

MODEL 206-PT / 206-PTC / S206-PT / S206-PTC DOUBLE CHAMBER HYDRAULICALLY OPERATED VALVE

KEY FEATURES

- Positive control, even with low operating pressure
- Precise positioning
- Internal drop check included on the PTC model
- Available in globe and angle style

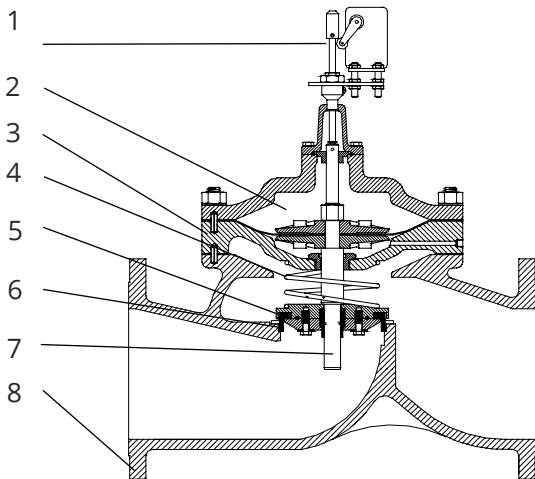
PRODUCT OVERVIEW

The 206-PT and 206-PTC series control valves are hydraulically operated by introducing or releasing water from the control chambers. PT and PTC valves have two operating chambers which are divided from each other by the diaphragm, and are separated from the flowing media by an adaptor plate. 206-PTC is an enhancement of the 206-PT and includes an internal drop check feature. This mechanical check provides non-slam closure on reverse flow, independently of the stem position or the pilot operation. PT and PTC valves are usually combined with Singer Valve specific purpose pilots and accessories to provide control for a wide range of functions: typically pump control and solenoid control applications. 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. Optional Model X129 Limit Switch Assembly
2. Double Chambers Separated From The Flowing Media
3. ASTM A536 Ductile Iron Construction
4. Optional Internal Check Feature (PT)
5. EPDM Resilient Disc
6. AISI 316 Stainless Steel Seat
7. AISI 316 Stainless Steel Stem
8. NSF 61 Fusion Bonded Epoxy Coating



ALTERNATIVE MODELS



A206-PT Angle

SELECTION

The 206-PT and 206-PTC valves operate by introducing or exhausting water from the upper and lower chambers at controlled rates. Since the operating chambers are separated from the flowing media, a positive and precise differential pressure can be established across the diaphragm. Valves are sized to provide an appropriate pressure drop for each application. Valves usually exhaust to atmosphere. Sizing is ultimately determined by the specific application. Refer to the capacity charts for general guidelines.

VALVE SIZES & MATERIALS:

Valve Materials		
	Standard	Optional
Available Sizes	Flanged	-
Globe	3 in to 36 in (80-900 mm)	-
Angle	4 in to 8 in (100 mm-200 mm)	-
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 10-14 mils (250-350 microns)	Consult factory
11. Fasteners	18-8 Stainless Steel	316 Stainless Steel

Double-chambered automatic control valves are typically used for pump control. Other uses would include but not be limited to low-pressure differential applications. 206-PT and 206-PTC valves are particularly well suited for applications that require valves to open fully regardless of flow or pressure drop or any application where more relatively constant, controlled speed is required.

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 analog position transmitters (4 - 20 mA)

Oxy-Nitride Stem

Grooved Ends

Reclaimed Water

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.

ORDERING INSTRUCTIONS

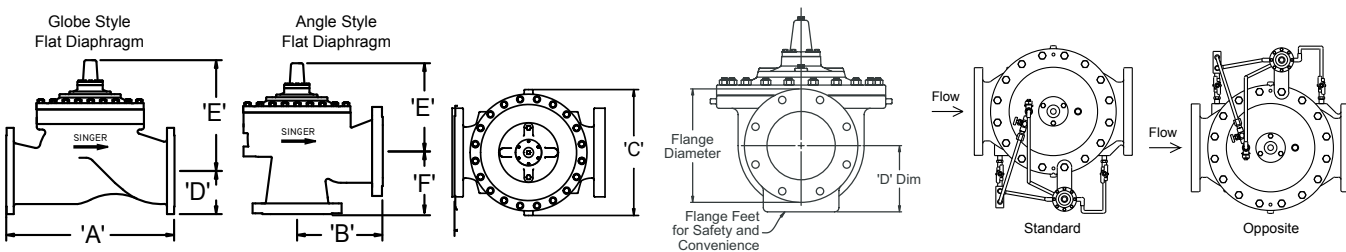
Refer to page 244 for the order form and ordering instructions.

MODEL 206-PT / 206-PTC / S206-PT / S206-PTC DOUBLE CHAMBER HYDRAULICALLY OPERATED VALVE

VALVE DATA (US UNITS)

Size	DWG	Standard	Flat Diaphragm System				
Inches	REF	ANSI	3 in	4 in	6 in	8 in	10 in
Globe Dimensions			All figures shown in inches unless otherwise stated				
Lay Length	A	FNPT	-	-	-	-	-
Centerline to Bottom	D	FNPT	-	-	-	-	-
Lay Length	A	150F	12.00	15.00	20.13	25.00	24.50
Centerline to Bottom	D	150F	4.00	4.60	5.62	6.75	8.56
Lay Length	A	300F	-	15.63	21.00	26.00	25.88
Centerline to Bottom	D	300F	-	5.00	6.34	7.50	9.31
Angle Dimensions							
Center Inlet to Discharge	B	FNPT	-	-	-	-	-
Center Discharge to Inlet	F	FNPT	-	-	-	-	-
Center Inlet to Discharge	B	150F	-	7.56	10.19	12.50	-
Center Discharge to Inlet	F	150F	-	5.94	6.19	9.00	-
Center Inlet to Discharge	B	300F	-	7.88	10.63	13.00	-
Center Discharge to Inlet	F	300F	-	6.25	6.81	9.50	-
Common Dimensions (Globe & Angle)							
Width	C		8.19	10.00	12.50	16.00	20.00
Height (To Stem Cap) Globe	E		8.93	11.28	12.25	16.25	21.38
Height (To Stem Cap) Angle	E		-	9.50	10.50	13.43	-
Body Port Tapping		FNPT	3/8	3/8	3/8	1/2	1/2
Stem Cap Plug		MNPT	3/8	3/8	3/8	3/8	3/8
Cover Port Tapping		FNPT	3/8	3/8	3/8	1/2	1/2
Valve Stroke			15/16	1-1/8	1-7/16	1-11/16	2-7/8
Displaced Bonnet Volume (Gallons)			0.02	0.1	0.2	0.6	1.7
Approximate Shipping Weight (Lbs)			75	100	250	500	650
Flow Capacities (USGPM) Globe & Angle							
C _v - Globe			60	150	250	505	985
C _v - Angle			-	150	250	560	-
Continuous (Globe)			300	580	1025	2300	4100
Intermittent (Globe)			373	690	1190	2700	4670
Momentary (Globe)			564	1236	2160	4800	8400
Maximum Pressure Ratings (Ductile Only)							
PSI		FNPT	-	-	-	-	-
PSI		150F	250	250	250	250	250
PSI ¹		300F	400	400	400	400	400
Maximum Temperature							
Fahrenheit			180°	180°	180°	180°	180°

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



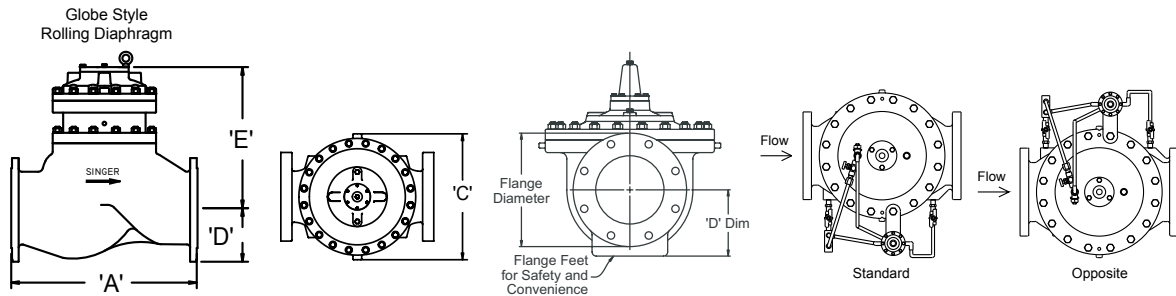
See pilot system information, page 207.
For additional Engineering notes, see page 242.

MODEL 206-PT / 206-PTC / S206-PT / S206-PTC DOUBLE CHAMBER HYDRAULICALLY OPERATED VALVE

VALVE DATA (US UNITS)

Size	DWG	Standard	Rolling Diaphragm System							
Inches	REF	ANSI	12 in	16 in	18 in	20 in	24 in x 16 in	24 in x 20 in	30 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	27.50	36.00	42.00	45.00	50.50	61.50	69.93	69.93
Centerline to Bottom	D	150F	9.50	11.75	12.50	13.93	16.50	17.13	20.69	23.75
Lay Length	A	300F	29.00	37.63	43.63	46.63	52.25	63.25	-	-
Centerline to Bottom	D	300F	10.50	12.75	14.00	15.25	18.00	19.65	-	-
Angle Dimensions										
Center Inlet to Discharge	B	FNPT	-	-	-	-	-	-	-	-
Center Discharge to Inlet	F	FNPT	-	-	-	-	-	-	-	-
Center Inlet to Discharge	B	150F	-	-	-	-	-	-	-	-
Center Discharge to Inlet	F	150F	-	-	-	-	-	-	-	-
Center Inlet to Discharge	B	300F	-	-	-	-	-	-	-	-
Center Discharge to Inlet	F	300F	-	-	-	-	-	-	-	-
Common Dimensions (Globe & Angle)										
Width	C		22.13	26.00	31.31	31.50	36.00	36.00	49.75	49.75
Height (To Stem Cap) Globe	E		22.63	27.00	32.38	32.38	32.38	41.75	45.75	45.75
Height (To Stem Cap) Angle	E		-	-	-	-	-	-	-	-
Body Port Tapping		FNPT	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Stem Cap Plug		MNPT	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Cover Port Tapping		FNPT	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Valve Stroke			3-1/4	3-3/4	4-3/4	4-3/4	4-3/4	5-9/16	6	6
Displaced Bonnet Volume (Gallons)			1.5	2.3	6.8	6.8	14.8	9.0	14.8	14.8
Approximate Shipping Weight (Lbs)			900	1400	2400	2600	2800	3240	6200	7000
Flow Capacities (USGPM) Globe & Angle										
C _v - Globe			1550	2200	3300	3400	3500	5100	7800	8000
C _v - Angle			-	-	-	-	-	-	-	-
Continuous (Globe)			6400	9230	16500	16500	16500	21700	33650	33800
Intermittent (Globe)			7320	10470	20915	20915	20915	26000	37490	37640
Momentary (Globe)			13200	19200	30000	30050	30100	39000	67490	67640
Maximum Pressure Ratings (Ductile Only)										
PSI		FNPT	-	-	-	-	-	-	-	-
PSI		150F	250	250	250	250	250	250	250	250
PSI ¹		300F	400	400	400	400	400	400	400	400
Maximum Temperature										
Fahrenheit			180°	180°	180°	180°	180°	180°	180°	180°

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



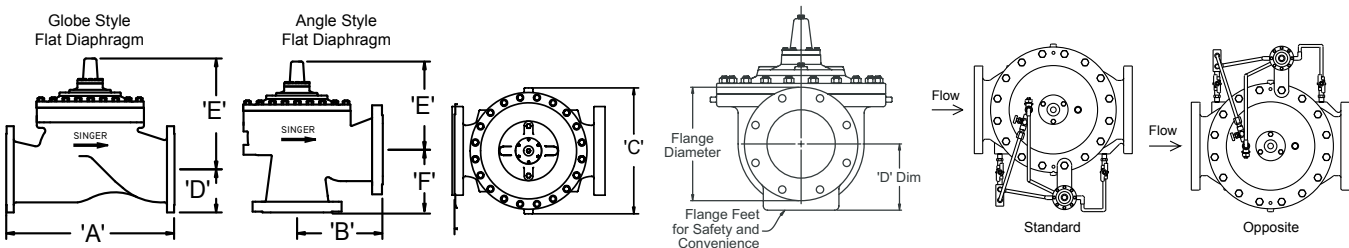
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MODEL 206-PT / 206-PTC / S206-PT / S206-PTC DOUBLE CHAMBER HYDRAULICALLY OPERATED VALVE

ANSI VALVE DATA (METRIC UNITS)

Size	DWG	Standard	Flat Diaphragm System				
mm	REF	ANSI	80 mm	100 mm	150 mm	200 mm	250 mm
Globe Dimensions			All figures shown in mm unless otherwise stated				
Lay Length	A	FNPT	-	-	-	-	-
Centerline to Bottom	D	FNPT	-	-	-	-	-
Lay Length	A	150F	305	381	511	635	622
Centerline to Bottom	D	150F	102	117	143	171	217
Lay Length	A	300F	-	397	533	660	657
Centerline to Bottom	D	300F	-	127	161	191	236
Angle Dimensions							
Center Inlet to Discharge	B	FNPT	-	-	-	-	-
Center Discharge to Inlet	F	FNPT	-	-	-	-	-
Center Inlet to Discharge	B	150F	-	192	259	318	-
Center Discharge to Inlet	F	150F	-	151	157	229	-
Center Inlet to Discharge	B	300F	-	200	270	330	-
Center Discharge to Inlet	F	300F	-	159	173	241	-
Common Dimensions (Globe & Angle)							
Width	C		208	254	318	406	508
Height (To Stem Cap) Globe	E		227	287	311	413	543
Height (To Stem Cap) Angle	E		-	241	267	341	-
Body Port Tapping	FNPT	Inches	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
Cover Port Tapping	FNPT	Inches	3/8	3/8	3/8	1/2	1/2
Valve Stroke		mm	14	29	37	43	73
Displaced Bonnet Volume (Litres)			0.1	0.3	0.8	2.1	6.3
Approximate Shipping Weight (Kilograms)			34	45	113	227	295
Flow Capacities (L/s) Globe & Angle							
K_v - Globe			14	36	60	120	230
K_v - Angle			-	36	59	138	-
Continuous (Globe)			19	37	65	145	259
Intermittent (Globe)			24	44	75	170	295
Momentary (Globe)			36	78	136	303	530
Maximum Pressure Ratings (Ductile Only)							
Bar		FNPT	-	-	-	-	-
Bar		150F	17	17	17	17	17
Bar ¹		300F	27.6	27.6	27.6	27.6	27.6
Maximum Temperature							
Celsius			82°	82°	82°	82°	82°

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



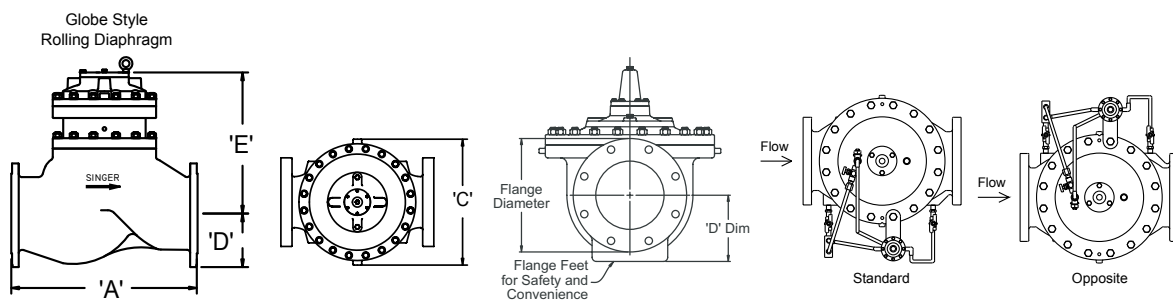
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ANSI VALVE DATA (METRIC UNITS)

Size	DWG	Standard	Rolling Diaphragm System						
mm	REF	ANSI	300 mm	400 mm	450 mm	500 mm	600 x 400 mm	600 x 500 mm	900 mm
Globe Dimensions			All figures shown in mm unless otherwise stated.						
Lay Length	A	FNPT	-	-	-	-	-	-	-
Centerline to Bottom	D	FNPT	-	-	-	-	-	-	-
Lay Length	A	150F	699	914	1067	1143	1283	1562	1776
Centerline to Bottom	D	150F	241	298	318	354	419	435	588
Lay Length	A	300F	737	956	1108	1184	1327	1607	-
Centerline to Bottom	D	300F	267	324	356	387	457	499	-
Angle Dimensions									
Center Inlet to Discharge	B	FNPT	-	-	-	-	-	-	-
Center Discharge to Inlet	F	FNPT	-	-	-	-	-	-	-
Center Inlet to Discharge	B	150F	-	-	-	-	-	-	-
Center Discharge to Inlet	F	150F	-	-	-	-	-	-	-
Center Inlet to Discharge	B	300F	-	-	-	-	-	-	-
Center Discharge to Inlet	F	300F	-	-	-	-	-	-	-
Common Dimensions Globe									
Width	C		562	660	795	800	914	914	1262
Height (To Stem Cap) Globe	E		575	686	822	822	822	1060	1162
Height (To Stem Cap) Angle	E		-	-	-	-	-	-	-
Body Port Tapping	FNPT	Inches	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Stem Cap Plug	MNPT	Inches	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Cover Port Tapping	FNPT	Inches	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Valve Stroke		mm	83	95	120	120	120	141	150
Displaced Bonnet Volume (Litres)			6	9	26	26	26	34	56
Approximate Shipping Weight (Kilograms)			408	635	1089	1179	1270	1470	3175
Flow Capacities (L/s) Globe									
K_v - Globe			370	520	780	810	830	1210	1870
K_v - Angle			-	-	-	-	-	-	-
Continuous (Globe)			404	582	1041	1041	1041	1370	2132
Intermittent (Globe)			465	661	1320	1320	1320	1640	2375
Momentary (Globe)			833	1211	1893	1896	1899	2460	4267
Maximum Pressure Ratings (Ductile Only)									
Bar		FNPT	-	-	-	-	-	-	-
Bar		150F	17	17	17	17	17	17	17
Bar*		300F	27.6	27.6	27.6	27.6	27.6	27.6	27.6
Maximum Temperature									
Celsius			82°	82°	82°	82°	82°	82°	82°

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



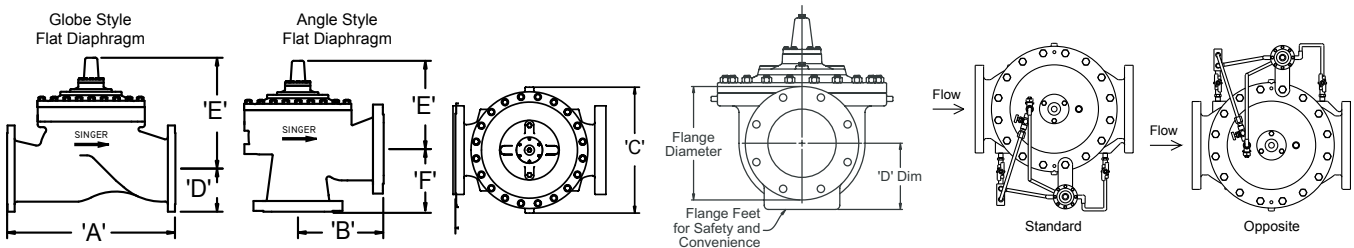
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MODEL 206-PT / 206-PTC / S206-PT / S206-PTC DOUBLE CHAMBER HYDRAULICALLY OPERATED VALVE

ISO VALVE DATA (METRIC UNITS)

Size	DWG	Standard	Flat Diaphragm System				
mm	REF	ANSI	80 mm	100 mm	150 mm	200 mm	250 mm
Globe Dimensions			All figures shown in mm unless otherwise stated				
Lay Length	A	FNPT	-	-	-	-	-
Centerline to Bottom	D	FNPT	-	-	-	-	-
Lay Length	A	150F	305	381	511	635	622
Centerline to Bottom	D	150F	102	117	143	171	217
Lay Length	A	300F	-	397	533	660	657
Centerline to Bottom	D	300F	-	127	161	191	236
Angle Dimensions							
Center Inlet to Discharge	B	FNPT	-	-	-	-	-
Center Discharge to Inlet	F	FNPT	-	-	-	-	-
Center Inlet to Discharge	B	150F	-	192	259	318	-
Center Discharge to Inlet	F	150F	-	151	157	229	-
Center Inlet to Discharge	B	300F	-	200	270	330	-
Center Discharge to Inlet	F	300F	-	159	173	241	-
Common Dimensions (Globe & Angle)							
Width	C		208	254	318	406	508
Height (To Stem Cap) Globe	E		227	287	311	413	543
Height (To Stem Cap) Angle	E		-	241	267	341	-
Body Port Tapping	FNPT	Inches	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
Cover Port Tapping	FNPT	Inches	3/8	3/8	3/8	1/2	1/2
Valve Stroke		mm	14	29	37	43	73
Displaced Bonnet Volume (Litres)			0.1	0.3	0.8	2.1	6.3
Approximate Shipping Weight (Kilograms)			34	45	113	227	295
Flow Capacities (L/s) Globe & Angle							
K_v - Globe			14	36	60	120	230
K_v - Angle			-	36	59	138	-
Continuous (Globe)			19	37	65	145	259
Intermittent (Globe)			24	44	75	170	295
Momentary (Globe)			36	78	136	303	530
Maximum Pressure Ratings (Ductile Only)							
Bar		FNPT	-	-	-	-	-
Bar		PN16	17	17	17	17	17
Bar ¹		PN25	27.6	27.6	27.6	27.6	27.6
Maximum Temperature							
Celsius			82°	82°	82°	82°	82°

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



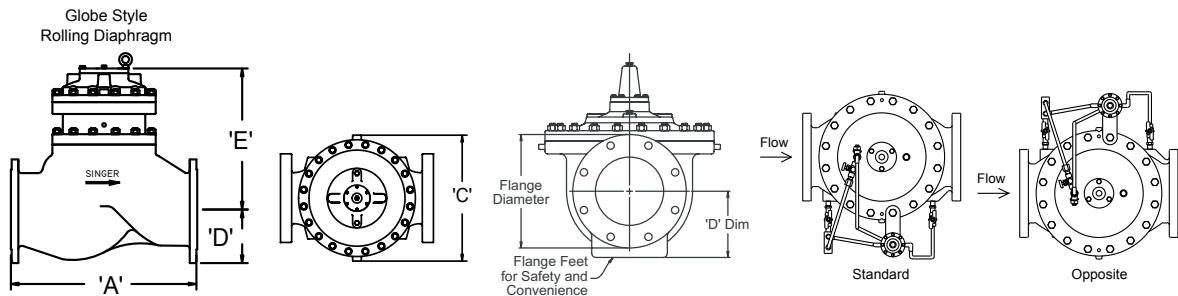
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ISO VALVE DATA (METRIC UNITS)

Size	DWG	Standard	Rolling Diaphragm System						
			300 mm	400 mm	450 mm	500 mm	600 x 400 mm	600 x 500 mm	900 mm
Globe Dimensions			All figures shown in mm unless otherwise stated.						
Lay Length	A	FNPT	-	-	-	-	-	-	-
Centerline to Bottom	D	FNPT	-	-	-	-	-	-	-
Lay Length	A	150F	699	914	1067	1143	1283	1562	1776
Centerline to Bottom	D	150F	241	298	318	354	419	435	588
Lay Length	A	300F	737	956	1108	1184	1327	1607	-
Centerline to Bottom	D	300F	267	324	356	387	457	499	-
Angle Dimensions									
Center Inlet to Discharge	B	FNPT	-	-	-	-	-	-	-
Center Discharge to Inlet	F	FNPT	-	-	-	-	-	-	-
Center Inlet to Discharge	B	150F	-	-	-	-	-	-	-
Center Discharge to Inlet	F	150F	-	-	-	-	-	-	-
Center Inlet to Discharge	B	300F	-	-	-	-	-	-	-
Center Discharge to Inlet	F	300F	-	-	-	-	-	-	-
Common Dimensions Globe									
Width	C		562	660	795	800	914	914	1262
Height (To Stem Cap) Globe	E		575	686	822	822	822	1060	1162
Height (To Stem Cap) Angle	E		-	-	-	-	-	-	-
Body Port Tapping	FNPT	Inches	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Stem Cap Plug	MNPT	Inches	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Cover Port Tapping	FNPT	Inches	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Valve Stroke		mm	83	95	120	120	120	141	150
Displaced Bonnet Volume (Litres)			6	9	26	26	26	34	56
Approximate Shipping Weight (Kilograms)			408	635	1089	1179	1270	1470	3175
Flow Capacities (L/s) Globe									
K _v - Globe			370	520	780	810	830	1210	1870
K _v - Angle			-	-	-	-	-	-	-
Continuous (Globe)			404	582	1041	1041	1041	1370	2132
Intermittent (Globe)			465	661	1320	1320	1320	1640	2375
Momentary (Globe)			833	1211	1893	1896	1899	2460	4267
Maximum Pressure Ratings (Ductile Only)									
Bar		FNPT	-	-	-	-	-	-	-
Bar		PN16	17	17	17	17	17	17	17
Bar*		PN25	27.6	27.6	27.6	27.6	27.6	27.6	27.6
Maximum Temperature									
Celcius			82°	82°	82°	82°	82°	82°	82°

*Valves 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.