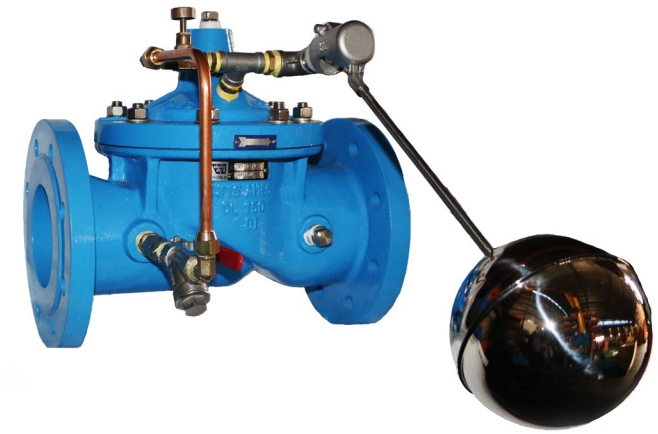
MODULATING FLOAT VALVE

Mustang Series — M110-10 or M6110-10 (Globe)

Basic Valve Features

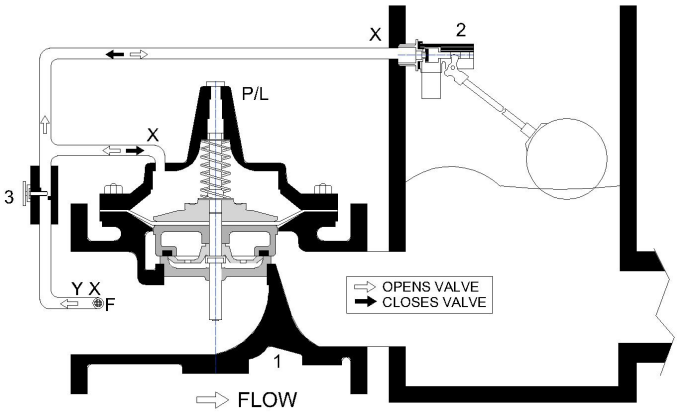
- **Single Piece Flat Diaphragm Designed**
  Absolute no friction to the rubber diaphragm against the basic valve
- **Only Three Major Components**
  Cover, Stem Assembly and Body
- **100% Fusion Bonded Epoxy Coated**
  NSF 61 Certified Epoxy Coating Internally and Externally
- **Simplified Maintenance**
  No special tools and skill are required



Function

- Maintains a constant liquid level in reservoir
- Opens when level drop
- Closes when level rises

Schematic



Components

1.	Main Valve	F	Flo-Clean Strainer
2.	Modulating Float Control	X	Isolation Cocks
3	Adjustable Speed Control	Y	Strainer
		P/L	Position Indicator / Limit Switch

Operation

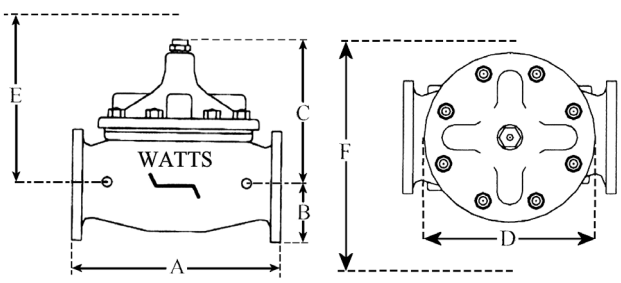
The WATTS ACV M110-10 Modulating Float Control Valve is designed to automatically maintain a constant liquid level in a tank or reservoir. It controlled by a remote mounted Fig. 10-11 Modulating Float Pilot designed to: 1) Modulate Open (allowing fluid out of the basic valve cover chamber) when reservoir level decrease, and, 2) Modulate Close (allowing fluid to fill the basic valve cover chamber) when reservoir level increases.

A decrease in reservoir level causes the valve to modulate towards an open position, allowing reservoir water level to increase. An increase in reservoir level cause the valve to modulate towards a closed position, allowing reservoir level to decrease.

The Modulating Float Control Pilot is remotely mounted from the valve, and field connected with 3/8” minimum copper tubing (not supplied) in accordance with factory piping schematic.

M110-10 is Full Port designed On-Off Float Control Valve with M100 Basic Valve and M6110-10 are Reduced Port designed On-Off Float Control Valve with M6100 Basic Valve.

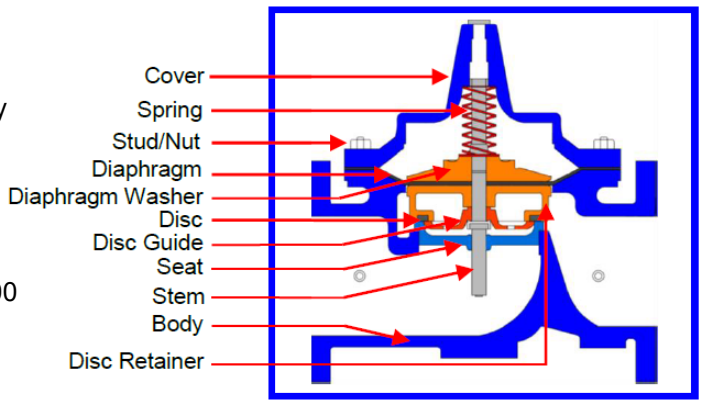
Dimension (mm)



	A		B		C		D		E	F
VALVE SIZE	M 100	M 6100	M 100	M 6100	M 100	M 6100	M 100	M 6100	Maintenance Clearance	
25	184	---	39	---	140	---	143	---	280	480
32	184	---	39	---	140	---	143	---	280	480
40	184	---	39	---	140	---	143	---	280	480
50	254	---	83	---	165	---	168	---	305	510
65	295	---	95	---	262	---	203	---	360	560
80	345	279	105	105	284	178	232	168	360	560
100	381	353	114	114	362	219	292	232	410	610
150	508	451	140	140	468	295	400	292	610	815
200	645	543	171	171	554	381	508	400	660	860
250	756	660	203	203	594	454	600	508	710	965
300	864	762	241	241	744	533	711	600	760	1120
350	991	---	267	---	614	---	832	---	860	1220
400	1051	889	298	298	889	654	902	711	1020	1320
450	---	1219	---	457	---	787	---	900	1220	1420
500	---	1219	---	508	---	787	---	900	1220	1420
600	---	1219	---	610	---	787	---	1263	1220	1420

Main Valve Material Specifications

Body and Cover	- Ductile Iron ASTM A-536
Coating	- NSF 61 Certified Fusion Bonded Epoxy
Stem Seat and Disc Guide	- Stainless Steel ASTM 316
Nut and spring	- Stainless Steel AISI 304
Disc Retainer	- Ductile Iron “Epoxy Coated”
Diaphragm Washer	- Ductile Iron “Epoxy Coated”
Studs and Nuts	- Stainless Steel
Diaphragm	- Nylon Reinforced Buna-N ASTM D 2000
Disc	- Buna-N Rubber ASTM D 2000



Main Valve Technical Data

Valve Size	- 25 mm to 600 mm
Designed Standard	- AWWA C530-12
Operating Pressure	- Class 150 Max. 250 PSI (Standard)
	- Class 300 Max. 500 PSI (Optional)
Operating Temperature	- -10 to 90 deg. C (Fluids)
End Connection	- 50 mm to 600 mm Flanged End
	- 25 mm to 40 mm Screwed End
Flange Standard	- BS 4504 PN16, PN25, ANSI 150 or ANSI 300

Pilot System Specifications

Pilot Models	- Figure 10-11
Body Material	- Stainless Steel
Rod and Float	- Stainless Steel
Disc	- Buna-N Synthetic Rubber
Pressure Rating	- 100 PSI
Fittings and Tubing	- Brass and Copper (Standard) Stainless Steel (Optional)

Installation Guidelines

- Prior to installation, flush line to remove debris.
- Install valve horizontally “in line” (cover facing up), so flow arrow matches flow through the line. Avoid installing valves size 150 mm and larger vertically. Consult factory **prior** to ordering if installation is other than described.
- **Install** inlet and outlet isolation valves. **Notes :** When using butterfly valves, insure disc does not contact control valve. Damage or improper valve seating may occur.
- By-pass isolation valve is recommended to install for maintenance purpose without shutting down the systems.
- Provide adequate clearance for valve servicing and maintenance (refer to Dimension Table).
- **It** is advisable to install a strainer before the control valve to prevent any solid particle from entering the valve body.
- Install pressure gauge to monitor valve inlet pressure.
- Field installed Modulating Float Control Pilot to basic valve using 3/8” diameter minimum copper tubing (not supplied) in accordance with factory piping schematic.
- Float Control Pilot should be mounted in a field installed “stilling well” for protection against surface turbulence and interference.

Flow Data Series M 100 / M 6100 (Globe)

Valve Size (mm)		25	32	40	50	65	80	100	150	200	250	300	350	400	450	500	600
Max. Continuous Flow Rate GPM	**M100**	83	95	130	208	300	460	800	1850	3100	4900	7000	8500	11000	---	---	---
	M6100	---	---	---	---	---	260	580	1025	2200	4100	6400	---	9230	14360	16500	17250
Max. Intermittent Flow Rate GPM	**M100**	86	119	161	260	380	580	990	2300	3900	6100	8800	11500	11400	---	---	---
	M6100	---	---	---	---	---	325	720	1280	2750	5100	8000	---	11500	17950	20625	21560
CV Factor USGPM	**M100**	20	25	30	54	85	115	200	490	770	1245	1750	2300	2940	---	---	---
	M6100	---	---	---	---	---	62	136	229	480	930	1458	---	2110	3300	3400	3500

Maximum continuous flow based on pipeline velocity of 20 ft. per second.
Maximum intermittent flow based on pipeline velocity of 25 ft. per second.
The Cv factor of a valve is the flow rate in US GPM at 60° F that will cause a 1 psi drop in pressure.
The factors stated are based upon a fully open valve.

Other WATTS ACV Float Control Valve

M 110-13 / M 6110-13	Modulating Float Control Valve with Pressure Sustaining Feature
M 110-AS / M 6110-AS	Modulating Float Control Valve with Solenoid (On-Off) Feature
M 110-18 / M 6110-18	On-Off Float Control Valve with Pressure Sustaining Feature

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Represented By:

VALMATIC ENGINEERING SDN BHD (369320 W)
Lot 10, Jalan Anggerik Mokara 31/48, Kota Kemuning, Seksyen 31,
40150 Shah Alam, Selangor, Malaysia.
Tel: 603-5122 9888, 5122 0099 Fax: 603-5122 3030
http: www.valmatic.com.my E-mail: vmatic@pd.jaring.my