

CONTROL VALVES

BUTTERFLY VALVES KB SERIES



DESCRIPTION

The Valve Solutions KB Series butterfly valves are available in sizes from 2" to 24" and come with a variety of options to meet your needs. The Fusion Bonded Epoxy coated body along with the EPDM seat and o-ring make for a very durable and long lasting butterfly valve. These valves are available in 100 PSI, 150 PSI, and 200 PSI close off ratings for 2 position control. These are available with low or high pressure pneumatic actuators or with Valve Solutions' new 1000X series actuators.

FEATURES

- Good for chilled water, hot water and 50% Glycol applications
- Ductile iron body construction
- PTFE bushing
- Stainless steel disc and stem
- Manual gear wheel available
- Actuators come with two 1/2" conduit entries



VSI 6-inch with High Pressure Series C and Solenoid



VSI, 14-inch with 1060 and optional hand valve



VSI 6-inch 3-way Valve with 1000-X (Arrangement 1)



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SPECIFICATIONS

Size	2" thru 24"	Supply Voltage	24 VAC, 120 VAC
Cv	135 thru 43116 (See ordering)	Supply Frequency	60 Hz
Body Pattern	Lugged 150 # butterfly	Supply VA	Ranges from 38.4 VA to 474 VA depending on actuator
Flow Characteristic	Modified EQ%	Supply Current	0.34A to 7.2 A depending on actuator
Rangeability	10:1 for 30° to 70° range	Conduit Connection	(1) 1/2" NPT conduit connection
Leakage Rating	Bubble tight	Air Connections	80 PSI 1/4" NPT
Mounting Flange	ANSI 150	Feedback	4-20 mA
Body Rating	ASME/ANSI Class 125	Auxiliary Switch	(2) SPDT, optional
Maximum Closeoff Pressure	100 PSI, 150 PSI, 200 PSI	Action	Floating, modulating, 2-position
KB1 Models	100 PSI	Rotation	90 degrees
KB2 Models	200 PSI (up to 10"); 150 PSI (12" and up)	Actuator Compatibility	Dependent on model
Maximum Pressure Rating	ASME/ANSI Class 125	Actuator Mounting	ISO 5211, direct-coupled
Media Compatibility	H2O - 50% Glycol	Weight	32 to 1754 lb (14.5 to 795.6 Kg) depending on model
Media Temperature Range	-30° to 225°F (-34° to 107°C)	Enclosure Rating	NEMA 4 on select models
Disc	304 Stainless Steel	Approvals	CSA US File 226201
Disc Seal	EPDM	Meets ARRA or BAA	Yes



CONTROL VALVES

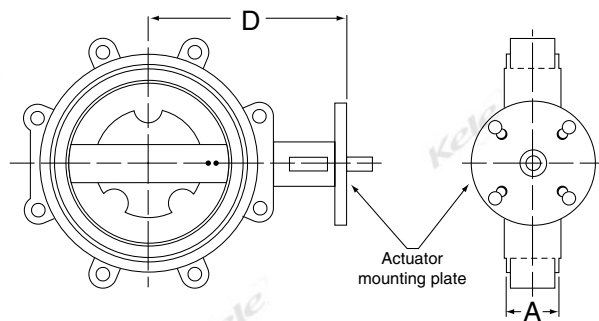
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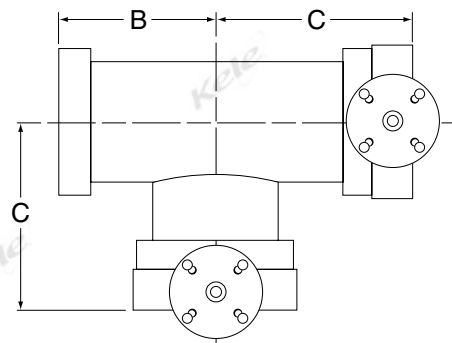
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VALVE DIMENSIONS in (mm)															
PORT	DIM	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
2-WAY	A	1.693 (43)	1.811 (46)	1.811 (46)	2.047 (52)	2.205 (56)	2.205 (56)	2.632 (60)	2.677 (68)	3.071 (78)	3.071 (78)	4.016 (102)	4.488 (114)	5.000 (127)	6.053 (154)
3-WAY	B	4.5 (114)	5 (127)	5.5 (140)	6.5 (165)	7.5 (190)	8 (203)	9 (228)	11 (280)	12 (305)	14 (356)	15 (381)	16.5 (419)	18 (457)	22 (559)
	C	6.2 (158)	6.8 (173)	7.3 (185)	8.5 (216)	9.7 (247)	10.2 (259)	11.6 (295)	13.7 (347)	15 (381)	17 (432)	19 (483)	21 (534)	23 (584)	28 (711)
Height without actuator	D	6.34 (161)	6.89 (175)	7.13 (181)	7.9 (200)	8.4 (213)	8.9 (226)	10.24 (259)	11.5 (292)	13.27 (337)	14.49 (368)	15.75 (400)	16.61 (422)	18.9 (480)	22.13 (562)
Weight 2-WAY	LB (KG)	9 (4.07)	10 (4.57)	12.75 (5.77)	19.25 (8.75)	24.25 (11.04)	28 (12.64)	44 (20.02)	70 (31.67)	103 (46.87)	152.5 (69.2)	253 (114.6)	333 (151.2)	408 (185)	626.5 (248.2)
Weight 3-WAY	LB (KG)														
Mounting	LUGS	(4ea) 5/8-11	(4ea) 5/8-11	(4ea) 5/8-11	(8ea) 5/8-11	(8ea) 3/4-10	(8ea) 3/4-10	(8ea) 3/4-10	(12ea) 7/8-9	(12ea) 7/8-9	(12ea) 1-8	(16ea) 1-8	(16ea) 1 1/8-7	(20ea) 1 1/8-7	(20ea) 1 1/4-7

Two-way Valve Bodies



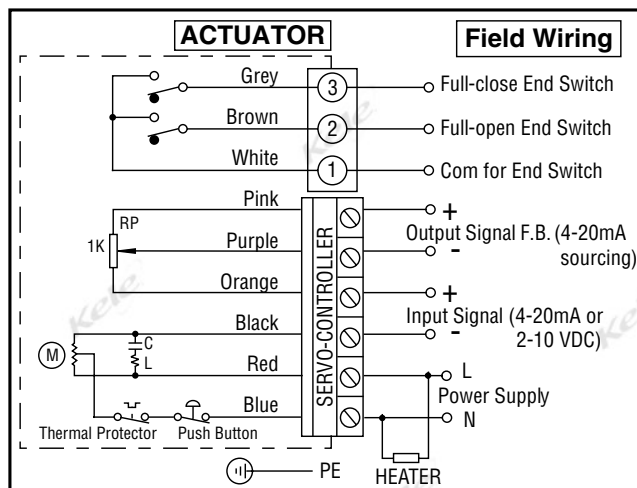
Three-way Tee-mounted Valve Bodies



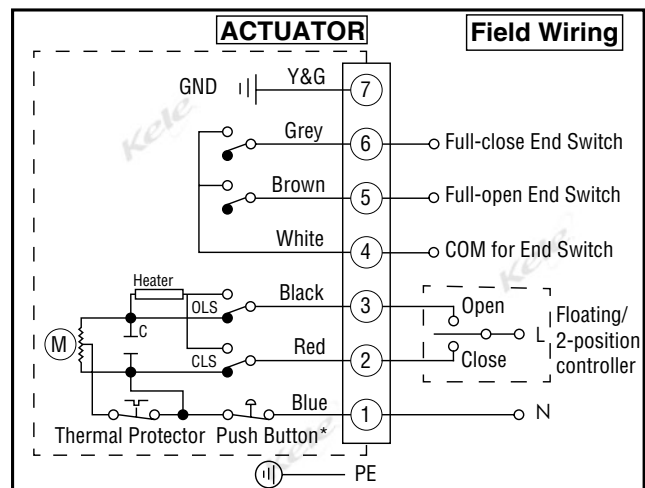
*For total valve height add dimension "D" to the actuator coupling height listed above.

1000 SERIES WIRING

PROPORTIONAL/MODULATING



TWO-POSITION/FLOATING



* Not available on 1005-X

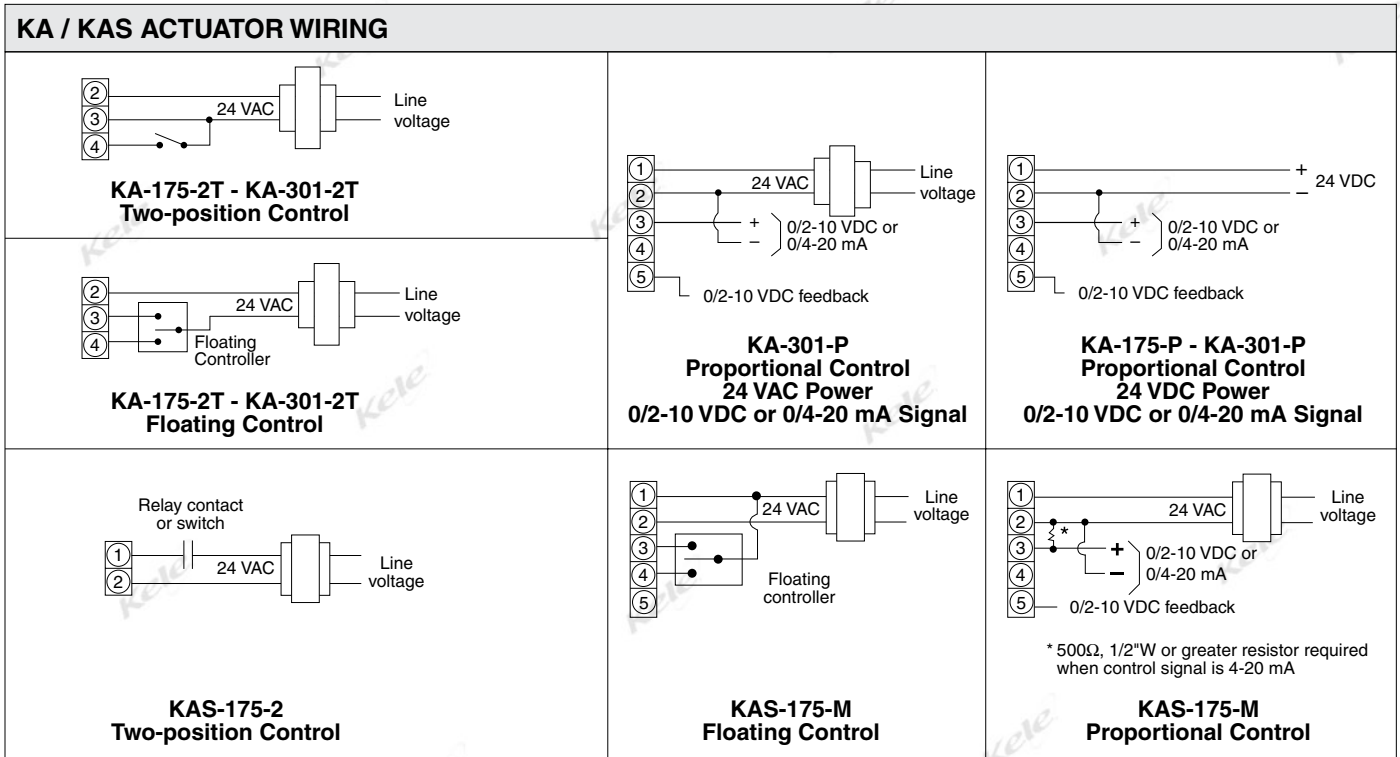
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DOUBLE ACTING HIGH PRESSURE PNEUMATIC ACTUATOR SPECS (100PSI CLOSE OFF)

	2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Pneumatic Actuator	Air Source PSIG	Control Signal		Torque @ 80PSI In/LB	Failsafe	Timing Seconds	Dimensions HxWxL (in)	Coupling Height (in)	Actuator Weight (lbs)
						HP22/HP21	HPM						
						2-POS	Modulating						
HIGH PRESSURE DOUBLE ACTING (DA)	2"-3"	2"-3"	100	C-DA063	40-130	24/120VAC	3-15PSI, 4-20mA	354	NO	0.5	4.25x3.25x6.6	DIRECT	4.41
	4"	4"	100	C-DA083	40-130	24/120VAC	3-15PSI, 4-20mA	761	NO	0.5	5.07x4.05x8.03	DIRECT	6.83
	5-6"	5-6"	100	C-DA092	40-130	24/120VAC	3-15PSI, 4-20mA	1097	NO	0.5	5.37x4.27x10.31	DIRECT	10.14
	8"	8"	100	C-DA105	40-130	24/120VAC	3-15PSI, 4-20mA	1611	NO	0.5	6.02x4.78x10.55	DIRECT	14.99
	10"	10"	100	C-DA125	40-130	24/120VAC	3-15PSI, 4-20mA	2443	NO	0.5	6.89x5.59x11.85	DIRECT	19.68
	12"	12"	100	C-DA140	40-130	24/120VAC	3-15PSI, 4-20mA	4160	NO	1	7.56x5.98x15.35	DIRECT	28.66
	14"	14"	100	C-DA160	40-130	24/120VAC	3-15PSI, 4-20mA	6470	NO	1	8.54x6.95x18.03	DIRECT	44.09
	16"-18"	16"	100	C-DA190	40-130	24/120VAC	3-15PSI, 4-20mA	10355	NO	2	10.24x8.12x20.67	DIRECT	68.37
	20"	18"	100	C-DA210	40-130	24/120VAC	3-15PSI, 4-20mA	12949	NO	2	11.22x8.90x20.94	DIRECT	103.62
	24"	20"	100	C-DA240	40-130	24/120VAC	3-15PSI, 4-20mA	12949	NO	2	12.56x10.24x23.70	DIRECT	147.74
	24"	100	C-DA270	40-130	24/120VAC	3-15PSI, 4-20mA	28464	NO	2	14.02x11.58x28.43	DIRECT	213.85	

DOUBLE ACTING HIGH PRESSURE PNEUMATIC ACTUATOR SPECS (100PSI CLOSE OFF)

	2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Pneumatic Actuator	Air Source PSIG	Control Signal		Torque @ 80PSI In/LB	Failsafe	Timing Seconds	Dimensions HxWxL (in)	Coupling Height (in)	Actuator Weight (lbs)
						HP22/HP21	HPM						
						2-POS	Modulating						
HIGH PRESSURE DOUBLE ACTING (DA)	2"-3"	2"-2.5"	200	C-DA063	40-130	24/120VAC	3-15PSI, 4-20mA	354	NO	0.5	4.25x3.25x6.6	DIRECT	4.41
	4"	3"-4"	200	C-DA083	40-130	24/120VAC	3-15PSI, 4-20mA	761	NO	0.5	5.07x4.05x8.03	DIRECT	6.83
	5"	5"	200	C-DA092	40-130	24/120VAC	3-15PSI, 4-20mA	1097	NO	0.5	5.37x4.27x10.31	DIRECT	10.14
	6"	6"	200	C-DA105	40-130	24/120VAC	3-15PSI, 4-20mA	1611	NO	0.5	6.02x4.78x10.55	DIRECT	14.99
	8"	8"	200	C-DA125	40-130	24/120VAC	3-15PSI, 4-20mA	2443	NO	0.5	6.89x5.59x11.85	DIRECT	19.68
	10"	10"	200	C-DA140	40-130	24/120VAC	3-15PSI, 4-20mA	4160	NO	1	7.56x5.98x15.35	DIRECT	28.66
	12"-14"	12"	150	C-DA160	40-130	24/120VAC	3-15PSI, 4-20mA	6470	NO	1	8.54x6.95x18.03	DIRECT	44.09
	16"	14"	150	C-DA190	40-130	24/120VAC	3-15PSI, 4-20mA	10355	NO	2	10.24x8.12x20.67	DIRECT	68.37
	18"-20"	16"	150	C-DA210	40-130	24/120VAC	3-15PSI, 4-20mA	12949	NO	2	11.22x8.90x20.94	DIRECT	103.62
	24"	18"	150	C-DA240	40-130	24/120VAC	3-15PSI, 4-20mA	12949	NO	2	12.56x10.24x23.70	DIRECT	147.74
		20"	150	C-DA270	40-130	24/120VAC	3-15PSI, 4-20mA	28464	NO	2	14.02x11.58x28.43	DIRECT	213.85
		24"	150	C-DA300	40-130	24/120VAC	3-15PSI, 4-20mA	37147	NO	3	14.88x12.76x29.21	DIRECT	242.51



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SPRING RETURN HIGH PRESSURE PNEUMATIC ACTUATOR SPECS (100PSI CLOSE OFF)

	2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Pneumatic Actuator	Air Source PSIG	Control Signal		Torque @ 80PSI In/LB	Failsafe	Timing Seconds	Dimensions HxWxL (in)	Coupling Height (in)	Actuator Weight (lbs)
						HP2Sx 2-POS	HPMSx Modulating						
HIGH PRESSURE SPRING RETURN (SR)	2"	2"	100	C-SR063	40-130	24/120VAC	3-15PSI, 4-20mA	121	YES	0.5	4.25x3.25x6.6	DIRECT	4.63
	2.5"-3"	2.5"-3"	100	C-SR083	40-130	24/120VAC	3-15PSI, 4-20mA	280	YES	0.5	5.07x4.05x8.03	DIRECT	7.94
	4"-5"	4"	100	C-SR092	40-130	24/120VAC	3-15PSI, 4-20mA	413	YES	0.5	5.37x4.27x10.31	DIRECT	11.46
		5"	100	C-SR105	40-130	24/120VAC	3-15PSI, 4-20mA	560	YES	0.5	6.02x4.78x10.55	DIRECT	15.24
	6"-8"	6"	100	C-SR125	40-130	24/120VAC	3-15PSI, 4-20mA	929	YES	0.5	6.89x5.59x11.85	DIRECT	22.27
	10"	8"-10"	100	C-SR140	40-130	24/120VAC	3-15PSI, 4-20mA	1522	YES	1	7.56x5.98x15.35	DIRECT	33.07
	12"	12"	100	C-SR160	40-130	24/120VAC	3-15PSI, 4-20mA	2469	YES	1	8.54x6.95x18.03	DIRECT	52.91
	14"	14"	100	C-SR190	40-130	24/120VAC	3-15PSI, 4-20mA	3540	YES	2	10.24x8.12x20.67	DIRECT	77.16
	16"		100	C-SR210	40-130	24/120VAC	3-15PSI, 4-20mA	4868	YES	2	11.22x8.90x20.94	DIRECT	121.25
	18"	16"	100	C-SR240	40-130	24/120VAC	3-15PSI, 4-20mA	7266	YES	2	12.56x10.24x23.70	DIRECT	176.37
20"	18"	100	C-SR270	40-130	24/120VAC	3-15PSI, 4-20mA	9904	YES	2	14.02x11.58x28.43	DIRECT	260.15	
	20"	100	C-SR300	40-130	24/120VAC	3-15PSI, 4-20mA	12922	YES	3	14.88x12.76x29.21	DIRECT	286.6	

SPRING RETURN HIGH PRESSURE PNEUMATIC ACTUATOR SPECS (200PSI CLOSE OFF)

	2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Pneumatic Actuator	Air Source PSIG	Control Signal		Torque @ 80PSI In/LB	Failsafe	Timing Seconds	Dimensions HxWxL (in)	Coupling Height (in)	Actuator Weight (lbs)
						HP2Sx 2-POS	HPMSx Modulating						
HIGH PRESSURE SPRING RETURN (SR)	2"		200	C-SR063	40-130	24/120VAC	3-15PSI, 4-20mA	121	YES	0.5	4.25x3.25x6.6	DIRECT	4.63
	2.5"-3"	2"-2.5"	200	C-SR083	40-130	24/120VAC	3-15PSI, 4-20mA	280	YES	0.5	5.07x4.05x8.03	DIRECT	7.94
	4"	3"	200	C-SR092	40-130	24/120VAC	3-15PSI, 4-20mA	413	YES	0.5	5.37x4.27x10.31	DIRECT	11.46
		4"	200	C-SR105	40-130	24/120VAC	3-15PSI, 4-20mA	560	YES	0.5	6.02x4.78x10.55	DIRECT	15.24
	5"-6"	5"	200	C-SR125	40-130	24/120VAC	3-15PSI, 4-20mA	929	YES	0.5	6.89x5.59x11.85	DIRECT	22.27
	8"	6"-8"	200	C-SR140	40-130	24/120VAC	3-15PSI, 4-20mA	1522	YES	1	7.56x5.98x15.35	DIRECT	33.07
	10"		200	C-SR160	40-130	24/120VAC	3-15PSI, 4-20mA	2469	YES	1	8.54x6.95x18.03	DIRECT	52.91
	12"	10"	200	C-SR190	40-130	24/120VAC	3-15PSI, 4-20mA	3540	YES	2	10.24x8.12x20.67	DIRECT	77.16
	14"	12"	150	C-SR210	40-130	24/120VAC	3-15PSI, 4-20mA	4868	YES	2	11.22x8.90x20.94	DIRECT	121.25
	16"	14"	150	C-SR240	40-130	24/120VAC	3-15PSI, 4-20mA	7266	YES	2	12.56x10.24x23.70	DIRECT	176.37
	16"	150	C-SR270	40-130	24/120VAC	3-15PSI, 4-20mA	9904	YES	2	14.02x11.58x28.43	DIRECT	260.15	
18"	18"	150	C-SR300	40-130	24/120VAC	3-15PSI, 4-20mA	12922	YES	3	14.88x12.76x29.21	DIRECT	286.6	

LOW PRESSURE SPRING RETURN PNEUMATIC ACTUATOR SPECS (100PSI CLOSE OFF)

	2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Pneumatic Actuator	Air Source PSIG	Control Signal		Torque @ 80PSI In/LB	Failsafe	Timing Seconds	Dimensions HxWxL (in)	Coupling Height (in)	Actuator Weight (lbs)
						LP2Sx 2-POS	LPMSx Modulating						
LOW PRESSURE SPRING RETURN (SR)	2"-3"	2"-2.5"	100	D31535130	20	20 PSI	NA	201	YES	15	10x8x16	3"	14
	4"-5"	3"-4"	100	D32445110	20	20 PSI	NA	425	YES	15	12x10x20	4"	24
	6"-8"	5"-6"	100	D32465110	20	20 PSI	NA	602	YES	15	14x12x24	5"	35
	10"-12"	8"-10"	100	D32465110(X2)	20	20 PSI	NA	1204	YES	15	14x12x24	5"	70
	2"-3"	2"-2.5"	100	D31535120	20	NA	3-15 PSI	201	YES	15	10x8x16	3"	14
	4"-5"	3"-4"	100	D32445100	20	NA	3-15 PSI	425	YES	15	12x10x20	4"	24
	6"-8"	5"-6"	100	D32465100	20	NA	3-15 PSI	602	YES	15	14x12x24	5"	35
	10"-12"	8"-10"	100	D32465100(X2)	20	NA	3-15 PSI	1204	YES	15	14x12x24	5"	70

LOW PRESSURE SPRING RETURN PNEUMATIC ACTUATOR SPECS (100PSI CLOSE OFF)

	2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Pneumatic Actuator	Air Source PSIG	Control Signal		Torque @ 80PSI In/LB	Failsafe	Timing Seconds	Dimensions HxWxL (in)	Coupling Height (in)	Actuator Weight (lbs)
						LP2Sx 2-POS	LPMSx Modulating						
LOW PRESSURE SPRING RETURN (SR)	2"-2.5"	2"	200	D31535130	20	20 PSI	NA	201	YES	15	10x8x16	3"	14
	3"-4"	2.5"-3"	200	D32445110	20	20 PSI	NA	425	YES	15	12x10x20	4"	24
	5"-6"	4"-5"	200	D32465110	20	20 PSI	NA	602	YES	15	14x12x24	5"	35
	8"	6"-8"	200	D32465110(X2)	20	20 PSI	NA	1204	YES	15	14x12x24	5"	70
	2"-2.5"	2"	200	D31535120	20	NA	3-15 PSI	201	YES	15	10x8x16	3"	14
	3"-4"	2.5"-3"	200	D32445100	20	NA	3-15 PSI	425	YES	15	12x10x20	4"	24
	5"-6"	4"-5"	200	D32465100	20	NA	3-15 PSI	602	YES	15	14x12x24	5"	35
	8"	6"-8"	200	D32465100(X2)	20	NA	3-15 PSI	1204	YES	15	14x12x24	5"	70

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ELECTRIC ACTUATOR SPECIFICATIONS (SIZED FOR 100 PSI CLOSE-OFF)											
2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Electric Actuator	Electric Power	Control Signal	Torque (in/lb)	Fail Safe	Run Time (Seconds)	Dimensions (HxWxL) In.	Coupling Height 2-Way	Coupling Height 3-Way
2"-3"	2"-2.5"	100	KA-175	24VAC(6VA)	2-POS, FLOAT, 2-10VDC	175	NO	95	8"x7"x9.25"	8"	8"
2"-3"	2"-2.5"	100	KAS-175	24VAC(16VA)	2-POS, FLOAT, 2-10VDC	175	YES	95	8"x7"x9.25"	8"	8"
4"	3"	100	KA-301	24VAC(9VA)	2-POS, FLOAT, 2-10VDC	301	NO	95	8"x7"x9.25"	8"	8"
4"-5"	3"-4"	100	GKB24	24VAC(21VA)	2-POS, FLOAT, 2-10VDC	360	YES	95	8"x7"x9.25"	8"	8"
5"	4"	100	GMB24	24VAC(6VA)	2-POS, FLOAT, 2-10VDC	360	NO	95	8"x7"x9.25"	8"	8"
6"	5"-6"	100	GKX24MFT(X2)	24VAC(42VA)	2-POS, FLOAT, 2-10VDC	720	YES	95	13"x7"x9.25"	13"	13"
2"-5"	2"-3"	100	1005-X	24VAC(40VA) or 120VAC(40VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	443	NO	20	6.3"x5.4"x6.3"	DIRECT	2"
6"	4"-6"	100	1010-X	24VAC(46VA) or 120VAC(97VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	885	NO	30	7.2"x5.8"x7.7"	DIRECT	2"
8" - 10"	8" - 10"	100	1020-X	24VAC(116VA) or 120VAC(201VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	1770	NO	30	8.6"x7.2"x10"	DIRECT	3"
12"-14"	12"	100	1040-X	24VAC(173VA) or 120VAC(410VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	3540	NO	30	8.6"x7.2"x10"	DIRECT	3"
	14"	100	1060-X	120VAC(432VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	5310	NO	45	8.6"x7.2"x10"	DIRECT	3"
16"-18"	16"-18"	100	1100-X	120VAC(456VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	8851	NO	30	9.6"x9.5"x12.2"	DIRECT	3"
20"	20"	100	1160-X	120VAC(472VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	14616	NO	48	9.6"x9.5"x12.2"	DIRECT	3"
24"	24"	100	1250-X	120VAC(475VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	22127	NO	75	9.6"x9.5"x12.2"	DIRECT	3"

1. Series 1000-X modulating units are equipped with control modules that accept 2-10V or 4-20mA control signal and feedback signal of 4-20mA.
 2. The KA and KAS actuators are Kele brand direct coupled actuators and are rated NEMA 2 - indoor use. They can be used on the smaller sized 2-4" valves. The same applies to the G Series Belimo brand.
 3. The Series 1000-X actuators are standard equipped with a heater and are NEMA 4 rated for outdoor usage.



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CONTROL VALVES

ELECTRIC ACTUATOR SPECIFICATIONS (SIZED FOR 150/200 PSI CLOSE-OFF)

2-WAY VALVE SIZE	3-WAY VALVE SIZE	CLOSE OFF (PSI)	Electric Actuator	Electric Power	Control Signal	Torque (In/Lb)	Fail Safe	Run Time (Seconds)	Dimensions (HxWxL) In.	Coupling Height 2-Way	Coupling Height 3-Way
2"	2"	200	KA-175	24VAC(6VA)	2-POS, FLOAT, 2-10VDC	175	NO	95	8"x7"x9.25"	8"	8"
2"	2"	200	KAS-175	24VAC(16VA)	2-POS, FLOAT, 2-10VDC	175	YES	95	8"x7"x9.25"	8"	8"
2.5"-3"	2.5"	200	KA-301	24VAC(16VA)	2-POS, FLOAT, 2-10VDC	175	NO	95	8"x7"x9.25"	8"	8"
2.5"-3"	2.5"	200	EFB24	24VAC(14VA)	2-POS, FLOAT, 2-10VDC	270	YES	95	8"x7"x9.25"	13"	13"
4"-5"	3"	200	GMB24(X2)	24VAC(21VA)	2-POS, FLOAT, 2-10VDC	720	NO	95	13"x7"x9.25"	13"	13"
4"	4"	200	EFB24(X2)	24VAC(28VA)	2-POS, FLOAT, 2-10VDC	270	YES	95	13"x7"x9.25"	13"	13"
5"	5"	200	GKX24MFT	24VAC(42VA)	2-POS, FLOAT, 2-10VDC	720	YES	95	13"x7"x9.25"	13"	13"
2"-4"	2"-3"	200	1005-X	24VAC(40VA) or 120VAC(40VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	443	NO	20	5.5"x4.4"x6.3"	DIRECT	2"
5"-6"	4"-6"	200	1010-X	24VAC(46VA) or 120VAC(97VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	885	NO	30	7.2"x5.8"x7.7"	DIRECT	2"
8"	8"	200	1020-X	24VAC(116VA) or 120VAC(201VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	1770	NO	30	8.6"x7.2"x10"	DIRECT	3"
10"-12"	10"	200	1040-X	24VAC(173VA) or 120VAC(410VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	3540	NO	30	8.6"x7.2"x10"	DIRECT	3"
14"	12"	200	1060-X	120VAC(432VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	5310	NO	45	8.6"x7.2"x10"	DIRECT	3"
14"	14"	150	1060-X	120VAC(432VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	5310	NO	45	8.6"x7.2"x10"	DIRECT	3"
16"-18"	16"	150	1100-X	120VAC(456VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	8851	NO	30	9.6"x9.5"x12.2"	DIRECT	3"
20"	18"	150	1160-X	120VAC(472VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	14616	NO	48	9.6"x9.5"x12.2"	DIRECT	3"
24"	20"	150	1250-X	120VAC(475VA)	2-POS, FLOAT, 2-10VDC, 4-20mA	22127	NO	75	9.6"x9.5"x12.2"	DIRECT	3"

- Series 1000-X modulating units are equipped with control modules that accept 2-10V or 4-20mA control signal and feedback signal of 4-20mA.
- The KA and KAS actuators are Kele brand direct coupled actuators and are rated NEMA 2 - indoor use. They can be used on the smaller sized 2-4" valves. The same applies to the G Series Belimo brand.
- The Series 1000-X actuators are standard equipped with a heater and are NEMA 4 rated for outdoor usage.

CONTROL VALVES

BUTTERFLY VALVES KB SERIES



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CONTROL VALVES

ELECTRIC ACTUATOR CODES (NEMA 4 ELECTRIC)

VALVE TYPE/SIZE	1E2V	2E2V	1EMV2 / 1EMV4	2EMV2 / 2EMV4
2-WAY/2"	1005-X	1005-X-24V	1005/S-X-2(4)	1005/S-X-24V-2(4)
2-WAY/2.5"	1005-X	1005-X-24V	1005/S-X-2(4)	1005/S-X-24V-2(4)
2-WAY/3"	1005-X	1005-X-24V	1005/S-X-2(4)	1005/S-X-24V-2(4)
2-WAY/4"	1005-X	1005-X-24V	1005/S-X-2(4)	1005/S-X-24V-2(4)
2-WAY/5"	1005-X or 1010-X	1005-X-24V or 1010-X-24	1005/S-X-2(4) OR 1010/S-X	1005/S-X-24V-2(4) or 1010/S-X-24V-2(4)
2-WAY/6"	1010-X	1005-X-24V or 1010-X-24	1010/S-X	1010/S-X-24V-2(4)
2-WAY/8"	1020-X	1005-X-24V or 1020-X-24V	1020/S-X	1020/S-X-24V-2(4)
2-WAY/10"	1020-X or 1040-X	1005-X-24V or 1040-X-24V	1020/S-X or 1040/S-X	1020/S-X-24V-2(4) or 1040/S-X-24V-2(4)
2-WAY/12"	1040-X	1005-X-24V or 1040-X-24V	1040/S-X	1040/S-X-24V-2(4)
2-WAY/14"	1040-X or 1060-X	1005-X-24V	1040/S-X or 1060/S-X	1040/S-X-24V-2(4)
2-WAY/16"	1100-X	—	1100/S-X	—
2-WAY/18"	1100-X or 1160-X	—	1100/S-X or 1160/S-X	—
2-WAY/20"	1160-X	—	1160/S-X	—
2-WAY/24"	1250-X	—	1250/S-X	—
3-WAY/2"	1005-X	1005-X-24V	1005/S-X-2(4) or 1005/S-X-2(4)	1005/S-X-24V-2(4)
3-WAY/2.5"	1005-X	1005-X-24V	1005/S-X-2(4) or 1005/S-X-2(4)	1005/S-X-24V-2(4)
3-WAY/3"	1005-X	1005-X-24V	1005/S-X-2(4) or 1005/S-X-2(4)	1005/S-X-24V-2(4)
3-WAY/4"	1010-X	1010-X-24	1010/S-X	1010/S-X-24V-2(4)
3-WAY/5"	1010-X	1010-X-24	1010/S-X	1010/S-X-24V-2(4)
3-WAY/6"	1010-X or 1020-X	1010-X-24V or 1020-X-24	1010/S-X or 1020/S-X	1010/S-X-24V-2(4) or 1020/S-X-24V-2(4)
3-WAY/8"	1020-X	1020-X-24V	1020/S-X	1020/S-X-24V-2(4)
3-WAY/10"	1020-X or 1040-X	1020-X-24V or 1040-X-24V	1020/S-X or 1040/S-X	1020/S-X-24V-2(4) or 1040/S-X-24V-2(4)
3-WAY/12"	1040-X or 1060-X	1040-X-24V	1040/S-X or 1060/S-X	1040/S-X-24V-2(4)
3-WAY/14"	1060-X	—	1060/S-X	—
3-WAY/16"	1100-X	—	1100/S-X	—
3-WAY/18"	1100-X or 1160-X	—	1100/S-X or 1160/S-X	—
3-WAY/20"	1160-X or 1250-X	—	1160/S-X or 1250/S-X	—
3-WAY/24"	1250-X	—	1250/S-X	—

ELECTRIC ACTUATOR CODES (NEMA 2 ELECTRIC)

VALVE TYPE/SIZE	2E2D	2E2DSC / 2E2DS0	2EMD	2EMDSC / 2EMDSO
2-WAY/2"	KA-175-2T	KAS-175-2	KA-175-P	KAS-175-M
2-WAY/2.5"	KA-175-2T or KA-301-2T	KAS-175-2 or EFB24	KA-175-P or KA-301-P	KAS-175-M or EFB24-SR
2-WAY/3"	KA-175-2T or KA-301-2T	KAS-175-2 or EFB24	KA-175-P or KA-301-P	KAS-175-M or EFB24-SR
2-WAY/4"	KA-301-2T or GMB24-3(x2)	GKB24-3 or EFB24(x2)	KA-301-P or GMB24-SR(x2)	GKB24-SR or EFB24-SR(x2)
2-WAY/5"	GMB24-3 or GMB24-3(x2)	GKB24-3 or GKX24-MFT(x2)	GMB24-SR or GMB24-SR(x2)	GKB24-SR or GKX24-MFT(x2)
2-WAY/6"	GMB24-3(x2)	GKX24-MFT(x2)	GMB24-SR(x2)	GKX24-MFT(x2)
3-WAY/2"	KA-175-2T	KAS-175-2	KA-175-P	KAS-175-M
3-WAY/2.5"	KA-175-2T or KA-301-2T	KAS-175-2 or EFB24	KA-175-P or KA-301-P	KAS-175-M or EFB24-SR
3-WAY/3"	KA-301-2T	EFB24 or GKB24-3	KA-301-P	EFB24-SR or GKB24-SR
3-WAY/4"	GMB24-3 or GMB24-3(x2)	GKB24-3 or EFB24(x2)	GMB24-SR or GMB24-SR(x2)	GKB24-SR or EFB24-SR(x2)
3-WAY/5"	GMB24-3(x2)	GKX24-MFT(x2)	GMB24-SR(x2)	GKX24-MFT(x2)
3-WAY/6"	GMB24-3(x2)	GKX24-MFT(x2)	GMB24-SR(x2)	GKX24-MFT(x2)



CONTROL VALVES

BUTTERFLY VALVES KB SERIES

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CONTROL VALVES

ACTUATOR CODES (LOW PRESSURE PNEUMATIC- 20PSI AIR)

VALVE TYPE/SIZE	LP2SC	LP2SO	LPMSC	LPMSO
2-WAY/2"	D-3153-5130	D-3153-5130	D-3153-5120	D-3153-5120
2-WAY/2.5"	D-3153-5130	D-3153-5130	D-3153-5120	D-3153-5120
2-WAY/3"	D-3153-5130 or D-3244-5110	D-3153-5130 or D-3244-5110	D-3153-5120 or D-3244-5100	D-3153-5120 or D-3244-5100
2-WAY/4"	D-3244-5110	D-3244-5110	D-3244-5100	D-3244-5100
2-WAY/5"	D-3244-5110 or D-3246-5110	D-3244-5110 or D-3246-5110	D-3244-5100 or D-3246-5100	D-3244-5100 or D-3246-5100
2-WAY/6"	D-3246-5110	D-3246-5110	D-3246-5100	D-3246-5100
2-WAY/8"	D-3246-5110 or D-3246-5110(x2)	D-3246-5110 or D-3246-5110(x2)	D-3246-5100 or D-3246-5100(x2)	D-3246-5100 or D-3246-5100(x2)
2-WAY/10"	D-3246-5110(x2)	D-3246-5110(x2)	D-3246-5100(x2)	D-3246-5100(x2)
2-WAY/12"	D-3246-5110(x2)	D-3246-5110(x2)	D-3246-5100(x2)	D-3246-5100(x2)
3-WAY/2"	D-3153-5130	D-3153-5130	D-3153-5120	D-3153-5120
3-WAY/2.5"	D-3153-5130 or D-3244-5110	D-3153-5130 or D-3244-5110	D-3153-5120 or D-3244-5100	D-3153-5120 or D-3244-5100
3-WAY/3"	D-3244-5110	D-3244-5110	D-3244-5100	D-3244-5100
3-WAY/4"	D-3244-5110 or D-3246-5110	D-3244-5110 or D-3246-5110	D-3244-5100 or D-3246-5100	D-3244-5100 or D-3246-5100
3-WAY/5"	D-3246-5110	D-3246-5110	D-3246-5100	D-3246-5100
3-WAY/6"	D-3246-5110 or D-3246-5110(x2)	D-3246-5110 or D-3246-5110(x2)	D-3246-5100 or D-3246-5100(x2)	D-3246-5100 or D-3246-5100(x2)
3-WAY/8"	D-3246-5110(x2)	D-3246-5110(x2)	D-3246-5100(x2)	D-3246-5100(x2)
3-WAY/10"	D-3246-5110(x2)	D-3246-5110(x2)	D-3246-5100(x2)	D-3246-5100(x2)

ACTUATOR CODES (HIGH PRESSURE PNEUMATIC-80 PSI AIR)

VALVE TYPE/SIZE	HP21 / HP22	HP2SC1 / HP2SC2 HP2S01 / HP2S02	HPM	HPMSC / HPMSO
2-WAY/2"	C-DA63/WT8	C-SR63/WT8	C-DA63/VP7G	C-SR63/VP7G
2-WAY/2.5"	C-DA63/WT8	C-SR83/WT8	C-DA63/VP7G	C-SR83/VP7G
2-WAY/3"	C-DA63/WT8	C-SR83/WT8	C-DA63/VP7G	C-SR83/VP7G
2-WAY/4"	C-DA83/WT8	C-SR92/WT8	C-DA83/VP7G	C-SR92/VP7G
2-WAY/5"	C-DA83/WT8 or C-DA092/WT8	C-SR92/WT8 or C-SR125/WT8	C-DA83/VP7G or C-DA092/VP7G	C-SR92/VP7G or C-SR125/VP7G
2-WAY/6"	C-DA092/WT8 or C-DA105/WT8	C-SR125/WT8	C-DA092/VP7G or C-DA105/VP7G	C-SR125/VP7G
2-WAY/8"	C-DA105/WT8 or C-DA125/WT8	C-SR125/WT8 or C-SR140/WT8	C-DA105/VP7G or C-DA125/VP7G	C-SR125/VP7G or C-SR140/VP7G
2-WAY/10"	C-DA125/WT8 or C-DA140/WT8	C-SR140/WT8 or C-SR160/WT8	C-DA125/VP7G or C-DA140/VP7G	C-SR140/VP7G or C-SR160/VP7G
2-WAY/12"	C-DA140/WT8 or C-DA160/WT8	C-SR160/WT8 or C-SR190/WT8	C-DA140/VP7G or C-DA160/VP7G	C-SR160/VP7G or C-SR190/VP7G
2-WAY/14"	C-DA160/WT8	C-SR190/WT8 or C-SR210/WT8	C-DA160/VP7G	C-SR190/VP7G or C-SR210/VP7G
2-WAY/16"	C-DA190/WT8	C-SR210/WT8 or C-SR240/WT8	C-DA190/VP7G	C-SR210/VP7G or C-SR240/VP7G
2-WAY/18"	C-DA190/WT8 or C-DA240/WT8	C-SR240/WT8 or C-SR300/WT8	C-DA190/VP7G or C-DA240/VP7G	C-SR240/VP7G or C-SR300/VP7G
2-WAY/20"	C-DA210/WT8 or C-DA240/WT8	C-SR270/WT8	C-DA210/VP7G or C-DA240/VP7G	C-SR270/VP7G
2-WAY/24"	C-DA270/WT8 or C-DA300/WT8	—	C-DA270/VP7G or C-DA300/VP7G	—
3-WAY/2"	C-DA63/WT8	C-SR63/WT8 or C-SR83/WT8	C-DA63/VP7G	C-SR63/VP7G or C-SR83/VP7G
3-WAY/2.5"	C-DA63/WT8	C-SR83/WT8	C-DA63/VP7G	C-SR83/VP7G
3-WAY/3"	C-DA63/WT8 or C-DA83/WT8	C-SR83/WT8 or C-SR92/WT8	C-DA63/VP7G or C-DA83/VP7G	C-SR83/VP7G or C-SR92/VP7G
3-WAY/4"	C-DA83/WT8	C-SR92/WT8 or C-SR105/WT8	C-DA83/VP7G	C-SR92/VP7G or C-SR105/VP7G
3-WAY/5"	C-DA83/WT8 or C-DA092/WT8	C-SR105/WT8 or C-SR125/WT8	C-DA83/VP7G or C-DA092/VP7G	C-SR105/VP7G or C-SR125/VP7G
3-WAY/6"	C-DA092/WT8 or C-DA105/WT8	C-SR125/WT8 or C-SR140/WT8	C-DA092/VP7G or C-DA105/VP7G	C-SR125/VP7G or C-SR140/VP7G
3-WAY/8"	C-DA105/WT8 or C-DA125/WT8	C-SR140/WT8	C-DA105/VP7G or C-DA125/VP7G	C-SR140/VP7G
3-WAY/10"	C-DA125/WT8 or C-DA140/WT8	C-SR140/WT8 or C-SR190/WT8	C-DA125/VP7G or C-DA140/VP7G	C-SR140/VP7G or C-SR190/VP7G
3-WAY/12"	C-DA140/WT8 or C-DA160/WT8	C-SR160/WT8 or C-SR210/WT8	C-DA140/VP7G or C-DA160/VP7G	C-SR160/VP7G or C-SR210/VP7G
3-WAY/14"	C-DA160/WT8 or C-DA190/WT8	C-SR190/WT8 or C-SR240/WT8	C-DA160/VP7G or C-DA190/VP7G	C-SR190/VP7G or C-SR240/VP7G
3-WAY/16"	C-DA190/WT8 or C-DA210/WT8	C-SR240/WT8 or C-SR270/WT8	C-DA190/VP7G or C-DA210/VP7G	C-SR240/VP7G or C-SR270/VP7G
3-WAY/18"	C-DA210/WT8 or C-DA240/WT8	C-SR270/WT8 or C-SR300/WT8	C-DA210/VP7G or C-DA240/VP7G	C-SR270/VP7G or C-SR300/VP7G
3-WAY/20"	C-DA240/WT8 or C-DA270/WT8	C-SR300/WT8	C-DA240/VP7G or C-DA270/VP7G	C-SR300/VP7G
3-WAY/24"	C-DA270/WT8	—	C-DA270/VP7G	—

Note: Actuators listed in order depending on valve body pressure rating.

Example: C-DA125/VP7G or C-DA140/VP7G
100 psi pressure body or 150/200 psi pressure body

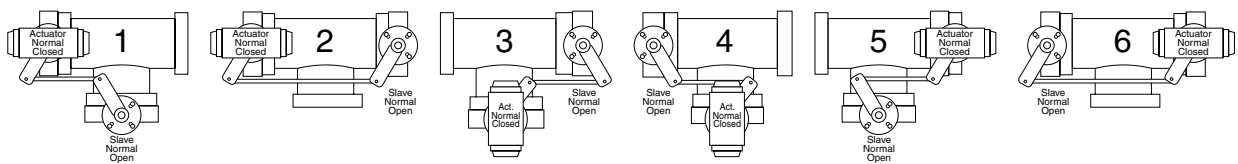


ORDERING INFORMATION

MODEL						
KB	Butterfly Valve					
PRESSURE						
1	100 psi (low pressure)					
2	150/200 psi (high pressure)					
TYPE						
-2	2-Way (No arrangement code needed)					
-3	3-Way (Arrangement code required)					
SIZE						
-02	2" (Cv = 64 @ 60°, Cv = 135 @ 90°)	-10	10" (Cv = 2047 @ 60°, Cv = 5340 @ 90°)			
-25	2.5" (Cv = 98 @ 60°, Cv = 220 @ 90°)	-12	12" (Cv = 3162 @ 60°, Cv = 8250 @ 90°)			
-03	3" (Cv = 116 @ 60°, Cv = 302 @ 90°)	-14	14" (Cv = 4568 @ 60°, Cv = 11917 @ 90°)			
-04	4" (Cv = 230 @ 60°, Cv = 600 @ 90°)	-16	16" (Cv = 6282 @ 60°, Cv = 16388 @ 90°)			
-05	5" (Cv = 392 @ 60°, Cv = 1022 @ 90°)	-18	18" (Cv = 8320 @ 60°, Cv = 21705 @ 90°)			
-06	6" (Cv = 605 @ 60°, Cv = 1579 @ 90°)	-20	20" (Cv = 10698 @ 60°, Cv = 27908 @ 90°)			
-08	8" (Cv = 1202 @ 60°, Cv = 3136 @ 90°)	-24	24" (Cv = 16528 @ 60°, Cv = 43116 @ 90°)			
ACTUATOR						
-2E2V	NEMA 4, 24V electric, 2-position	-LP2SC	Low pressure pneumatic, 2-position, spring return, NC			
-2EMV2	NEMA 4, 24V electric, modulating, 2-10 VDC input	-LP2SO	Low pressure pneumatic, 2-position, spring return, NO			
-2EMV4	NEMA 4, 24V electric, modulating, 4-20 mA input	-LPMSC	Low pressure pneumatic, 3-15 positioner, spring return, NC			
-1E2V	NEMA 4, 120V electric, 2-position	-LPMNO	Low pressure pneumatic, 3-15 positioner, spring return, NO			
-1EMV2	NEMA 4, 120V electric, modulating, 2-10 VDC input	-HP21	High pressure pneumatic, double acting, 120V solenoid			
-1EMV4	NEMA 4, 120V electric, modulating, 4-20 mA input	-HP22	High pressure pneumatic, double acting, 24V solenoid			
-2E2D	NEMA 2, 24V electric, 2-position*	-HPM	High pressure pneumatic, double acting, 3-15 positioner			
-2E2DSC	NEMA 2, 24V electric, 2-position, spring return, NC*	-HP2SC1	High pressure pneumatic, spring return, NC, 120V solenoid			
-2E2DSO	NEMA 2, 24V electric, 2-position, spring return, NO*	-HP2SO1	High pressure pneumatic, spring return, NO, 120V solenoid			
-2EMD	NEMA 2, 24V electric, modulating*	-HP2SC2	High pressure pneumatic, spring return, NC, 24V solenoid			
-2EMDSC	NEMA 2, 24V electric, modulating, spring return, NC*	-HP2SO2	High pressure pneumatic, spring return, NO, 24V solenoid			
-2EMDSO	NEMA 2, 24V electric, modulating, spring return, NO*	-HPMSC	High pressure pneumatic, spring return, NC, 3-15 positioner			
		-HPMSO	High pressure pneumatic, spring return, NO, 3-15 positioner			
3-Way ARRANGEMENT CODE (Required for 3-way valves) (See configuration arrangement diagram below)						
-01	Arrangement 1					
-02	Arrangement 2					
-03	Arrangement 3					
-04	Arrangement 4					
-05	Arrangement 5					
-06	Arrangement 6					
KB	1	-3	-02	-1EMV2	-01	Example: KB1-3-02-1EMV2-01

* Note: For 6" valves and smaller.

3-WAY ARRANGEMENT CONFIGURATION (1-6)



ACCESSORIES

HW-1000-X

Hand wheel for 1000-X actuators (WILL NOT WORK ON 1005-X MODELS)