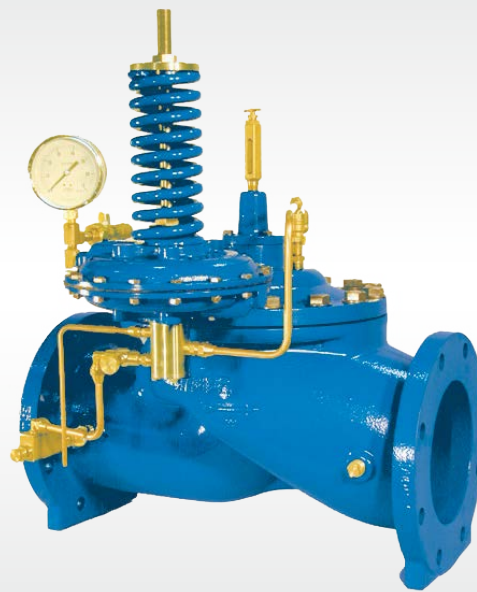


Type 2 One-Way Flow Altitude Valve

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

Quality

ISO 9001:2015 Quality Management Systems

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.

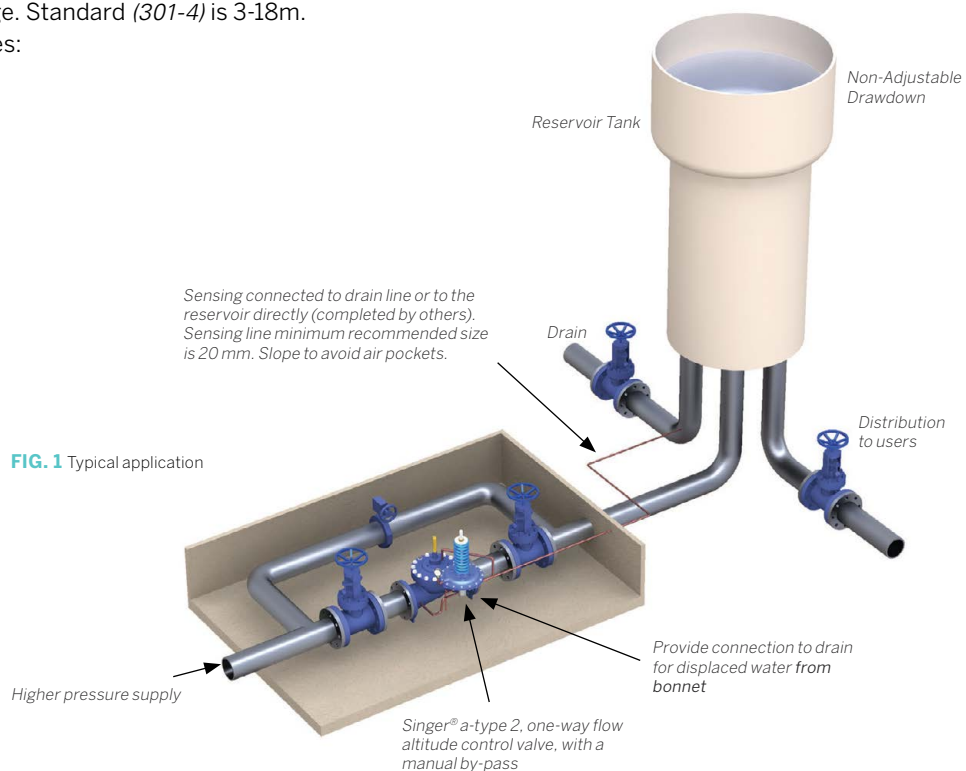
7. If the fill line discharges below the reservoir surface, an internal drop check or separate check valve is suggested. This prevents return flow on loss of supply pressure.

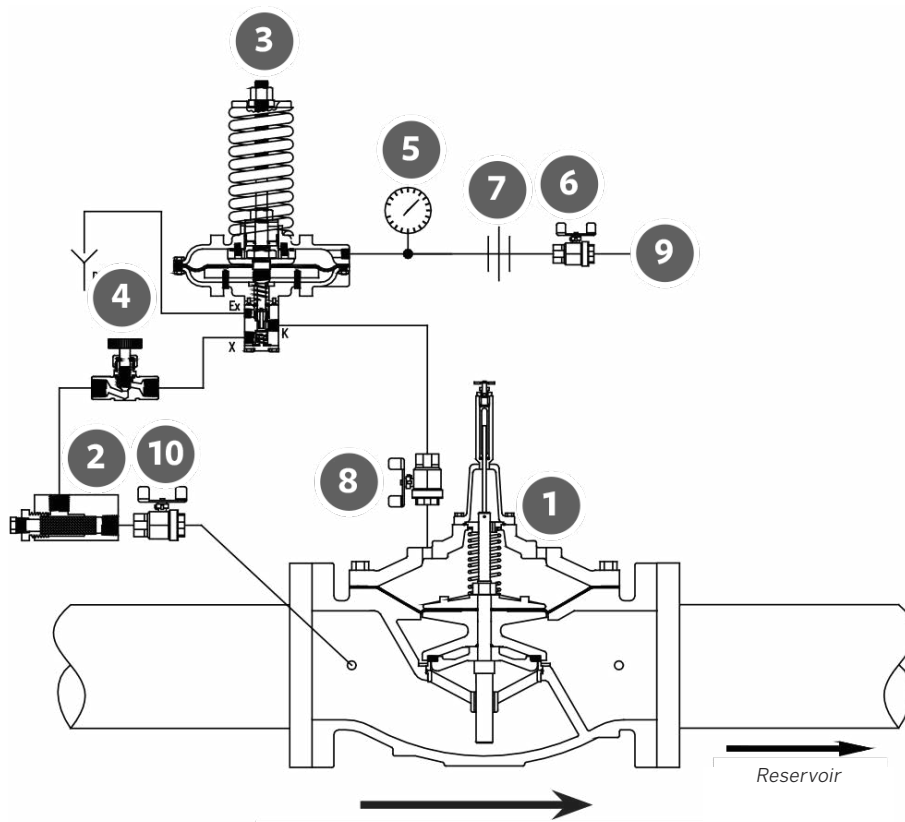
ORDERING INSTRUCTIONS

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





Schematic A-0413C

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_v^2	
	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

** $K_v = L / s$ at 1 bar pressure drop

$$(Q = K_v \sqrt{\Delta P})$$

Note: Based on fully open valve



Scan for more
information

Disclaimer: While every effort has been made to ensure that the information in this document is correct and accurate, users of Hygrade Water Infrastructure product or information within this document must make their own assessment of suitability for their particular application. Product dimensions are nominal only, and should be verified if critical to a particular installation. No warranty is either expressed, implied, or statutory made by Hygrade Water Infrastructure unless expressly stated in any sale and purchase agreement entered into between Hygrade Water Infrastructure and the user.

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