

# Type 2 One-Way Flow Altitude Valve

The Singer 106-A-Type 2, and 206-A-Type 2 Altitude Control Valves are ideal for maintaining a preset maximum water level in a tank or reservoir.



TECHNICAL GUIDE: **AVH1.22**

## Applications

Potable water  
Tank level control  
Municipal  
Mining Applications  
Irrigation Applications

## Product Attributes

Prevents tank/tower/reservoir  
overflow  
Superior repeatability  
Positive shut-off  
Maintains a preset maximum  
water level

## Approvals/Standards

AS 5081:2008  
Flanges to AS/NZS 4087 Fig. B5  
Coating complies with AS/NZS 4158



**Licence Number:**  
WMK/SMK26726

The valve functions as a two position control valve, either fully open or fully closed. The Type 2 valve allows normal forward flow to fill the reservoir to the maximum level then closes drip-tight at the set-point. It opens to refill the tank once the level drops a fixed distance below the high water level.

Note: This valve does not operate as a check valve to prevent reverse flow.

### STANDARD MATERIALS

Standard materials for pilot system components are:

- Ductile Iron
- Stainless-Steel
- Brass
- Copper

### SELECTION SUMMARY

1. Generally select line size to minimise losses during normal forward flow.
2. Use the performance curves and sizing bulletin to determine the pressure drop across the valve.
3. Maximum continuous flow – 106 is 6m/s, 206 is 5 m/s. Consult Hygrade if higher flows are expected.
4. The pilot system exhausts to atmosphere ensuring the valve opens fully; requires that the displaced volume of water be taken to drain with each opening.
5. Select pilot spring range. Standard (301-4) is 3-18m. Specify for 301-4 ranges:
  - 1-6m
  - 12-38m
  - 18-67m

6. Level drop required to open: 0.3m – 0.91m approximate.

7. If the fill line discharges below the reservoir surface, an internal drop check or separate check valve is suggested. This prevents return flow on loss of supply pressure.

### ORDERING INSTRUCTIONS

Refer to the order form and ordering instructions.

Additionally, include the following information for this product:

1. Single Chamber (106), or (206)
2. Pilot Range

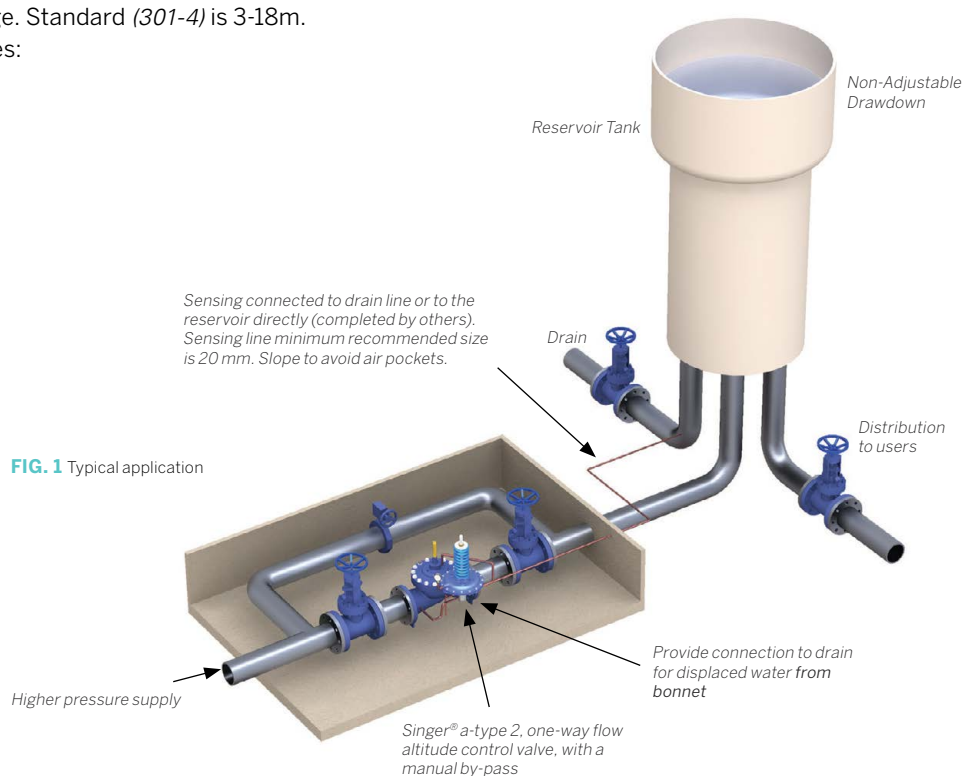
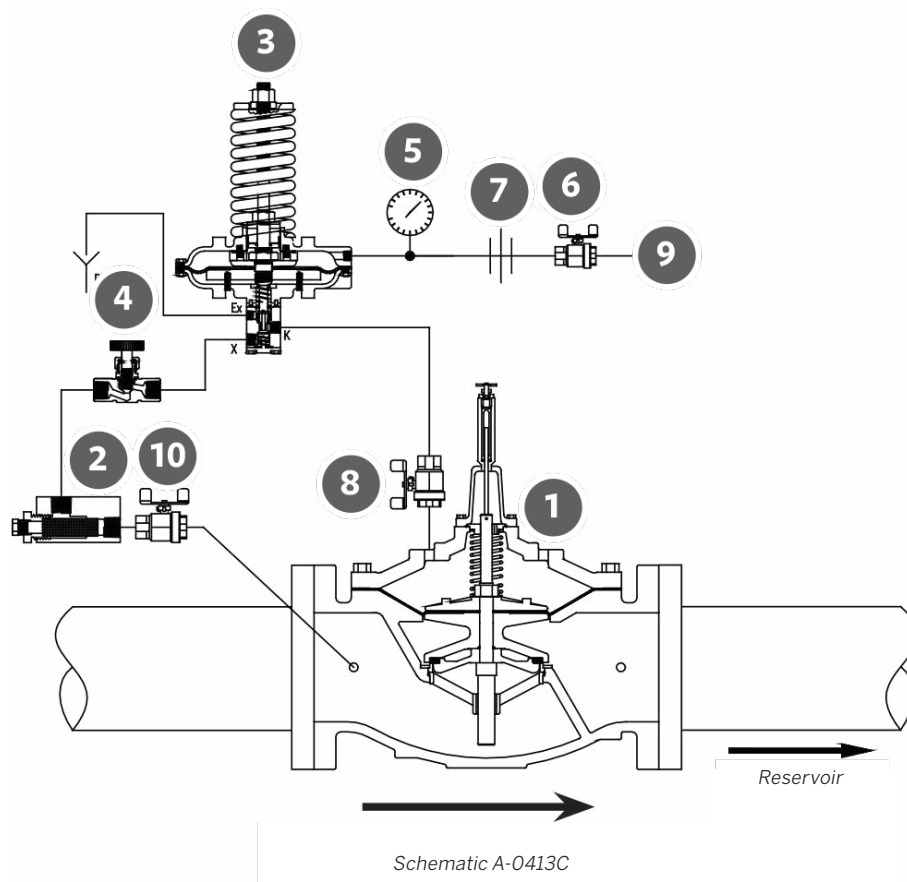


FIG. 1 Typical application



### SCHEMATIC DRAWING

1. Main Valve – 106-PG, or 206-PG – with X107 Position Indicator
2. Strainer – 40 Mesh Stainless-Steel Screen
3. Model 301-4 Altitude Pilot
4. Closing Speed Control
5. Altitude Gauge
6. Isolation Valve
7. Union
8. Isolation Valve
9. Sensing Connection to Reservoir (*Complete in field by others*)
10. Isolation Valve

**TABLE 1** 106-A-Type 2 and 206-A-Type 2 Flow Coefficient Cv

Size (mm)	K <sub>v</sub> <sup>2</sup>	
	106-A-Type 1	206-A-Type 1
80	95	52
100	173	130
150	398	216
200	692	437
250	1125	1125
300	1817	1817
350	2227	-
400	2855	2227
450	4191	2855
500	4412	4412
600	6574	-
600 x 400	-	6574
600 x 500	-	14134
700	10467	6747
750	-	6747
800	-	6834
900	14134	6920
1000	-	14134
1200	-	14134

\*\*K<sub>v</sub> = L / s at 1 bar pressure drop

(Q=K<sub>v</sub> √ ΔP )

Note: Based on fully open valve



Scan for more  
information

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