Series W-M110-10 Thread BSPT (DN32-DN50)

Series W-M110-10 Flange(DN50-DN300)

Modulating Float Control Valve

Application:

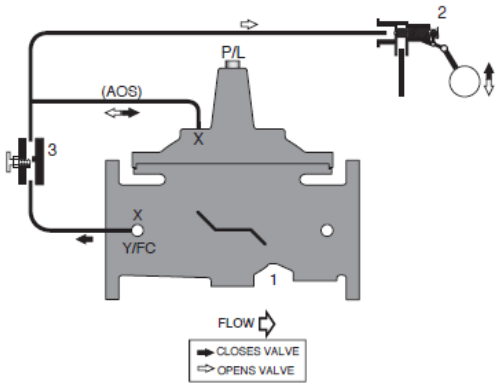
The Watts W-M110-10 Modulating Float Control Valve consists of the main valve of hydraulic control valve and adjustable floating ball valve. It can adjust the liquid level height, once the adjustment is completed, the valve will always maintain the liquid level height. It's generally used in water tank or reservoir in industrial enterprises and residential building.

Features:

1. Compact structure, reliable sealing.
2. Simple structure, convenient maintenance.
3. Control the main valve opening and closing through floating ball valve, making sure that water level inside the water tank keeps given height.
4. The main valve opening or closing speed can be adjusted by the needle valve.

Operating Principles:

The main valve, floating ball valve and needle valve are connected by copper tube (as below), when drawdown, floating ball also drops, water in the upper cavity of main valve discharges through the floating ball valve. Because of the resistance of needle valve, water pressure in the upper cavity of main valve reduces, high pressure in the main valve inlet pushes the disc, main valve opens to supply water to the water pool. When the liquid level rises, floating ball rises to close the floating ball valve, the upper cavity of main valve inflows constantly through the needle valve, until the pressure of upper cavity is equal to the inlet, and the disk area of main valve upper cavity is greater than the valve port area, upper cavity forms a downward thrust, making the main valve closed and stopping inflow of the water pool.



STANDARD COMPONENTS
1 - Main Valve (Single Chamber)
2 - Modulating Float Control
3 - Adjustable Closing Speed

OPTIONS and ACCESSORIES
- X - Isolation Cocks
- FC - Flo-Clean Strainer
- Y - Y-Strainer (Replaces Flo-Clean)
- AOS – Adjustable Opening Speed
- P - Position Indicator
- L - Limit Switch

Technical Specification:

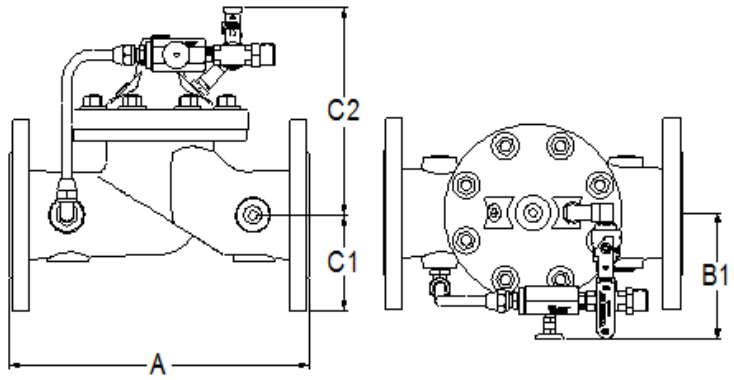
Nominal Diameter: DN32～DN300
Nominal Pressure: PN16/CL150/CL300
Float Valve Working Pressure： 43.5Psi (3Bar)
Float Diameter: 100 mm
Working Temperature: 0℃～80 ℃
Minimum Different Pressure: 5Psi(0.035MPa)
Fluid Medium: Water
Level Control Hight: ≤100mm
Connection Standard: CL 300 BSPT to ISO 7-1
PN16 to BS EN 1092-2
CL150 to ANSI B16.42
CL300 to ANSI B16.42

Material:

Part	Body / Bonnet	Stem	Seat	Diaphram	Sealing	Float Ball / Stem	Pilot valve
Material	Ductile iron NSF coating.	Stainless Steel	Stainless Steel	NBR + Nylon	NBR	Stainless Steel	Brass

Installation Dimensions:

Connection Dimension: PN16 to BS EN 1092-2.



Size(DN)	A(mm)	B1(mm)	C1(m)	C2(mm)
DN32 BSPT	184	126	33	262
DN40 BSPT	184	126	33	262
DN50 BSPT	238	126	48	262
DN50	230	126	82.5	259
DN65	290	123	92.5	200
DN80	310	123	100	196
DN100	350	200	110	233
DN125	400	212	125	308
DN150	480	224	142.5	315
DN200	600	258	170	365
DN250	730	315	202.5	444
DN300	762	377	241	518

*Please contact the local salesmen if the size ≥DN300 are needed.

Flow Rates：

Size (DN)	32	40	50	65	80	100	150	200	250	300
Maximum Continuous (GPM)	95	130	210	300	485	800	1850	3100	5000	7000
Maximum Intermittent (GPM)	119	161	265	390	590	1000	2300	4000	6250	8725
Minimum Continuous (GPM)	1	1	1	20	30	50	115	200	300	400

*NOTE：The above chart is a suggested guide .Inlet pressure, outlet pressure , minimum, normal and maximum flow rates should be considered for specific valve sizing. Contact Watts ACV details.

Typical Application:

Water tank or reservoir in industrial enterprises and residential building

Installation Instructions:

(1) In the process of transportation and installation, valve must be packed and handled with care to avoid surface coatings and accessories damage.

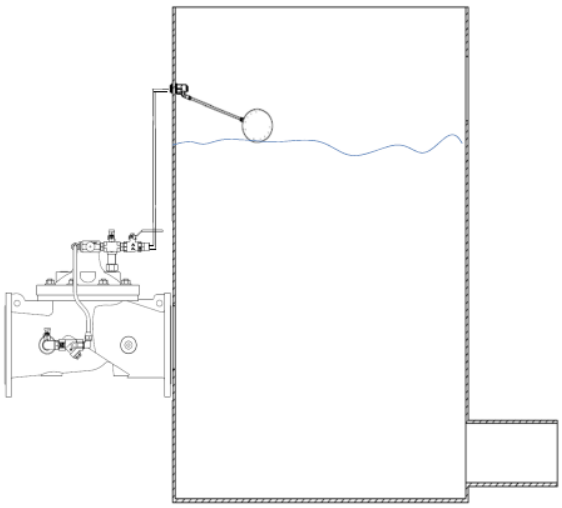
(2) Water supply pipeline should be washed before floating ball valve installation, eliminating sand, gravel and other debris in the pipe.

(3) The flow direction from inlet to outlet should be paid attention to in installation, and maintenance space around the valve is convenient to assemble.

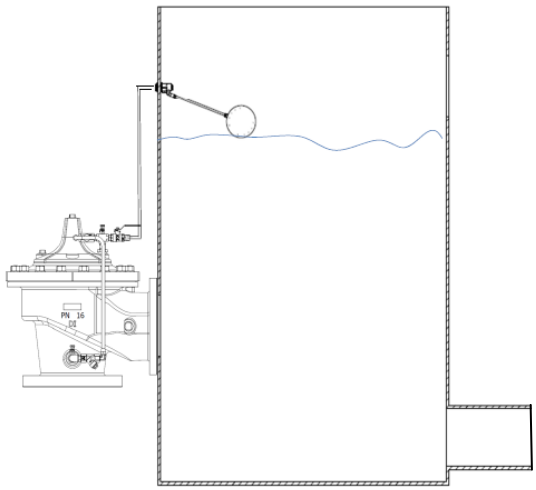
(4) The inlet and outlet of main valve should be installed with gate valve or butterfly valve for easy maintenance.

(5) Make sure the float ball is 1.5m away from outlet of main valve while installing, in order to prevent water wave from damaging float ball, however, float ball will be allowed to close if there is a shield protecting it.

(6) For the size below DN150, the main valve can be installed horizontally or vertically, but horizontal installation is better. The size above DN150 only can be installed horizontally. See the picture for globe series and angle series.



GLOBE SERIES



ANGLE SERIES

(7) Connect Modulating Float Control to main valve using 3/8” diameter minimum copper tubing.

(8) The height must be enough between limited liquid level and overfall, it takes some time from closing float ball valve to closing main valve, as to ≤DN100 valves, it only takes less time, as to≥ DN100 valves, maybe it takes over 10s.

(9) Valve should be checked regularly, ensuring the debris in filter being cleaned.