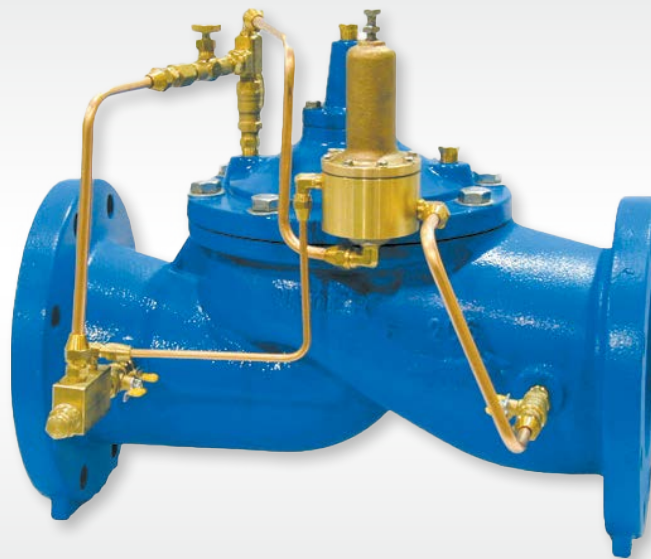


# Pressure Relief and Pressure Sustaining Valves

The Singer PR and PR-R Pressure Relief and Pressure Sustaining Control Valves open quickly when the inlet pressure meets or exceeds a predetermined setting to relieve damaging overpressure or maintain an upstream pressure.



TECHNICAL GUIDE: **VH1.17**

## Applications

Potable water  
Pressure Control  
Municipal  
Mining Applications  
Irrigation Applications

## Product Attributes

Easily adjustable pressure setting  
Accurately maintains pressure to set point  
Can be used for either Pressure Relief or Pressure Sustaining applications  
Smooth closing

## Approvals/Standards

AS 5081:2008  
Flanges to AS/NZS4087 Fig. B5  
Coating complies with AS/NZS 4158

## Quality

ISO 9001:2015 Quality Management Systems



Licence Number:  
WMK/SMK26726

The Pressure Relief Valve is mounted in a tee off the main pipeline and limits system pressure by relieving excess flow on overpressures above the set-point. The Pressure Sustaining Valve is mounted in-line, senses the upstream pressure and modulates to maintain the upstream set-point.

The 81-RP pilot senses the upstream pressure through a connection to the valve inlet. The valve and pilot remain closed until the inlet pressure exceeds the pilot setting. The valve opens rapidly to relieve damaging overpressure and closes smoothly at an adjustable speed, when the pressure returns below the set-point. The upstream pressure is limited to the pilot set-point.

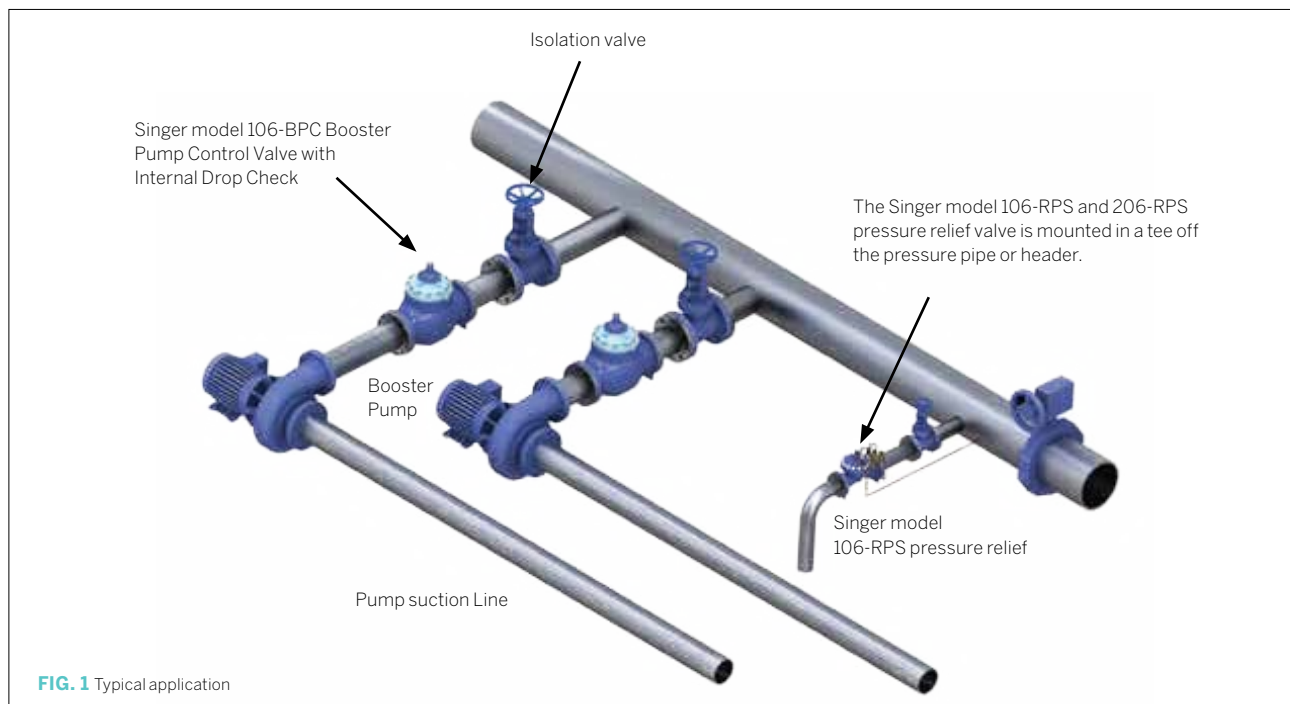


FIG. 1 Typical application

## 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

## 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. Relief pressure range
  3. Outlet pressure

## SELECTION SUMMARY

1. Select the valve with sufficient capacity using the available pressure drop across the valve.
2. Usually operating in the momentary "M" service range.
3. For extended or continuous relief applications, use model 106-RPS-AC: Pressure Relief with Anti-Cavitation Cages.
4. Ensure that the maximum working pressure rating for the valve and for the flanges exceeds the maximum operating pressure.
5. Select a standard globe style body or the optional angle style body.

Sizing is ultimately determined by the specific application. Refer to Singer Control Valve Sizing Calculator on our website.

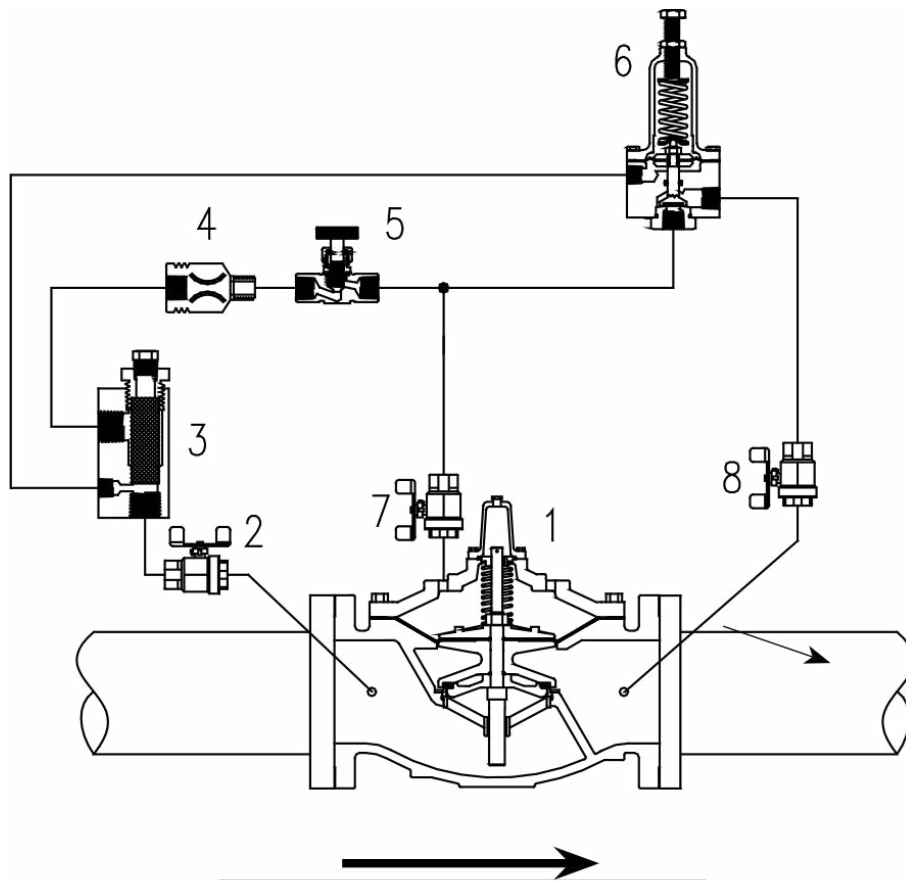


FIG. 2 Schematic A-0423F

### 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. Fixed Restriction- 3.2 mm
5. Model 852-B Closing Speed Control
6. Model 81-RP 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
7. Isolation Valve - standard 100 mm and larger
8. Isolation Valve - standard all sizes

**TABLE 1** 106- RPS Flow Capacity at 14 m/s

<b>Code</b>	<b>Size (mm)</b>	<b>Momentary (L/s)</b>
Indent	15	2
Indent	20	3
Indent	25	7
Indent	32	11
Indent	40	16
VC50RPS106S	50	30
Indent	65	42
VC80RPS106S	80	65
VC100RPS106S	100	114
VC150RPS106S	150	252
VC200RPS106S	200	442
VC250RPS106S	250	694
VC300RPS106S	300	1009
VC350RPS106S	350	1199
VC400RPS106S	400	1577
Indent	500	2461
Indent	600	3546
Indent	900	7868

**TABLE 2** 206- RPS Flow Capacity at 14 m/s

<b>Code</b>	<b>Size (mm)</b>	<b>Momentary (L/s)</b>
VC80RPS206S	80	36
VC100RPS206S	100	78
VC150RPS206S	150	136
VC200RPS106S	200	303
VC250RPS206S	250	530
VC300RPS206S	300	833
VC400RPS206S	400	1211
Indent	450	1893
Indent	500	1896
Indent	600 x 400	1899
Indent	600 x 500	2461
Indent	700	4255
Indent	750	4258
Indent	800	4261
Indent	900	4268
Indent	1000	3912



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**0800 494 723**  
**hygradewater.co.nz**

**102 Neilson Street**  
Onehunga, Auckland 1061, New Zealand  
PO Box 58 142, Botany, Auckland 2163

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