E671A9D1A			4,4 (9.6)
			1	409B601A9A	409B601A1A	409C601A9D1A	409D601A9D1A	409E601A9D1A			
	VALVE WITH MANIFOLD (BOTTOM CYL. PORTS)		1/2	413B651A9A	413B651A1A	413C651A9D1A	413D651A9D1A	413E651A9D1A			4,4 (9.6)
			3/4	413B671A9A	413B671A1A	413C671A9D1A	413D671A9D1A	413E671A9D1A			
	VALVE WITH MANIFOLD (BOTTOM/ SIDE CYL. PORTS)		1/2	416B651A9A	416B651A1A	416C651A9D1A	416D651A9D1A	416E651A9D1A			
			3/4	416B671A9A	416B671A1A	416C671A9D1A	416D671A9D1A	416E671A9D1A			

F



# AIR PILOT MODELS A10 AND A20 (500 AND 1000 SERIES)



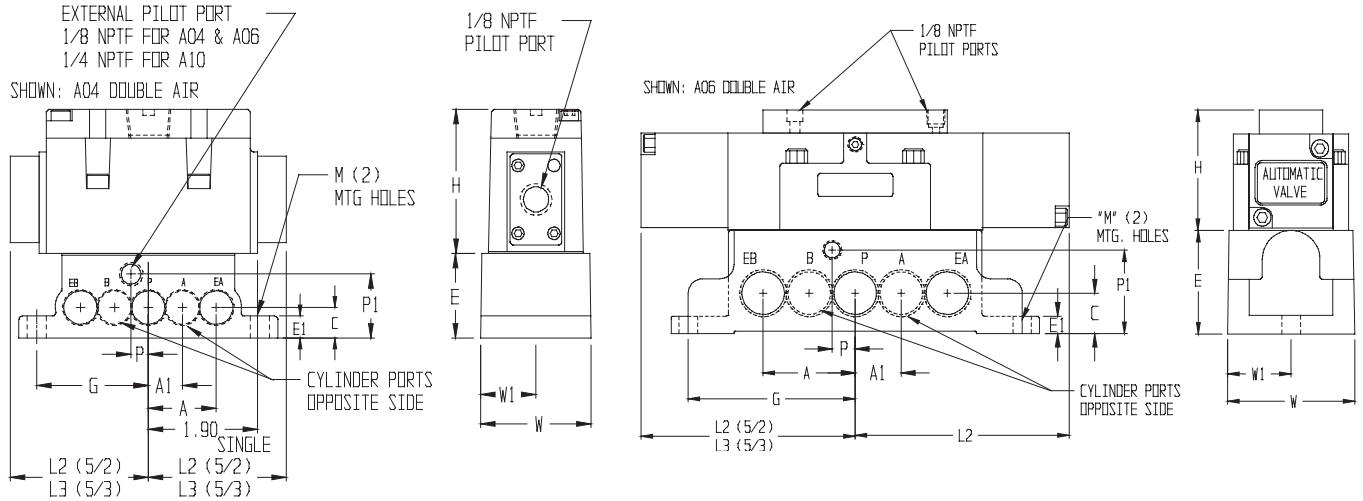
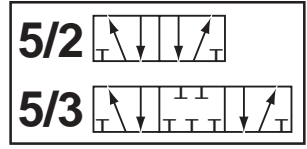
**SINGLE**

**DOUBLE**

## MODEL NUMBERS

SERIES AV (SAE)	BODY TYPE	PORT LOC.	PORT SIZE	5/2		5/3			BODY MAT.	SEAL MAT.	Kg (LB)
				SINGLE	DOUBLE	BLOCK	EXHAUST	PRESSURE			
A10 (500)  13.7 (13480)	VALVE ONLY	BASE	-	407B871A1C	407B871A1A	407C871A9D1A	407D871A9D1A	407E8731A9D1A	ALUM.	NBR	1,1 (2.3)
	VALVE WITH SUB-BASE		1/2	409B851A1C	409B851A1A	409C851A9D1A	409D851A9D1A	409E851A9D1A			8,2 (18.0)
			3/4	409B871A1C	409B871A1A	409C871A9D1A	409D871A9D1A	409E871A9D1A			7,7 (17.0)
			1	409B811A1C	409B811A1A	409C811A9D1A	409D811A9D1A	409E811A9D1A			
	VALVE WITH MANIFOLD (BOTTOM CYL. PORTS)		1/2	413B851A1C	413B851A1A	413C851A9D1A	413D851A9D1A	413E851A9D1A			8,1 (17.8)
			3/4	413B871A1C	413B871A1A	413C871A9D1A	413D871A9D1A	413E871A9D1A			
A20 (1000)  22.7 (22340)	VALVE ONLY	BASE	-	407B121A9A	407B121A1A	407C121A9D1A	407D121A9D1A	407E121A9D1A	ALUM.	NBR	8,1 (17.8)
	VALVE WITH SUB-BASE		1	409B101A9A	409B101A1A	409C101A9D1A	409D101A9D1A	409E101A9D1A			8,1 (25.1)
			1 1/4	409B121A9A	409B121A1A	409C121A9D1A	409D121A9D1A	409E121A9D1A			
			1 1/2	409B151A9A	409B151A1A	409C151A9D1A	409D151A9D1A	409E151A9D1A			

# DIMENSIONAL INFORMATION



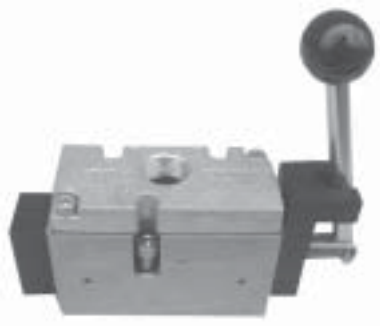
SERIES AV (SAE)	BODY TYPE	PORT SIZE	A	A1	C	E	E1	G	H	L2	L3	M	P	P1	W	W1
<b>A04 (125)</b>	VALVE ONLY	-	-	-	-	-	-	-	64,3 2.53	60,8 2.40	60,8 2.40	-	-	-	-	-
	VALVE WITH SUB-BASE	1/4 3/8	30,0 1.18	15,0 .59	13,5 .53	36,6 1.44	9,5 .38	49,3 1.94	-	60,8 2.40	60,8 2.40	8,7 .34	7,6 .30	28,2 1.11	48,8 1.92	24,4 .96
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	1/4 3/8	34,9 1.38	1,75 .69	17,5 .69	46,0 1.81	9,5 .38	57,2 2.25	-	60,8 2.40	60,8 2.40	7,1 .28	7,6 .30	36,5 1.44	46,3 1.82	23,1 .91
	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)	1/4 3/8	34,9 1.38	19,1 .75	28,6 1.12	52,4 2.06	-	-	-	60,8 2.40	60,8 2.40	-	7,6 .30	46,0 1.81	50,8 2.00	25,4 1.00
<b>A06 (500)</b>	VALVE ONLY	-	-	-	-	-	-	-	66,5 2.62	117 4.61	162 6.37	-	-	-	-	-
	VALVE WITH SUB-BASE	1/2, 3/4, 1	50,8 2.00	25,4 1.00	22,2 .88	57,2 2.25	10,3 .41	92,1 3.63	-	117 4.61	162 6.37	10,2 .41	12,7 .50	46,0 1.81	70,3 2.77	35,1 1.38
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	1/2, 3/4, 1	50,8 2.00	25,4 1.00	22,2 .88	57,2 2.25	10,3 .41	92,1 3.63	-	117 4.61	162 6.37	10,2 .41	12,7 .50	46,0 1.81	65,1 2.56	32,5 1.28
	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)	1/2, 3/4, 1	50,8 2.00	25,4 1.00	50,8 2.00	82,2 3.25	-	79,4 3.12	-	117 4.61	162 6.37	8,7 .34	12,7 .50	71,5 2.81	88,9 3.50	44,5 1.75
<b>A10 (500)</b>	VALVE ONLY	-	-	-	-	-	-	-	152 6.00	143 5.63	143 5.63	-	-	-	-	-
	VALVE WITH SUB-BASE	1/2, 3/4, 1	71,4 2.81	34,9 1.38	25,4 1.00	55,6 2.19	20,6 .81	106 4.19	-	143 5.63	143 5.63	10,3 .41	20,6 .91	42,9 1.69	82,6 3.25	41,2 1.62
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	1/2, 3/4	69,9 2.75	31,8 1.25	20,6 .81	50,8 2.00	12,7 .50	103 4.06	-	143 5.63	143 5.63	7,9 .31	15,9 .63	40,5 1.60	82,6 3.25	41,3 1.63
<b>A20 (1000)</b>	VALVE ONLY	-	-	-	-	-	-	-	170 6.69	146 5.75	140 5.75	-	-	-	-	-
	VALVE WITH SUB-BASE	1, 1 1/4, 1 1/2	85,7 3.38	41,3 1.63	32,5 1.28	77,8 3.06	20,6 .81	128 5.03	-	146 5.75	146 5.75	10,3 .41	20,6 .81	61,9 2.44	105 4.12	26,9 1.06

Units of Measure: Top - mm, Bottom - inches

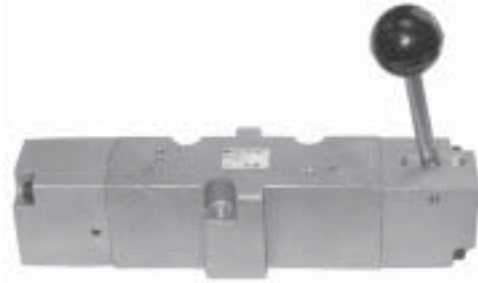
F



# MANUAL MODELS (125 AND 250 SERIES)



A04



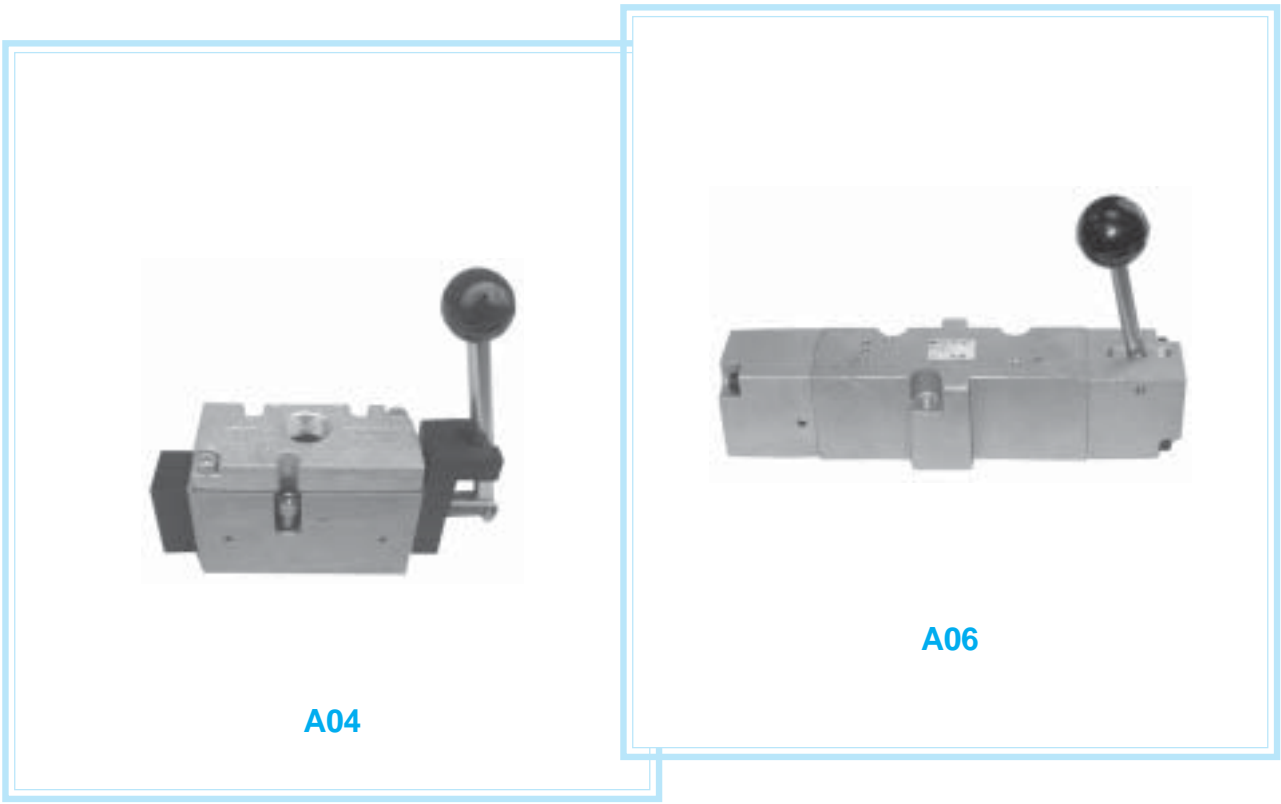
A06

## MODEL NUMBERS (4 WAY 2 POSITION)

SERIES AV (SAE)	BODY TYPE	PORT LOC.	PORT SIZE	5/2		BODY MAT.	SEAL MAT.	Kg (LB)				
				DETENTED	SPRING RETURN							
A04 (125)  2.4 (2360)	VALVE ONLY	BASE	-	407B433B7A	407B433B9A	ALUM.	NBR	1,1 (2.3)				
	VALVE WITH SUB-BASE		1/4	409B423B7A	409B423B9A			1,4 (3.2)				
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)		1/4	413B423B7A	413B423B9A			1,5 (3.3)				
			3/8	413B433B7A	413B433B9A							
			1/4	416B423B7A	416B423B9A			1,7 (3.7)				
			3/8	416B433B7A	416B433B9A							
	A06 (250)  8.6 (8460)		VALVE ONLY	BASE	-			407B673B7A	407B673B9A	ALUM.	NBR	3,1 (6.9)
			VALVE WITH SUB-BASE		1/2			409B653B7A	407B653B9A			4,4 (9.6)
3/4		409B673B7A			409B673B9A							
VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)		1	409B603B7A		409B603B9A	3,9 (8.7)						
		1/2	413B653B7A		413B653B9A							
3/4		413B673B7A	413B673B9A									






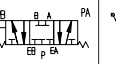
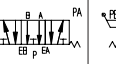
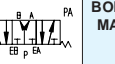
# MANUAL MODELS



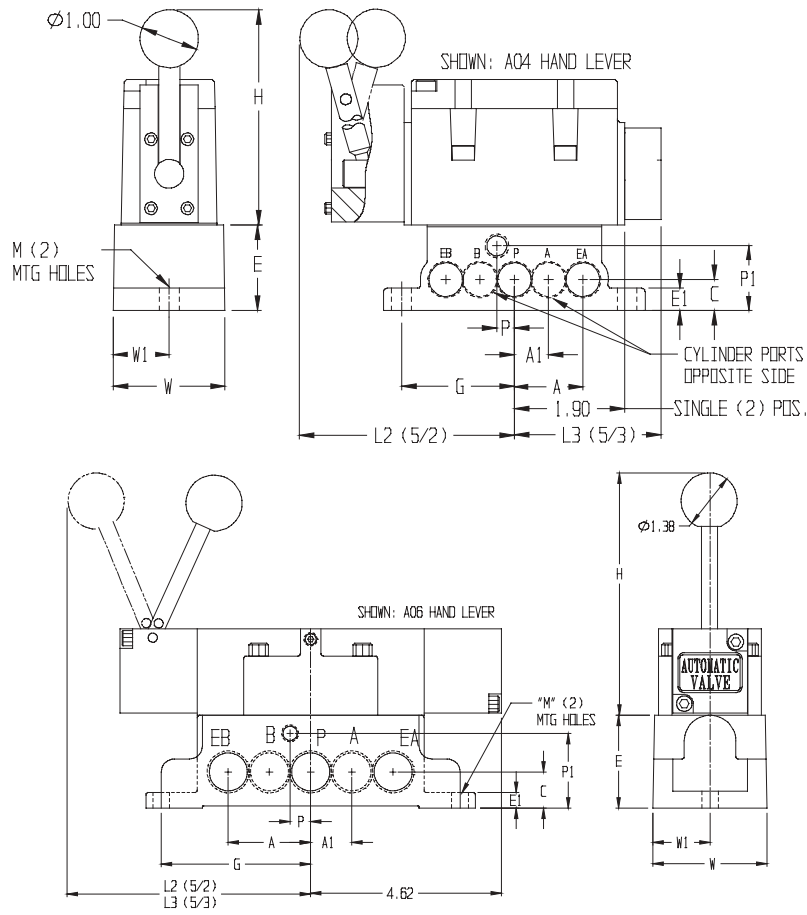
**A04**

**A06**

## MODEL NUMBERS (4 WAY 3 POSITION)

SERIES AV (SAE)  Cv (l/min)	BODY TYPE	PORT LOC.	PORT SIZE	5/3						BODY MAT.	SEAL MAT.	Kg (LB)	
				DETENTED			SPRING CENTERED						
													
				BLOCK	EXHAUST	PRESSURE	BLOCK	EXHAUST	PRESSURE				
<b>A04</b> (125)  <b>2.4</b> (2360)	VALVE ONLY	BASE	-	407C433B7B	407D433B7B	407E433B7B	407C433B9B	407D433B9B	407E433B9B	ALUM.	NBR	1,1 (2.3)	
	VALVE WITH SUB-BASE		1/4	409C423B7B	409D423B7B	409E423B7B	409C423B9B	409D423B9B	409E423B9B			1,4 (3.2)	
			3/8	409C433B7B	409D433B7B	409E433B7B	409C433B9B	409D433B9B	409E433B9B			1,5 (3.3)	
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)		1/4	413C423B7B	413D423B7B	413E423B7B	413C423B9B	413D423B9B	413E423B9B				1,7 (3.7)
			3/8	413C433B7B	413D433B7B	413E433B7B	413C433B9B	413D433B9B	413E433B9B				
	<b>A06</b> (250)  <b>8.6</b> (8460)		VALVE ONLY	BASE	-	407C673B7B	407D673B7B	407E673B7B	407C673B9B				407D673B9B
VALVE WITH SUB-BASE		1/2	409C653B7B		409D653B7B	409E653B7B	409C653B9B	409D653B9B	409E653B9B	4,4 (9.6)			
		3/4	409C673B7B		409D673B7B	409E673B7B	409C673B9B	409D673B9B	409E673B9B				
VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)		1	409C603B7B		409D603B7B	409E603B7B	409C603B9B	409D603B9B	409E603B9B		3,9 (8.7)		
		1/2	413C653B7B		413D653B7B	413E653B7B	413C653B9B	413D653B9B	413E653B9B				
3/4	413C673B7B	413D673B7B	413E673B7B	413C673B9B	413D673B9B	413E673B9B							

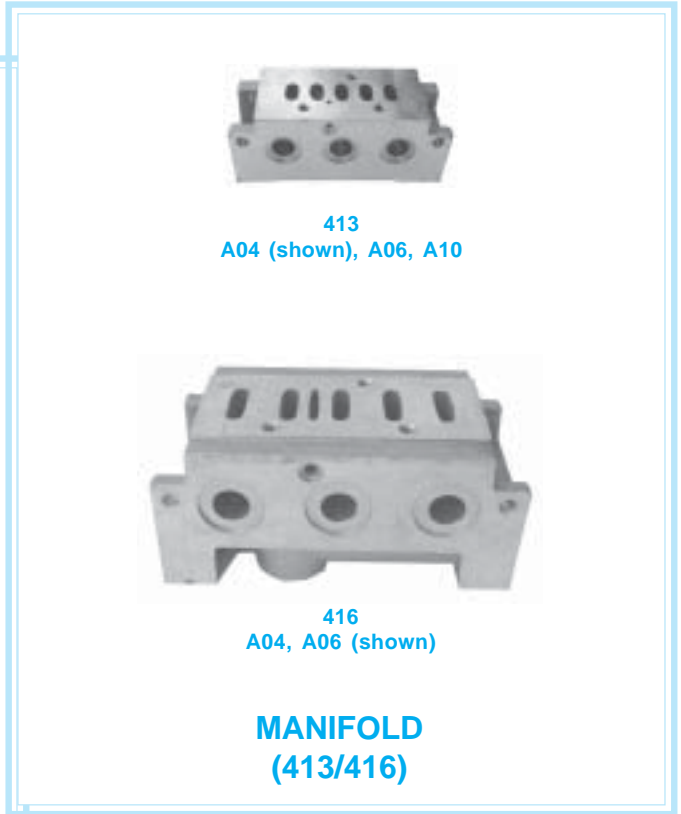
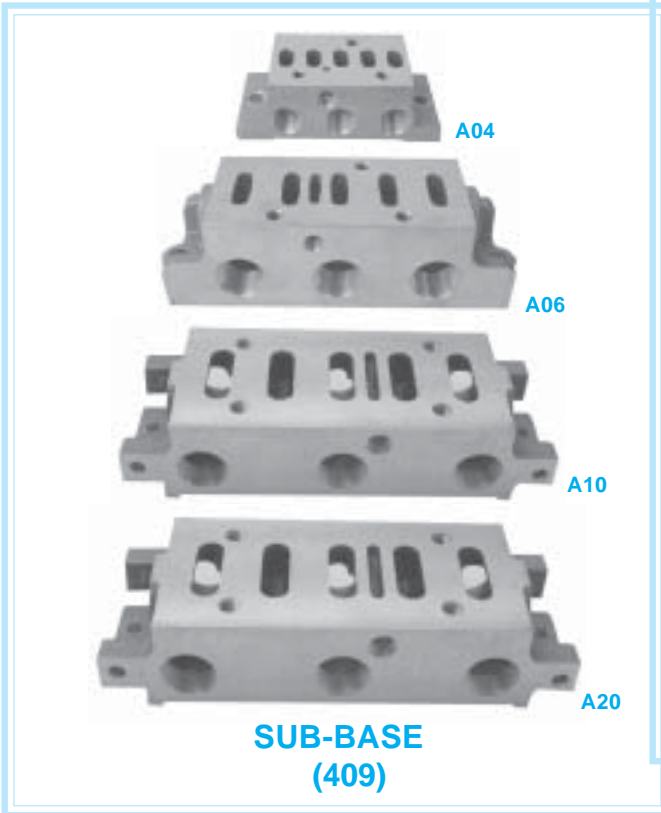
# DIMENSIONAL INFORMATION



SERIES AV (SAE)	BODY TYPE	PORT SIZE	A	A1	C	E	E1	G	H	L2	L3	M	P	P1	W	W1
A04 (125)	VALVE ONLY	-	-	-	-	-	-	-	135 5.3	105 4.14	64.0 2.52	-	-	-	-	-
	VALVE WITH SUB-BASE	1/4 3/8	30.0 1.18	15.0 .59	13.5 .53	36.6 1.44	9.5 .38	49.3 1.94	-	105 4.14	64.0 2.52	8.7 .34	7.6 .30	28.2 1.11	48.8 1.92	24.4 .96
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	1/4 3/8	34.9 1.38	1.75 .69	17.5 .69	46.0 1.81	9.5 .38	57.2 2.25	-	105 4.14	64.0 2.52	7.1 .28	7.6 .30	36.5 1.44	46.3 1.82	23.1 .91
	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)	1/4 3/8	34.9 1.30	19.1 .75	28.6 1.12	52.4 2.06	-	-	-	105 4.14	64.0 2.52	-	7.6 .30	46.0 1.81	50.8 2.00	25.4 1.00
A06 (250)	VALVE ONLY	-	-	-	-	-	-	-	148 5.83	150 5.89	150 5.89	-	-	-	-	-
	VALVE WITH SUB-BASE	1/2, 3/4, 1	50.8 2.00	25.4 1.00	22.2 .88	10.3 .41	92.1 3.63	-	-	150 5.89	150 5.89	10.2 .41	12.7 .50	46.0 1.81	70.3 2.77	35.1 1.38
	VALVE WITH MANIFOLD (BOTTOM CYLINDER PORTS)	1/2, 3/4, 1	50.8 2.00	25.4 1.00	22.2 .88	-	92.1 3.63	-	-	150 5.89	150 5.89	10.2 .41	12.7 .50	46.0 1.81	65.1 2.56	32.5 1.28
	VALVE WITH MANIFOLD (BOTTOM/SIDE CYLINDER PORTS)	1/2, 3/4, 1	50.8 2.00	25.4 1.00	82.2 3.25	-	79.4 3.12	-	-	150 5.89	150 5.89	8.7 .34	12.7 .50	71.5 2.81	88.9 3.50	44.5 1.75

Units of Measure: Top - mm, Bottom - inches

## SUB-BASE AND MANIFOLDS



## MODEL NUMBERS

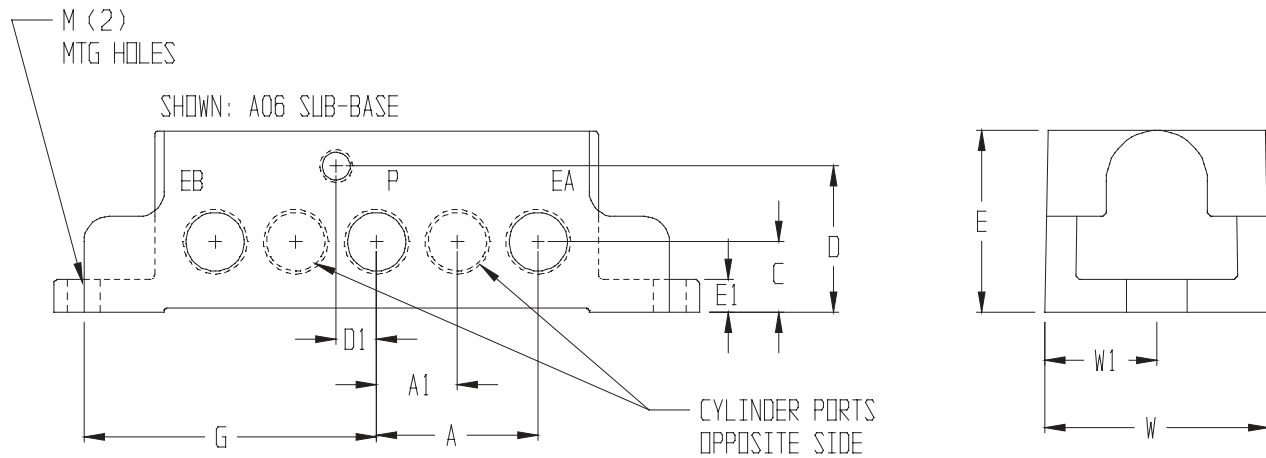
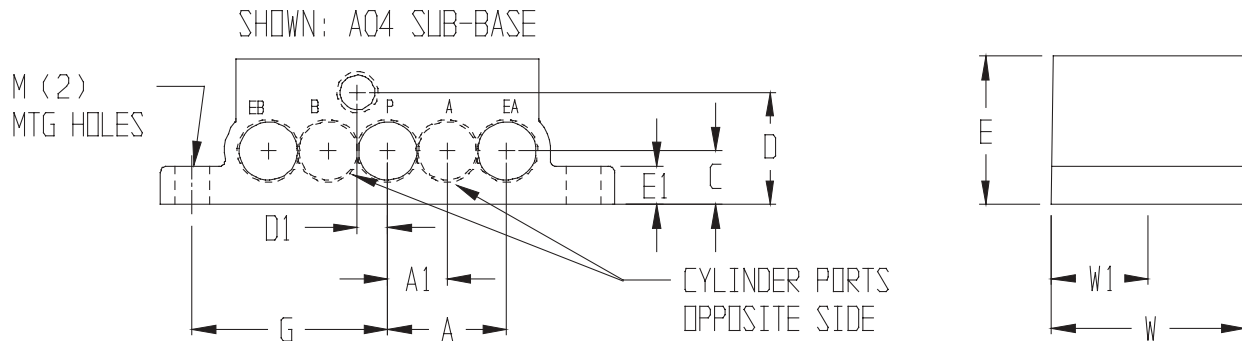
SERIES AV (SAE)	AUTO SERIES	409		413					416					
		INDIVIDUAL BASE		MANIFOLD*			MANIFOLD ACCESSORIES		MANIFOLD*			MANIFOLD ACCESSORIES		
		409 MODEL NUMBERS	PORT SIZE	413 MODEL NUMBERS	PORTS P,EA,EB SIZE	PORTS A & B SIZE	BLOCKING DISK	BLANK STATION COVER#	416 MODEL NUMBERS	PORTS P,EA,EB SIZE	PORTS A & B SIZE	BLOCKING DISK	BLANK STATION COVER#	END PLATE KIT
A04 (125)	125	A6318-025	1/4	A6250-025	3/8	1/4	0957-038	A6658	A6880-110	3/8	1/4	A7002-010	A6658	B6882
		A6318-038	3/8	A6250-038	3/8	3/8			A6880-120	3/8	3/8			
A06 (250)	250	A6331-050	1/2	A6265-050	3/4	1/2	0957-075	A5903	A6886-120	3/4	1/2	A7002-020	A5903	B6891
		A6331-075	3/4	A6265-075	3/4	3/4			A6886-130	3/4	3/4			
		A6331-100	1	-	-	-			-	-	-			
A10 (500)	500	A5209-050	1/2	A5285-050	3/4	1/2	0957-075	-	-	-	-	-	-	-
		A5209-075	3/4	A5285-075	3/4	3/4								
		A5209-100	1	-	-	-								
A20 (1000)	1000	A5247-100	1	-	-	-	-	-	-	-	-	-	-	-
		A5247-125	1 1/4											
		A5247-150	1 1/2											

\*Seals and mounting hardware included.

#Each blank station requires a cover.

# DIMENSIONAL INFORMATION

## 409

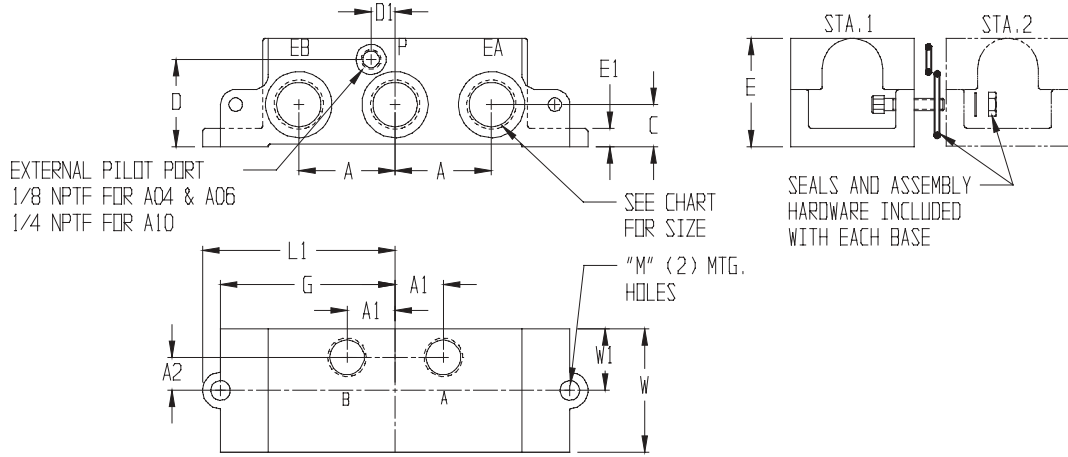


F

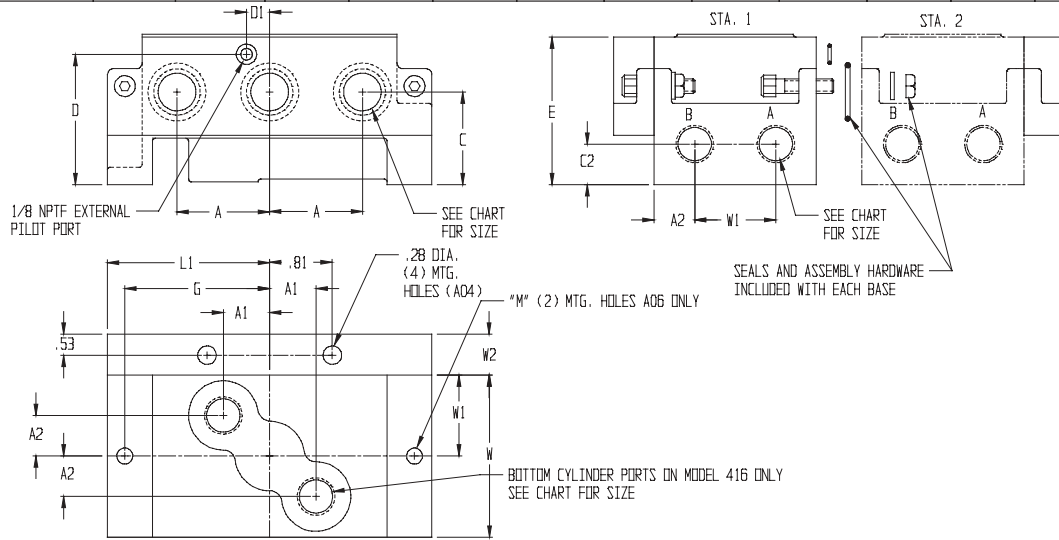
SERIES AV (SAE)	MODEL	A	A1	C	D	D1	E	E1	G	M	W	W1
A04 (125)	409	30,0 1.18	15,0 .59	13,5 .53	28,2 1.11	7,6 .30	36,6 1.44	9,5 .38	49,3 1.94	8,7 .34	48,8 1.92	24,4 .96
A06 (250)	409	50,8 2.00	25,4 1.00	22,2 .88	46,0 1.81	12,7 .50	57,2 2.25	10,3 .41	92,1 3.63	10,2 .41	70,3 2.77	35,1 1.38
A10 (500)	409	71,6 2.82	35,1 1.38	25,4 1.00	42,9 1.69	20,6 .81	55,6 2.19	20,6 .81	106 4.19	10,2 .41	82,3 3.24	41,2 1.62
A20 (1000)	409	85,7 3.38	41,3 1.63	3,25 1.28	61,9 2.44	20,6 .81	77,8 3.06	20,6 .81	128 5.03	10,3 .41	105 4.12	26,9 1.06

Units of Measure: Top - mm, Bottom - inches

# DIMENSIONAL INFORMATION 413 AND 416



SERIES AV (SAE)	MODEL	A	A1	A2	C	D	D1	E	E1	G	L1	M	W	W1
<b>A04 (125)</b>	413	34,9 1.38	1,75 .69	00,0 0.0	17,5 .69	36,5 1.44	7,6 .30	46,0 1.81	9,5 .38	57,2 2.25	66,7 2.62	7,1 .28	46,3 1.82	23,1 .91
<b>A06 (250)</b>	413	50,8 2.00	25,4 1.00	00,0 0.0	22,2 .88	46,0 1.81	12,7 .50	57,2 2.25	10,3 .41	92,1 3.63	102 4.00	10,3 .41	65,1 2.56	32,5 1.28
<b>A10 (500)</b>	413	69,9 2.75	31,8 1.25	17,5 .69	20,6 .81	40,5 1.60	15,9 .63	50,8 2.00	12,7 .50	103 4.06	111 4.38	7,9 .31	82,6 3.25	41,3 1.63



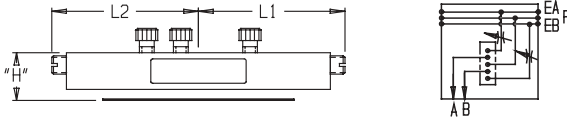
SERIES AV (SAE)	MODEL	A	A1	A2	C	D	D1	E	G	L1	M	W	W1	W2
<b>A04 (125)</b>	416	34,9 1.38	19,1 .75	12,7 .50	28,6 1.12	46,0 1.81	7,6 .30	52,4 2.06	-	66,7 2.63	-	50,8 2.00	25,4 1.00	19,1 .75
<b>A06 (250)</b>	416	50,8 2.00	25,4 1.00	22,2 .88	50,8 2.00	71,5 2.81	12,7 .50	82,6 3.25	79,4 3.12	88,9 3.50	8,7 .34	88,9 3.50	44,5 1.75	22,2 .88

Units of Measure: Top - mm, Bottom - inches

## ACCESSORIES

### SANDWICH FLOW CONTROL

(Sandwich flow controls cannot be used with sandwich dual pressure regulators.)

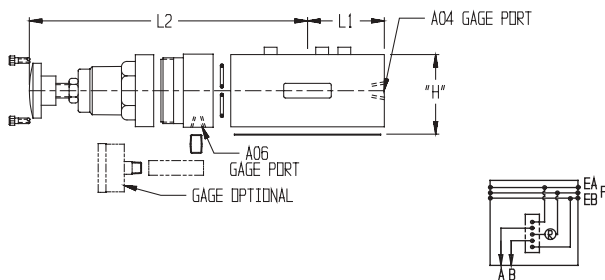


#### FEATURES

- Restricts air flow from port A to port EA and from port B to port EB.

### SANDWICH SINGLE PRESSURE REGULATOR

(Single pressure regulators require a valve external pilot supply for regulated pressure less than 35 PSIG.)

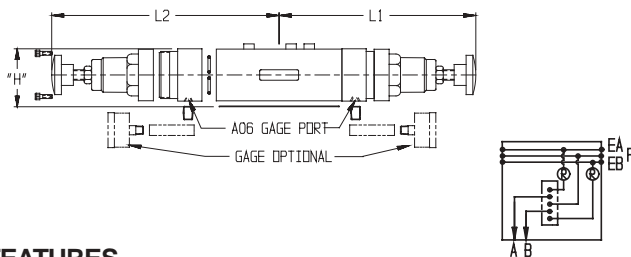


#### FEATURES

- Regulates single inlet pressure from inlet port P to cylinder ports A and B.
- Mounts between valve and sub-base.
- 1/8 NPFT gage ports.
- Three pressure ranges: 0-30, 5-60, 10-130 PSIG.

### SANDWICH DUAL PRESSURE REGULATOR

(Dual pressure regulators require a valve external pilot supply and cannot be used with sandwich flow controls.)



#### FEATURES

- Regulates dual inlet pressure from EA - EB to cylinder ports A and B.
- Mounts between valve and sub-base.
- 1/8 NPFT gage ports.
- Three pressure ranges: 0-30, 5-60, 10-130 PSIG.

SERIES AV (SAE)	MODEL NUMBER	H	L1	L2	Kg (LB)
A04 (125)	A6590	19,8 .78	63,5 2.50	63,5 2.50	,3 (0.7)
A06 (250)	B6826	3,10 1.22	95,3 3.75	95,3 3.75	1,0 (2.2)

Units of Measure: Top - mm, Bottom - inches

- Mounts between valve and sub-base or between valve and single pressure regulator.
- Vibration proof metering control.

SERIES AV (SAE)	TYPE	MODEL NUMBER		H	L1	L2	Kg (LB)
		5-60 PSIG	10-130 PSIG				
A04 (125)	REG.	B6691-060	B6991-130	37,3 1.47	54,9 2.16	104 4.11	,5 (1.2)
	GAGE	A5655-060	A5655-160	-	-	-	-
A06 (250)	REG.	B6693-060	B6693-130	63,5 2.5	66,7 2.63	208 8.23	2,0 (4.4)
	GAGE	A6785-060	A6785-160	-	-	-	-

Units of Measure: Top - mm, Bottom - inches

- On series A04, color coded locking rings identify the pressure range: Green 0-30, Yellow 5-60, Red 10-130 PSIG.
- On series A06, fingertip control knob and locking nut are standard.

SERIES AV (SAE)	TYPE	MODEL NUMBER		H	L1	L2	Kg (LB)
		5-60 PSIG	10-130 PSIG				
A04 (125)	REG.	-	B6692-130-130	37,3 1.47	108 4.25	408 4.25	,6 (1.3)
	GAGE	-	-	-	-	-	-
A06 (250)	REG.	-	B6694-130-130	63,5 2.5	66,7 2.63	208 8.23	2,0 (4.4)
	GAGE	A6785-060	A6785-130	-	-	-	-

Units of Measure: Top - mm, Bottom - inches

- On series A04, color coded locking rings identify the pressure range: Green 0-30, Yellow 5-60, Red 10-130 PSIG.
- On series A06, fingertip control knob and locking nut are standard.

# OPTIONS

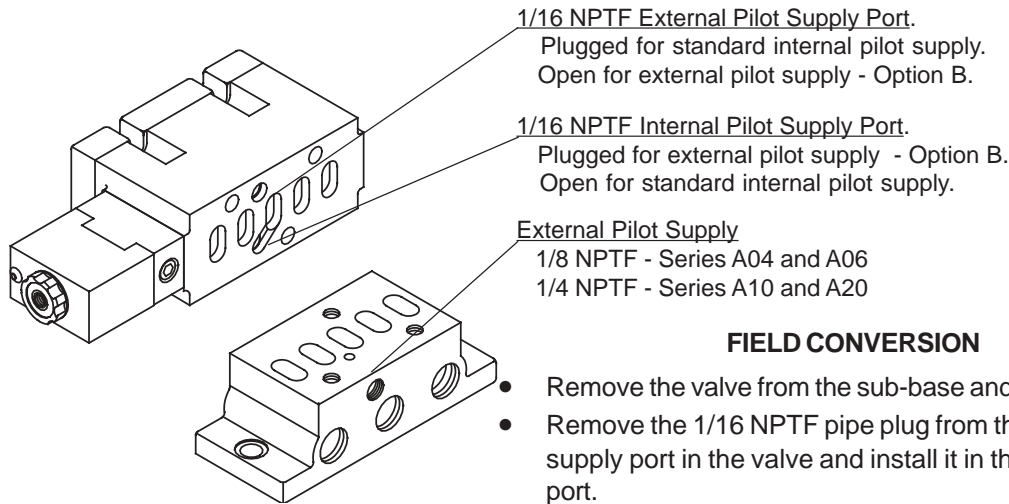
(LISTED AT THE END OF THE MODEL NUMBER IN ALPHA-NUMERIC ORDER)

## A - FLUOROELASTOMER SEALS

For applications where fluid media or ambient conditions are not compatible with nitrile seals. Note: Fluorocarbon seals do not increase the effective temperature range of the valve. For high temperature applications, consult the factory.

## B - EXTERNAL PILOT

For solenoid applications when the pressure to port is less than 35 PSIG (2 BAR). See example below for field conversion.



### FIELD CONVERSION

- Remove the valve from the sub-base and turn upside down.
- Remove the 1/16 NPTF pipe plug from the external pilot supply port in the valve and install it in the internal supply port.
- Connect air supply to the external pilot supply port in the base.

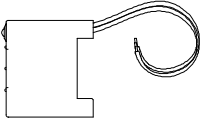
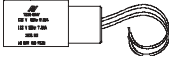
## D - DUSTPROOF

For applications in extremely dusty and contaminated environments. Standard vent ports are plugged. Operators breathe through the exhaust ports via flats on the end of the spools.

## 0-7 - WIRING

OPTIONS				PIN NUMBER									
4 PIN MICRO	5 PIN MICRO	5 PIN MINI	CUSTOMER SPEC.	1		2		3		4		5	
	0		GM	RED/WHITE	SOL A (BRN)	RED	SOL B (BLK)	GREEN	GRD	RED/YELLOW	SOL B (BRN)	RED/BLACK	SOL A (BLK)
	1		FORD	RED/WHITE	SOL B (BRN)	RED	SOL A (BRN)	GREEN	GRD	RED/YELLOW	SOL A (BRN)	RED/BLACK	SOL B (BLK)
	2 - AC		CHRYSLER	RED/WHITE	SOL A (BRN)	RED	SOL A (BLK)	GREEN	GRD	RED/YELLOW	SOL B (BRN)	RED/BLACK	SOL B (BLK)
	2 - DC		CHRYSLER	RED/WHITE	SOL A (BRN)	RED	SOL B (BRN)	GREEN	GRD	RED/YELLOW	SOL A (BLK)	RED/BLACK	SOL B (BLK)
		3	GM	RED/WHITE	SOL A (BRN)	RED	SOL B (BLK)	GREEN	GRD	RED/YELLOW	SOL B (BRN)	RED/BLACK	SOL A (BLK)
		4	FORD	RED/WHITE	SOL B (BRN)	RED	SOL A (BRN)	GREEN	GRD	RED/YELLOW	SOL A (BLK)	RED/BLACK	SOL B (BLK)
		5	CHRYSLER	RED/WHITE	SOL A (BRN)	RED	SOL A (BLK)	GREEN	GRD	RED/YELLOW	SOL B (BRN)	RED/BLACK	SOL B (BLK)
6			GM	BROWN	SOL A (BRN)	WHITE	-	BLUE	SOL A SOL B (BLK)	BLACK	SOL B (BRN)	NONE	
7			FORD	BROWN	-	WHITE	SOL A (BRN)	BLUE	SOL A SOL B (BLK)	BLACK	SOL B (BRN)	NONE	

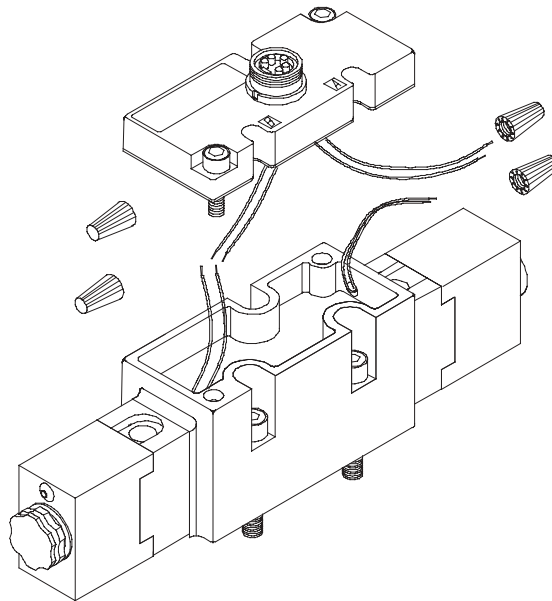
# ELECTRICAL INFORMATION

DESCRIPTION		WHEN THE 8TH CHARACTER OF MODEL NUMBER IS:	INSTRUCTIONS	COIL PART NUMBER ** = VOLTAGE
NEMA 4X WITH 18" LEADS		S	Coil included (specify voltage code from below)	7201-9**
EXPLOSION-PROOF 1/2" CONDUIT WITH 24" LEADS [ CSA 202633X FM APPROVED CL. I; ZONE1Ex m II T4; AEx m II CL. I; Div. 1; GR. A, B, C, D CL. II; GR. E, F, G CL. III T4 Ta= -20°C to +60°C NEMA: 4, 4X, 7C, 7D ]		Y	Coil included (specify voltage code from below)	7019-**Y

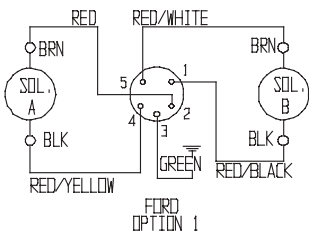
VOLTAGE +/- 10 %	** C O D E	CURRENT (AMPS)				RESISTANCE (OHMS @ 25° C)		POWER (AC=VA DC=WATTS)	
		INRUSH		HOLDING		4	7	4	7
		4	7	4	7				
22/50 24/60	DA	.37	.55	.37	.32	32.5	19	4.8	4.5
110/50 120/60	AA	.07	.96	.05	.054	908	530	4.8	6.5
220/50 240/60	AB	.15	.048	.13	.027	3630	2345	4.8	6.5
12 VDC	DA	.37	-	.37	.375	32.5	32	4.4	7
24 VDC	DB	.18	-	.18	.187	130	128	4.4	-
125 VDC	AB	.03	-	.03	.06	3630	2000	4.4	7



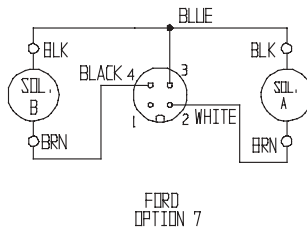
# SERVICE INFORMATION



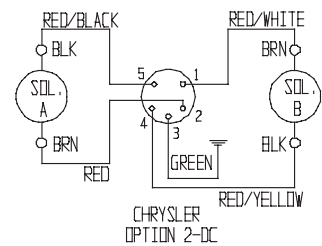
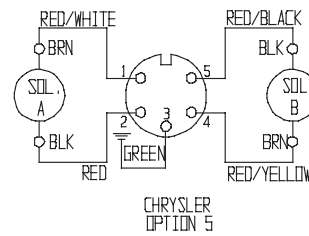
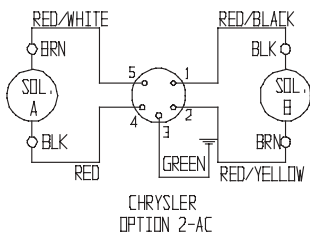
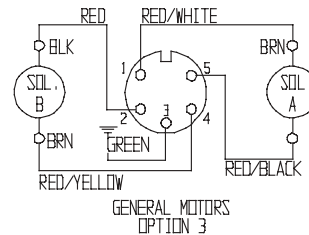
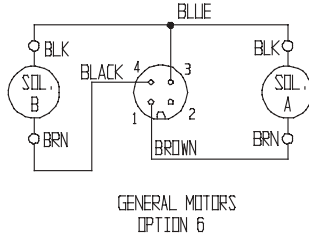
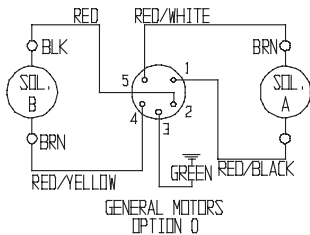
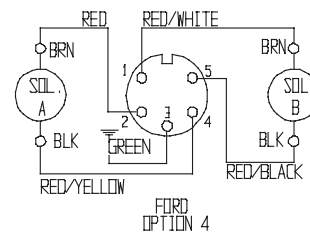
5-PIN MICRO



4-PIN MICRO



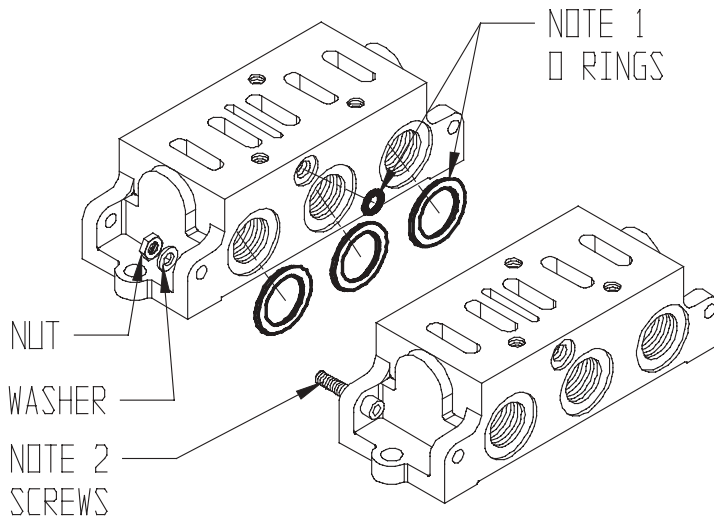
5-PIN MINI



F

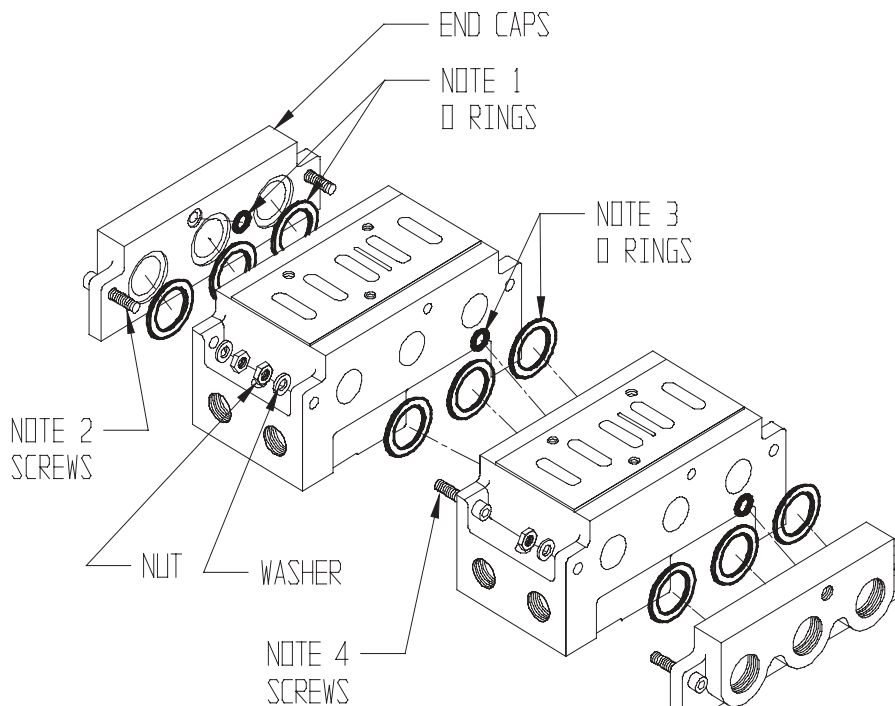
## SERVICE INFORMATION

### ASSEMBLY - MANIFOLD BASES



#### Assembly Instructions for 413

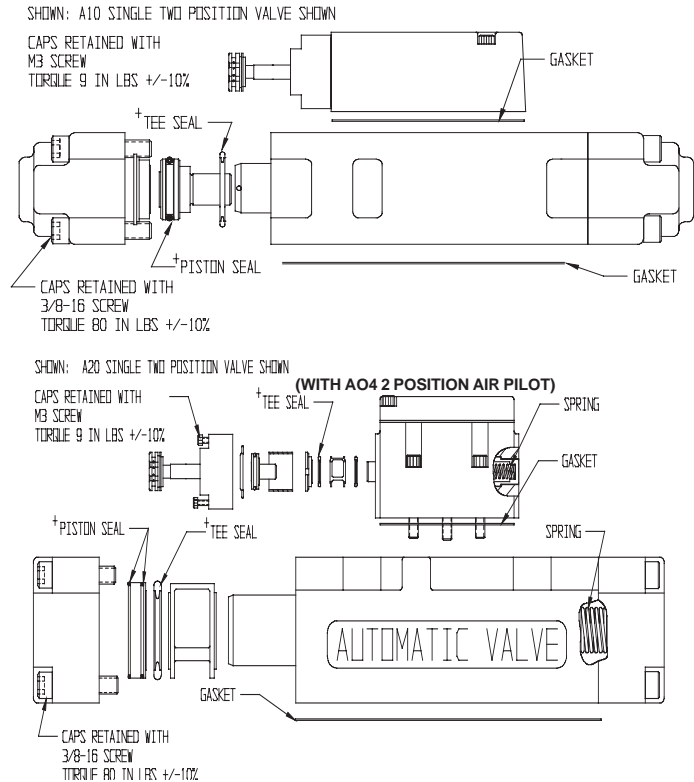
1. Place O rings in counterbores in base, as shown.
2. Assemble base to base using screws, washers, and nuts, as shown.



#### Assembly Instructions for 416

1. Place O rings in counterbores of end caps, as shown.
2. Assemble cap to base using screws, washers, and nuts, as shown.
3. Place O rings in counterbores of base, as shown.
4. Assemble base to base using screws, washers and nuts, as shown.

# SERVICE KIT INFORMATION



## SERVICE KIT INSTALLATION

1. Remove screws from cap of operator.
2. Remove cap.
3. Remove existing serviceable components.
4. Replace with kit components. **\*All seals must be lubricated with Magnalube-G or equivalent.**
5. Align pilot hole in body with pilot hole in cap.
6. Torque screws as shown above.

Lubrication of Automatic Valve products is not required but is recommended to maximize service life. Oils should be compatible with seal material, have an ISO 32 or lighter viscosity, and have an aniline point between 82°C (180°F) and 99°C (210°F). Refer to Maintenance section of catalog for recommended lubricants.

# MODEL NUMBERS

SERIES	FUNCTION			
	SINGLE		DOUBLE	
	PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
A04	K-A04-SGL	Tee Seals (6)	K-A04-DBL	Tee Seals (6)
	K-A04-SGL-A (Fluoroelastomer)	Piston Seal (1) Spring (1) Gasket (1)	K-A04-DBL-A (Fluoroelastomer)	Piston Seal (2) Gasket (1)
A06	K-A06-SGL	Tee Seals (6)	K-A06-DBL	Tee Seals (6)
	K-A06-SGL-A (Fluoroelastomer)	Piston Seal (1) Spring (1) Gasket (2)	K-A06-DBL-A (Fluoroelastomer)	Piston Seal (2) Gasket (2)
A10	K-A10-SGL	Tee Seals (6)	K-A10-DBL	Tee Seals (6)
	K-A10-SGL-A (Fluoroelastomer)	Piston Seal (1) Gasket (2)	K-A10-DBL-A (Fluoroelastomer)	Gasket (2)
A20	K-A20-SGL	Tee Seals (12)	K-A20-DBL	Tee Seals (12)
	K-A20-SGL-A (Fluoroelastomer)	Piston Seal (3) Spring (2) Gasket (2)	K-A20-DBL-A (Fluoroelastomer)	Piston Seal (6) Gasket (2)



# NOTES