

Single Chamber, Reduced Bore Hydraulically Operated Valve

The 206-PG series main valve is designed to suit a large variety of applications such as pressure, flow or level control. This hydraulically operated valve introduces or releases water from the control chamber above the diaphragm to effectively maintain accurate water control.



TECHNICAL GUIDE: **AVH1.13**

Applications

Potable water
Pressure systems
Municipal
Mining Applications
Irrigation Applications

Product Attributes

Available in globe and angle style
Reduced bore for enhanced control

Quality

AS 5081:2008
Flanging to AS/NZS 4087
Coating to AS/NZS 4158



The 206-PG series control valve is the preferred choice for pressure reducing valves, flow control valves, relief valves and applications with lower to medium flows.

This hydraulically operated valve introduces or releases water from the control chamber above the diaphragm to effectively maintain water control. Further adapt the valve to provide control for a wide range of functions by selecting from Singer Valve's wide range of pilot and accessories options. Customise for functions like controlling pressure, flow or level or in almost limitless combinations to suit specific applications.

Selection

Automatic control valves operate by introducing or exhausting water from above the diaphragm at controlled rates. A pressure differential is required and is either inlet to outlet or inlet to atmosphere, depending on the application. Valves are sized to provide an appropriate pressure drop for each application. Most valves require a minimum of 10 psi / 0.7 bar pressure drop to operate. This applies mostly to valves that have the bonnet vented to downstream. With minimum of 5 psi / 0.35 bar downstream pressure, many valves can be made to open fully by venting the bonnet to atmosphere.

Singer Valve control valves are designed for use with clean potable water. Applications for other media are possible. Consult with Hygrade.

Careful consideration of the possibility of cavitation must be given. Anti-cavitation trim is available to control the cavitation, reduce noise and prevent damage. Refer to 106-AC (page 80) or consult with Hygrade.

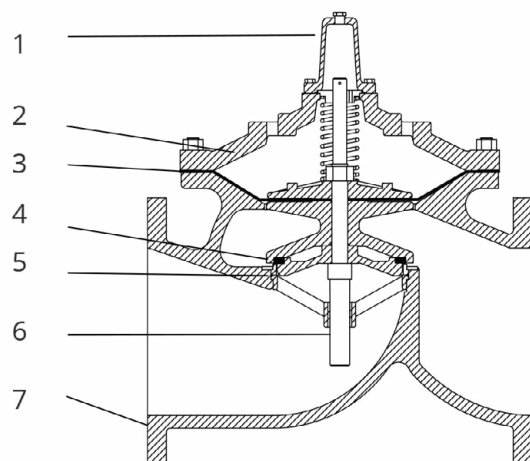
The Singer Model 206-PG single chambered valve is the basic valve used in practically every model bearing the 206 description. The pilot systems are designed to meet the functional and performance requirements of specific applications. Sizing is ultimately determined by the specific application.

Schematic Drawing

1. Removable Stem Cap
2. ASTM A536 Ductile Iron Construction
3. Diaphragm Buna-N or EPDM
4. Buna-N or EPDM Resilient Disc
5. AISI 316 Stainless Steel Seat
6. AISI 316 Stainless Steel Stem
7. NSF 61 Fusion Bonded Epoxy Coating



FIG. 1 Alternative models A206-PG Angle



AVAILABLE OPTIONS

Further customise the valve by adding any of the available options below.

Main valve options

Position Indicators (Available for install at Hygrade or as a field modification)

- Model X107 stem mounted position indicators
- Model X129 limit switch assembly with Single Pole Double Throw limit switch (Double Pole Double Throw optional)
- Model X156 position transmitter (4 to 20 mA)
 - *Oxy-Nitride Stem*
 - *Grooved Ends*
 - *Internal Drop Check*
 - *Reclaimed Water*
 - *External Spring Lift*

Materials of construction

Individual components can be upgraded from ductile iron, bronze and brass to stainless steel, for most sizes. Consult with Hygrade.

Model PGM

Provides a fully operational back-up system in the event of a diaphragm or pilot failure.

TABLE 1 Valve Sizes & Materials

	Standard	Optional
Available Sizes	Flanged	-
Globe	3 in to 48 in (80-1200 mm)	-
Angle	4 in to 8 in (100-200 mm)	-

TABLE 2 Valve Components

	Standard	Optional
1. Valve Body, Cover	65-45-12 Ductile Iron	-
2. Seat Ring	316 Stainless Steel	-
3. Disc Retainer	B16 Brass / B62 Bronze / A536 Ductile Iron	316 Stainless Steel
4. Stem	316 Stainless Steel	-
5. Stem Nut	B16 Brass	316 Stainless Steel
6. Spring	316 Stainless Steel	-
7. Guide Bushings	B16 Brass or SAE 660 Bronze	316 Stainless Steel
8. Diaphragm	EPDM	Buna-N / Viton (limited sizes)
9. Resilient Disc	EPDM	Buna-N / Viton (limited sizes)
10. Coating	NSF61 Approved Fusion Bonded Epoxy - Thickness 10-14 mils (250-300 microns)	Consult factory
11. Fasteners	AISI 18-8 Stainless Steel	AISI 316 Stainless Steel

206-PG	Flow Capacity 45 ft / s or 14 m / s (See 206-PG in Main Valve section for other valve data)								
Size (inches)	3 in	4 in	6 in	8 in	10 in	12 in	16 in	18 in	20 in
Size (mm)	80 mm	100 mm	150 mm	200 mm	250 mm	300 mm	400 mm	450 mm	500 mm
Momentary (USGPM)	564	1236	2160	4800	8400	13200	19200	30000	30050
Momentary (L/s)	36	78	136	303	530	833	1211	1893	1896

206-PG	Flow Capacity 45 ft / s or 14 m / s (See 206-PG in Main Valve section for other valve data)						
Size (inches)	24 x 16 in	24 x 20 in	28 in	30 in	32 in	36 in	40 in
Size (mm)	600 x 400 mm	600 x 500 mm	700 mm	750 mm	800 mm	900 mm	1000 mm
Momentary (USGPM)	30100	39000	67440	67490	67540	67640	62000
Momentary (L/s)	1899	2461	4255	4258	4261	4268	3912



Scan for more information

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