HYGRADE WATER

SINGER®
a MUELLER brand

Pressure Reducing Valves

Singer Pressure Reducing Valves sense the downstream pressure through a connection at the valve outlet. Under flowing conditions, the pilot reacts to small changes in pressure to maintain a steady downstream pressure.

TECHNICAL GUIDE: **VH1.15**

Applications

- Potable water
- Municipal
- Mining Applications
- Irrigation Applications
- Water loss management

WaterMark™ ***Licence Number:*** *WMK/SMK26726*

Product Attributes

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

Approvals/Standards

- AS 5081:2008
- Flanges to AS/NZS 4087 Fig. B5
- Coating complies with AS/NZS 4158

Quality

- ISO 9001:2015 Quality Management Systems

The Singer Pressure Reducing Valves are based on the 106-PG or 206-PG main valves and are configurable to suit your application.

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 reduced port model 206-PR is often the best selection.

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.

Refer to the Singer Control Valve Sizing Calculator on our website for assistance.

ORDERING INSTRUCTIONS

Refer to the order form and ordering instructions.

Additionally, include the following information for this product:

1. Single chamber (106) or (206)
2. Outlet pressure range

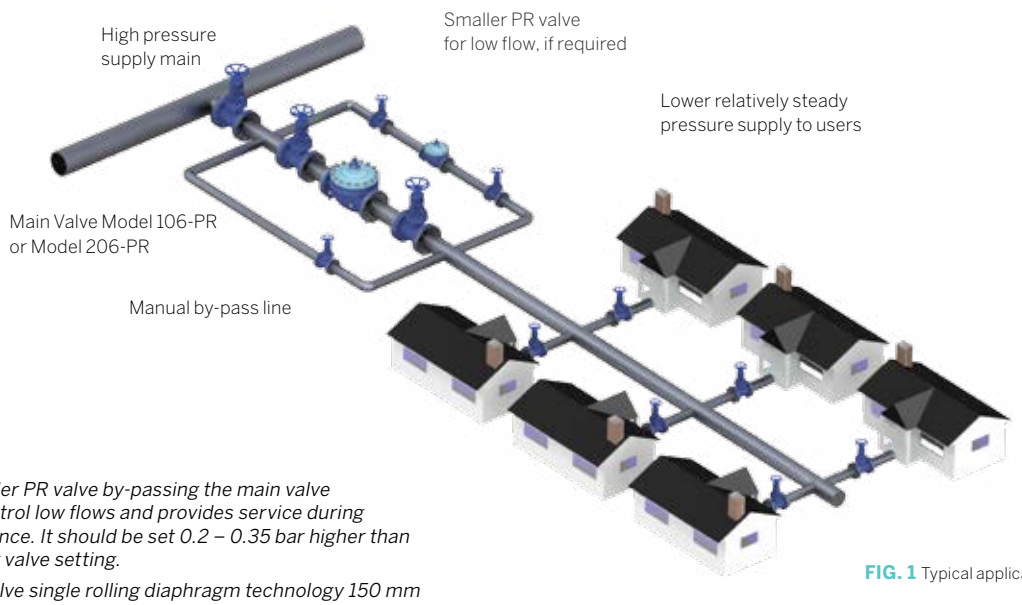

FIG. 1 Typical application

Note:

- *The smaller PR valve by-passing the main valve helps control low flows and provides service during maintenance. It should be set 0.2 – 0.35 bar higher than the larger valve setting.*
- *Singer Valve single rolling diaphragm technology 150 mm and larger have extremely precise control, even at low flows, making smaller by-pass valves unnecessary except for possible bypass during maintenance.*

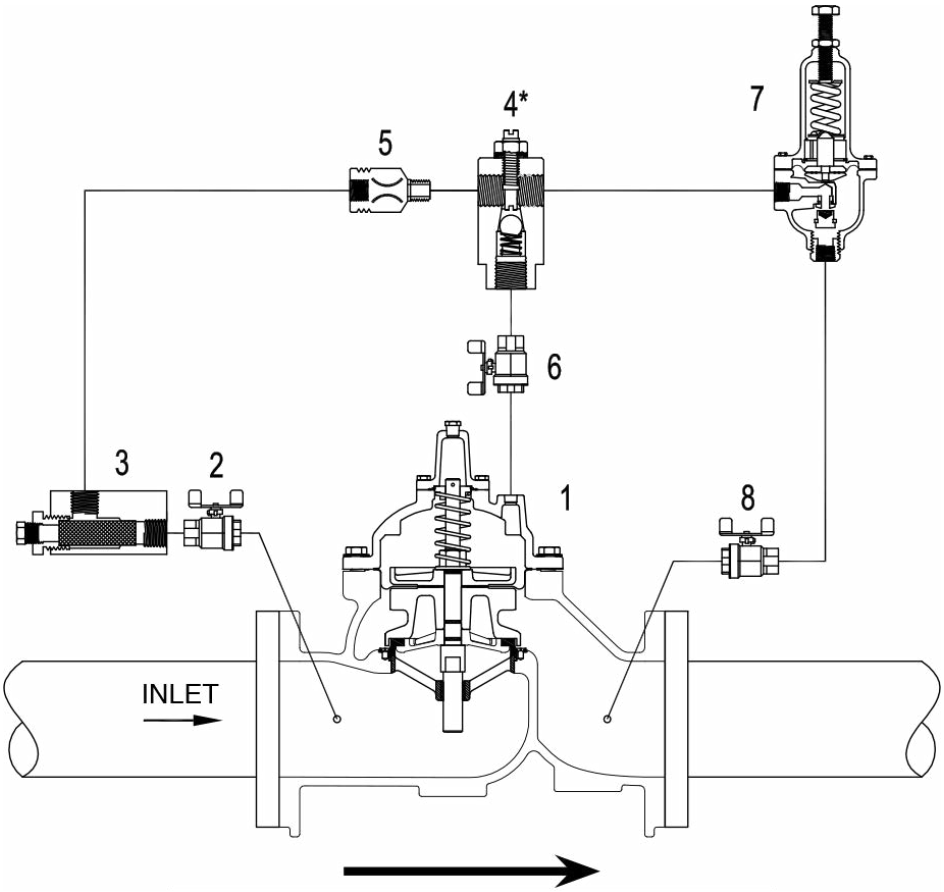

FIG. 2 Schematic A-0306C

SCHEMATIC DRAWING

1. Main Valve - 106-PG or 206-PG
2. Isolation Valve - standard 100 mm and larger
3. Strainer - standard 100 mm and larger
4. Model 26 Flow Stabilizer / Opening Speed Control
   - Standard on valves 200mm 106, 250mm 206 and smaller
5. Fixed Restriction
6. Isolation Valve - standard 100 mm and larger
7. Model 160 pilot. Specify for:
   - 0.35 to 3.5 Bar
   - 0.70 to 5.5 Bar
   - 1.38 to 13.8 Bar
   - 6.9 to 20.7 Bar
8. Isolation Valve - standard all sizes

Note: *Singer Rolling Diaphragm shown is available for 150mm 106-PG and larger.*

TABLE 1 106-PR

Code	Size (mm)	Minimum Flat Diaphragm (L/s)	Maximum Continuous (L/s)
Indent	15	0.1	0.8
Indent	19	0.1	1
Indent	25	0.1	3
Indent	32	0.1	6
Indent	40	0.1	8
VC50PRV106S	50	0.3	13
Indent	65	0.3	19
VC80PRV106S	80	0.3	29
VC100PRV106S	100	0.6	50

TABLE 2 106-PR

Code	Size (mm)	Minimum Flat Diaphragm (L/s)	Minimum Rolling Diaphragm (L/s)	Maximum Continuous (L/s)
VC150PRV106S	150	1.3	0.1	114
VC200PRV106S	200	2.5	0.1	196
VC250PRV106S	250	-	0.2	309
VC300PRV106S	300	-	0.2	442
VC350PRV106S	350	-	0.2	536
VC400PRV106S	400	-	0.2	694
Indent	500	-	0.6	1104
Indent	600	-	0.6	1628
Indent	900	-	1.3	3500

TABLE 3 206-PR

Code	Size (mm)	Minimum Flat Diaphragm (L/s)	Minimum Rolling Diaphragm (L/s)	Maximum Continuous (L/s)
VC80PRV206S	80	0.3	-	19
VC100PRV206S	100	0.3	-	37
VC150PRV206S	150	0.6	-	65
VC200PRV206S	200	1.3	-	145
VC250PRV206S	250	2.5	-	260
VC300PRV206S	300	-	0.2	404
VC400PRV206S	400	-	0.2	582
VC450PRV206S	450	-	0.2	1040
Indent	500	-	0.2	1040

TABLE 4 206-PR

Code	Size (mm)	Minimum Rolling Diaphragm (L/s)	Maximum Continuous (L/s)
Indent	600 x 400	0.2	1041
Indent	600 x 500	0.2	1370
Indent	700	0.6	2120
Indent	700	0.6	2123
Indent	800	0.6	2126
Indent	900	0.6	2132
Indent	1000	0.6	3912

*****Refer to 106-PG (VH1.18) and 206-PG (VH1.20) Main Body Technical Guides for more information.*

Scan for more information

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