

MODELS 106-PG / S106-PG SINGLE CHAMBER, HYDRAULICALLY OPERATED VALVE

KEY FEATURES

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

PRODUCT OVERVIEW

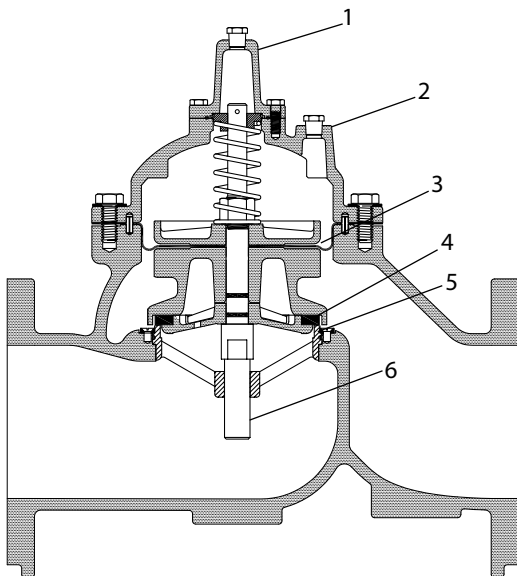
The 106-PG series control valve is designed to suit a large variety of applications such as pressure, flow or level control. This hydraulically operated valve introduces or releases water from the control chamber above the diaphragm to effectively maintain accurate water control

Refer to Main Valve Options on page 62 and Pilots & Accessories on page 207 to further customize the valve to suit specific applications.



PRODUCT LINE 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



ALTERNATIVE MODELS



A106-PG Angle



106-PG Threaded

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

VALVE SIZES & MATERIALS

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

| 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 |

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 78) or consult with Singer Valve.

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.

AVAILABLE OPTIONS

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

MAIN VALVE OPTIONS, REFER TO PAGE 62

Position Indicators (Available for install at Singer Valve 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

Reclaim Water

External Spring Lift

PILOTS & ACCESSORIES, REFER TO PG. 207 MATERIALS OF CONSTRUCTION

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

MODEL PGM

Provides a fully operational back-up system in the event of a diaphragm or pilot failure. See page 46.

ANTI-CAVITATION TRIM

Model 106-AC allows very high pressure drops in one valve, while retaining the standard 106 valve features. See page 78.

ORDERING INSTRUCTIONS

Refer to page 244 for the order form and ordering instructions.

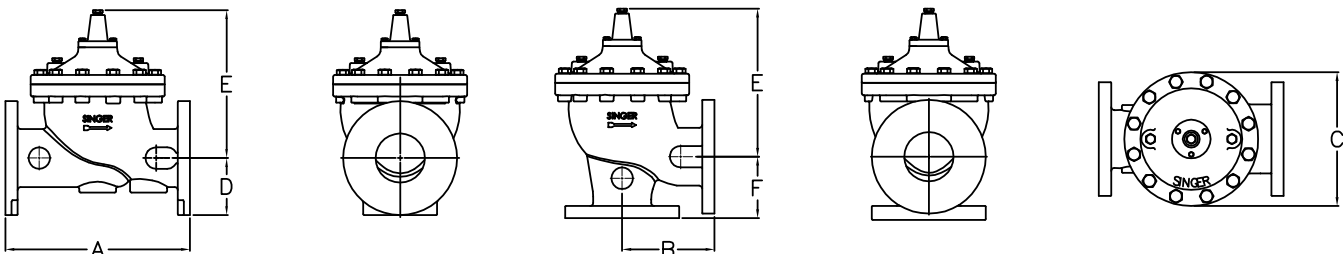
MODELS 106-PG / S106-PG SINGLE CHAMBER, HYDRAULICALLY OPERATED VALVE

ANSI VALVE DATA (US UNITS)

| Size | DWG | Standard | Flat Diaphragm System | | | | | | | | | | |
|--|-----|----------|--|--------|-------|----------|----------|-------|----------|---------|-------|------|------|
| | | | 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 | 6 in | 8 in |
| Globe Dimensions | | | All figures shown in inches unless otherwise stated | | | | | | | | | | |
| Lay Length | A | FNPT | 6.75 | 6.75 | 6.75 | 9.38 | 11.00 | 13.50 | - | - | - | - | - |
| Centerline to Bottom | D | FNPT | 2.50 | 2.50 | 2.50 | 2.75 | 3.38 | 3.68 | - | - | - | - | - |
| Lay Length | A | 150F | - | - | 8.50 | 9.38 | 11.00 | 12.00 | 15.00 | 20.00 | 25.38 | - | - |
| Centerline to Bottom | D | 150F | - | - | 2.75 | 3.00 | 3.50 | 3.75 | 4.60 | 5.60 | 7.63 | - | - |
| Lay Length | A | 300F | - | - | 9.00 | 10.00 | 11.63 | 13.25 | 15.63 | 21.00 | 26.38 | - | - |
| Centerline to Bottom | D | 300F | - | - | 3.25 | 3.25 | 3.75 | 4.13 | 5.09 | 6.34 | 7.88 | - | - |
| Angle Dimensions | | | | | | | | | | | | | |
| Center Inlet to Discharge | B | FNPT | 3.38 | 3.38 | 3.38 | 4.69 | 5.50 | 6.63 | - | - | - | - | - |
| Center Discharge to Inlet | F | FNPT | 3.00 | 3.00 | 3.00 | 3.25 | 4.00 | 4.63 | - | - | - | - | - |
| Center Inlet to Discharge | B | 150F | - | - | - | 4.75 | 5.50 | 6.06 | 7.50 | 10.00 | 12.75 | - | - |
| Center Discharge to Inlet | F | 150F | - | - | - | 3.25 | 4.00 | 4.06 | 5.00 | 6.00 | 8.00 | - | - |
| Center Inlet to Discharge | B | 300F | - | - | - | 5.00 | 5.88 | 6.43 | 7.88 | 10.50 | 13.25 | - | - |
| Center Discharge to Inlet | F | 300F | - | - | - | 3.50 | 4.31 | 4.43 | 5.31 | 6.50 | 8.50 | - | - |
| Common Dimensions (Globe & Angle) | | | | | | | | | | | | | |
| Width | C | | 4.88 | 4.88 | 6.13 | 6.50 | 8.19 | 9.25 | 10.88 | 16.75 | 21.63 | - | - |
| Height (To Stem Cap) Globe | E | | 4.38 | 4.38 | 4.38 | 4.75 | 7.50 | 8.00 | 9.15 | 11.75 | 14.91 | - | - |
| Height (To Stem Cap) Angle | E | | 4.38 | 4.38 | 4.38 | 4.75 | 7.50 | 8.00 | 9.15 | 11.75 | 14.91 | - | - |
| Body Port Tapping | | FNPT | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 1/2 | 1/2 |
| Stem Cap Plug | | MNPT | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 |
| Cover Port Tapping | | FNPT | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 1/2 | 1/2 | 1/2 |
| Valve Stroke | | | 1/2 | 1/2 | 1/2 | 9/16 | 15/16 | 1-1/8 | 1-7/16 | 1-11/16 | 2-7/8 | - | - |
| Displaced Bonnet Volume (Gallons) | | | 0.007 | 0.007 | 0.007 | 0.02 | 0.1 | 0.1 | 0.2 | 0.6 | 1.7 | - | - |
| Approximate Shipping Weight (Lbs) | | | 20 | 20 | 20 | 40 | 65 | 100 | 175 | 400 | 650 | - | - |
| Flow Capacities (USGPM) Globe & Angle | | | | | | | | | | | | | |
| C _v - Globe | | | 28 | 30 | 32 | 55 | 80 | 110 | 200 | 460 | 800 | - | - |
| C _v - Angle | | | 24 | 24 | 26 | 63 | 90 | 135 | 230 | 535 | 950 | - | - |
| Continuous (Globe) | | | 49 | 93 | 125 | 210 | 300 | 460 | 800 | 1800 | 3100 | - | - |
| Intermittent (Globe) | | | 61 | 120 | 160 | 260 | 375 | 575 | 1000 | 2250 | 3875 | - | - |
| Momentary (Globe) | | | 110 | 170 | 250 | 470 | 670 | 1030 | 1800 | 4000 | 7000 | - | - |
| Maximum Pressure Ratings (Ductile Only) | | | | | | | | | | | | | |
| PSI ¹ | | FNPT | 400 | 400 | 400 | 400 | 400 | 400 | - | - | - | - | - |
| PSI | | 150F | - | - | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| PSI ¹ | | 300F | - | - | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| Maximum Temperature | | | | | | | | | | | | | |
| Fahrenheit | | | 180° | 180° | 180° | 180° | 180° | 180° | 180° | 180° | 180° | 180° | 180° |

Available in Stainless Steel only. See page 65.

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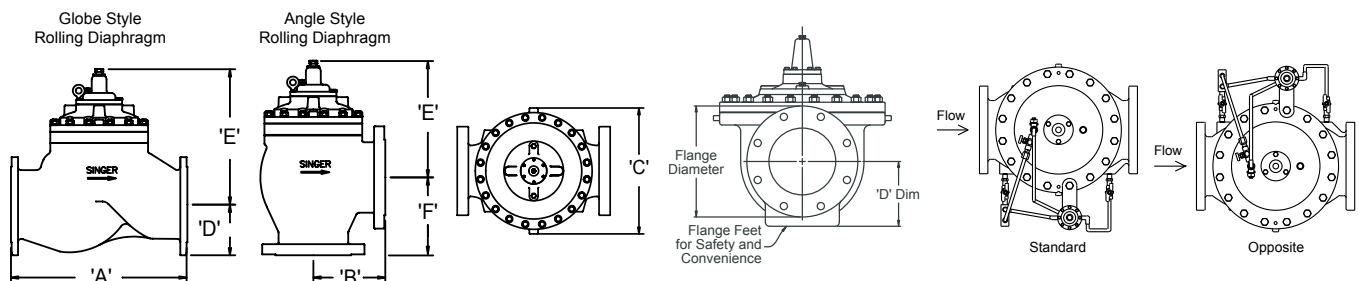


See pilot system information, page 207.
For additional Engineering notes, see page 242.

ANSI VALVE DATA (US UNITS)

| Size | DWG | Standard | Rolling Diaphragm System | | | | | | | | | |
|--|-----|----------|---|-------|-------|-------|-------|-------|--------|-------|--------|--|
| Inches | REF | ANSI | 6 in | 8 in | 10 in | 12 in | 14 in | 16 in | 20 in | 24 in | 36 in | |
| Globe Dimensions | | | All figures shown in inches unless otherwise stated. | | | | | | | | | |
| Lay Length | A | FNPT | - | - | - | - | - | - | - | - | - | |
| Centerline to Bottom | D | FNPT | - | - | - | - | - | - | - | - | - | |
| Lay Length | A | 150F | 20.00 | 25.38 | 29.75 | 34.00 | 31.00 | 41.38 | 52.00 | 61.50 | 76.00 | |
| Centerline to Bottom | D | 150F | 5.60 | 7.63 | 8.56 | 9.50 | 10.50 | 11.75 | 14.43 | 17.13 | 23.50 | |
| Lay Length | A | 300F | 21.00 | 26.38 | 31.12 | 35.50 | 32.50 | 43.50 | 53.62 | 63.25 | 78.00 | |
| Centerline to Bottom | D | 300F | 6.34 | 7.88 | 9.31 | 10.25 | 11.50 | 12.75 | 15.75 | 19.65 | 25.50 | |
| Angle Dimensions | | | | | | | | | | | | |
| Center Inlet to Discharge | B | FNPT | - | - | - | - | - | - | - | - | - | |
| Center Discharge to Inlet | F | FNPT | - | - | - | - | - | - | - | - | - | |
| Center Inlet to Discharge | B | 150F | - | - | 11.50 | 13.75 | - | 18.00 | - | - | - | |
| Center Discharge to Inlet | F | 150F | - | - | 12.50 | 12.50 | - | 15.69 | - | - | - | |
| Center Inlet to Discharge | B | 300F | - | - | 12.19 | 14.50 | - | 18.81 | - | - | - | |
| Center Discharge to Inlet | F | 300F | - | - | 13.19 | 13.25 | - | 16.50 | - | - | - | |
| Common Dimensions (Globe & Angle) | | | | | | | | | | | | |
| Width | C | | 12.75 | 16.09 | 22.13 | 26 | 26 | 32 | 35 | 49.68 | 64.5 | |
| Height (To Stem Cap) Globe | E | | 15.43 | 20.19 | 23.31 | 26.75 | 26.8 | 31.4 | 35.5 | 45.75 | 61 | |
| Height (To Stem Cap) Angle | E | | - | - | 20 | 23.75 | - | 28.5 | - | - | - | |
| Body Port Tapping | | FNPT | 3/8 | 1/2 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 | |
| Stem Cap Plug | | MNPT | 3/8 | 3/8 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 | |
| Cover Port Tapping | | FNPT | 1/2 | 1/2 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 | |
| Valve Stroke | | | 1-11/16 | 2-7/8 | 3-1/4 | 3-3/4 | 3-3/4 | 4-3/4 | 5-9/16 | 6 | 9 | |
| Displaced Bonnet Volume (Gallons) | | | 0.50 | 1.00 | 1.50 | 2.30 | 2.30 | 6.75 | 9.00 | 14.75 | 43.00 | |
| Approximate Shipping Weight (Lbs) | | | 350 | 650 | 900 | 1300 | 1400 | 2300 | 3450 | 5000 | 13500 | |
| Flow Capacities (USGPM) Globe & Angle | | | | | | | | | | | | |
| C _v - Globe | | | 460 | 800 | 1300 | 2100 | 2575 | 3300 | 5100 | 7600 | 16340 | |
| C _v - Angle | | | - | - | 1400 | 2450 | - | 4000 | - | - | - | |
| Continuous (Globe) | | | 1800 | 3100 | 4900 | 7000 | 8500 | 11000 | 17500 | 25000 | 55470 | |
| Intermittent (Globe) | | | 2250 | 3875 | 6100 | 8800 | 11500 | 14250 | 21700 | 31200 | 69338 | |
| Momentary (Globe) | | | 4000 | 7000 | 11000 | 16000 | 19000 | 25000 | 39000 | 56200 | 124700 | |
| Maximum Pressure Ratings (Ductile Only) | | | | | | | | | | | | |
| PSI ¹ | | FNPT | - | - | - | - | - | - | - | - | - | |
| PSI | | 150F | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | |
| PSI ¹ | | 300F | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | |
| Maximum Temperature | | | | | | | | | | | | |
| Fahrenheit | | | 180° | 180° | 180° | 180° | 180° | 180° | 180° | 180° | 180° | |

¹Valves rated and stamped 400 psi as standard. Valves rated and stamped 600 psi on request.



See pilot system information, page 207.
For additional Engineering notes, see page 242.

MODELS 106-PG / S106-PG SINGLE CHAMBER, HYDRAULICALLY OPERATED VALVE

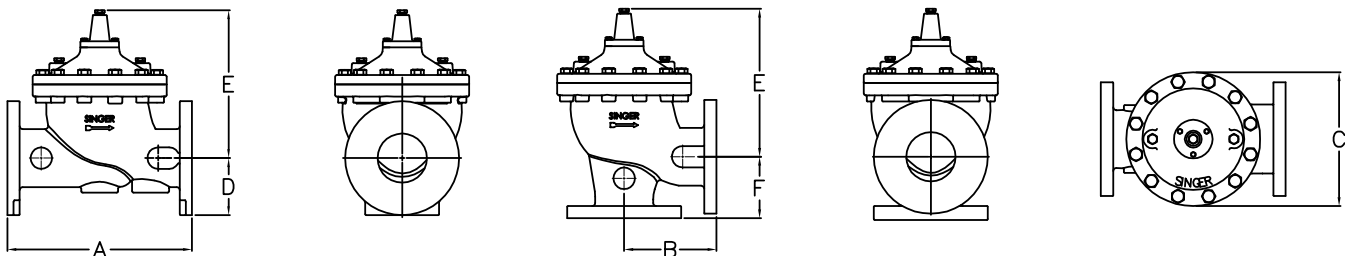
ANSI VALVE DATA (METRIC UNITS)

| Size | DWG | Std | Flat Diaphragm System | | | | | | | | | | |
|--|------|------|--|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| | | | 15 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm | 65 mm | 80 mm | 100 mm | 150 mm | 200 mm |
| | | | All figures show in mm unless otherwise stated | | | | | | | | | | |
| Globe Dimensions | | | | | | | | | | | | | |
| Lay Length | A | FNPT | 171 | 171 | 171 | 238 | 279 | 343 | - | - | - | - | - |
| Centerline to Bottom | D | FNPT | 64 | 64 | 64 | 70 | 86 | 93 | - | - | - | - | - |
| Lay Length | A | 150F | - | - | 216 | 238 | 279 | 305 | 381 | 508 | 645 | - | - |
| Centerline to Bottom | D | 150F | - | - | 70 | 76 | 89 | 95 | 117 | 142 | 200 | - | - |
| Lay Length | A | 300F | - | - | 229 | 254 | 295 | 337 | 397 | 533 | 670 | - | - |
| Centerline to Bottom | D | 300F | - | - | 83 | 83 | 95 | 105 | 129 | 161 | 200 | - | - |
| Angle Dimensions | | | | | | | | | | | | | |
| Center Inlet to Discharge | B | FNPT | 86 | 86 | 86 | 119 | 140 | 168 | - | - | - | - | - |
| Center Discharge to Inlet | F | FNPT | 76 | 76 | 76 | 83 | 102 | 118 | - | - | - | - | - |
| Center Inlet to Discharge | B | 150F | - | - | - | 121 | 140 | 154 | 191 | 254 | 324 | - | - |
| Center Discharge to Inlet | F | 150F | - | - | - | 83 | 102 | 103 | 127 | 152 | 203 | - | - |
| Center Inlet to Discharge | B | 300F | - | - | - | 127 | 149 | 163 | 200 | 267 | 337 | - | - |
| Center Discharge to Inlet | F | 300F | - | - | - | 89 | 109 | 113 | 135 | 165 | 216 | - | - |
| Common Dimensions (Globe & Angle) | | | | | | | | | | | | | |
| Width | C | | 124 | 124 | 156 | 165 | 208 | 235 | 276 | 425 | 549 | - | - |
| Height (to stem cap) Globe | E | | 111 | 111 | 111 | 121 | 191 | 203 | 232 | 298 | 379 | - | - |
| Height (to stem cap) Angle | E | | 111 | 111 | 111 | 121 | 191 | 203 | 232 | 298 | 379 | - | - |
| Body Port Tapping | FNPT | in | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 1/2 | 1/2 |
| Stem Cap Plug | MNPT | in | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 |
| Cover Port Tapping | FNPT | in | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 1/2 | 1/2 | 1/2 |
| Valve Stroke | | mm | 13 | 13 | 13 | 14 | 25 | 29 | 37 | 43 | 73 | - | - |
| Displaced Bonnet Volume (Litres) | | | 0.03 | 0.03 | 0.03 | 0.1 | 0.3 | 0.3 | 0.8 | 2.1 | 6.3 | - | - |
| Approximate Shipping Weight (Kilograms) | | | 9 | 9 | 9 | 18 | 29 | 45 | 79 | 181 | 295 | - | - |
| Flow Capacities (L/s) Globe & Angle | | | | | | | | | | | | | |
| Kv - Globe | | | 6.6 | 7.1 | 7.6 | 13 | 19 | 26 | 47 | 110 | 190 | - | - |
| Kv - Angle | | | 5.7 | 5.7 | 6.2 | 15 | 21 | 32 | 55 | 127 | 225 | - | - |
| Continuous (Globe) | | | 3 | 6 | 8 | 13 | 19 | 29 | 50 | 114 | 196 | - | - |
| Intermittent (Globe) | | | 4 | 8 | 10 | 16 | 24 | 36 | 63 | 142 | 244 | - | - |
| Momentary (Globe) | | | 7 | 11 | 16 | 30 | 42 | 65 | 114 | 252 | 442 | - | - |
| Maximum Pressure Ratings (Ductile Only) | | | | | | | | | | | | | |
| Bar ¹ | FNPT | | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | - | - | - | - |
| Bar | 150F | | - | - | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Bar ¹ | 300F | | - | - | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 |
| Maximum Temperature | | | | | | | | | | | | | |
| Celcius | | | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° |

Available in Stainless Steel only. See page 65.

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¹Valves rated and stamped 27.6 bar as standard. Valves rated and stamped 41 bar on request



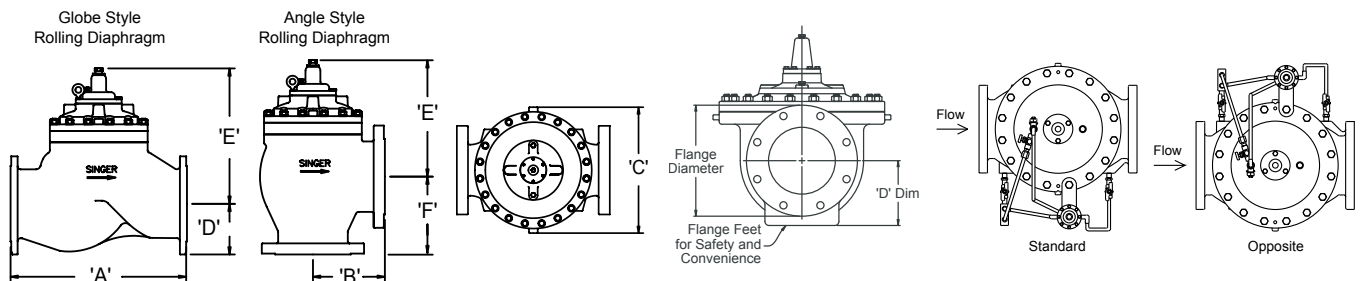
See pilot system information, page 207.
For additional Engineering notes, see page 242.

MODELS 106-PG / S106-PG SINGLE CHAMBER, HYDRAULICALLY OPERATED VALVE

ANSI VALVE DATA (METRIC UNITS)

| Size | DWG | Standard | Rolling Diaphragm System | | | | | | | | |
|--|------|----------|---|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | 150 mm | 200 mm | 250 mm | 300 mm | 350 mm | 400 mm | 500 mm | 600 mm | 900 mm |
| mm | REF | ANSI | | | | | | | | | |
| Globe Dimensions | | | All figures shown in mm unless otherwise stated. | | | | | | | | |
| Lay Length | A | FNPT | - | - | - | - | - | - | - | - | - |
| Centerline to Bottom | D | FNPT | - | - | - | - | - | - | - | - | - |
| Lay Length | A | 150F | 508 | 645 | 756 | 864 | 787 | 1051 | 1321 | 1562 | 1930 |
| Centerline to Bottom | D | 150F | 142 | 200 | 217 | 241 | 267 | 298 | 367 | 435 | 597 |
| Lay Length | A | 300F | 533 | 670 | 790 | 902 | 826 | 1105 | 1362 | 1607 | 1981 |
| Centerline to Bottom | D | 300F | 161 | 200 | 236 | 260 | 292 | 324 | 400 | 499 | 648 |
| Angle Dimensions | | | | | | | | | | | |
| Center Inlet to Discharge | B | FNPT | - | - | - | - | - | - | - | - | - |
| Center Discharge to Inlet | F | FNPT | - | - | - | - | - | - | - | - | - |
| Center Inlet to Discharge | B | 150F | - | - | 292 | 349 | - | 457 | - | - | - |
| Center Discharge to Inlet | F | 150F | - | - | 318 | 318 | - | 399 | - | - | - |
| Center Inlet to Discharge | B | 300F | - | - | 310 | 368 | - | 478 | - | - | - |
| Center Discharge to Inlet | F | 300F | - | - | 335 | 337 | - | 419 | - | - | - |
| Common Dimensions (Globe & Angle) | | | | | | | | | | | |
| Width | C | | 324 | 409 | 562 | 660 | 660 | 813 | 889 | 1262 | 1623 |
| Height (To Stem Cap) Globe | E | | 392 | 513 | 592 | 679 | 681 | 798 | 902 | 1162 | 1550 |
| Height (To Stem Cap) Angle | E | | - | - | 508 | 603 | - | 724 | - | - | - |
| Body Port Tapping | FNPT | Inches | 3/8 | 1/2 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 |
| Stem Cap Plug | MNPT | Inches | 3/8 | 3/8 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 |
| Cover Port Tapping | FNPT | Inches | 1/2 | 1/2 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 |
| Valve Stroke | | mm | 43 | 73 | 83 | 95 | 95 | 120 | 141 | 150 | 229 |
| Displaced Bonnet Volume (Litres) | | | 2 | 4 | 6 | 9 | 9 | 26 | 34 | 56 | 163 |
| Approximate Shipping Weight (Kilograms) | | | 160 | 250 | 480 | 590 | 635 | 1043 | 1565 | 2268 | 6124 |
| Flow Capacities (L/s) Globe & Angle | | | | | | | | | | | |
| K_v - Globe | | | 110 | 190 | 310 | 500 | 610 | 780 | 1210 | 1800 | 3875 |
| K_v - Angle | | | - | - | 332 | 581 | - | 948 | - | - | - |
| Continuous (Globe) | | | 114 | 196 | 309 | 442 | 536 | 694 | 1104 | 1577 | 3500 |
| Intermittent (Globe) | | | 142 | 244 | 385 | 555 | 726 | 899 | 1370 | 1968 | 4375 |
| Momentary (Globe) | | | 252 | 442 | 694 | 1009 | 1199 | 1577 | 2460 | 3546 | 7867 |
| Maximum Pressure Ratings (Ductile Only) | | | | | | | | | | | |
| Bar ¹ | | FNPT | - | - | - | - | - | - | - | - | - |
| Bar | | 150F | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Bar ¹ | | 300F | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 |
| Maximum Temperature | | | | | | | | | | | |
| Celcius | | | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° |

¹Valves rated and stamped 27.6 bar as standard. Valves rated and stamped 41 bar on request



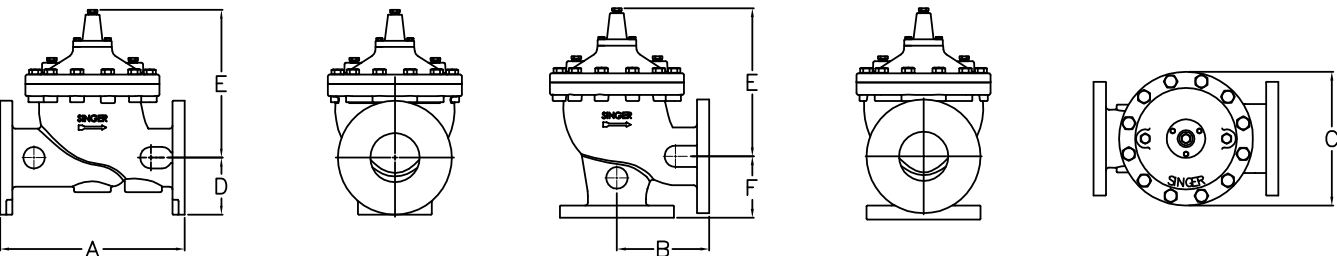
See pilot system information, page 207.
For additional Engineering notes, see page 242.

MODELS 106-PG / 206-PG SINGLE CHAMBER, HYDRAULICALLY OPERATED VALVE

| Size | DWG | Std | Flat Diaphragm System | | | | | | | | | | | |
|--|------|-------------|---|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-----|
| | | | 15 mm | 20 mm | 25 mm | 32 mm | 40 mm | 50 mm | 65 mm | 80 mm | 100 mm | 150 mm | 200 mm | |
| Globe Dimensions | | | All figures show in mm unless otherwise stated | | | | | | | | | | | |
| Lay Length | A | BSPT | 171 | 171 | 171 | 238 | 279 | 343 | - | - | - | - | - | - |
| Centerline to Bottom | D | BSPT | 64 | 64 | 64 | 70 | 86 | 93 | - | - | - | - | - | - |
| Lay Length | A | PN10 / PN16 | - | - | 229 | 238 | 279 | 318 | 381 | 508 | 645 | - | - | - |
| Centerline to Bottom | D | PN10 / PN16 | - | - | 83 | 76 | 89 | 100 | 117 | 142 | 200 | - | - | - |
| Lay Length | A | PN25 / PN40 | - | - | 229 | 238 | 279 | 318 | 397 | 533 | 670 | - | - | - |
| Centerline to Bottom | D | PN25 / PN40 | - | - | 83 | 76 | 89 | 100 | 129 | 161 | 200 | - | - | - |
| Angle Dimensions | | | | | | | | | | | | | | |
| Center Inlet to Discharge | B | BSPT | 86 | 86 | 86 | 119 | 140 | 168 | - | - | - | - | - | - |
| Center Discharge to Inlet | F | BSPT | 76 | 76 | 76 | 83 | 102 | 118 | - | - | - | - | - | - |
| Center Inlet to Discharge | B | PN10 / PN16 | - | - | - | 121 | 140 | 163 | 191 | 254 | 324 | - | - | - |
| Center Discharge to Inlet | F | PN10 / PN16 | - | - | - | 83 | 102 | 113 | 127 | 152 | 203 | - | - | - |
| Center Inlet to Discharge | B | PN25 / PN40 | - | - | - | 121 | 140 | 163 | 200 | 267 | 337 | - | - | - |
| Center Discharge to Inlet | F | PN25 / PN40 | - | - | - | 83 | 102 | 113 | 135 | 165 | 216 | - | - | - |
| Common Dimensions (Globe & Angle) | | | | | | | | | | | | | | |
| Width | C | | 124 | 124 | 156 | 165 | 208 | 235 | 276 | 425 | 549 | - | - | - |
| Height (To Stem Cap) Globe | E | | 111 | 111 | 111 | 121 | 191 | 203 | 232 | 298 | 379 | - | - | - |
| Height (To Stem Cap) Angle | E | | 111 | 111 | 111 | 121 | 191 | 203 | 232 | 298 | 379 | - | - | - |
| Body Port Tapping | FNPT | Inches | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 1/2 |
| Stem Cap Plug | MNPT | Inches | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 |
| Cover Port Tapping | FNPT | Inches | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 1/2 | 1/2 | 1/2 |
| Valve Stroke | | mm | 13 | 13 | 13 | 14 | 25 | 29 | 37 | 43 | 73 | - | - | - |
| Displaced Bonnet Volume (Litres) | | | 0.03 | 0.03 | 0.03 | 0.1 | 0.3 | 0.3 | 0.8 | 2.1 | 6.3 | - | - | - |
| Approximate Shipping Weight (Kilograms) | | | 9 | 9 | 9 | 18 | 29 | 45 | 79 | 181 | 295 | - | - | - |
| Flow Capacities (L/s) Globe & Angle | | | | | | | | | | | | | | |
| K _v - Globe | | | 6.6 | 7.1 | 7.6 | 13 | 19 | 26 | 47 | 110 | 190 | - | - | - |
| K _v - Angle | | | 5.7 | 5.7 | 6.2 | 15 | 21 | 32 | 55 | 123 | 225 | - | - | - |
| Continuous (Globe) | | | 3 | 6 | 8 | 13 | 19 | 29 | 50 | 114 | 196 | - | - | - |
| Intermittent (Globe) | | | 4 | 8 | 10 | 16 | 24 | 36 | 63 | 142 | 244 | - | - | - |
| Momentary (Globe) | | | 7 | 11 | 16 | 30 | 42 | 65 | 114 | 252 | 442 | - | - | - |
| Maximum Pressure Ratings (Ductile Only) | | | | | | | | | | | | | | |
| Bar ¹ | | BSPT | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | 27.6 | - | - | - | - | - |
| Bar | | PN16 | - | - | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| Bar ¹ | | PN25 | - | - | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Maximum Temperature | | | | | | | | | | | | | | |
| Celcius | | | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° |

Available in Stainless Steel only. See page 65.

Available in Stainless Steel only. See page 65.

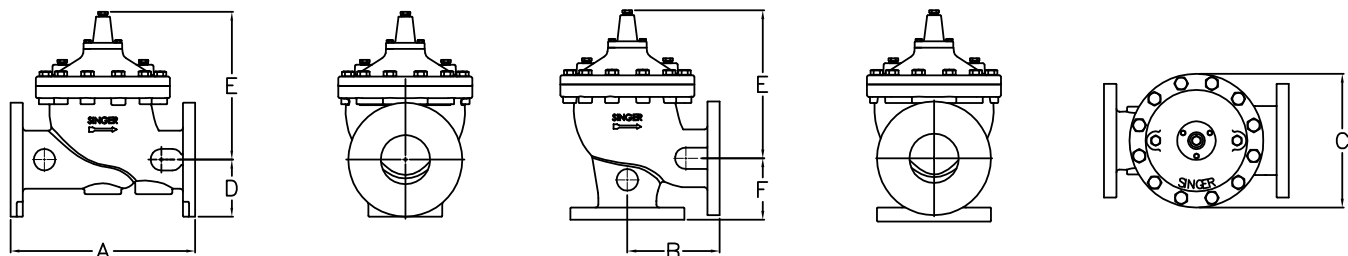


See pilot system information, page 207.
For additional Engineering notes, see page 242.

MODELS 106-PG / S106-PG SINGLE CHAMBER, HYDRAULICALLY OPERATED VALVE

ISO VALVE DATA (METRIC UNITS)

| Size | DWG | Standard | Rolling Diaphragm System | | | | | | | | |
|--|------|-------------|---|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | 150 mm | 200 mm | 250 mm | 300 mm | 350 mm | 400 mm | 500 mm | 600 mm | 900 mm |
| MM | REF | ISO | | | | | | | | | |
| Globe Dimensions | | | All figures shown in mm unless otherwise stated | | | | | | | | |
| Lay Length | A | BSPT | - | - | - | - | - | - | - | - | - |
| Centerline to Bottom | D | BSPT | - | - | - | - | - | - | - | - | - |
| Lay Length | A | PN10 / PN16 | 508 | 645 | 756 | 864 | 787 | 1051 | 1321 | 1562 | 1930 |
| Centerline to Bottom | D | PN10 / PN16 | 142 | 200 | 217 | 241 | 267 | 298 | 367 | 435 | 597 |
| Lay Length | A | PN25 / PN40 | 533 | 670 | 790 | 864 | 826 | 1105 | 1362 | 1607 | 1981 |
| Centerline to Bottom | D | PN25 / PN40 | 161 | 200 | 243 | 241 | 292 | 324 | 400 | 499 | 648 |
| Angle Dimensions | | | | | | | | | | | |
| Center Inlet to Discharge | B | BSPT | - | - | - | - | - | - | - | - | - |
| Center Discharge to Inlet | F | BSPT | - | - | - | - | - | - | - | - | - |
| Center Inlet to Discharge | B | PN10 / PN16 | - | - | 292 | 349 | - | 457 | - | - | - |
| Center Discharge to Inlet | F | PN10 / PN16 | - | - | 318 | 318 | - | 399 | - | - | - |
| Center Inlet to Discharge | B | PN25 / PN40 | - | - | 310 | 349 | - | 478 | - | - | - |
| Center Discharge to Inlet | F | PN25 / PN40 | - | - | 335 | 318 | - | 419 | - | - | - |
| Common Dimensions (Globe & Angle) | | | | | | | | | | | |
| Width | C | | 324 | 409 | 562 | 660 | 660 | 813 | 889 | 1262 | 1422 |
| Height (To Stem Cap) Globe | E | | 346 | 455 | 592 | 679 | 681 | 798 | 902 | 1162 | 1550 |
| Height (To Stem Cap) Angle | E | | - | - | 508 | 603 | - | 724 | - | - | - |
| Body Port Tapping | FNPT | Inches | 3/8 | 1/2 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 |
| Stem Cap Plug | MNPT | Inches | 3/8 | 3/8 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 |
| Cover Port Tapping | FNPT | Inches | 1/2 | 1/2 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 1 |
| Valve Stroke | | mm | 43 | 73 | 83 | 95 | 95 | 120 | 141 | 150 | 229 |
| Displaced Bonnet Volume (Litres) | | | 2 | 4 | 6 | 9 | 9 | 26 | 34 | 56 | 163 |
| Approximate Shipping Weight (Kilograms) | | | 160 | 250 | 480 | 590 | 635 | 1043 | 1565 | 2268 | 6124 |
| Flow Capacities (L/s) Globe & Angle | | | | | | | | | | | |
| Kv - Globe | | | 110 | 190 | 310 | 500 | 610 | 780 | 1210 | 1800 | 3875 |
| Kv - Angle | | | - | - | 332 | 581 | - | 948 | - | - | - |
| Continuous (Globe) | | | 114 | 196 | 309 | 442 | 536 | 694 | 1104 | 1577 | 3500 |
| Intermittent (Globe) | | | 142 | 244 | 385 | 555 | 726 | 899 | 1370 | 1968 | 4375 |
| Momentary (Globe) | | | 252 | 442 | 694 | 1009 | 1199 | 1577 | 2460 | 3546 | 7867 |
| Maximum Pressure Ratings (Ductile Only) | | | | | | | | | | | |
| Bar | | BSPT | - | - | - | - | - | - | - | - | - |
| Bar | | PN16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| Bar | | PN25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Maximum Temperature | | | | | | | | | | | |
| Celcius | | | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° | 82° |



See pilot system information, page 207.
For additional Engineering notes, see page 242.