

Models 106-F-Type 4 / 206-F-Type 4 Modulating Float Valve



206-F-Type 4 Globe

KEY FEATURES

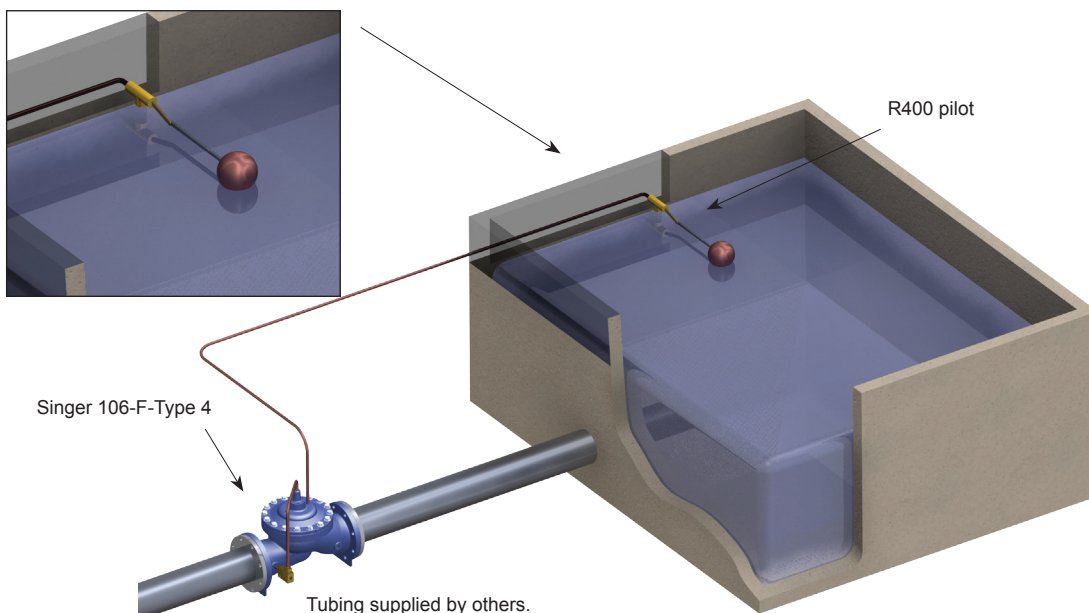
- Maintains relatively constant level
- Automatic compensation for level draw-down
- Standard integral damping reduces hunting
- Drip-tight at high level shut-off
- Low supply pressure options

Product Overview

The Singer model 106-F-Type 4 and 206-F-Type 4 modulating float valves are based on the 106-PG or 206-PG main valve. They are ideal for balancing the inflow and outflow demand into the reservoir and maintaining level at the designated maximum.

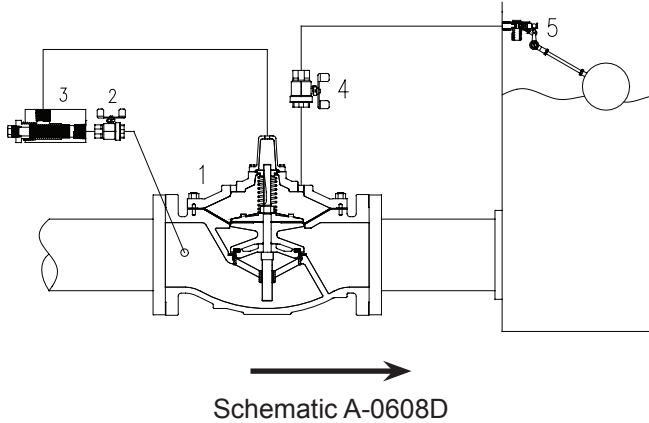
The valve closes drip-tight at the maximum level and modulates to maintain the tank level. The float pilot is remotely installed at the high level in the reservoir tank. Pilot connections to the main valve are connected in the field. As the reservoir level drops the main valve is opened proportionally to increase the filling rate. Movement of the main stem alters the size of the closing restriction, interrupting the tendency of the valve to hunt.

Typical Application



Models 106-F-Type 4 / 206-F-Type 4 Modulating Float Valve

Schematic Drawing



1. Main Valve - 106-PG or 206-PG, Internal Needle Stem Valve (INSV) built into stem
2. Isolation Valve
3. Strainer - 40 mesh stainless steel screen
4. Isolation Valve
5. R400 Float Pilot comes with plastic float

Note: Schematic shown for 2.5 in / 65 mm and larger

Standard Materials

Standard materials for pilot system components are:

- Stainless Steel
- Plastic float
- Brass, Copper, Iron

Note: The stilling well and the connections between the main valve and the R-400 pilot are provided by others.

Specifications

- The valve shall be a Singer Valve model 106-F-Type 4 / 206-F-Type 4, size “_____”, ANSI Class 150 (ANSI 300, ANSI flanges drilled to ISO PN 10 / 16/ 25 or 40) pressure rating / flange standard, globe (angle), style valve. The Model R-400 Modulating Float Valve shall be utilized with a ten inch brass float rod and polypropylene float (connection between main valve and Model R-400 Modulating Float Valve by others). Assembly shall be according to Schematic A-0608D.
- The valve allows flow into the reservoir in order to maintain the level at the designated maximum. The valve closes drip-tight at the maximum level. As the reservoir drops, the main valve opens proportionally (modulates) to increase the filling rate in an effort to maintain the maximum reservoir level.
- Refer to Main Valve section, see page 11, 106-PG (or 206-PG) for detailed information pertaining to valve sizes and materials, selection criteria and specifications.
- Refer to Pilot and Accessories section, see page 249, Model R-400 Modulating Float Pilot for detailed information pertaining to materials and specifications.

Selection Summary

1. Generally select line size to minimize losses during normal forward flow.
2. Use the performance curves and sizing bulletin to check the pressure drop across the valve at normal flow rate.

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3. Check the maximum operating pressure against the maximum working pressure rating of the flanges.
4. If the outlet pressure is less than 35% of the inlet pressure, check for cavitation.
5. If the inlet pressure is less than 10 psi / 0.7 bar higher than the maximum reservoir head, consult with Singer Valve.
6. Assisted opening may be required for full flow.
 - for non-modulating (on-off) service, refer to model 106-F-Type 5 / 206-F-Type 5 float valve
 - for high tower reservoir, refer to models 106-A-Type 1 / 206-A-Type 1, or 2, or 3, or 4 Altitude Control valves

Ordering Instructions

Refer to page 286 for the order form and ordering instructions.

Additionally, include the following information for this product:

- Full port (106) and reduced port (206)

106-F-Type 4	Flow Capacity (See 106-PG in Main Valve section for other valve data)								
	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 (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
Maximum Continuous (USGPM)	12	19	49	93	125	210	300	460	800
Maximum Continuous (L/s)	0.8	1	3	6	8	13	19	29	50
Pressure Drop (PSI)	20	20	20	15	15	20	15	16	15
Pressure Drop (Bar)	1.4	1.4	1.4	1.0	1.0	1.4	1	1.1	1.0

106-F-Type 4	Flow Capacity (See 106-PG in Main Valve section for other valve data)								
	6 in	8 in	10 in	12 in	14 in	16 in	20 in	24 in	36 in
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
Maximum Continuous (USGPM)	1800	3100	4900	7000	8500	11000	17500	25000	55470
Maximum Continuous (L/s)	114	196	309	442	536	694	1104	1577	3500
Pressure Drop (PSI)	15	15	15	16	11	17	8.6	9.6	8.6
Pressure Drop (Bar)	1.0	1.0	1.0	1.1	0.8	1.2	0.6	0.7	0.6

206-F-Type 4	Flow Capacity (See 206-PG in Main Valve section for other valve data)								
	3 in	4 in	6 in	8 in	10 in	12 in	16 in	18 in	20 in
Size (inches)	3 in	4 in	6 in	8 in	10 in	12 in	16 in	18 in	20 in
Size (mm)	80 mm	100 mm	150 mm	200 mm	250 mm	300 mm	400 mm	450 mm	500 mm
Maximum Continuous (USGPM)	300	580	1025	2300	4100	6400	9230	16500	16500
Maximum Continuous (L/s)	19	37	65	145	260	404	582	1040	1040
Pressure Drop (PSI)	19	15	17	21	17	17	18	23	22
Pressure Drop (Bar)	1.3	1.0	1.2	1.4	1.2	1.2	1.2	1.6	1.5

206-F-Type 4	Flow Capacity (See 206-PG in Main Valve section for other valve data)					
	24 x 16 in	24 x 20 in	28 in	30 in	32 in	36 in
Size (inches)	24 x 16 in	24 x 20 in	28 in	30 in	32 in	36 in
Size (mm)	600 x 400 mm	600 x 500 mm	700 mm	750 mm	800 mm	900 mm
Maximum Continuous (USGPM)	16500	21700	33600	33650	33700	33800
Maximum Continuous (L/s)	1040	1370	2120	2123	2126	2132
Pressure Drop (PSI)	21	21	17	17	17	17
Pressure Drop (Bar)	1.4	1.4	1.2	1.2	1.2	1.2