



# SERIES 2120 - SERIES 1000/S-X

MODULATING INDUSTRIAL ELECTRIC ACTUATORS  
3-WAY 2" - 20" RESILIENT SEATED BUTTERFLY VALVES

## SERIES 2120 BUTTERFLY VALVE

**SERVICE:** Chilled/Hot Water - 50% Glycol  
**FLOW CHARACTERISTIC:** Modified EQ%  
**SIZES:** 2" - 20"  
**BODY:** Ductile Iron ASTM A536  
**BODY COATING:** Fusion Bonded Epoxy  
**BODY PRESSURE RATING:** ASME/ANSI Class 125  
**WORKING PRESSURE:** 250 PSI for -22°F to 100°F  
**END FITTING:** Lugged ANSI Class 125/150 Flanged  
**DISC:** 304SS  
**STEM:** 416SS  
**SEAT:** EPDM  
**O-RING:** EPDM  
**BUSHING:** PTFE  
**CLOSE OFF:** 200 PSI (2"-12") or 150 PSI (14"-20")  
**LEAKAGE:** Bubble Tight Shutoff  
**TEMPERATURE RANGE:** -22°F to 250°F  
**MAX FLUID VELOCITY:** 30 FPS

## SERIES 1000-X MODULATING ACTUATOR

**MOTOR:** 110/220VAC or 24VAC  
**TORQUE RANGE:** 443 - 22,127 in/lbs  
**HOUSING:** Die Cast Aluminum - NEMA 4  
**CONTROL SIGNAL:** 4-20mA or 2-10VDC  
**FEEDBACK:** 4-20mA  
**RESOLUTION:** 80 Steps (4-20mA) 200 Steps (2-10VDC)  
**PROTECTION:** Thermal Overload Protection  
**POSITION INDICATOR:** Mechanical Dome  
**CONDUIT ENTRIES:** 2 x 1/2" NPT  
**POWER GEARS:** Alloy Steel and Aluminum Bronze  
**BEARINGS:** Alloy Steel Sleeve and Ball Bearings  
**CERTIFICATIONS:** CE, NRTL, NEMA 4, CSA File 226201  
**INTERNAL HEATER:** Standard  
**MANUAL OVERRIDE POWER SWITCH:**  
 \*Not available on 1005/S-XL and all 24V models  
**MANUAL OVERRIDE:** Allen Handle Standard  
 \*Optional Handwheel not available on 1005/S-XL



## SERIES 1000-X MODULATING ACTUATOR SPECIFICATIONS

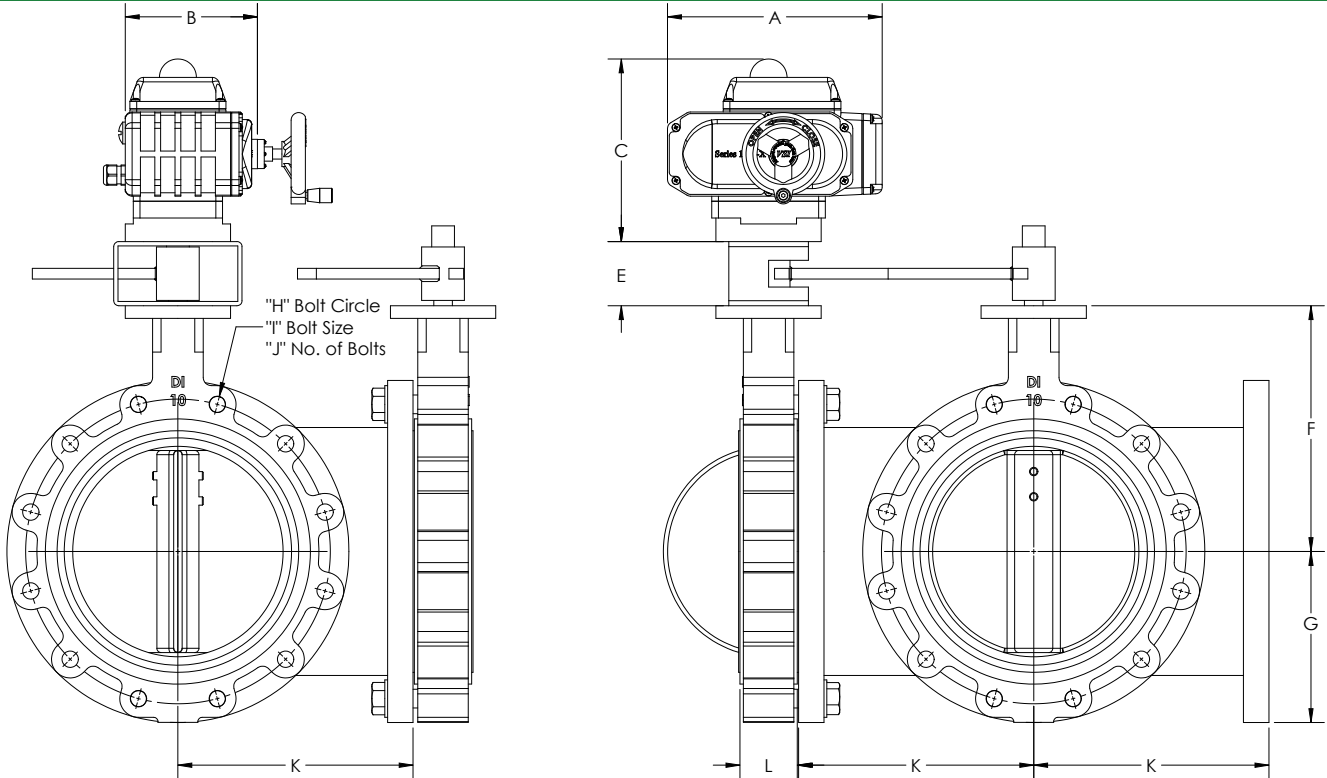
MODEL	1005/S-XL	1010/S-X	1020/S-X	1040/S-X	1060/S-X	1100/S-X	1160/S-X	1250/S-X
Output Torque (in-lb)	443	885	1770	3540	5310	8851	14616	22127
Output Torque (Nm)	50	100	200	400	600	1000	1600	2500
Duty Cycle	80%	80%	80%	80%	80%	70%	70%	70%
Travel Speed @ 60Hz (Sec)	20	30	30	30	45	30	48	75
Max Current (Amp @ 110/220VAC)	0.34/0.17	0.81/0.47	1.68/0.78	3.41/1.78	3.60/1.87	3.80/2.12	3.93/2.16	3.95/2.20
Run Current (AMP @ 110/220VAC)	0.24/0.16	0.57/0.35	0.65/0.37	1.12/0.57	1.18/0.60	1.93/0.94	1.75/0.96	1.75/0.98
Max Current (Amp @ 24VAC)	2.0	2.5	5.4	8.4	N/A	N/A	N/A	N/A
Run Current (Amp @ 24VAC)	1.5	2.0	4.9	7.9	N/A	N/A	N/A	N/A
Input Signal	Switchable 2-10VDC or 4-20mA on all models							
Output Signal	4-20mA							
Enclosure Rating	WATERTIGHT NEMA 4							



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## DIMENSIONAL INFORMATION



DIMENSIONS: MM (INCHES)

PSI	VALVE SIZE		ACTUATOR	A	B	C	E	F	G	H	J x I	K	L
	INCH	DN											
200 PSI	2	50	1005/S-XL	160 (6.30)	112 (4.41)	160.5 (6.32)	50.8 (2.00)	161 (6.34)	80 (3.15)	4.75	4 x 5/8 - 11	114.3 (4.50)	43 (1.69)
	2.5	65	1005/S-XL	160 (6.30)	112 (4.41)	160.5 (6.32)	50.8 (2.00)	175 (6.89)	89 (3.50)	5.5	4 x 5/8 - 11	127 (5.00)	46 (1.81)
	3	75	1005/S-XL	160 (6.30)	112 (4.41)	160.5 (6.32)	50.8 (2.00)	181 (7.13)	95 (3.74)	6	4 x 5/8 - 11	139.7 (5.50)	46 (1.81)
	4	100	1010/S-X	196 (7.72)	121 (4.76)	181 (7.13)	50.8 (2.00)	226 (8.90)	114 (4.49)	7.5	8 x 5/8 - 11	165.1 (6.50)	52 (2.05)
	5	125	1010/S-X	196 (7.72)	121 (4.76)	181 (7.13)	50.8 (2.00)	226 (8.90)	127 (5.00)	8.5	8 x 3/4 - 10	190.5 (7.50)	56 (2.20)
	6	150	1020/S-X	255 (10.04)	158 (6.22)	218 (8.58)	50.8 (2.00)	260 (10.24)	139 (5.47)	9.5	8 x 3/4 - 10	203.2 (8.00)	56 (2.20)
	8	200	1020/S-X	255 (10.04)	158 (6.22)	218 (8.58)	50.8 (2.00)	260 (10.24)	175 (6.89)	11.75	8 x 3/4 - 10	228.6 (9.00)	60 (2.36)
	10	250	1040/S-X	255 (10.04)	158 (6.22)	218 (8.58)	50.8 (2.00)	292 (11.50)	203 (7.99)	14.25	12 x 7/8 - 9	279.4 (11.00)	68 (2.68)
	12	300	1060/S-X	255 (10.04)	158 (6.22)	218 (8.58)	50.8 (2.00)	337 (13.27)	242 (9.53)	17	12 x 7/8 - 9	304.8 (12.00)	78 (3.07)
150 PSI	14	350	1060/S-X	255 (10.04)	158 (6.22)	218 (8.58)	50.8 (2.00)	368 (14.49)	267 (10.51)	18.75	12 x 1 - 8	355.6 (14.00)	78 (3.07)
	16	400	1100/S-X	310 (12.20)	217 (8.54)	244 (9.61)	76.2 (3.00)	400 (15.75)	297 (11.69)	21.25	16 x 1 - 8	381 (15.00)	102 (4.02)
	18	450	1160/S-X	310 (12.20)	217 (8.54)	244 (9.61)	76.2 (3.00)	422 (16.61)	318 (12.52)	22.75	16 x 1 1/8 - 7	419.1 (16.50)	114 (4.49)
	20	500	1250/S-X	310 (12.20)	217 (8.54)	244 (9.61)	76.2 (3.00)	480 (18.90)	348 (13.70)	25	20 x 1 1/8 - 7	457.2 (18.00)	127 (5.00)