

Models 106-A-Type 4

One-Way Flow Altitude Control Valve with Differential Control

KEY FEATURES

- No overflows
- Adjustable draw-down level (differential) set-point
- Superior repeatability
- Positive shut-off
- Adjustable draw-down for improved water cycling



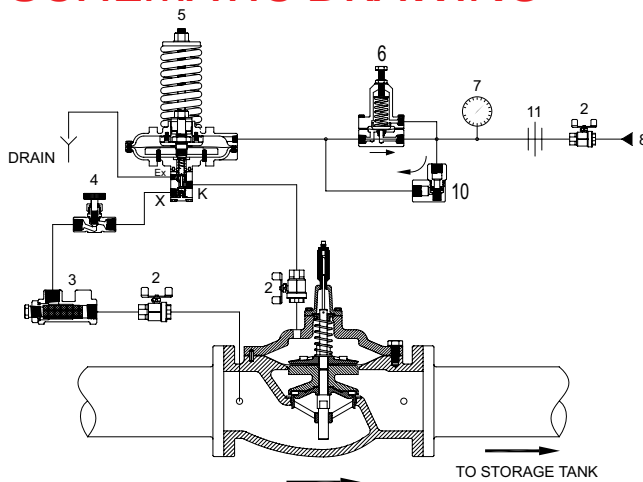
PRODUCT OVERVIEW

The 106-A-Type 4 altitude control valves are based on the 106-PG main valve, and is ideal for maintaining a preset maximum water level. The valve functions as a two position control valve, either fully open or fully closed.

The Type 4 allows normal forward flow to fill the storage tank to the maximum level, then closes drip-tight at the set-point. It opens to refill the tank once the level drops an adjustable amount below the high water level.

Note: Distribution from the storage tank is through a separate pipeline. This valve does not operate as a check valve to prevent reverse flow.

SCHEMATIC DRAWING



Schematic A-0415C

1. Main Valve - 106-PG, SPG or GE with X107 visual position indicator. Available in 2 in / 50 mm to 8 in / 200 mm, FNTP 2 in / 50 mm to 3 in / 80 mm, Flanged 2 1/2 in / 63 mm to 8 in / 200 mm, Grooved 2 in / 50 mm to 8 in / 200 mm, Globe style only
2. Isolation Valve
3. Strainer - 40 mesh stainless steel screen
4. Closing Speed Control
5. Model 301-4 Altitude Pilot
6. Model 106-RD Differential Pilot
7. Altitude Gauge - dual scale - feet and meter
8. Sensing connection to storage tank (complete in field)
9. Model 10 Check Valve
10. Union

STANDARD MATERIALS

Standard materials for pilot system components are:

- Ductile Iron
- Stainless Steel
- Brass
- Copper

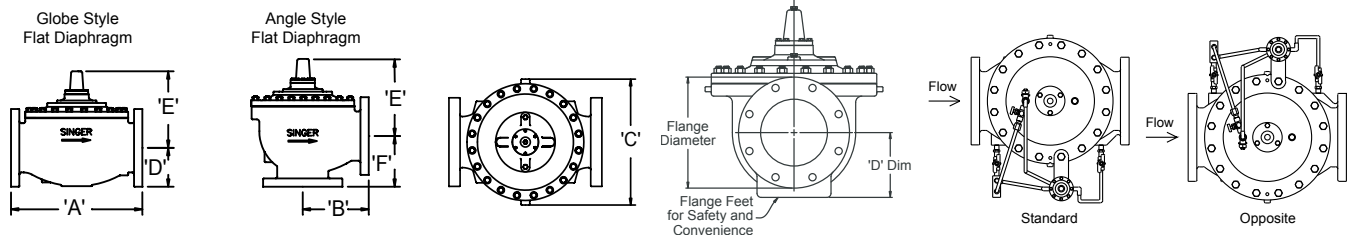
Model 106-PG

Full Port, Single Chamber, Hydraulically Operated Valve

ANSI Valve Data (US Units)

Size	DWG	Standard	Flat Diaphragm System										
Inches	REF	ANSI	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	3.50	3.50	6.75	6.75	6.75	9.38	11.00	13.50	-	-	-
Centerline to Bottom	D	FNPT	1.20	1.20	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		3.00	3.00	4.88	4.88	6.13	6.5	8.19	9.25	10.88	16.75	21.63
Height (To Stem Cap) Globe	E		3.06	3.06	4.38	4.38	4.38	6.75	9.5	10.5	12.25	11.75	14.91
Height (To Stem Cap) Angle	E		-	-	4.38	4.38	4.38	4.75	7.71	10.5	12.25	11.75	14.91
Body Port Tapping		FNPT	1/4	1/4	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	1/2
Stem Cap Plug		MNPT	1/4	1/4	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	1/2	1/2
Valve Stroke			1/4	1/4	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)			0.002	0.002	0.007	0.007	0.007	0.02	0.1	0.1	0.2	0.6	1.7
Approximate Shipping Weight (Lbs)			10	10	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
PSI ¹		300F			-	-	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.



Model S106-PG

Full Port, Single Chamber, Hydraulically Operated Valve

ANSI Valve Data (US and Metric Units)

Size	DWG	Standard	Rolling Diaphragm System			
			US Units		Metric Units	
Inches/mm	REF	ANSI	6 in	8 in	150 mm	200 mm
Globe Dimensions			inches		mm	
Lay Length	A		-	-	-	-
Centerline to Bottom	D		-	-	-	-
Lay Length	A		20.00	25.38	508	645
Centerline to Bottom	D		5.60	7.63	142	200
Lay Length	A		21.00	26.38	533	670
Centerline to Bottom	D		6.34	7.88	161	200
Angle Dimensions						
Center Inlet to Discharge	B		-	-	-	-
Center Discharge to Inlet	F		-	-	-	-
Center Inlet to Discharge	B		-	-	-	-
Center Discharge to Inlet	F		-	-	-	-
Center Inlet to Discharge	B		-	-	-	-
Center Discharge to Inlet	F		-	-	-	-
Common Dimensions (Globe & Angle)			inches		mm	
Width	C		12.75	16.09	324	409
Height (To Stem Cap) Globe	E		15.43	20.19	392	513
Height (To Stem Cap) Angle	E		-	-	-	-
Body Port Tapping	FNPT	inch	3/8	1/2	3/8	1/2
Stem Cap Plug	MNPT	inch	3/8	3/8	3/8	3/8
Cover Port Tapping	FNPT	inch	1/2	1/2	1/2	1/2
Valve Stroke			1-11/16	2-7/8	43	73
Displaced Bonnet Volume			0.50 gal	1.00 gal	2 L	4 L
Approximate Shipping Weight			350 Lbs	650 Lbs	160 Kg	250 Kg
Flow Capacities Globe & Angle			USGPM		L/s	
C _v - Globe			460	800	110	190
C _v - Angle			-	-	-	-
Continuous (Globe)			1800	3100	114	196
Intermittent (Globe)			2250	3875	142	244
Momentary (Globe)			4000	7000	252	442
Maximum Pressure Ratings (Ductile Only)			PSI		Bar	
	FNPT		-	-	-	-
	150F		250	250	17	17
	300F		400	400	27.6	27.6
Maximum Temperature			Fahrenheit		Celsius	
			180°	180°	82°	82°

Model 106-PG

Full Port, 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
mm	REF	ISO	All figures show in mm unless otherwise stated										
Globe Dimensions			All figures show in mm unless otherwise stated										
Lay Length	A	-	89	89	171	171	171	238	279	343	-	-	-
Centerline to Bottom	D	-	31	31	64	64	64	70	86	93	-	-	-
Lay Length	A	-	-	-	-	-	229	238	279	318	381	508	645
Centerline to Bottom	D	-	-	-	-	-	83	76	89	100	117	142	200
Lay Length	A	-	-	-	-	-	229	238	279	318	397	533	670
Centerline to Bottom	D	-	-	-	-	-	83	76	89	100	129	161	200
Angle Dimensions													
Center Inlet to Discharge	B	-	-	-	86	86	86	119	140	168	-	-	-
Center Discharge to Inlet	F	-	-	-	76	76	76	83	102	118	-	-	-
Center Inlet to Discharge	B	-	-	-	-	-	-	121	140	163	191	254	324
Center Discharge to Inlet	F	-	-	-	-	-	-	83	102	113	127	152	203
Center Inlet to Discharge	B	-	-	-	-	-	-	121	140	163	200	267	337
Center Discharge to Inlet	F	-	-	-	-	-	-	83	102	113	135	165	216
Common Dimensions (Globe & Angle)													
Width	C		76	76	124	124	156	152	208	235	276	425	549
Height (To Stem Cap) Globe	E		78	78	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	1/4	1/4	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	1/2
Stem Cap Plug	MNPT	Inches	1/4	1/4	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	1/2	1/2
Valve Stroke		mm	6.4	6.4	13	13	13	14	25	29	37	43	73
Displaced Bonnet Volume (Litres)			0.01	0.01	0.03	0.03	0.03	0.1	0.3	0.3	0.8	2.1	6.3
Approximate Shipping Weight (Kilograms)			5	5	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		-	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	-	-	-
Bar		-	-	-	-	-	16	16	16	16	16	16	16
Bar ¹		-	-	-	-	-	25	25	25	25	25	25	25
Maximum Temperature													
Celcius			82°	82°	82°	82°	82°	82°	82°	82°	82°	82°	82°

