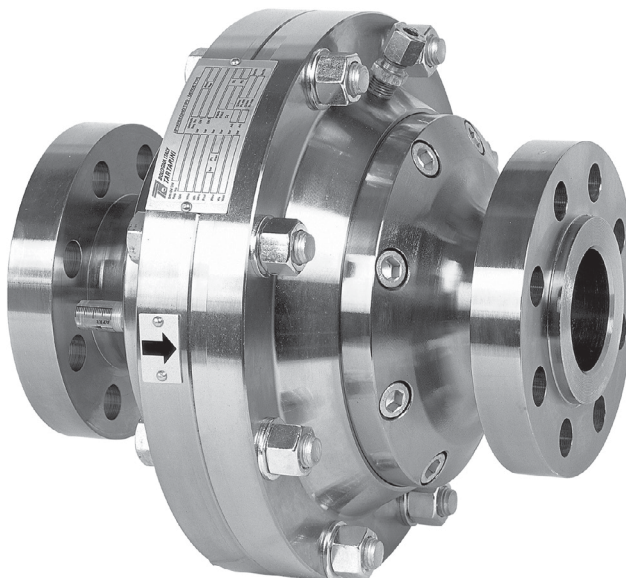


May 2020

FLA1 Series Pressure Reducing Regulator



E0820

Figure 1. FLA1 Series Pressure Regulator

Features

- **No Atmospheric Bleed** - Eliminates nuisance and wasteful bleed gas to atmosphere by utilizing a self-contained control system, which bleeds 100% of the gas to the downstream system.
- **Quiet Operation** - Multiple noise attenuation options available which reduce noise by up to 25 dBA at the source, eliminating the need for expensive path treatments such as insulation, buried valves and enclosures which only mask noise.
- **High Capacity** - The highly efficient axial flow design produces exceptionally high capacities.
- **Long Life in Severe Service Applications** - The metal plug design deflects particles and debris away from the soft-seat, which gives excellent particle erosion resistance.
- **Precise Pressure Control** - Provides accurate downstream pressure control regardless of inlet pressure variations or demand changes.
- **Easy In-Line Maintenance** - Outlet flange spacer allows trim parts such as the disk holder to be inspected, cleaned and replaced without removing the body from the pipeline.
- **Bubble-Tight Shutoff** - A knife-edged metal plug and soft seat provide bubble tight shutoff for use in applications where positive shutoff is required such as dead-end systems.
- **Full Pressure Rating** - The equal inlet and outlet pressure rating of 100 bar / 1480 psig, which allows easier selection and requires no special startup or shutdown procedures.
- **Versatility** - Ideal for a wide variety of applications such as natural gas transmission and distribution stations and power plant feeds.
- **Travel Indicator** - Simplifies in-service inspection and system troubleshooting.
- **High Turn Down Capability** - The oversized diaphragm and unique piloting system allow for high turn down, providing superior pressure control in systems with large variations in downstream flow demand.
- **Disk Design** - The FLA1 Series offers disks for the main body made from Nitrile (NBR), Fluorocarbon (FKM), and Polyurethane (PU). Polyurethane (PU) provides better abrasion resistance properties and a high durometer rating to extend the working life of the disk in difficult applications such as high pressure drop and low flow.

FLA1 Series

Specifications

The Specifications section gives some general specifications for the FLA1 Series regulators. The nameplates give detailed information for a particular regulator as built in the factory.

Body Sizes and End Connection Styles

Type FLA1: DN 25, 40, 50, 80, 100, 150, 200 and 250 / NPS 1, 1-1/2, 2, 3, 4, 6, 8 and 10 CL300 and CL600 RF Flanged

Type FLA1 with Type SRS/SRSII Silencer (Inlet x Outlet): DN 25 x 100, 40 x 150, 50 x 150, 80 x 250, 100 x 250, 150 x 300 and 200 x 400 / NPS 1 x 4, 1-1/2 x 6, 2 x 6, 3 x 10, 4 x 10, 6 x 12 and 8 x 16 CL300 and CL600 RF Flanged

Maximum Inlet and Outlet (Casing) Pressure⁽¹⁾

CL300: 50 bar / 740 psig

CL600: 100 bar / 1450 psig

Minimum Operating Differential Pressure⁽²⁾

0.50 bar d / 7.3 psid

Outlet Pressure Ranges

See Table 2

Accuracy Class

AC: up to $\pm 1\%$

Lock-Up Pressure Class

SG: up to +5%

Class of Lock-Up Pressure Zone

SZ: up to 5%

Flow Coefficients

See Table 4

Pressure Registration

External

Construction Materials

Covers and Flanges: Steel, ASTM A105

Sleeve: Steel

Diaphragm Plates: Steel

Diaphragm: Nitrile (NBR) with PVC coating

Seal: Nitrile (NBR) or Fluorocarbon (FKM)

Seal Pad: Nitrile (NBR), Fluorocarbon (FKM) or Polyurethane (PU) Disk

Minimum/Maximum Allowable Temperature (TS)⁽¹⁾⁽²⁾

Class 1: -10 to 60°C / 14 to 140°F

Working Temperature Capabilities⁽¹⁾

Standard Version, Nitrile (NBR) or

Fluorocarbon (FKM): -10 to 60°C / 14 to 140°F

Options

Spacer

Travel Transducer

Proximity or Micro Switch

Booster Valve

Pneumatic or Electric Remote Control Drive Unit

Pilot

PSA Series

PRX Series⁽³⁾

Pilot Connection

1/4 NPT

Approximate Shipping Weights

See Table 5

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

2. When using a Type SA/2 pilot supply filter regulator, the differential pressure across the regulator must be at least 3.10 bar d / 45 psid for optimum regulator performance.

3. Use Type SA/2 Pilot Supply Filter Regulator when using PRX Series Pilots.

Table 1. Configurations Abbreviations

CONFIGURATIONS	CL300 RF / CL600 RF				
	Standard	Silencer			
		Type SR	Type SRII ⁽¹⁾	Type SRS ⁽¹⁾	Type SRSII ⁽¹⁾
Regulator	Type FLA1	Type FLA1-SR	Type FLA1-SRII	Type FLA1-SRS	Type FLA1-SRSII

1. Types SRII and SRSII silencers are not available for DN 40 / NPS 1-1/2 size. Size DN 200 / NPS 8 is available only with Type SRII or SRSII silencers, size DN 250 / NPS 10 is available only with Type SRII silencer. Type SRS/SRSII silenced solutions have a widened outlet flange.

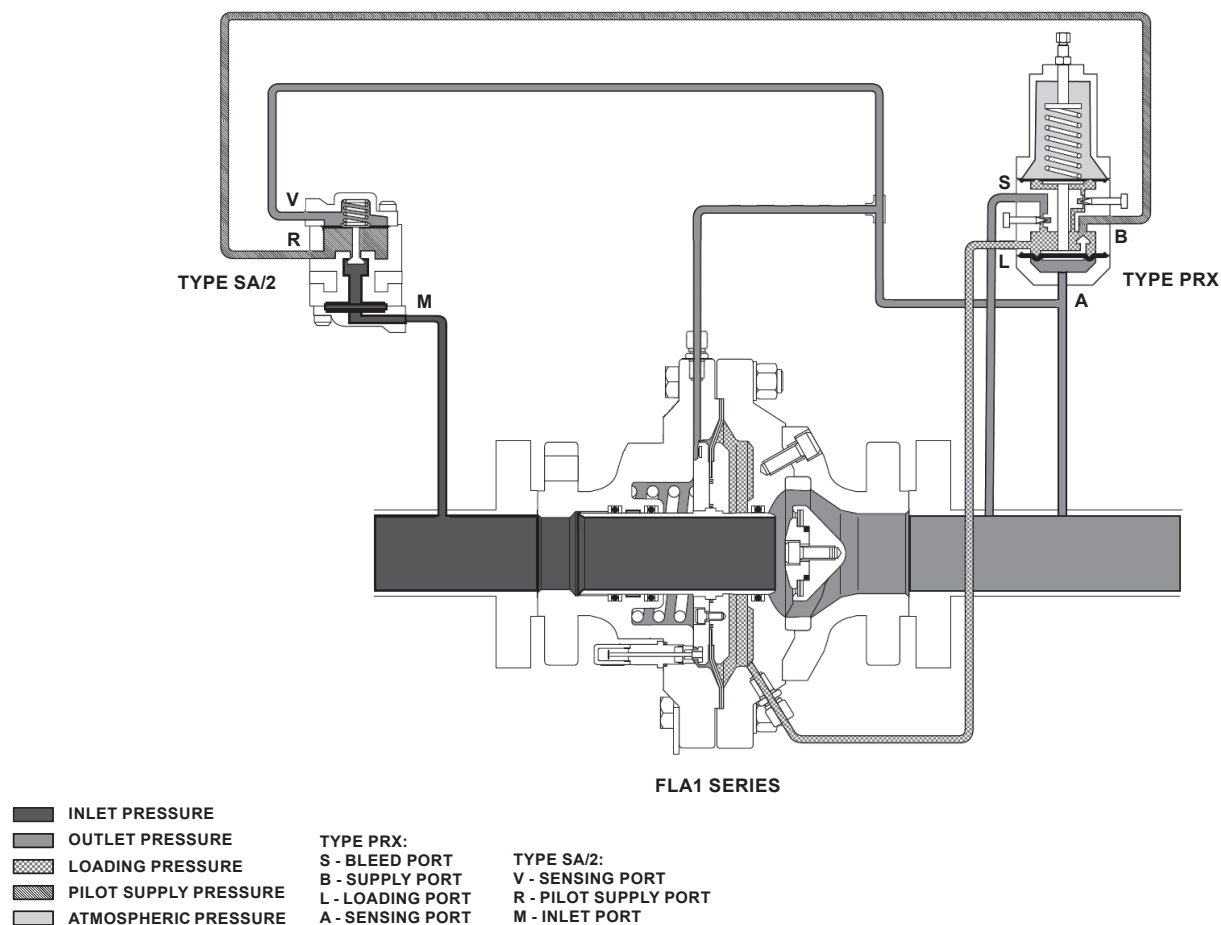


Figure 2. FLA1 Series Operational Schematic

Introduction

The FLA1 Series is an accurate, pilot-operated regulator designed for high-pressure transmission/city gate, large capacity distribution systems and power plant feeds. FLA1 Series provides smooth and quiet operation, tight shutoff and long service life. FLA1 Series is designed to be used with fuel gases of 1st and 2nd family according to EN 437, and with other non aggressive and non fuel gases. For any other gases, other than natural gas, please contact your local sales office.

The regulator is comprised of a main valve with a built-in actuator and a PSA or PRX Series pressure reducing pilot and a Type SA/2 pilot supply pressure regulator when PRX Series pilot is used.

The regulator's superior performance is due to the amplifying effect of the pilot and two-path control system. Changes in outlet pressure act quickly on the actuator diaphragm to provide fast response to system change. Then the pilot amplifies any small system changes to position the main valve for precise pressure control.

Pilot Descriptions

FLA1 Series pressure reducing regulator includes PRX or PSA Series pilot mounted on the main valve.

Type PSA/79: Outlet pressure range of 0.50 to 40.0 bar / 7 to 580 psig. Single diaphragm pilot for pilot controlled gas pressure regulators. It can be used as the pilot on single stage pressure reducing regulator or as pilot for active or monitor in a wide-open monitor system.

Type PSA/79-AP: Outlet pressure range of 40.0 to 65.0 bar / 580 to 942.75 psig. Single diaphragm pilot for pilot controlled gas pressure regulators. It can be used as the pilot on single stage pressure reducing regulator or as pilot for active or monitor in a wide-open monitor system.

Type PSOA/79: Single diaphragm pilot for setting of first pressure reducing step of pilot controlled gas pressure regulator for monitor in a working monitor system.

FLA1 Series

Table 2. Pilot Types and Outlet Pressure Ranges

PILOT FOR REGULATOR OR MONITOR	PILOT FOR WORKING MONITOR APPLICATION		OUTLET PRESSURE RANGE		AC (ACCURACY CLASS)	SPRING COLOR	SPRING PART NUMBER
	Regulator	Monitor	bar	psig			
Type PSA/79 ⁽²⁾	Type PSOA/79	Type REOA/79	0.5 to 0.75	7.25 to 10.87	2.5%	White/Red	M0022281X12
			0.75 to 1	10.87 to 14.5		Black/White	M0023311X12
			1 to 1.5	14.5 to 21.75		Black/Red	M0023361X12
			1.5 to 2.5	21.75 to 36.25		Black/Blue	M0023371X12
			2.5 to 5	36.25 to 72.5		Aluminum	M0023381X12
			5 to 8	72.5 to 116		Yellow/Black	M0076930X12
			8 to 10	116 to 145	1%	Yellow/Red	M0112710X12
			10 to 15	145 to 217.5		Yellow	M0200930X12
			15 to 20	217.5 to 290		Blue	M0200940X12
			20 to 25	290 to 362.6		Red/White	M0200950X12
			25 to 30	362.6 to 435		Red	M0200870X12
			30 to 40	435 to 580		Red/Black	M0200960X12
Type PSA/79-AP	Type PSOA/79-AP	Type REOA/79-AP	40 to 48	580 to 696		Red	M0200870X12
			48 to 65	696 to 942.75		Red/Black	M0200960X12
Type PSA/80 ⁽²⁾	Type PSOA/80	Type REOA/80	1.5 to 2.5	21.75 to 36.25	2.5%	Black/Blue	M0023371X12
			2.5 to 5	36.25 to 72.5		Aluminum	M0023381X12
			5 to 8	72.5 to 116		Yellow/Black	M0076930X12
			8 to 10	116 to 145	1%	Yellow/Red	M0112710X12
			10 to 15	145 to 217.5		Yellow	M0200930X12
			15 to 20	217.5 to 290		Blue	M0200940X12
			20 to 25	290 to 362.6		Red/White	M0200950X12
			25 to 30	362.6 to 435		Red	M0200870X12
			30 to 40	435 to 580		Red/Black	M0200960X12
Type PSA/80-AP	Type PSOA/80-AP	Type PSOA/80-AP	40 to 48	580 to 696		Red	M0200870X12
			48 to 65	696 to 942.75		Red/Black	M0200960X12
Type PRX/120 ⁽³⁾	Type PRX/120	Type PRX/125	1 to 1.8	14.5 to 26	2.5%	Yellow	M0255240X12
			1.6 to 3	23 to 44		Green	M0255230X12
			2.8 to 5.5	41 to 80		Blue	M0255180X12
			5 to 8.5	73 to 123		Black	M0255220X12
			8 to 14.5	116 to 210	1%	Silver	M0255210X12
			14 to 23	203 to 334		Gold	M0255200X12
			22 to 30	319 to 435		Aluminum	M0255860X12
			29 to 42	421 to 609		Red	M0255190X12
Type PRX-AP/120 ⁽³⁾	Type PRX-AP/120	Type PRX-AP/125	30 to 80	435 to 1160		Clear	M0273790X12
Type PRX/131 ⁽⁴⁾	----	----	0.5 to 1.1	7.3 to 16	2.5%	White	M0255250X12
			1 to 1.8	14.5 to 26		Yellow	M0255240X12
			1.6 to 3	23 to 44		Green	M0255230X12
			2.8 to 5.5	41 to 80		Blue	M0255180X12
			5 to 8.5	73 to 123		Black	M0255220X12
			8 to 14.5	116 to 210	1%	Silver	M0255210X12
			14 to 23	203 to 334		Gold	M0255200X12
			22 to 30	319 to 435		Aluminum	M0255860X12
Type PRX-AP/131 ⁽⁴⁾	----	----	29 to 42	421 to 609		Red	M0255190X12
			30 to 80	435 to 1160		Clear	M0273790X12

1. FLA1 Series regulators are equipped with the PSA or PRX Series pilots.
2. All PSA Series pilots are supplied with a 5-micron filter and built-in pressure stabilizer, except for Types PSOA/79 and PSOA/80.
3. Type SA/2 filter/pilot supply pressure regulator should be used with PRX Series pilots.
4. Type PRX/131 Series is used as booster valve.

Table 3. Pressure Accessories

TYPE	ALLOWABLE PRESSURE		SUPPLIER PRESSURE FILTERING DEGREE (μ) SET RANGE W _d		BODY AND COVER MATERIAL
	bar	psig	bar	psig	
Pilot Supply Pressure Regulator Type SA/2 ⁽¹⁾	100	1450	3.0 plus Downstream Pressure	44 plus Downstream Pressure	Steel
Filter Type FU ⁽²⁾			5μ		
Booster Valve Type V/31-1	19.0	276	0.4 to 8	0.03 to 0.55	Aluminum
Booster Valve Type PRX/131	100	1450	0.50 to 9.0	7 to 130	Steel

1. Equipped with 5μ filter and is suitable for heating.

2. When the pressure difference between upstream and downstream is below 10.0 bar / 145 psig, Type SA/2 can be used with the 5μ Type FU filter.

Type REOA/79: Single diaphragm pilot for setting of downstream pressure reducing step of pilot controlled gas pressure regulator for monitor in a working monitor system.

Type PSA/80: Outlet pressure range of 1.5 to 40.0 bar / 22 to 580 psig. Double diaphragm pilot for pilot controlled gas pressure regulators. It can be used as the pilot on single stage pressure reducing regulator or as pilot for active or monitor in a wide-open monitor system.

Type PSA/80-AP: Outlet pressure range of 40.0 to 65.0 bar / 580 to 942.75 psig. Single diaphragm pilot for pilot controlled gas pressure regulators. It can be used as the pilot on single stage pressure reducing regulator or as pilot for active or monitor in a wide-open monitor system.

Type PSOA/80: Double diaphragm pilot for setting of first pressure reducing step of pilot controlled gas pressure regulator for monitor in a working monitor system.

Type REOA/80: Double diaphragm pilot for setting of downstream pressure reducing step of pilot controlled gas pressure regulator for monitor in a working monitor system.

Type PRX/120: Outlet pressure range of 1.00 to 40.0 bar / 15 to 580 psig. Type PRX/120 can be used as the pilot on single stage pressure-reducing regulators, as the monitor or working pilot in wide-open monitor systems or as the working pilots in working monitor systems.

Type PRX-AP/120: Outlet pressure range of 30.0 to 80.0 bar / 435 to 1160 psig. The Type PRX-AP/120 can be used as the pilot on single stage pressure reducing regulators, as the monitor or working pilot in wide-open monitor systems or as the working pilots in working monitor systems.

Type PRX/125: This pilot is identical to the Type PRX/120 except that the restriction screw is removed. Type PRX/125 can only be used as the monitor override pilot on working monitor applications.

Type PRX-AP/125: Identical to the Type PRX-AP/120 except that the restriction screw is removed. Type PRX-AP/125 can only be used as the monitor override pilot on working monitor applications.

Booster Valve

The booster valve is fitted on the monitor-regulator system which branches off from the monitor drive pressure circuit, so that the monitor operates more quickly.

Type PRX/131: Outlet pressure range of 0.5 to 40 bar / 7.25 to 580 psig. The Type PRX/131 is used as a booster or quick dump pilot on a single stage pressure reducing regulator or with the monitor pilot on the monitor regulator in wide open monitor systems.

Type PRX-AP/131: Outlet pressure range of 30 to 80 bar / 435 to 1160 psig. This pilot is used as a booster or quick dump pilot on a single stage pressure reducing regulator or with a monitor pilot on the monitor regulator in wide-open monitor systems.

Pilot Supply Filter Regulator

The PRX Series pilots are usually used together with the Type SA/2 pilot supply filter regulator. The Type SA/2 acts as a pressure stabilizer that provides a constant supply pressure to the PRX Series pilots: that is approximately 3.1 bar / 45 psi over set pressure. Type SA/2 has an integral 5 micron Type FU filter. This integral filter acts only as an emergency filter; gas must be cleaned upstream of the regulator.

Noise Abatement

At elevated pressure drops and flow rates, regulators with standard trims can produce unacceptable noise levels. Several options are available to reduce the noise generated.

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Type SR: Type SR (Figure 6) multi-path noise abatement device is incorporated into the regulator on the seat area. It consists of plated Stainless steel wires containing no sound deadening materials.

Depending on flows and pressure drop, the silencer can reduce noise levels as much as 20 dB (A) with an approximate 3% Cg reduction. Type SR is available only in NPS 1 through 6 / DN 25 through 150 and is not recommended for high velocity applications.

Type SRII: The Type SRII (Figure 6) noise abatement device is the next generation of Type SR and is used in case of extreme service conditions (dirty gas, high pressure drops and high gas velocities). Noise characteristics are very similar to the standard Type SR.

Type SRS: A second noise reduction device may be added to the FLA1 Series regulators. Type SRS (Figure 6) consists of a Type SR or SRII plus a widened outlet flange in which a second silencer is fitted. Noise reduction is based on the principle of stream splitting and gradual expansion in several stages. By using a wider outlet flange the silencer can be mounted integral to the regulator body which allows installation of the regulator directly into the downstream piping without an expansion joint. Noise reduction up to 25 dB (A) is reached without limiting the velocity in the outlet flange with a Cg reduction of about 15%. Type SR/SRS Silencer is available only in NPS 1 through 6 / DN 25 through 150.

Principle of Operation

The pilot-operated FLA1 Series (Figure 2) uses inlet pressure, which is reduced through pilot operation to load the actuator. Outlet pressure is supplied to the regulator actuator piston. This pressure assists the main spring that tends to close the regulator, and opposes loading pressure in the actuator. Outlet pressure also opposes the pilot control spring.

When outlet pressure drops below the setting of the pilot control spring, pilot control spring force on the pilot diaphragm opens the pilot valve plug, providing additional loading pressure to the actuator piston. This piston loading pressure opens the main valve plug, supplying the required flow to the downstream system.

Any excess loading pressure on the actuator piston escapes downstream through the exhaust restriction in the pilot.

When the gas demand in the downstream system has been satisfied, the outlet pressure increases. The increased pressure is transmitted through the downstream control line and acts on the pilot diaphragm. This pressure exceeds the pilot spring setting and moves the diaphragm, closing the orifice. The loading pressure acting on the main piston bleeds to the downstream system through the exhaust restriction in the pilot.

Monitoring Systems

Monitoring regulation is overpressure protection by containment; therefore, there is no relief valve to vent to the atmosphere. When the working regulator fails to control the pressure, a monitor regulator installed in series, sensing the downstream pressure, goes into operation to maintain the downstream pressure at a slightly higher than normal set pressure. During an overpressure situation, monitoring keeps the customer on line. Also, testing is relatively easy. To perform a periodic test on a monitoring regulator, increase the outlet set pressure of the working regulator and watch the outlet pressure gauge to determine if the monitoring regulator takes over at the appropriate outlet pressure.

Wide-Open Monitoring System (Figure 3)

The decision to use either an upstream or downstream monitoring system is largely a matter of personal preference or company policy.

Working Monitoring System (Figure 3)

In a working monitoring system, the upstream regulator requires two pilots and it is always the monitoring regulator. The additional pilot permits the monitoring regulator to act as a series regulator to control an intermediate pressure during normal operation. In this way, both units are always operating and can be easily checked for proper operation. See Installation section. In normal operation, the working regulator controls the outlet pressure of the system. The monitoring regulator's working pilot controls the intermediate pressure and the monitoring pilot senses the system's outlet pressure. If the working regulator fails, the monitoring pilot will sense the increase in outlet pressure and take control.

Table 4. Flow and Sizing Coefficients

BODY SIZE, DN / NPS	LINE SIZE EQUALS BODY SIZE								2:1 LINE SIZE TO BODY SIZE RATIO							
	Regulating		Wide-open		C _i	IEC Sizing Coefficients			Regulating		Wide-open		C _i	IEC Sizing Coefficients		
	C _g	C _v	C _g	C _v		X _r	F _D	F _L	C _g	C _v	C _g	C _v		X _r	F _D	F _L
Type FLA1																
25 / 1	590	18.4	610	18.9	32.1	0.65	0.73	0.89	550	16.4	570	16.9	33.5	0.71	0.69	0.89
50 / 2	2300	70.6	2400	72.7	32.6	0.67	0.69	0.89	2200	67.7	2300	69.7	32.5	0.67	0.68	0.89
80 / 3	5200	161.9	5400	166.8	32.1	0.69	0.70	0.89	4900	161.4	5000	166.3	30.4	0.58	0.70	0.89
100 / 4	8000	249.3	8200	256.8	32.1	0.65	0.65	0.89	7900	244.9	8100	252.2	32.3	0.66	0.64	0.89
150 / 6	20,300	735.8	20,900	757.8	27.6	0.48	0.71	0.89	18,400	666.7	19,000	686.7	27.6	0.48	0.67	0.89
200 / 8	30,900	1080.4	32,800	1112.8	28.6	0.52	0.66	0.89	30,600	1069.9	31,500	1102.0	28.6	0.52	0.65	0.89
250 / 10	52,100	1615.4	53,600	1663.9	32.3	0.66	0.69	0.89	51,500	1599.7	53,100	1647.7	32.2	0.66	0.69	0.89
Type FLA1-SR																
25 / 1	580	17.4	600	17.9	33.4	0.70	0.89	0.89	530	15.5	550	15.9	34.3	0.74	0.84	0.89
50 / 2	2200	65.3	2300	67.2	33.7	0.72	0.84	0.89	2100	60.7	2200	62.6	34.6	0.76	0.81	0.89
80 / 3	5000	151.7	5200	156.3	33.0	0.69	0.85	0.89	4700	149.4	4800	153.9	31.5	0.63	0.84	0.89
100 / 4	7400	226.5	7600	233.3	32.7	0.67	0.78	0.89	7300	226.0	7500	232.8	32.3	0.66	0.77	0.89
150 / 6	17,800	597.5	18,300	615.4	29.8	0.56	0.80	0.89	16,900	567.1	17,400	584.1	29.8	0.56	0.78	0.89
Type FLA1-SR/SRS																
25 / 1	570	15.6	590	16.0	36.6	0.85	0.84	0.89	500	13.5	520	13.9	37.0	0.87	0.78	0.89
50 / 2	1900	48.9	2000	50.4	38.9	0.95	0.73	0.89	1850	47.2	1900	48.6	39.2	0.97	0.71	0.89
80 / 3	4000	111.7	4100	115.1	35.8	0.81	0.73	0.89	3800	104.8	3900	107.9	36.3	0.83	0.70	0.89
100 / 4	6200	164.7	6400	169.6	37.7	0.90	0.66	0.89	6100	170.6	6300	175.7	35.8	0.81	0.67	0.89
150 / 6 ⁽¹⁾	13,490	397.8	13,890	409.7	33.9	0.73	0.68	0.89	13,030	380.5	13,420	391.9	34.2	0.74	0.67	0.89
Type FLA1-SRII																
25 / 1	540	16.0	560	16.5	33.5	0.82	0.05	0.89	490	14.2	500	14.6	34.5	0.73	0.04	0.89
50 / 2	2000	59.8	2100	61.6	33.4	0.81	0.03	0.89	1900	55.6	2000	57.3	34.2	0.75	0.03	0.89
80 / 3	4400	138.0	4500	142.1	30.0	0.55	0.03	0.89	4200	143.7	4300	148.0	29.3	0.54	0.03	0.89
100 / 4	6500	196.5	6700	202.4	32.9	0.69	0.02	0.89	6400	203.9	6600	210.0	31.5	0.63	0.02	0.89
150 / 6	16,200	480.7	16,700	495.1	31.7	0.65	0.02	0.89	15,400	500.7	15,800	515.7	30.7	0.60	0.02	0.89
200 / 8	25,335	784.0	26,100	807.5	32.3	0.66	0.01	0.89	24,200	749.1	24,900	771.6	32.3	0.66	0.01	0.89
250 / 10	42,500	1197.9	43,800	1233.8	35.5	0.8	0.01	0.89	40,600	1144.6	41,800	1178.9	35.5	0.8	0.01	0.89
Type FLA1-SRII/SRS																
25 / 1	530	14.3	550	14.7	37.1	0.99	0.04	0.89	520	15.2	540	15.7	33.9	0.89	0.04	0.89
50 / 2	1700	44.8	1800	46.1	38.0	0.98	0.03	0.89	1700	43.2	1800	44.5	39.4	0.96	0.03	0.89
80 / 3	3500	101.6	3600	104.6	34.4	0.65	0.02	0.89	3400	100.8	3500	103.8	33.7	0.71	0.02	0.89
100 / 4	5400	142.9	5600	147.2	37.8	0.93	0.02	0.89	5300	153.9	5500	158.5	34.4	0.77	0.02	0.89
150 / 6 ⁽¹⁾	12,830	374.9	13,220	386.1	34.2	0.74	0.01	0.89	12,310	355.7	12,680	366.4	34.6	0.76	0.02	0.89
200 / 8	20,100	515.0	20,700	530.5	39.0	0.96	0.01	0.89	19,200	492.1	19,800	506.9	39.0	0.66	0.01	0.89
1. Sizing values reflect current 6-bolt Type SRS design. See previous document revisions for information on obsolete 1-bolt Type SRS design.																

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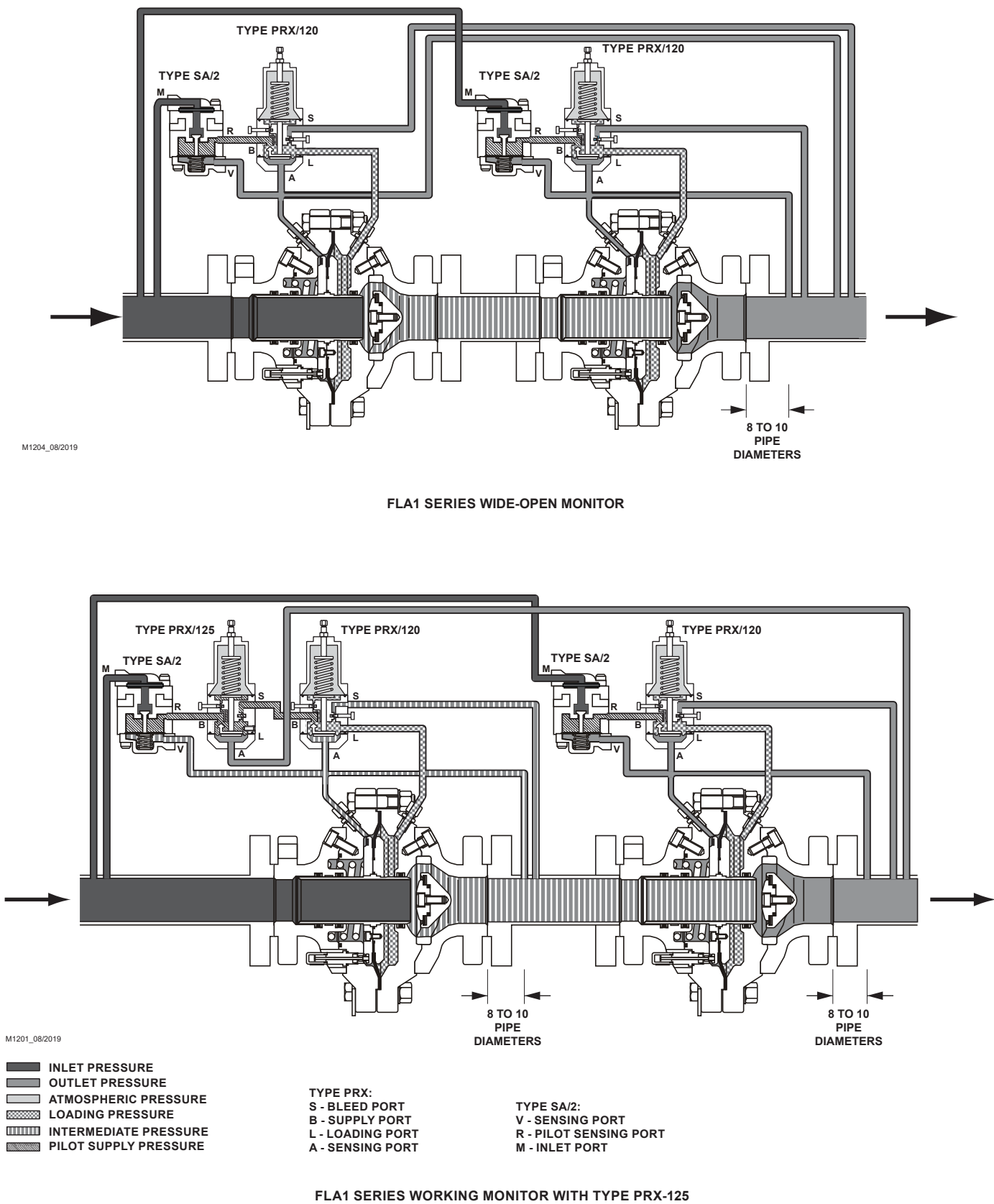
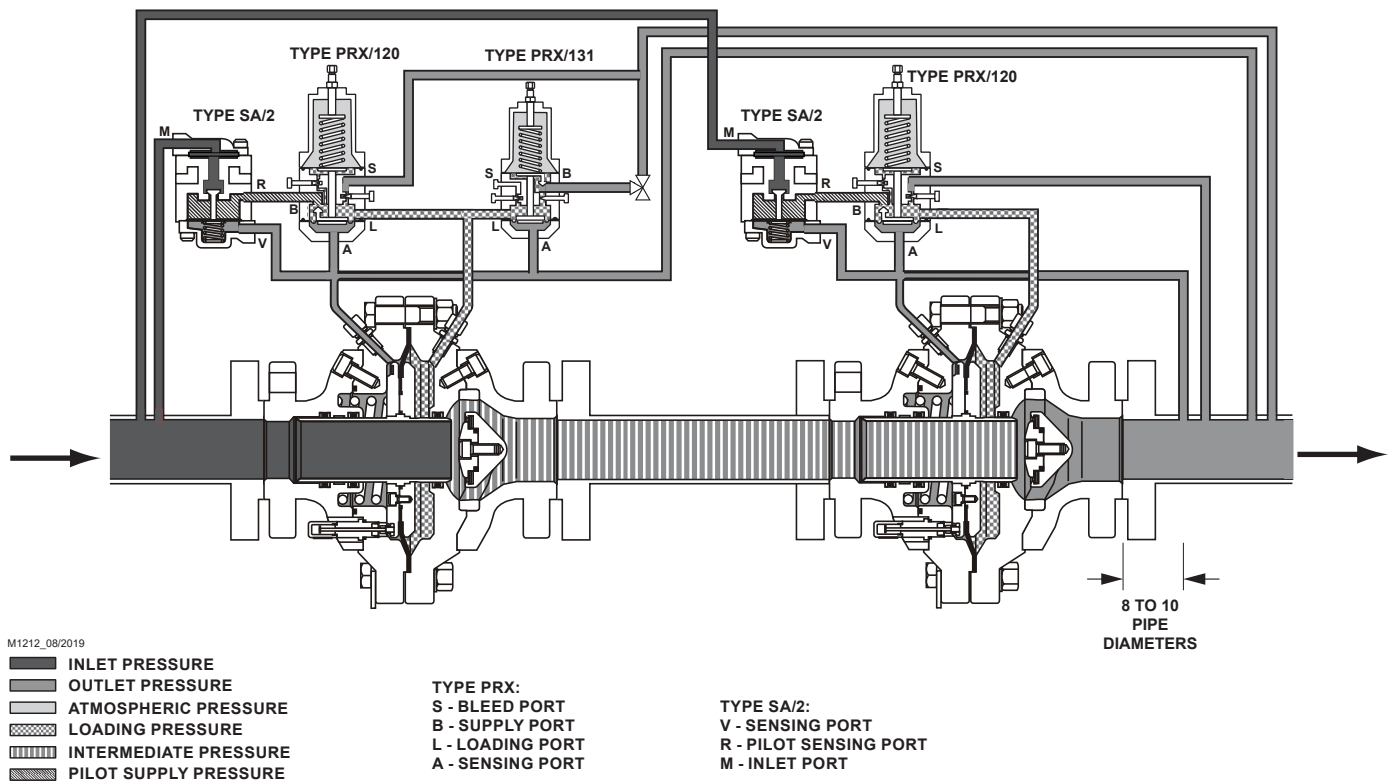


Figure 3. Installation Schematics



FLA1 SERIES WIDE-OPEN MONITOR WITH TYPE PRX/131 QUICK DUMP PILOT

Figure 3. Installation Schematics (continued)

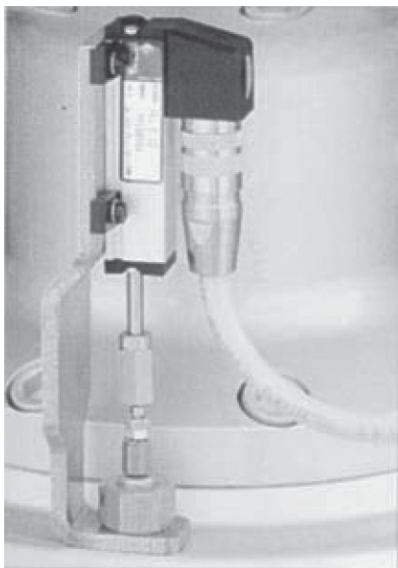


Figure 4. Travel Transducer

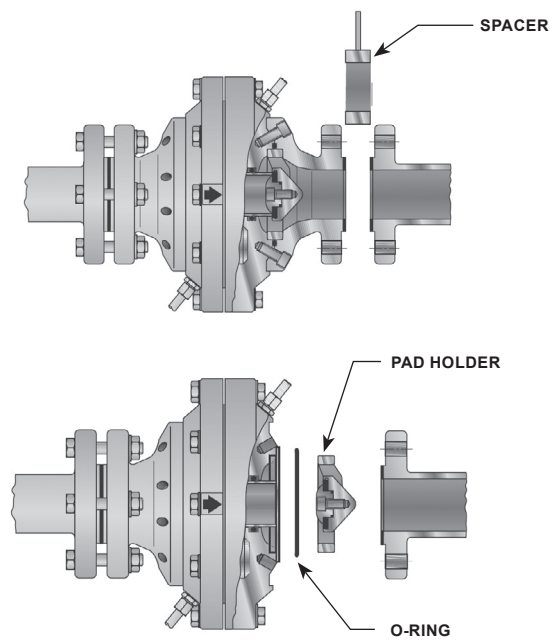


Figure 5. In-Line Maintenance

FLA1 Series

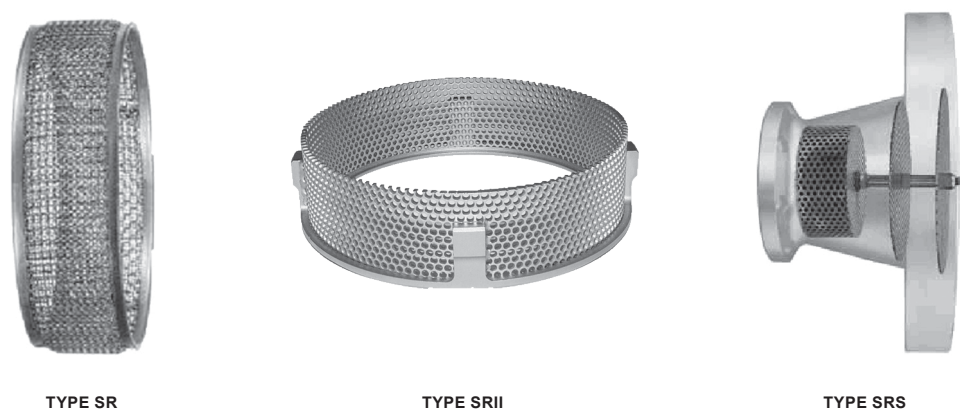


Figure 6. Noise Abatement Construction

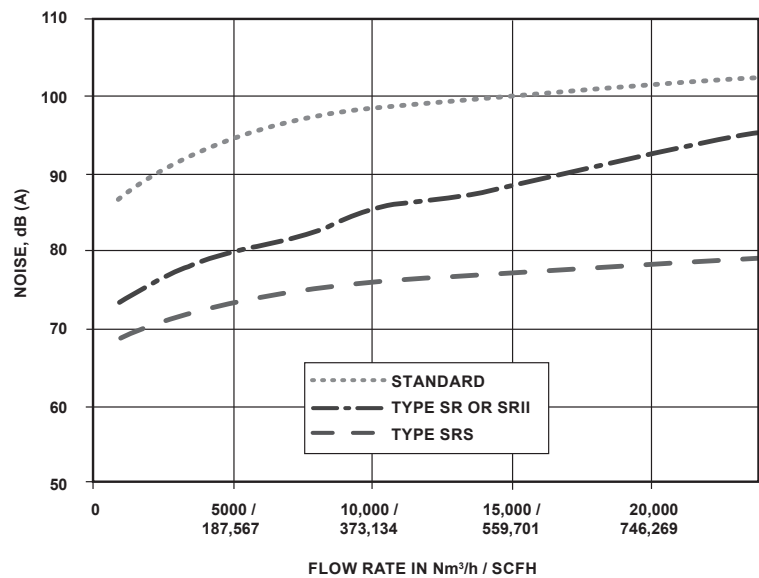


Figure 7. Typical Sound Emission Comparison among the Different Configurations

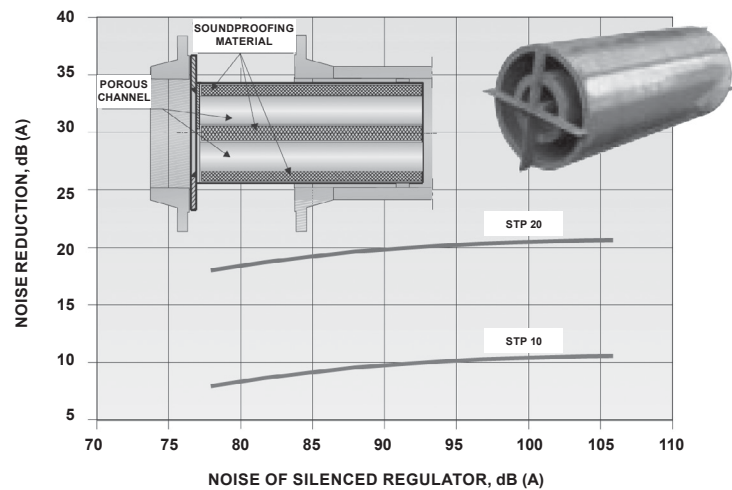


Figure 8. STP-Dissipative Silencer

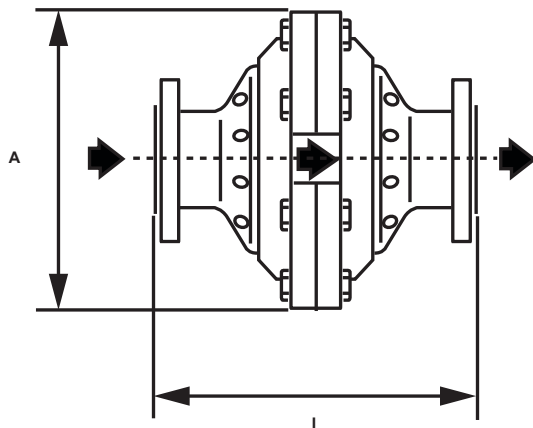


Figure 9. Dimensions of Standard FLA1 Series (with or without SR Series Silencer)

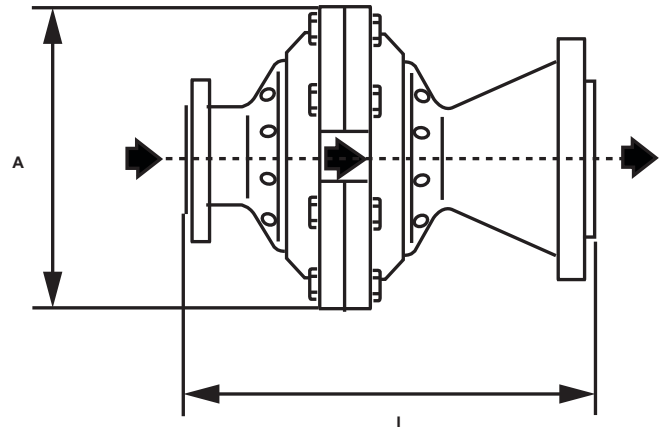


Figure 10. Dimensions of Widened Outlet FLA1 Series with Type SRS

Table 5. Dimensions and Weights

BODY SIZE		DIMENSIONS				APPROXIMATE SHIPPING WEIGHT	
		I		A			
DN	NPS	mm	In.	mm	In.	kg	lbs
Types FLA1 and FLA1-SR/SRII							
25	1	211	8.3	226	8.9	31	68
40	1-1/2	251	9.9	264	10.4	47	103
50	2	287	11.3	287	11.3	60	132
80	3	338	13.3	399	15.7	148	326
100	4	394	15.5	480	18.9	201	443
150	6	508	20.0	610	24.0	480	1058
200	8	610	24.0	653	25.7	620	1367
250	10	752	29.6	785	30.9	1190	2624
Type FLA1-SRS/SRSII							
25 x 100	1 x 4	300	11.8	226	8.9	45	99
40 x 150	1-1/2 x 6	371	14.6	264	10.4	74	163
50 x 150	2 x 6	399	15.7	287	11.3	87	192
80 x 250	3 x 10	500	19.7	399	15.7	233	514
100 x 250	4 x 10	526	20.7	480	18.9	286	631
150 x 300	6 x 12	660	26.0	610	24.0	620	1367
200 x 400	8 x 16	750	29.5	653	25.7	900	1984

FLA1 Series

Ordering Guide

Body Size (Select One)

- ☐ DN 25 / NPS 1
- ☐ DN 40 / NPS 1-1/2
- ☐ DN 50 / NPS 2
- ☐ DN 80 / NPS 3
- ☐ DN 100 / NPS 4
- ☐ DN 150 / NPS 6
- ☐ DN 200 / NPS 8
- ☐ DN 250 / NPS 10

End Connection (Select One)

- ☐ CL300 RF
- ☐ CL600 RF

Silencer (Select One)

- ☐ None
- ☐ Type SR
- ☐ Type SRII
- ☐ Type SRS
- ☐ Type SRSII

PAD Material (Select One)

- ☐ Nitrile (NBR)
- ☐ Fluorocarbon (FKM)
- ☐ Polyurethane (PU)

Option Type (Select One)

- ☐ None
- ☐ Travel Indicator, Nitrile (NBR)
- ☐ Transducer
- ☐ Proximity Switch
- ☐ Micro Switch

Pilot Switch (Select One)

Please refer to corresponding bulletin for detail configuration and pressure range

- ☐ PRX/120 and SA/2 Series
- ☐ PSA/79 Series
- ☐ PSA/80 Series

Boost Valve (Select One)

Please refer to corresponding bulletin for detail configuration and pressure range

- ☐ None
- ☐ PRX/131 Series

Recommended Spare Parts Kit (Optional)

- ☐ Yes, send a whole set of spare parts with the order.

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