

MODELS 106-PR-SC / 206-PR-SC / 306-PR-SC

Pressure Reducing Valve with Solenoid Shut-Off

KEY FEATURES

- Excellent low flow stability
- Fast-acting solenoid override
- Operates as normally open or closed
- Easily and precisely set downstream pressure

PRODUCT OVERVIEW

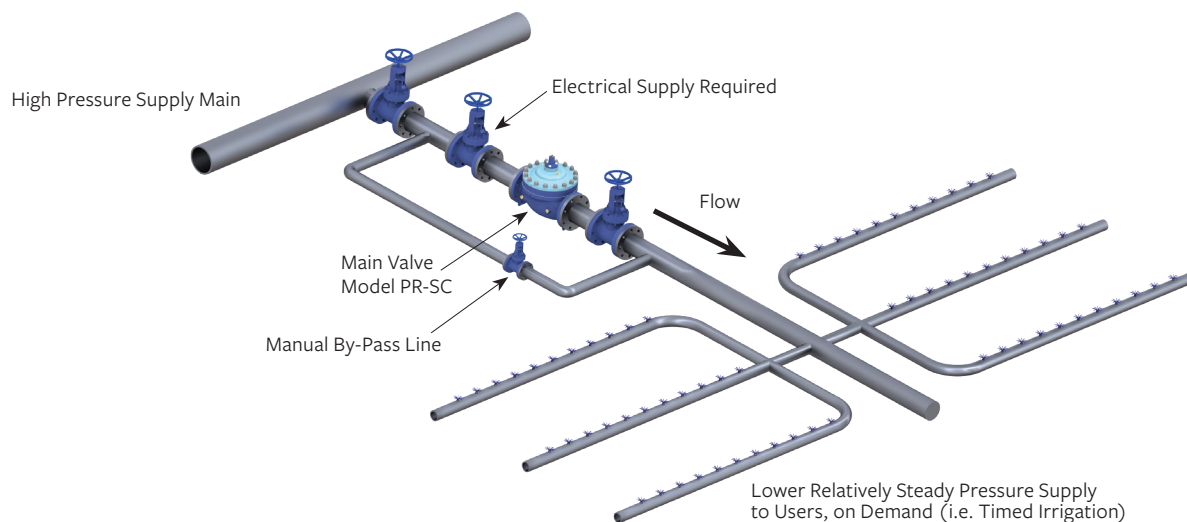
The 106-PR-SC, 206-PR-SC or 306-PR-SC pressure reducing valves with solenoid shut-off are based on the 106-PG, 206-PG or 306-PG main valve.

The pilot valve senses the downstream pressure through a connection at the valve outlet. Under flowing conditions, the pilot reacts to small changes in pressure to control the valve position by modulating the pressure above the diaphragm. The downstream pressure is maintained relatively steady at the pilot set-point.

The solenoid shut-off / override interrupts the PR function to close off the main valve. The valve is available as either normally open where the solenoid is energized to close the main valve or as normally closed where the solenoid is de-energized to close the main valve.



TYPICAL APPLICATION

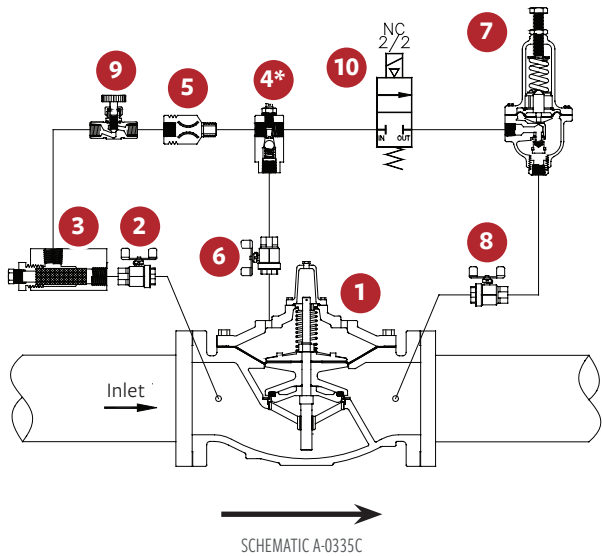


MODELS 106-PR-SC / 206-PR-SC / 306-PR-SC

Pressure Reducing Valve with Solenoid Shut-Off

SCHEMATIC DRAWING

| NO. | PART |
|-----|--|
| 1 | Main Valve - 106-PG, 206-PG or 306-PG |
| 2 | Isolation Valves - Standard 4" / 100 mm and Larger |
| 3 | Strainer - Standard 4" / 100 mm and Larger |
| 4* | Model 26 Flow Stabilizer / Opening Speed Control Standard on Valves 8" / 200 mm 106, 10" / 250 mm 206 and Smaller |
| 5 | Fixed Restriction |
| 6 | Isolation Valves - Standard 4" / 100 mm and Larger |
| 7 | Model 160 Pilot Specify for 5 to 50 psi / 0.35 to 3.5 bar, 10 to 80 psi / 0.70 to 5.5 bar, 20 to 200 psi / 1.38 to 13.8 bar, 100 to 300 psi / 6.9 to 20.7 bar. |
| 8 | Isolation Valve - Standard All Sizes |
| 9 | Closing Speed Control - Model 852-B |
| 10 | Solenoid Valve - 2 Way |



STANDARD MATERIALS

Standard materials for pilot system components are:

- ASTM B62 bronze or ASTM B16 brass
- AISI 303/316 stainless-steel trim
- Buna-N / EPDM diaphragm and seals

SELECTION SUMMARY

1. Select the valve series and size with sufficient capacity.
2. Check the operating flow against valve minimum.
3. If the outlet pressure is less than 35% of the inlet pressure, check for cavitation.
4. Determine whether operation is energized or de-energized to close the main valve.
5. Select the voltage (120 VAC standard) for solenoid and advise maximum operating differential pressure.
6. Ensure that the flange rating exceeds the maximum operating pressure.

ORDERING INSTRUCTIONS

Refer to the order form and ordering instructions.

Additionally, include the following information for this product:

1. Single chamber (106), (206) or (306)
2. Pilot range

MODELS 106-PR-SC / 206-PR-SC / 306-PR-SC

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106-PR-SC

FLOW CAPACITY

(SEE 106-PG IN MAIN VALVE SECTION FOR OTHER VALVE DATA)

| Size (Inches) | ½" | ¾" | 1" | 1 ¼" | 1 ½" | 2" | 2 ½" | 3" | 4" |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Size (mm) | 15 mm | 19 mm | 25 mm | 32 mm | 40 mm | 50 mm | 65 mm | 80 mm | 100 mm |
| Minimum (USGPM) Flat Diaphragm | 1 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 10 |
| Minimum (L/s) Flat Diaphragm | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.3 | 0.6 |
| Maximum Continuous (USGPM) | 12 | 19 | 49 | 93 | 125 | 210 | 300 | 460 | 800 |
| Maximum Continuous (L/s) | 0.8 | 1 | 3 | 6 | 8 | 13 | 19 | 29 | 50 |

106-PR-SC

FLOW CAPACITY

(SEE 106-PG IN MAIN VALVE SECTION FOR OTHER VALVE DATA)

| Size (Inches) | 6" | 8" | 10" | 12" | 14" | 16" | 20" | 24" | 36" |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Size (mm) | 150 mm | 200 mm | 250 mm | 300 mm | 350 mm | 400 mm | 500 mm | 600 mm | 900 mm |
| Minimum (USGPM) Flat Diaphragm | 20 | 40 | - | - | - | - | - | - | - |
| Minimum (USGPM) Rolling Diaphragm | 1 | 1 | 3 | 3 | 3 | 3 | 10 | 10 | 20 |
| Minimum (L/s) Flat Diaphragm | 1.3 | 2.5 | - | - | - | - | - | - | - |
| Minimum (L/s) Rolling Diaphragm | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.6 | 0.6 | 1.3 |
| Maximum Continuous (USGPM) | 1800 | 3100 | 4900 | 7000 | 8500 | 11000 | 17500 | 25800 | 55475 |
| Maximum Continuous (L/s) | 114 | 196 | 309 | 442 | 536 | 694 | 1104 | 1628 | 3500 |

206-PR-SC

FLOW CAPACITY

(SEE 206-PG IN MAIN VALVE SECTION FOR OTHER VALVE DATA)

| Size (Inches) | 3" | 4" | 6" | 8" | 10" | 12" | 16" | 18" | 20" |
|-----------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Size (mm) | 80 mm | 100 mm | 150 mm | 200 mm | 250 mm | 300 mm | 400 mm | 450 mm | 500 mm |
| Minimum (USGPM) Flat Diaphragm | 5 | 5 | 10 | 20 | 40 | - | - | - | - |
| Minimum (USGPM) Rolling Diaphragm | - | - | - | - | - | 3 | 3 | 3 | 3 |
| Minimum (L/s) Flat Diaphragm | 0.3 | 0.3 | 0.6 | 1.3 | 2.5 | - | - | - | - |
| Minimum (L/s) Rolling Diaphragm | - | - | - | - | - | 0.19 | 0.19 | 0.19 | 0.19 |
| Maximum Continuous (USGPM) | 300 | 580 | 1025 | 2300 | 4100 | 6400 | 9230 | 16500 | 16500 |
| Maximum Continuous (L/s) | 19 | 37 | 65 | 145 | 260 | 404 | 582 | 1040 | 1040 |

206-PR-SC

FLOW CAPACITY

(SEE 206-PG IN MAIN VALVE SECTION FOR OTHER VALVE DATA)

| Size (Inches) | 24 x 16" | 24 x 20" | 28" | 30" | 32" | 36" | 40" | 48" |
|-----------------------------------|--------------|--------------|--------|--------|--------|--------|---------|---------|
| Size (mm) | 600 x 400 mm | 600 x 500 mm | 700 mm | 750 mm | 800 mm | 900 mm | 1000 mm | 1200 mm |
| Minimum (USGPM) Rolling Diaphragm | 3 | 3 | 10 | 10 | 10 | 10 | 20 | 20 |
| Minimum (L/s) Rolling Diaphragm | 0.2 | 0.2 | 0.6 | 0.6 | 0.6 | 0.6 | 1.3 | 1.3 |
| Maximum Continuous (USGPM) | 16500 | 21700 | 33600 | 33650 | 33700 | 33800 | 55475 | 55475 |
| Maximum Continuous (L/s) | 1040 | 1370 | 2120 | 2123 | 2126 | 2132 | 3500 | 3500 |

306-PR-SC

FLOW CAPACITY

(SEE 306-PG IN MAIN VALVE SECTION FOR OTHER VALVE DATA)

| Size | DN50 | DN65 | DN80 | DN100 | DN150 | DN200 | DN250 | DN300 | DN560 | DN400 |
|---------------------------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| Minimum (L/s) Flat Diaphragm | 0.06 | 0.06 | 0.06 | 0.06 | 0.25 | - | - | - | - | - |
| Minimum (L/s) Rolling Diaphragm | - | - | - | - | - | 0.06 | 0.06 | 0.20 | 0.20 | 0.20 |
| Maximum Continuous (L/s) | 9 | 16 | 22 | 37 | 67 | 150 | 267 | 417 | 560 | 600 |