

Singer Pressure Relief Valve

The Singer 106 RPS / 206 RPS Pressure Relief Control Valve opens quickly when the inlet pressure meets or exceeds a predetermined setting to relieve damaging overpressure.



TECHNICAL GUIDE: **AVH1.10**

Applications

Potable water
Pressure Control
Municipal
Mining Applications
Irrigation Applications

Product Attributes

Easily adjustable pressure setting
Accurately maintains pressure to set point
Quick opening relief
Smooth closing

Approvals/Standards

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



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 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.

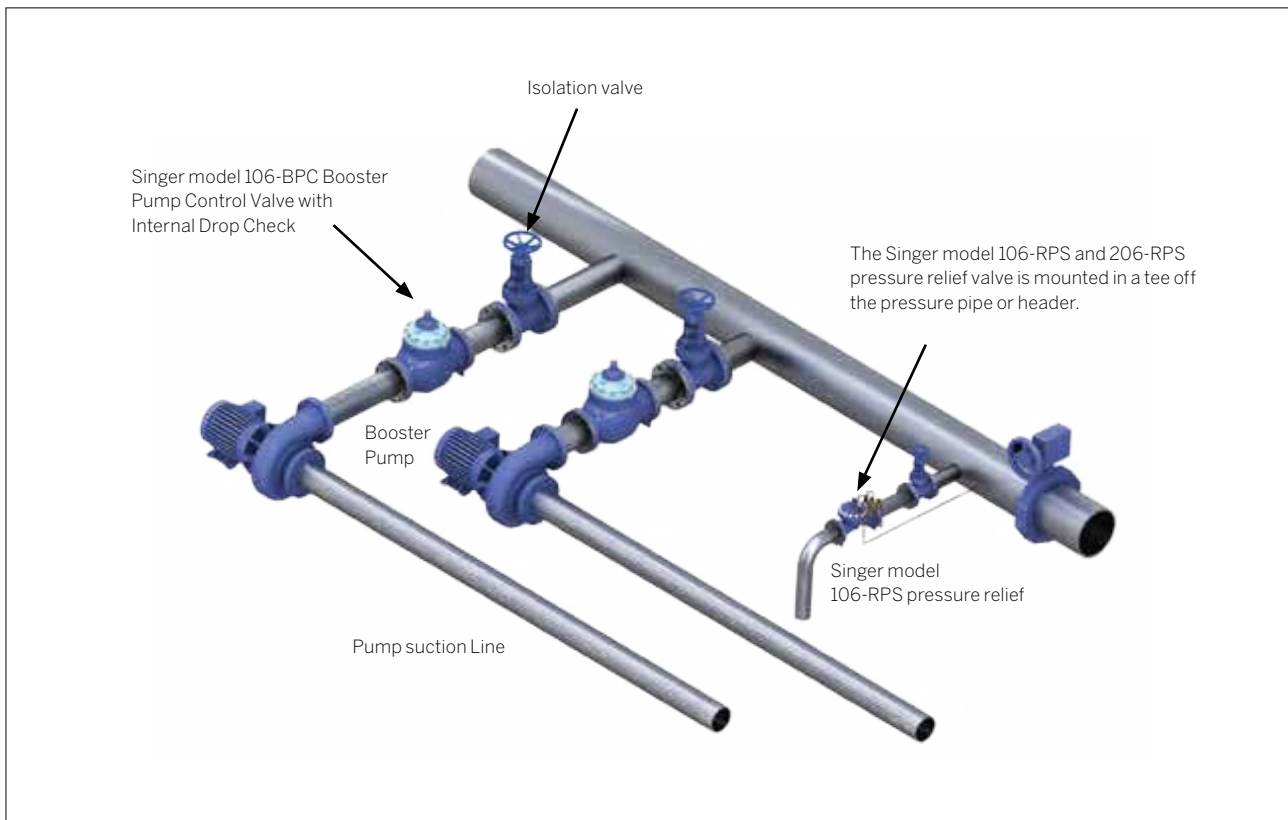


FIG. 1 Typical application

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.

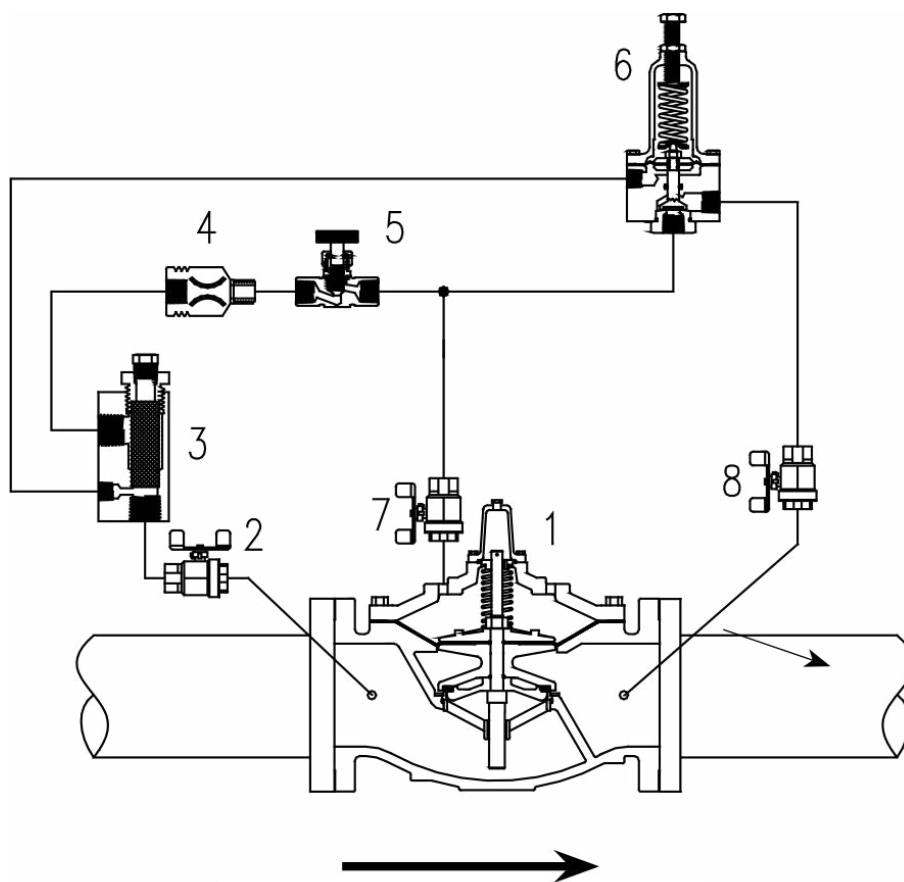


FIG. 2 Schematic A-0423F

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

Code	Size (mm)	Momentary (L/s)
Indent	15	2
Indent	20	3
Indent	25	7
Indent	32	11
Indent	40	16
CV050PRSV106-RPS-ESS	50	30
Indent	65	42
CV080PRSV106-RPS-ESS	80	65
CV100PRSV106-RPS-ESS	100	114
CV150PRSV106-RPS-ESS	150	252
CV200PRSV106-RPS-ESS	200	442
CV250PRSV106-RPS-ESS	250	694
CV300PRSV106-RPS-ESS	300	1009
CV350PRSV106-RPS-ESS	350	1199
CV400PRSV106-RPS-ESS	400	1577
Indent	500	2461
Indent	600	3546
Indent	900	7868

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

Code	Size (mm)	Momentary (L/s)
Indent	80	36
Indent	100	78
Indent	150	136
Indent	200	303
Indent	250	530
Indent	300	833
Indent	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



Scan for more
information

Disclaimer: While every effort has been made to ensure that the information in this document is correct and accurate, users of Hygrade Water Infrastructure product or information within this document must make their own assessment of suitability for their particular application. Product dimensions are nominal only, and should be verified if critical to a particular installation. No warranty is either expressed, implied, or statutory made by Hygrade Water Infrastructure unless expressly stated in any sale and purchase agreement entered into between Hygrade Water Infrastructure and the user.

September 2025