

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

Pressure Reducing Valve

KEY FEATURES

- Ideal for maintaining accurate downstream pressure
- Responds quickly and effectively

PRODUCT OVERVIEW

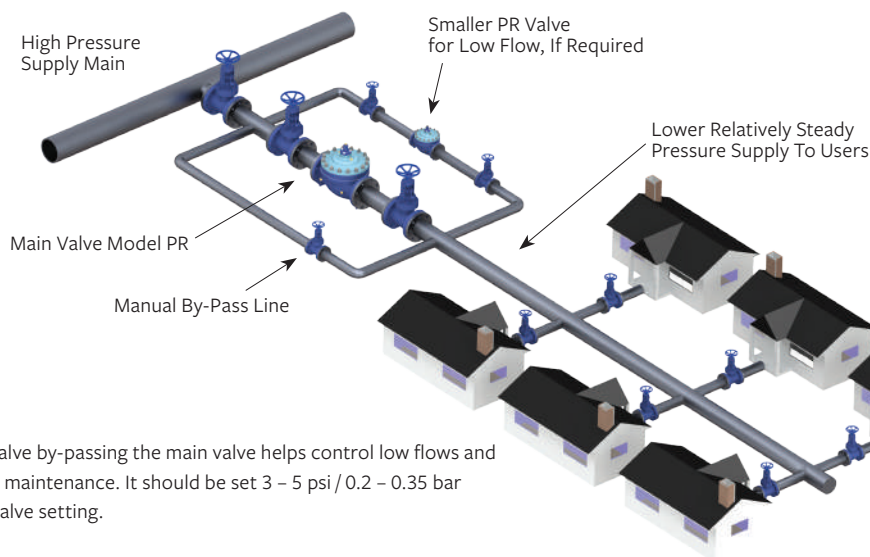
The 106-PR, 206-PR or 306-PR series pressure reducing valves are based on the 106-PG, 206-PG or 306-PG main valves.

The pilot valves sense 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 virtually steady at the pilot set-point.

In typical pressure reducing applications, the standard port model 206-PR is often the best selection.



TYPICAL APPLICATION



Note: The smaller PR valve by-passing the main valve helps control low flows and provides service during maintenance. It should be set 3 – 5 psi / 0.2 – 0.35 bar higher than the larger valve setting.

Singer® single rolling diaphragm technology 6" / 150 mm and larger have extremely precise control, even at low flows, making smaller by-pass valves unnecessary except for possible bypass during maintenance.

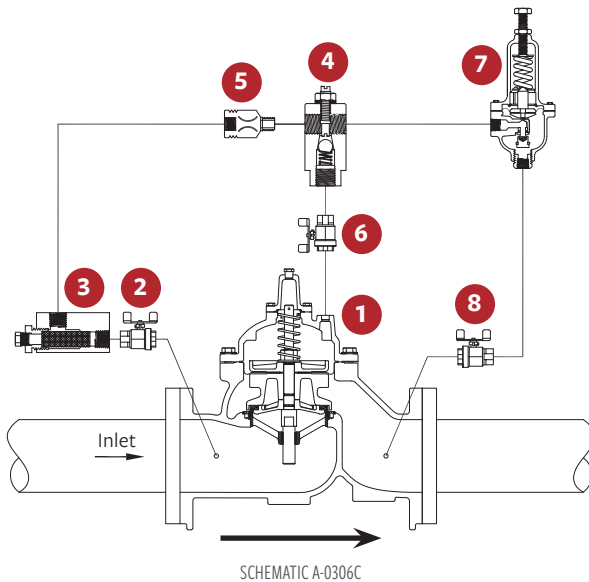
MODELS 106-PR / 206-PR / 306-PR

Pressure Reducing Valve

SCHEMATIC DRAWING

NO.	PART
1	Main Valve - 106-PG, 206-PG or 306-PG
2	Isolation Valve - 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 Valve - 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

Note: SRD shown is available for 6" 106-PG and larger.



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. 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. 106, 206, or 306
2. Pilot range

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

Pressure Reducing Valve

106-PR

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

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

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	-	-	-	-	-	0.2	0.2	0.2	0.2
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

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)	1041	1370	2120	2123	2126	2132	3500	3500

306-PR

FLOW CAPACITY

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

Size	DN50	DN65	DN80	DN100	DN150	DN200	DN250	DN300	DN350	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