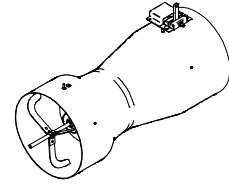


VV SPECIFICATIONS:	
ENVIRONMENTAL (OPERATING)	50°F to 122°F (10°C to 50°C), 5% to 95% R.H.(NON-CONDENSING)
ENVIRONMENTAL (STORAGE)	-22°F to 122°F (-30°C to 50°C), 0% to 95% R.H.(NON-CONDENSING)
VALVE BODY	14 Ga ALUMINUM
CONE	16 Ga ALUMINUM
SHAFT	TEFLON COATED 316 STAINLESS STEEL
SHAFT SUPPORTS	316 STAINLESS STEEL
SHAFT BEARINGS	WEAR-RESISTANT WITH TEFLON ADDITIVE

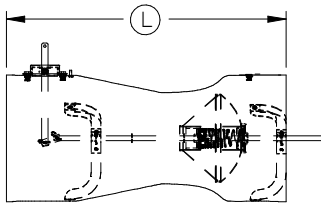


SINGLE VALVE			
UNIT SIZE	D	L	WEIGHT*
	in.(mm)	in.(mm)	lb.(kg)
108	8 (203)	23.50 (597)	19 (9)
110	10 (254)	21.75 (552)	20 (9)
112	12 (305)	27.00 (686)	22 (10)
114	14 (356)	30.00 (762)	24 (11)

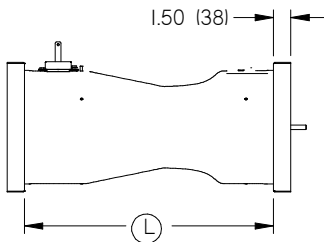
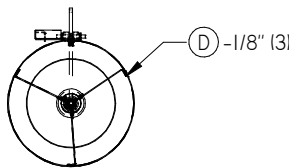
*WEIGHTS ARE ± 3lbs (1kg) DEPENDING ON OPTIONS

MULTIPLE VALVE				
UNIT SIZE	L	H	W	WEIGHT*
	in.(mm)	in.(mm)	in (mm)	lb (kg)
210	21.75 (552)	11.250 (286)	22.250 (565)	34 (15)
212	27.00 (686)	13.250 (337)	26.250 (667)	40 (18)
214	30.00 (762)	15.250 (387)	30.250 (768)	45 (20)
312	27.00 (686)	13.250 (337)	39.250 (997)	58 (26)
314	30.00 (762)	15.250 (387)	45.250 (1149)	65 (29)
412	27.00 (686)	13.250 (337)	52.500 (1334)	80(36)
414	30.00 (762)	15.250 (387)	60.500 (1537)	95 (43)

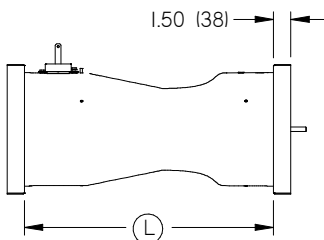
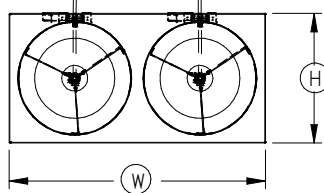
*WEIGHTS ARE ± 5lbs (2kg) DEPENDING ON OPTIONS



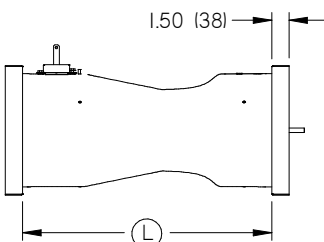
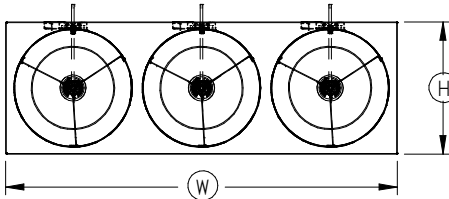
SINGLE VALVE



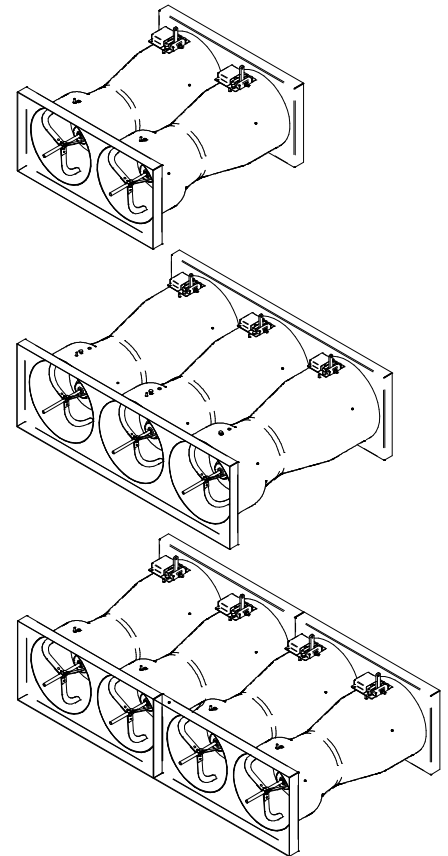
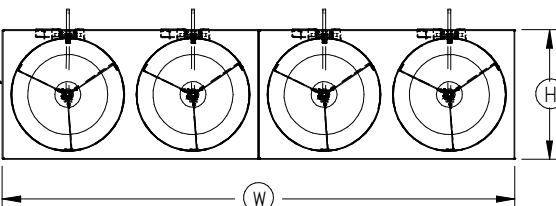
DUAL VALVE



TRIPLE VALVE



QUAD VALVE

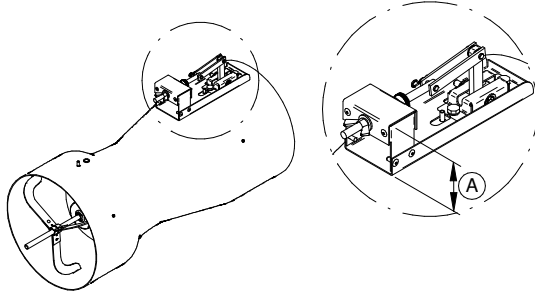


NOTE: SEE PROJECT SUBMITTAL SCHEDULE FOR SELECTED OPTIONS.

ALL METRIC DIMENSIONS () ARE SOFT CONVERTED. IMPERIAL DIMENSIONS ARE CONVERTED TO METRIC AND ROUNDED TO THE NEAREST MILLIMETER. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

CONTROL OPTIONS:

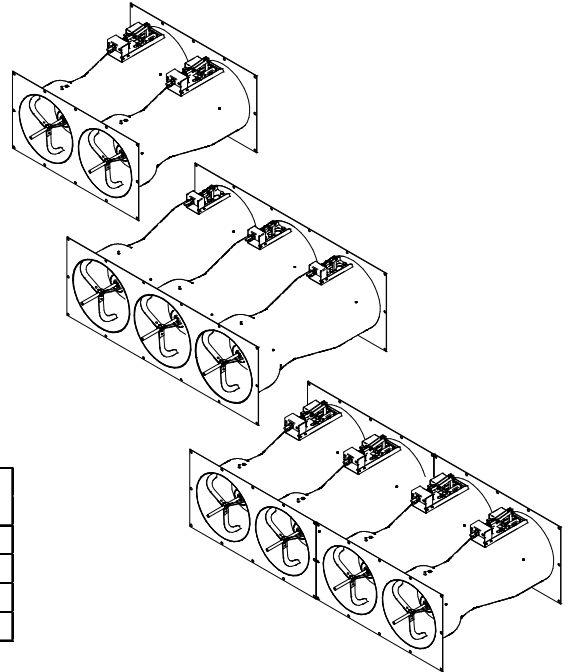
- CONSTANT VOLUME (CV), STANDARD VALVES ONLY



SINGLE VALVE

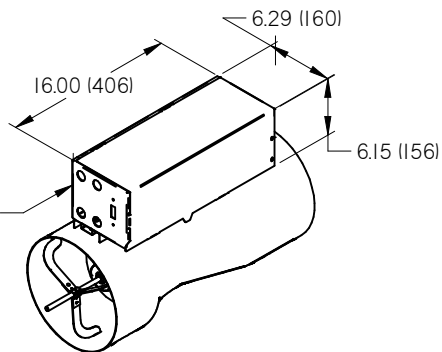
UNIT SIZE	A in (mm)
108	2.375 (60)
110, 210	2.375 (60)
112, 212, 312, 412	3.125 (79)
114, 214, 314, 414	3.125 (79)

**MULTIBODY VALVES
(FLANGE ENDS CONNECTION SHOWN)**



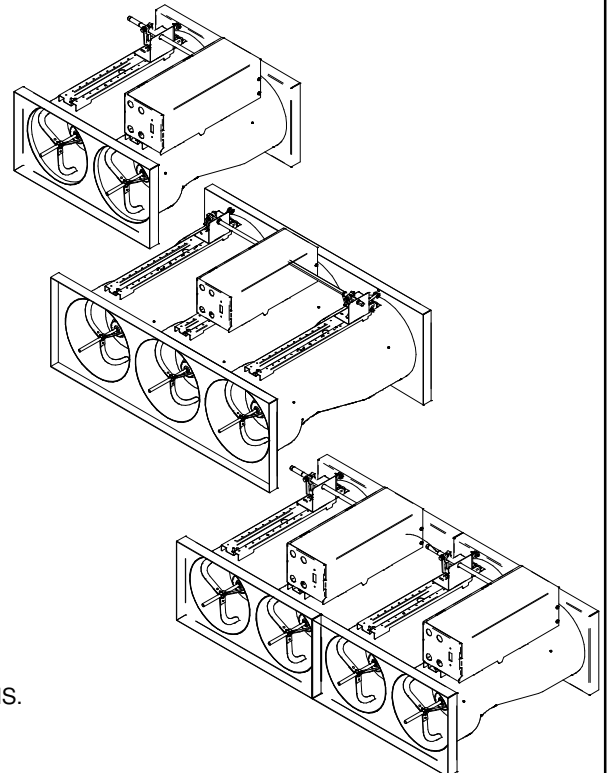
*QUADS CONSIST OF COMBINING 2 DUALS

- CONSTANT VOLUME (CV) WITH FHC, LMX OR VPS
- VARIABLE VOLUME (VAV & VDC) WITH PACE, FHC OR LMX
- VARIABLE VOLUME (VAV & 2P) WITH LMX ONLY



SINGLE VALVE

**MULTIBODY VALVES
(SLIP ENDS CONNECTION SHOWN)**



*QUADS CONSIST OF COMBINING 2 DUALS

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BODY TYPE AND PRESSURE RANGE OPTIONS:

STANDARD VENTURI VALVE (VV)

MEDIUM PRESSURE (M) -
0.6 to 3.0 in.w.c. (150-750 Pa),
MEASURED ACROSS VALVE

SINGLE VALVE			MULTIPLE VALVE		
UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW	UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW
	CFM (L/s)	CFM (L/s)		CFM (L/s)	CFM (L/s)
108	35 (17)	700 (330)	210	100 (48)	2000 (944)
110	50 (24)	1000 (472)	212	180 (84)	3000 (1416)
112	90 (42)	1500 (708)	214	400 (188)	5000 (2360)
114	200 (94)	2500 (1180)	312	270 (126)	4500 (2124)
			314	600 (282)	7500 (3540)
			412	360 (168)	6000 (2832)
			414	800 (376)	10000 (4720)

LOW PRESSURE (L) -
0.3 to 3.0 in.w.c (75-750 Pa),
MEASURED ACROSS VALVE

SINGLE VALVE			MULTIPLE VALVE		
UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW	UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW
	CFM (L/s)	CFM (L/s)		CFM (L/s)	CFM (L/s)
108	35 (17)	500 (236)	210	100 (48)	1100 (519)
110	50 (24)	550 (260)	212	180 (84)	2400 (1132)
112	90 (42)	1200 (566)	214	400 (188)	2800 (1320)
114	200 (94)	1400 (660)	312	270 (126)	3600 (1699)
			314	600 (282)	4200 (1980)
			412	360 (168)	4800 (2264)
			414	800 (376)	5600 (2640)

SHUTOFF VENTURI VALVE (SSO)

STANDARD LEAKAGE - METAL TO METAL SEAL
TO SHUT OFF AIRFLOW

MEDIUM PRESSURE (M) -
0.6 to 3.0 in.w.c (150-750 Pa),
MEASURED ACROSS VALVE

SINGLE VALVE			MULTIPLE VALVE		
UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW	UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW
	CFM (L/s)	CFM (L/s)		CFM (L/s)	CFM (L/s)
108	35 (17)	600 (283)	210	100 (48)	1700 (802)
110	50 (24)	850 (401)	212	180 (84)	2600 (1227)
112	90 (42)	1300 (614)	214	400 (188)	3000 (1415)
114	200 (94)	1500 (708)	312	270 (126)	3900 (1842)
			314	600 (282)	4500 (2167)
			412	360 (168)	5200 (2454)
			414	800 (376)	6000 (2830)

LOW PRESSURE (L) -
0.3 to 3.0 in.w.c. (75-750 Pa),
MEASURED ACROSS VALVE

SINGLE VALVE			MULTIPLE VALVE		
UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW	UNIT SIZE	MIN. AIRFLOW	MAX AIRFLOW
	CFM (L/s)	CFM (L/s)		CFM (L/s)	CFM (L/s)
108	35 (17)	400 (188)	210	100 (48)	1100 (519)
110	50 (24)	550 (260)	212	180 (84)	1800 (840)
112	90 (42)	900 (424)	312	270 (126)	2700 (1260)
			412	360 (168)	3600 (1680)

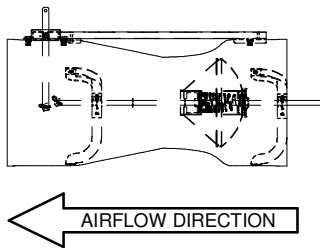
*SIZE 14, 214, 314 & 414 LOW PRESSURE VALVES ARE NOT AVAILABLE

NOTE: PLEASE REFER TO VV MANUAL FOR INSTALLATION INSTRUCTIONS.
SEE PROJECT SUBMITTAL SCHEDULE FOR SELECTED OPTIONS.

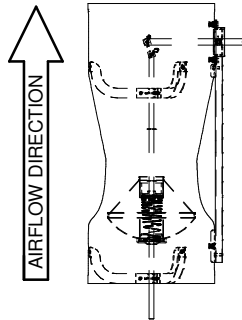
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AIRFLOW ORIENTATION OPTIONS

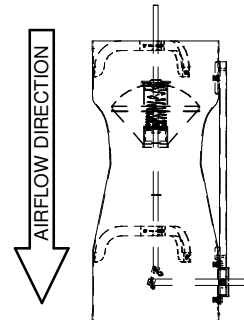
HORIZONTAL (H) VALVE



VERTICAL UP (VU) VALVE -
STANDARD VALVES ONLY



VERTICAL DOWN (VD) VALVE -
STANDARD VALVES ONLY



ACTUATOR FAIL SAFE OPTIONS

- FAIL IN PLACE (FLP)
- FAIL OPEN POSITION (FOP)
- FAIL CLOSED POSITION (FCP)

ACTUATOR SPEED OPTIONS

- STANDARD SPEED (SSA)
- HIGH SPEED (HSA)

INSULATION OPTION

- 3/4" EXTERNAL FIBER FREE FOAM INSULATION (IN)

COATING OPTIONS

- PHENOLIC COATING (P1) -
VALVE BODY & PLUNGER
- PHENOLIC COATING (P2) - VALVE BODY & INTERNALS,
ALL HARDWARE TEFLON COATED
STANDARD VALVES ONLY
- KYNAR COATING PVDF (K), - VALVE BODY & INTERNALS,
ALL HARDWARE TEFLON COATED
STANDARD VALVES ONLY

NOTE: PLEASE REFER TO VV MANUAL FOR INSTALLATION INSTRUCTIONS.
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CONNECTION OPTIONS

- SLIP CONNECTION (SL) - VALVE SLIPPED WITH 1" OVERLAP, ALL SIZES

SLIP END SPECIFICATIONS, SINGLE VALVE

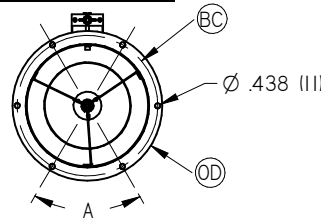
UNIT SIZE	DUCT	
	in. (mm)	
108	Ø 8" (203)	
110	Ø 10" (254)	
112	Ø 12" (305)	
114	Ø 14" (356)	

SLIP END SPECIFICATIONS, MULTIBODY VALVE

UNIT SIZE	DUCT	
	in. (mm)	
210	22"(559) x 11"(279)	
212	26"(660) x 13"(330)	
214	30"(762) x 15"(381)	
312	39"(991) x 13"(330)	
314	45"(1143) x 15"(381)	
412	52"(1320) x 13"(330)	
414	60"(1524) x 15"(381)	

- FLANGED CONNECTION (FL), ALL SIZES

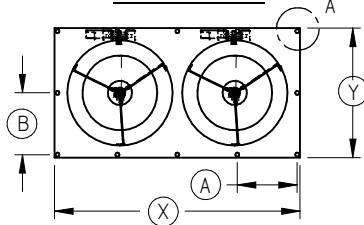
SINGLE VALVE



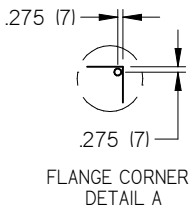
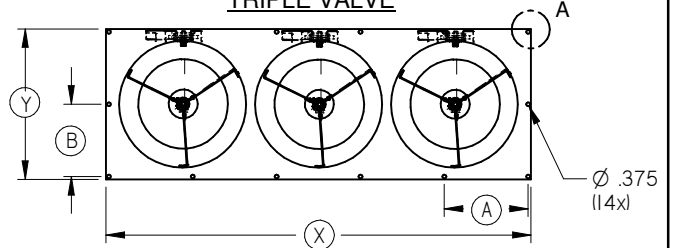
FLANGED END SPECIFICATIONS, SINGLE VALVE

UNIT SIZE	NUMBER OF BOLT HOLES	BC	OD	A
		in. (mm)	in. (mm)	Degrees
108	6	Ø 9.25" (235)	Ø 10" (254)	60
110	6	Ø 11.25" (286)	Ø 12" (305)	60
112	6	Ø 13.25" (337)	Ø 15" (381)	60
114	8	Ø 15.75" (400)	Ø 17" (432)	45

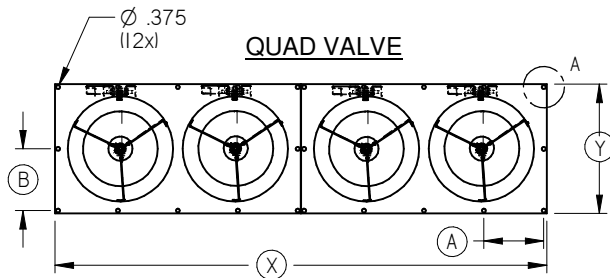
DUAL VALVE



TRIPLE VALVE



QUAD VALVE



FLANGED END SPECIFICATIONS, MULTIBODY VALVE

UNIT SIZE	X	Y	A	B
	in.(mm)	in.(mm)	in. (mm)	in. (mm)
210	23.250 (591)	12.250 (311)	5.675 (144)	5.850 (149)
212	27.250 (692)	14.250 (362)	6.675(170)	6.850 (174)
214	31.250 (794)	16.250 (413)	7.675 (195)	7.850 (199)
312	40.250 (1022)	14.250 (362)	7.940 (202)	6.850 (174)
314	46.250 (1175)	16.250 (413)	7.617 (193)	7.850 (199)
412	54.500 (1384)	14.250 (362)	6.675(170)	6.850 (174)
414	62.500 (1588)	16.250 (413)	7.675 (195)	7.850 (199)

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ACTUATOR REFERENCE CHART

UNIT SIZE	ACTUATOR CONTROL	ACTUATOR RESPONSE	ACTUATOR FAIL POSITION	ACTUATOR	QTY
108	VDC	SSA	FLP	019127-002	1
			FOP/FCP	019128-005	1
		HSA	FLP	019127-001	1
			FOP/FCP	019127-003	1
	2P	SSA	FLP	019128-001	1
			FOP/FCP	019128-004	1
		HSA	FLP	019128-003	1
			FOP/FCP	019127-007	1
110	VDC	SSA	FLP	019127-002	1
			FOP/FCP	019128-005	1
		HSA	FLP	019127-001	1
			FOP/FCP	019127-003	1
	2P	SSA	FLP	019128-001	1
			FOP/FCP	019128-004	1
		HSA	FLP	019128-003	1
			FOP/FCP	019127-007	1
112	VDC	SSA	FLP	019127-005	1
			FOP/FCP	019128-005	1
		HSA	FLP	019127-004	1
			FOP/FCP	019127-003	1
	2P	SSA	FLP	019128-002	1
			FOP/FCP	019128-004	1
		HSA	FLP	019128-009	1
			FOP/FCP	019127-007	1
114	VDC	SSA	FLP	019127-005	1
			FOP/FCP	019128-005	1
		HSA	FLP	019127-004	1
			FOP/FCP	019127-003	1
	2P	SSA	FLP	019128-002	1
			FOP/FCP	019128-004	1
		HSA	FLP	019128-009	1
			FOP/FCP	019127-007	1

UNIT SIZE	ACTUATOR CONTROL	ACTUATOR RESPONSE	ACTUATOR FAIL POSITION	ACTUATOR	QTY
210	VDC	SSA	FLP	019127-005	1
			FOP/FCP	019128-005	1
		HSA	FLP	019127-004	1
			FOP/FCP	019127-003	1
	2P	SSA	FLP	019128-002	1
			FOP/FCP	019128-004	1
		HSA	FLP	019128-009	1
			FOP/FCP	019127-007	1
212	VDC	SSA	FLP	019127-005	1
			FOP/FCP	019128-005	1
		HSA	FLP	019127-004	1
			FOP/FCP	019127-003	1
	2P	SSA	FLP	019128-002	1
			FOP/FCP	019128-004	1
		HSA	FLP	019128-009	1
			FOP/FCP	019127-007	1
214	VDC	SSA	FLP	019127-005	1
			FOP/FCP	019128-005	1
		HSA	FLP	019127-004	1
			FOP/FCP	019127-003	1
	2P	SSA	FLP	019128-002	1
			FOP/FCP	019128-004	1
		HSA	FLP	019128-009	1
			FOP/FCP	019127-007	1

UNIT SIZE	ACTUATOR CONTROL	ACTUATOR RESPONSE	ACTUATOR FAIL POSITION	ACTUATOR	QTY
312	VDC	SSA	FLP	019127-005	2
			FOP/FCP	019128-005	2
		HSA	FLP	019127-004	2
			FOP/FCP	019127-003	2
	2P	SSA	FLP	019128-002	1*
			FOP/FCP	019128-004	2
		HSA	FLP	019128-009	2
			FOP/FCP	019127-007	2
314	VDC	SSA	FLP	019127-005	2
			FOP/FCP	019128-005	2
		HSA	FLP	019127-004	2
			FOP/FCP	019127-003	2
	2P	SSA	FLP	019128-002	1*
			FOP/FCP	019128-004	2
		HSA	FLP	019128-009	2
			FOP/FCP	019127-007	2

UNIT SIZE	ACTUATOR CONTROL	ACTUATOR RESPONSE	ACTUATOR FAIL POSITION	ACTUATOR	QTY
412	VDC	SSA	FLP	019127-005	2
			FOP/FCP	019128-005	2
		HSA	FLP	019127-004	2
			FOP/FCP	019127-003	2
	2P	SSA	FLP	019128-002	2
			FOP/FCP	019128-004	2
		HSA	FLP	019128-009	2
			FOP/FCP	019127-007	2
414	VDC	SSA	FLP	019127-005	2
			FOP/FCP	019128-005	2
		HSA	FLP	019127-004	2
			FOP/FCP	019127-003	2
	2P	SSA	FLP	019128-002	2
			FOP/FCP	019128-004	2
		HSA	FLP	019128-009	2
			FOP/FCP	019127-007	2

*When ordered with LMX, actuator qty = 2

NOTE: SEE VALVE ACTUATOR PRODUCT SUBMITTAL FOR ACTUATOR SPECIFICATIONS.

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