HYGRADEWATER
INFRASTRUCTURE

Single Chamber, Full Bore Hydraulically Operated Valve

The 106-PG full bore control 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: **AVH1.11**

Applications

- Potable water
- Pressure systems
- Municipal
- Mining Applications
- Irrigation Applications

Product Attributes

- Anti-cavitation option is ideal for high pressure drop situations
- Available in globe and angle style

Quality

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

WaterMark

The 106-PG series control 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 e ectively maintain accurate water control.

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 pres-sure, many valves can be made to open fully by venting the bonnet to atmosphere.

Our control valves are designed for use with clean potable water. Applications for other media are possible. Consult 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 or consult Hygrade.

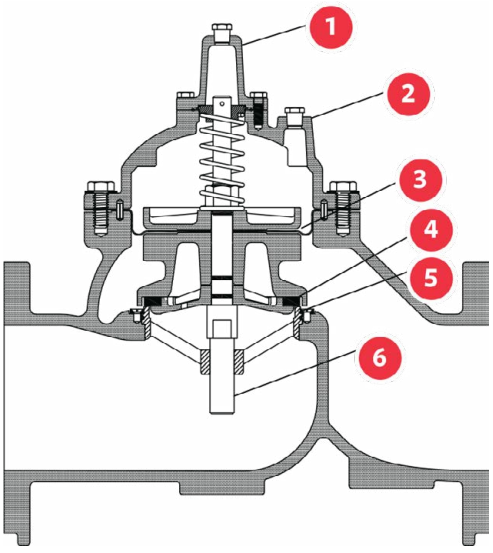
The 106-PG single chambered valve is the basic valve used in practically every model bearing the 106 description. The pilot systems are designed to meet the functional and performance requirements of specific applications. Sizing is ultimately determined by the specific application.

FIG. 1 Alternative models A106-PG Angle

FIG. 2 Alternative model 106-PG THREADED

Schematic Drawing

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



Available Options

Main Valve Options

Position Indicators (available for install at Hygrade manufacturing 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*
  - *Internal Drop Check*
  - *External Spring Lift*
  - *Grooved Ends*
  - *Reclaimed Water*

Pilots & Accessories, Materials of construction

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

Model PGM

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

Anti-Cavitation Trim

Model 106-AC allows very high pressure drops in one valve, while retaining the standard 106 valve features.

TABLE 1 Valve Styles

	Ductile		Stainless Steel	
Available Sizes	**Threaded**	**Flanged**	**Threaded**	**Flanged**
Globe	1" to 3" (25 - 80 mm)	1 1/2" to 36" (40 - 900 mm)	1/2" to 2" (15 - 50 mm)	1 1/2" to 6" (40 - 150 mm)
Angle	1" to 3" (25 - 80 mm)	2" to 12", 16" (50 - 300 mm, 400 mm)	N/A	N/A

TABLE 2 Valve Components

	Ductile		Stainless Steel	
	Standard	**Optional**	**Standard**	**Optional**
1 .Valve Body, Cover	65-45-12 Ductile Iron	-	316 Stainless Steel	-
2. Seat Ring	316 Stainless Steel	-	316 Stainless Steel	-
3. Disc Retainer	B16 Brass / B62 Bronze / A536 Ductile Iron	316 Stainless Steel	316 Stainless Steel	-
4. Stem	316 Stainless Steel	-	316 Stainless Steel	-
5. Stem Nut	B16 Brass	316 Stainless Steel	316 Stainless Steel	-
6. Spring	316 Stainless Steel	-	316 Stainless Steel	-
7. Guide Bushings	B16 Brass or SAE 660 Bronze	316 Stainless Steel	316 Stainless Steel	-
8. Diaphragm	EPDM	Buna-N / Viton (limited sizes)	EPDM	Buna-N / Viton (limited sizes)
9. Resilient Disc	EPDM	Buna-N / Viton (limited sizes)	EPDM	Buna-N / Viton (limited sizes)
10. Coating	NSF61 Approved Fusion Bonded Epoxy Thickness 10-14 mils (250 – 350 microns)	Consult factory	-	-
11. Fasteners	18-8 Stainless Steel	316 Stainless Steel	18-8 Stainless Steel	316 Stainless Steel

106-PG	Flow Capacity 45 ft / s or 14 m / s (See 106-PG in Main Valve section for other valve data)								
Size (inches)	1/2 in	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	3 in	4 in
Size (mm)	15 mm	19 mm	25 mm	32 mm	40 mm	50 mm	65 mm	80 mm	100 mm
Momentary (USGPM)	28	43	110	170	250	470	6700	1030	1800
Momentary (L/s)	2	3	7	11	16	30	42	65	114

106-PG	Flow Capacity 45 ft / s or 14 m / s (See 106-PG in Main Valve section for other valve data)								
Size (inches)	6 in	8 in	10 in	12 in	14 in	16 in	20 in	24 in	36 in
Size (mm)	150 mm	200 mm	250 mm	300 mm	350 mm	400 mm	500 mm	600 mm	900 mm
Momentary (USGPM)	4000	7000	11000	16000	19000	25000	39000	56200	124700
Momentary (L/s)	252	442	694	1009	1199	1577	2461	3546	7868

Scan for more information

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