

ISO 9001
AV **AUTOMATIC**
VALVE

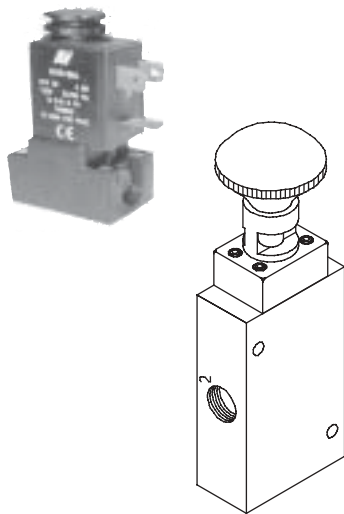
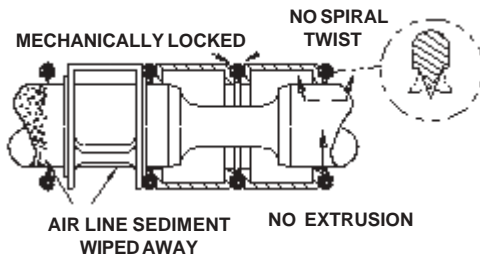


3 WAY COMPACT SPOOL VALVES



DESIGN FEATURES

L20/L45 3 WAY 2 POSITION VALVE



VALVES

- Lockout tested and approved to SAE specifications.
- Compact size, high flow.

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.
- Push non-locking override. (Extended turn and turn lock available).

PRODUCTS CERTIFIED TO INCLUDE

- CSA - (C22.2)
- UL - (STD 429)
- ATEX - (2018x)
- PTB - (EExmIIT5) (EExialICT6)
- CE - (73/23/EEC), (89/336IEEC)

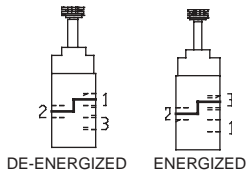
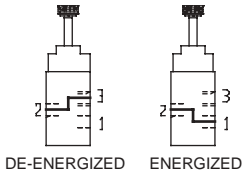


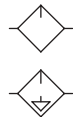
LOCKOUT

- Short stroke for quick response.
- Bright red handle for visibility.
- Padlockable in the closed position.
- When handle is pulled outward, inlet port 1 is connected to outlet port 2 and exhaust port 3 is blocked.
- When handle is pushed inward, inlet port 1 is blocked and outlet port 2 is connected to exhaust port 3.

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SPECIFICATIONS

VALVE OPERATION					
		3/2 NC - 3 way 2 position normally closed valves shift and apply pressure when a maintained signal is applied to the operator then reset and block pressure when the signal is removed.			3/2 NO - 3 way 2 position normally open valves shift and exhaust pressure when a maintained signal is applied to the operator then reset and apply pressure when the signal is removed.
OPERATING TEMPERATURES	SOLENOID PILOT OPERATED		TREATED BUNA-N SEALS (TREATED NBR, Standard)	FLUOROELASTOMER SEALS (FPM (FKM), Option A)	
	 Standard High Temp Coil (Option CT)		-18°C to +52°C (0°F to +125°F)	-18°C to +52°C (0°F to +125°F)	
OPERATING PRESSURES	SOLENOID PILOT OPERATED		INLET PORT	EXTERNAL PILOT PORT	
	 Standard 2 Position External Pilot (Option B)		240 - 1030 kPa (35 - 150 PSIG) Vacuum - 240 kPa (Vacuum - 35 PSIG)	Not Required 240 - 1030 kPa (35 - 150 PSIG)	
FILTRATION AND LUBRICATION	MEDIA - AIR OR INERT GAS				
	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. Filter to 50 microns or better. For temperatures below 40°F, air must be dry to prevent formation of ice.				

MODEL NUMBER CHART

SERIES	BODY TYPE	PORT SIZE	FUNCTION	BODY DESIGN	OPERATOR 1	OPERATOR 2	VOLTAGE	OPTIONS
L20	0	3/4	G H	A B	A F I K V W	A M R V W	AA AB DA DB DBL	A B C CT D G Y Z
L45		5/8	G H	A	L	M		A





STANDARD SOLENOID MODELS



L20

L45



INTRINSICALLY-SAFE
L20 / L45

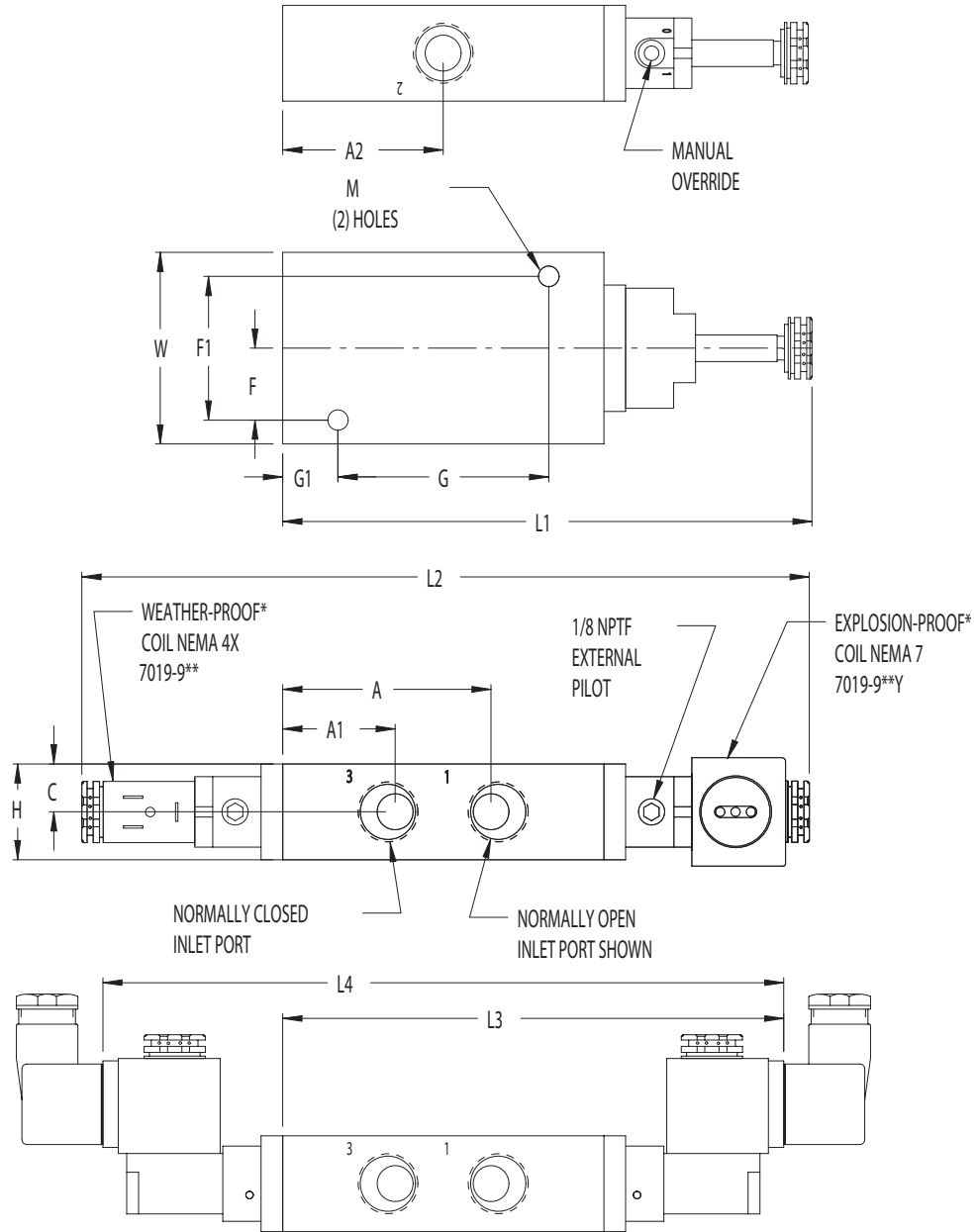
MODEL NUMBERS

SERIES	OPERATOR	SINGLE	FUNCTION	DOUBLE	FUNCTION	PORT SIZE	Cv (l/min)	BODY MATERIAL	SEAL MATERIAL	Kg (LB)			
L20	WEATHER-PROOF AND EXPLOSION-PROOF	L2003GAWR*	3 WAY NC		L2003GBWW*	3 WAY NC		ALUMINUM	NBR	1.8 (1770)	.5 (0.9)		
		L2004GAWR*			L2004GBWW*								
		L2003HAWR*	3 WAY NO		L2003HBWW*	3 WAY NO						1/4	.9 (2.1)
		L2004HAWR*			L2004HBWW*								
	INTRINSICALLY-SAFE	L2003GAVR***	3 WAY NC		L2003GBVV***	3 WAY NC				1/4	.9 (2.1)		
		L2004GAVR***			L2004GBVV***								
		L2003HAVR***	3 WAY NO		L2003HBVV***	3 WAY NO				1/4	.9 (2.1)		
		L2004HAVR***			L2004HBVV***								
L45	WEATHER-PROOF AND EXPLOSION-PROOF	L4505GAWR*	3 WAY NC		L4505GBWW*	3 WAY NC		ALUMINUM	NBR	4.0 (3940)	.78 (1.7)		
		L4505HAWR*			3 WAY NO								L4505HBWW*
	INTRINSICALLY-SAFE	L4505GAVR***	3 WAY NC			L4505GBVV***	3 WAY NC						.9 (2.1)
		L4505HAVR***			3 WAY NO							L4505HBVV***	

*Coils sold separately. Refer to Electrical Section for selection.

***Coils included with valve. Refer to Electrical Section for additional information.

DIMENSIONAL INFORMATION



SERIES	A	A1	A2	C	F	F1	G	G1	H	L1	L2	L3	L4	M	W
L20	48,2 (1.90)	26,2 (1.03)	37,3 (1.47)	12,7 (.50)	15,9 (.63)	32,3 (1.27)	55,6 (2.19)	9,7 (.38)	25,4 (1.00)	135 (5.32)	196 (7.70)	127 (5.00)	179 (7.06)	4,3 (.17)	41,9 (1.65)
L45	69,1 (2.72)	37,3 (1.47)	53,1 (2.09)	16,0 (.63)	23,9 (.94)	47,8 (1.88)	69,8 (2.75)	18,3 (.72)	31,8 (1.25)	174 (6.87)	241 (9.49)	166 (6.54)	225 (8.88)	6,6 (.26)	63,5 (2.50)

Units of Measure: Top - mm, Bottom - inches



L20 AIR PILOT AND MANUAL MODELS



**AIR PILOT
L20**



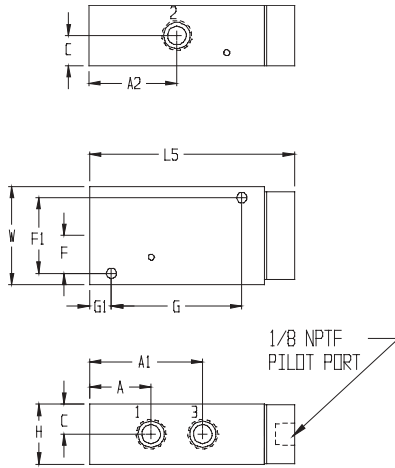
**MANUAL
L20**

MODEL NUMBERS

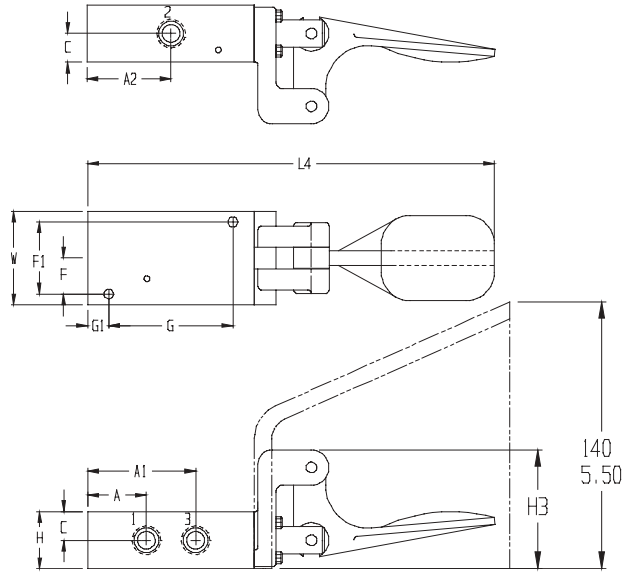
SERIES	OPERATOR	MODEL NUMBER				PORT SIZE	Cv (l/min)	BODY MATERIAL	SEAL MATERIAL	Kg (LB)					
		3 WAY NC		3 WAY NO											
L20	AIR PILOT	SINGLE				DOUBLE				1.8 (1770)	ALUMINUM	NBR	.4 (9)		
		L2003GAAR		L2003HAAR		L2003GBAA		L2003HBAA						1/4	
		L2004GAAR		L2004HAAR		L2004GBAA		L2004HBAA						3/8	
		DETTENTED				SPRING RETURN									
	FOOT PEDAL	L2003GAKM		L2003HAKM		L2003GAKR		L2003HAKR						1/4	
		L2004GAKM		L2004HAKM		L2004GAKR		L2004HAKR						3/8	
		HAND LEVER LINE MOUNTED	L2003GAFM		L2003HAFM		L2003GAFR		L2003HAFR						1/4
			L2004GAFM		L2004HAFM		L2004GAFR		L2004HAFR						3/8
	PALM BUTTON	L2003GAIM		L2003HAIM		L2003GAIR		L2003HAIR		1/4					
		L2004GAIM		L2004HAIM		L2004GAIR		L2004HAIR		3/8					

DIMENSIONAL INFORMATION

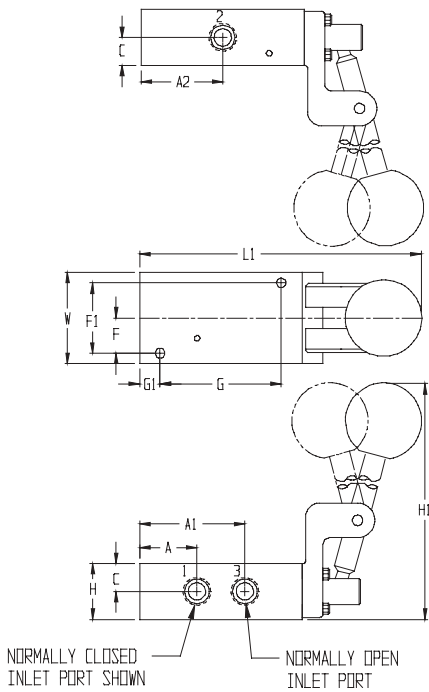
AIR PILOT



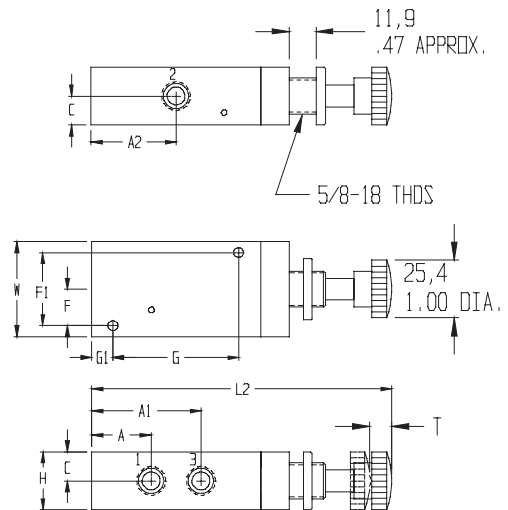
FOOT PEDAL



HAND LEVER



PALM BUTTON



SERIES	A	A1	A2	C	F	F1	G	G1	H	H1	H2	H3	L1	L2	L3	L4	L5	M	T	W
L20	26,2 (1.03)	48,2 (1.90)	37,3 (1.47)	12,7 (.50)	15,9 (.63)	32,3 (1.27)	55,6 (2.19)	9,7 (.38)	25,4 (1.00)	136 (5.35)	85,7 (3.38)	52,4 (2.06)	129 (5.09)	136 (5.22)	170 (6.71)	182 (7.16)	87,4 (3.44)	4,3 (.17)	7,5 (.38)	41,9 (1.65)

Units of Measure: Top - mm, Bottom - inches



L45 LOCKOUT, AIR PILOT AND MANUAL MODELS



**LOCKOUT
L45**



AIR PILOT



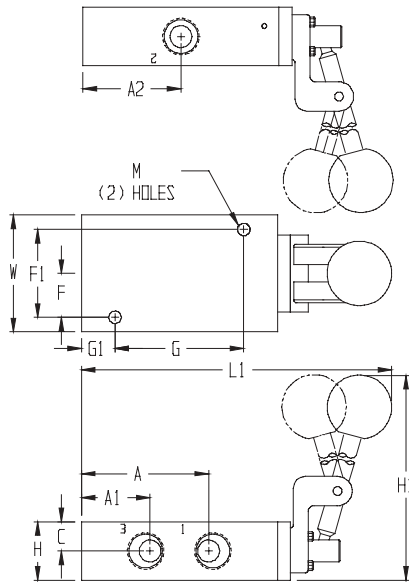
**HAND LEVER
(LINE MOUNTED)**

MODEL NUMBERS

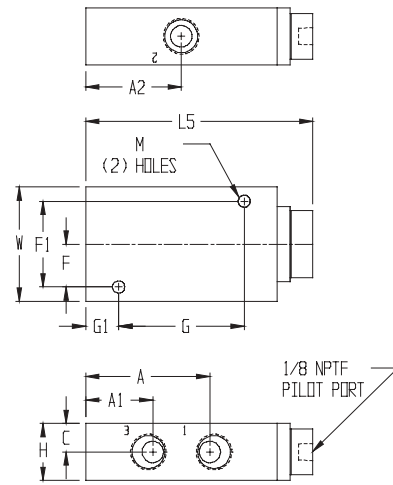
SERIES	OPERATOR	MODEL NUMBER								PORT SIZE	Cv (l/min)	BODY MATERIAL	SEAL MATERIAL	Kg (LB)	
		3 WAY NC		3 WAY NO		3 WAY NC		3 WAY NO							
L45	LOCKOUT	SINGLE				DOUBLE				1/2	4.0 (3940)	ALUMINUM	NBR	.9 (1.9)	
		-	-	L4505HALM		-	-	-	-	3/4					
	-	-	L4505HALM		-	-	-	-							
	AIR PILOT	SINGLE				DOUBLE									
		L4505GAAR		L4505HAAR		L4505GBAA		L4505HBAA							
	M A N U A L	FOOT PEDAL	DETENTED				SPRING RETURN								1/2
			L4505GAKM		L4505HAKM		L4505GAKR		L4505HAKR						
		HAND LEVER LINE MOUNTED	L4505GAFM		L4505HAFM		L4505GAFR		L4505HAFR						
		PALM BUTTON	L4505GAIM		L4505HAIM		L4505GAIR		L4505HAIR						

DIMENSIONAL INFORMATION

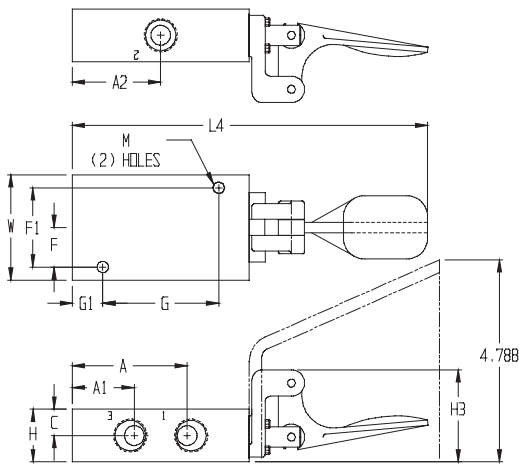
HAND LEVER



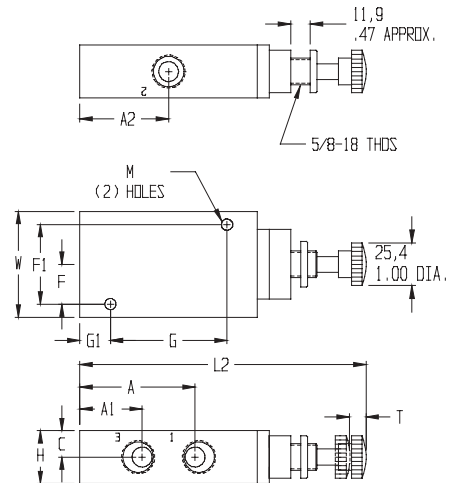
AIR PILOT



FOOT PEDAL



PALM BUTTON

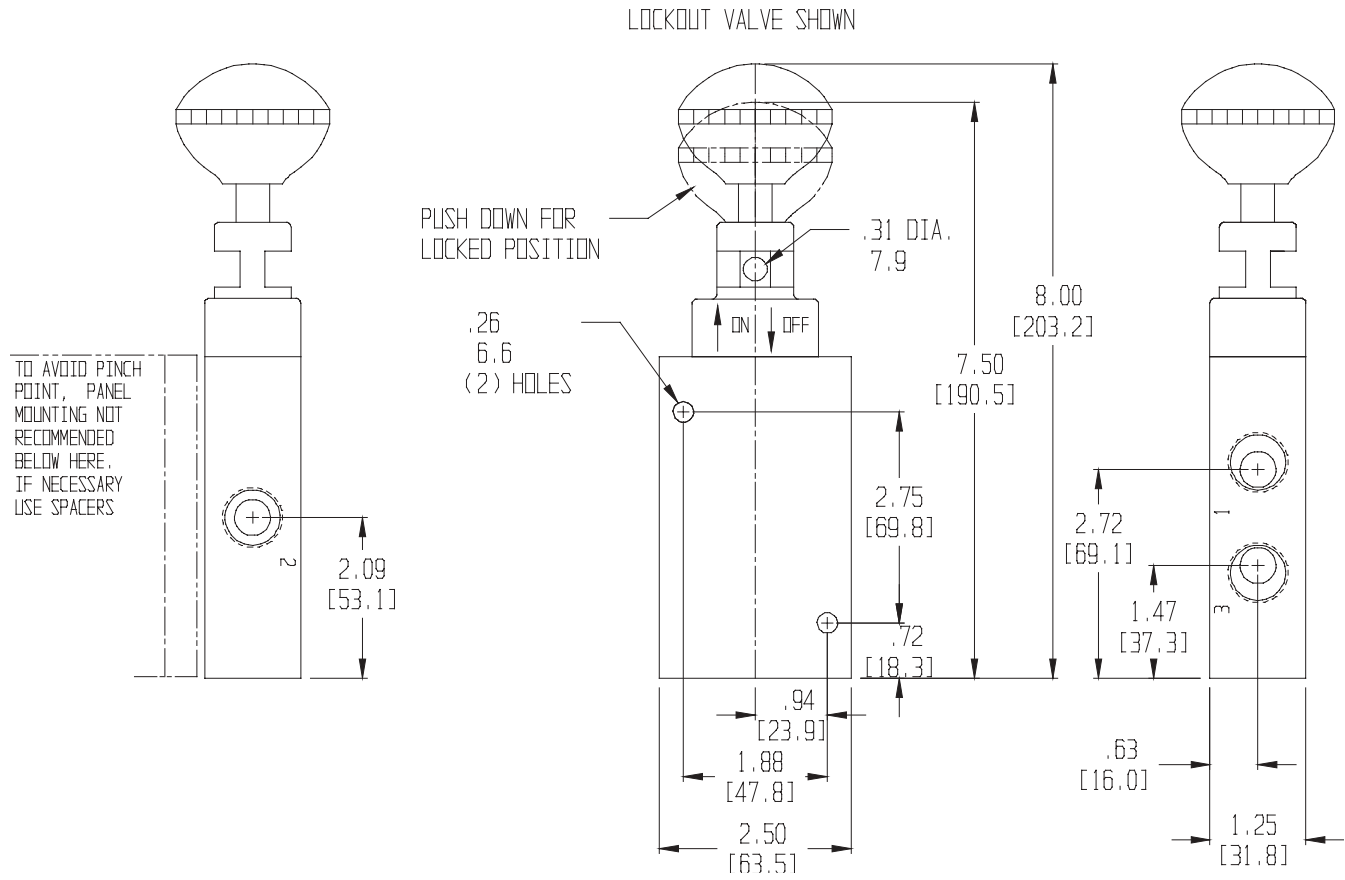


SERIES	A	A1	A2	C	F	F1	G	G1	H	H1	H2	L1	L2	L3	L4	L5	M	T	W
L45	69,1 (2.72)	37,3 (1.47)	53,1 (2.09)	16,0 (.63)	23,9 (.94)	47,8 (1.88)	69,8 (2.75)	18,3 (.72)	31,8 (1.25)	88,9 (3.50)	56,3 (2.22)	168 (6.62)	171 (6.75)	208 (8.21)	214 (8.42)	126 (4.97)	6,6 (.26)	12,7 (.50)	63,5 (2.50)

Units of Measure: Top - mm, Bottom - inches



DIMENSIONAL INFORMATION



OPTIONS

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

A - FLUOROELASTOMER SEALS

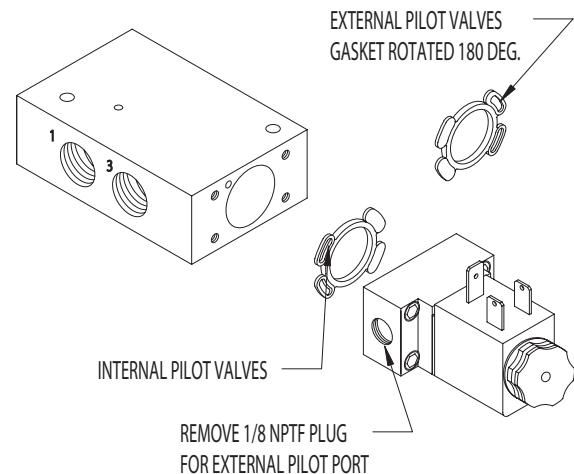
For applications where fluid media or ambient conditions are not compatible with nitrile seals. Note: Fluorocarbon seals do not increase the effective temperature range of the valve. For high temperature applications, consult the factory.

B - EXTERNAL PILOT

For solenoid applications when the pressure to port 1 is less than 35 PSIG (2 BAR). See example below for field conversion.

FIELD CONVERSION

- Remove solenoid and cap from valve body.
- Rotate gasket 180 degrees so that the internal pilot hole in the valve body is covered by the gasket.
- Reassemble the gasket, cap and solenoid to the valve body. Make sure gasket completely covers internal pilot hole before tightening screws.
- Remove the 1/8 NPTF pipe plug from the cap and make the external pilot connection.



C - CONDUIT COIL

Refer to Electrical Section for details.

CT - CONDUIT COIL HIGH TEMPERATURE

Refer to Electrical Section for details.

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.

G - COIL WITH 18" LEADS

Refer to Electrical Section for details.

S - STAINLESS STEEL

Stainless steel body, all other external parts corrosive resistant; for corrosive environment applications.

SS - 316 STAINLESS STEEL

Stainless steel body, all other external parts corrosive resistant; for corrosive environment applications.

W - G THREADS

Y - EXPLOSION-PROOF COIL (CSA, FM)

Refer to Electrical Section for details.

Z - EXPLOSION-PROOF COIL (ATEX, PTB)

Refer to Electrical Section for details.



ELECTRICAL INFORMATION

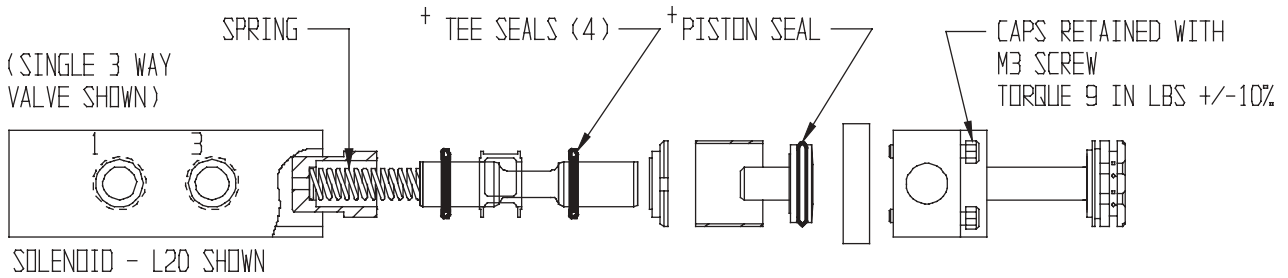
DESCRIPTION		WHEN THE 8TH CHARACTER OF MODEL NUMBER IS:	INSTRUCTIONS	COIL PART NUMBER ** = VOLTAGE
NEMA 4X WITH DIN 43650 CONNECTION		W	Order coil separately (specify voltage code from below)	7019-9**
NEMA 4X WITH 18" LEADS		W	Order coil separately (specify voltage code from below)	7019-9**G
NEMA 4X 1/2" CONDUIT WITH 30" LEADS		W	Order coil separately (specify voltage code from below)	7019-9**C 7019-9**CT (high temperature 82°C maximum)
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]		W	Order coil separately (specify voltage code from below)	7019-**Y
* INTRINSICALLY-SAFE WITH STRAIN RELIEF (EEx ia IIC T6) CL. I: Div. 1; GR. A, B, C, D CL. II: GR. E, F, G CL. III: Div. 1 Hazardous Location		V	Coil and Connector included with valve (24VDC only)	A7106-374
EXPLOSION-PROOF WITH 3m CABLE AND STRAIN RELIEF (Ex II 2G EExm II T - I EC Exm II T-)		Z	Order coil separately (specify voltage code from below)	7152-9**

VOLTAGE +/- 10 %	** C O D E	CURRENT (AMPS)								RESISTANCE (OHMS @ 25° C)				POWER (AC = VA DC = WATTS)			
		INRUSH				HOLDING				NEMA							
		4	7	V	Z	4	7	V	Z	4	7	V	Z	4	7	V	Z
22/50 24/60	DA	.40	.55	-	-	.40	.32	-	-	31	19	-	-	4.8	4.5	-	-
110/50 120/60	AA	.08	.096	-	-	.06	.054	-	.029	840	530	-	1164	4.8	6.5	-	3.0
220/50 240/60	AB	.04	.048	-	-	.03	.027	-	.015	3400	2345	-	6730	6.0	6.5	-	3.0
12 VDC	DA	.40	-	-	-	.40	.375	-	.267	31	32	-	45	4.8	7	-	3.5
24 VDC	DB	.20	-	.03	.136	.20	.187	.03	.136	121	128	275	177	4.8	-	2.1	3.5
24 VDC	DBL	-	-	-	-	-	-	-	-	320	-	-	-	1.8	4.5	-	-
125 VDC	AB	.04	-	-	-	.04	.06	-	-	3400	2000	-	-	4.8	7	-	-

For alternative lower wattage options, please consult the factory.

DIN 43650 CONNECTORS						
TYPE	STRAIN RELIEF WITHOUT CORD	1/2" CONDUIT WITHOUT CORD	MOLDED WITH 6' CORD	STRAIN RELIEF WITH LIGHT		STRAIN RELIEF WITH LIGHT + 6' CORD
				100-240 AC 48-120 DC	6-48 AC/DC	100-240 AC 48-120 DC 6-48 AC/DC
PART NUMBER	7020-001	7039-001	7020-006	7020-AA	7020-DB	7094-006 7094-007

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
L20	K-L20-SGL-3	Tee Seals (4)	K-L20-DBL-3	Tee Seals (4)
	K-L20-SGL-3-A (Fluoroelastomer)	Piston Seal (1) Spring (1)	K-L20-DBL-3-A (Fluoroelastomer)	Piston Seal (2)
L45	K-L45-SGL-3	Tee Seals (4)	K-L45-DBL-3	Tee Seals (4)
	K-L45-SGL-3-A (Fluoroelastomer)	Piston Seal Spring (1)	K-L45-DBL-3-A (Fluoroelastomer)	Piston Seal (2)



NOTES