MODELS 306 / S306-PGM

Integral Back-Up, Dual Diaphragm, Hydraulically Operated Valve

KEY FEATURES

- Ideal for applications requiring redundant and/or back-up security
- Virtually uninterrupted control under a variety of system failures
- Remote annunciation option available
- Available in globe style.

PRODUCT OVERVIEW

The 306-PGM and S306-PGM valves are designed for particularly sensitive applications or situations where valves are difficult to access and maintain.

The PGM series valves provide integral back-up control and the ability to signal should the desired function move off limits. It can also provide an independent and very positive override.

It is a variation of the standard single chamber 306-PG valve with modifications that add the following features:

- Back-up diaphragm
- Completely self-contained
- Modulating or emergency close back-up
- Back-up components kept out of the mainstream until required
- Extremely positive shut-off
- Emergency close for security breach or earthquake

With SRD technology the valve becomes incredibly steady throughout a complete range of flows and eradicates the need of additional low flow bypass valves.

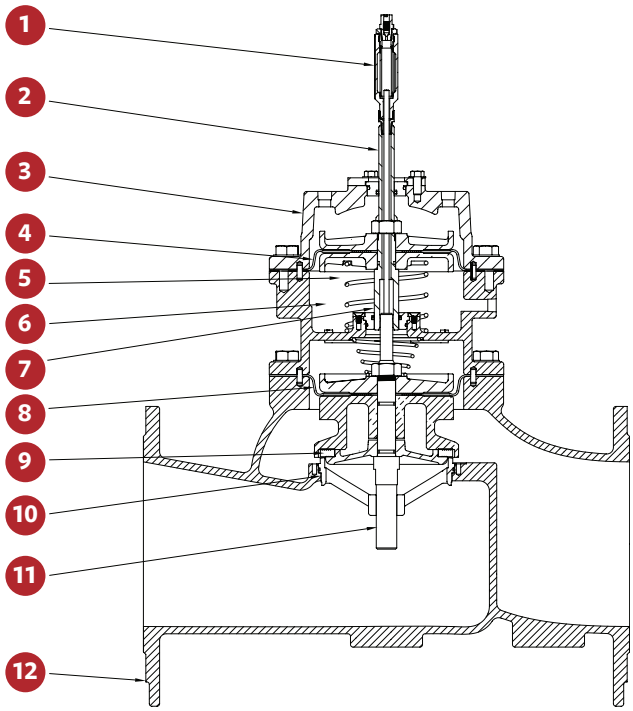
The PGM series valves may be combined with additional our specific accessories to add further customization such as:

- Back-up pilot system
- Annunciation with a Single Pole Double Throw Limit Switch

Refer to Main Valve Options and Pilots & Accessories to customize the valve to suit specific applications.

PRODUCT LINE DRAWING

ID	PART NAME
1	Primary Stem / Position Indicator
2	Secondary Stem
3	ASTM A536 Ductile Iron Construction
4	EPDM Secondary Diaphragm
5	Back-up Secondary Assembly
6	Open to Atmosphere
7	Sliding guide
8	EPDM primary Diaphragm
9	EPDM Resilient Disc
10	AISI 316 Stainless-Steel Seat
11	AISI 316 Stainless-Steel Stem
12	NSF61 Fusion Bonded Epoxy Coating



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VALVE SIZES & MATERIALS

VALVE MATERIALS		
	Standard	**Optional**
Available Sizes	Flanged	-
Globe	DN100 to DN400	-
VALVE COMPONENTS		
1. Valve Body, Cover	65-45-12 Ductile Iron	316 Stainless-Steel (limited sizes)
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 250-300 microns)	Consult factory
11. Fasteners	18-8 Stainless-Steel	316 Stainless-Steel

SELECTION

The Singer® Model 306-PGM incorporates a second actuator. If the primary system and/or the main valve fails, then the back-up pilot system takes over. Under normal operating conditions, there is no external discharge from the PGM. In modulating applications, when the back-up pilot system operates, there is a small (less than 1 USGPM / 0.06 L/s) continuous discharge that should be taken to drain.

The primary pilot function can be duplicated in the secondary pilot system to provide continuing back-up operations or the secondary system can be used for override functions. Consult with us with your specific application requirements.

Sizing of PGM valves are based on the same criteria as standard PG models.

AVAILABLE OPTIONS

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

MAIN VALVE OPTIONS

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

- Model X129 limit switch assembly with Single Pole Double Throw limit switch (Double Pole Double Throw optional)
- Model X156 analog position transmitters (4 - 20 mA)

Oxy-Nitride Stem **Reclaimed Water**

Internal Drop Check

PILOTS & ACCESSORIES, REFER TO MATERIALS OF CONSTRUCTION

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

ORDERING INSTRUCTIONS

Refer to the order form and ordering instructions.

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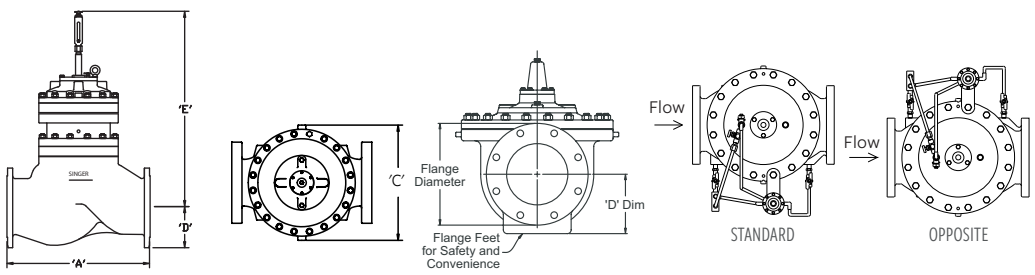
ANSI VALVE DATA (METRIC UNITS)

SIZE	DWG	STANDARD	FLAT DIAPHRAGM SYSTEM	
MM	REF	ISO	DN100	DN150
GLOBE DIMENSIONS			ALL FIGURES SHOW IN INCHES UNLESS OTHERWISE STATED	
Lay Length	A	PN10	350	480
Centerline to Bottom	D	PN10	144	152
Lay Length	A	PN16	350	480
Centerline to Bottom	D	PN16	144	152
Lay Length	A	PN25	350	480
Centerline to Bottom	D	PN25	144	152
Lay Length	A	PN40	350	480
Centerline to Bottom	D	PN40	144	152
COMMON DIMENSIONS (GLOBE & ANGLE)				
Width	C		235	311
Height (To Stem Cap) Globe	E		448	337
Body Port Tapping	FNPT	Inches	¾	3/4
Stem Cap Plug	MNPT	Inches	¾	¾
Cover Port Tapping	FNPT	Inches	¾	¾
Valve Stroke		mm	32.4	35.1
Displaced Bonnet Volume (Liters)			6	9
Approximate Shipping Weight (Kilograms)			49.0	82.5
FLOW CAPACITIES (L/S) GLOBE				
Kv - Globe (m^3/h @ 1 bar)			130	261
Continuous (Globe)			37	67
Intermittent (Globe)			44	75
Momentary (Globe)			78	136
MAXIMUM PRESSURE RATINGS				
Bar		PN10	10	10
Bar		PN16	16	16
Bar		PN25	25	25
Bar		PN40	40	40
MAXIMUM TEMPERATURE				
Celcius			82°	82°

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



GLOBE STYLE
ROLLING DIAPHRAGM

See pilot system information and additional engineering notes.

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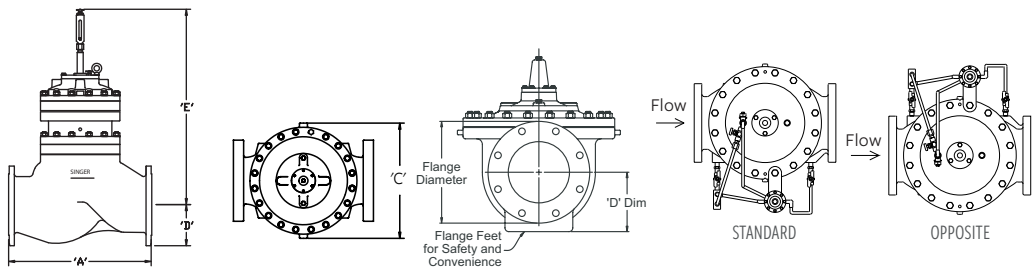
ANSI VALVE DATA (METRIC UNITS)

SIZE	DWG	STANDARD	ROLLING DIAPHRAGM SYSTEM				
MM	REF	ANSI	DN200	DN250	DN300	DN350	DN400
GLOBE DIMENSIONS		BS4504	ALL FIGURES SHOW IN INCHES UNLESS OTHERWISE STATED				
Lay Length	A	PN10	600	730	850	980	1100
Centerline to Bottom	D	PN10	200	217	240	270	298
Lay Length	A	PN16	600	730	850	980	1100
Centerline to Bottom	D	PN16	200	217	240	270	298
Lay Length	A	PN25	600	730	850	980	1100
Centerline to Bottom	D	PN25	200	217	240	270	298
Lay Length	A	PN40	600	730	850	980	1100
Centerline to Bottom	D	PN40	200	217	240	270	298
COMMON DIMENSIONS (GLOBE & ANGLE)							
Width	C		340	413	481	670	670
Height (To Stem Cap) Globe	E		553	683	924	1128	1130
Body Port Tapping	FNPT	Inches	3/4	3/4	3/4	3/4	3/4
Stem Cap Plug	MNPT	Inches	¾	¾	¾	¾	¾
Cover Port Tapping	FNPT	Inches	¾	¾	¾	¾	¾
Valve Stroke		mm	48.0	73.6	88.5	99.1	104.1
Displaced Bonnet Volume (Liters)			9	26	34	53	56
Approximate Shipping Weight (Kilograms)			106.5	209.8	341.5	550.8	560.7
FLOW CAPACITIES (L/S) GLOBE							
Kv - Globe (m^3/h @ 1 bar)			462	852	1341	2045	2149
Continuous (Globe)			150	267	417	560	600
Intermittent (Globe)			178	316	465	637	667
Momentary (Globe)			306	530	833	1019	1211
MAXIMUM PRESSURE RATINGS							
Bar		PN10	10	10	10	10	10
Bar		PN16	16	16	16	16	16
Bar		PN25	25	25	25	25	25
Bar		PN40	40	40	40	40	40
MAXIMUM TEMPERATURE							
Celcius			82°	82°	82°	82°	82°

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



GLOBE STYLE
ROLLING DIAPHRAGM

See pilot system information and additional engineering notes.