

## Series W-M113-12/6

### Ductile Iron Solenoid On-Off Control Valve

**Size: Thread DN32-DN50  
Flange DN50-DN300**

The Watts W-M113 Solenoid On-Off Control Valve can remotely control the switch of valve and truncate the flow of medium in the pipeline. It's generally used in city water supply, industrial and agricultural water transmission pipeline, etc.

#### Features

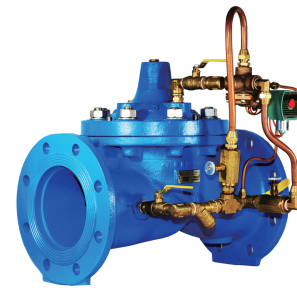
- Stable performance, safe and reliable
- Simple operation, convenient maintenance
- Long service life
- Remote electric control or on-site manual control

#### Test Pressures

Class	Pneumatic	Hydraulic
PN16	Seat: 7 bar	Shell: 24 bar Seat: 17.6 bar
CL150	Seat: 7 bar	Shell: 25.2 bar
CL300	Seat: 7 bar	Shell: 40 bar

#### Material

NO.	Component	Material	Standard
1	Cover	Ductile Iron+Epoxy Coated	ASTM A536 65-45-12
2	Cover Bearing	Stainless Steel	ASTM A276 304
3	Shaft/Stem	Stainless Steel	ASTM A276 304
4	Stud	Zinc Plated Steel/Stainless Steel	ASTM A570 Gr. 33/ASTM A276 304
5	Cover Nut	Zinc Plated Steel/Stainless Steel	ASTM A570 Gr. S3/ASTM A276 304
6	Washer	Zinc Plated Steel/Stainless Steel	ASTM A570 Gr. 33/ASTM A276 304
7	Diaphragm	Buna-N(Nitrile) +Nylon	
8	Spring	Stainless Steel	ASTM A276 302/304
9	Disc Retainer	Ductile Iron+Epoxy Coated	ASTM A536 65-45-12
10	Seat Disc	Buna-N(Nitrile)	
11	Body	Ductile Iron+Epoxy Coated	ASTM A536 65-45-12
12	Plug	Brass/Zinc Plated Steel	H62/ASTM A570 Gr. 33
13	Stem Nut	Stainless Steel	ASTM A276 304
14	LockWasher	Stainless Steel	ASTM A276 304
15	Spring Washer	Stainless Steel	ASTM A276 304
16	Diaphragm Washer	Ductile Iron+Epoxy Coated	ASTM A536 65-45-12
17	Spacer Washer Fiber	Fiber	
18	Disc Guide	Stainless Steel	ASTM A743 CF8M(316)
19	Seat O-Ring	Buna-N(Nitrile)	
20	Seat Ring	Stainless Steel	ASTM A743 CF8M(316)



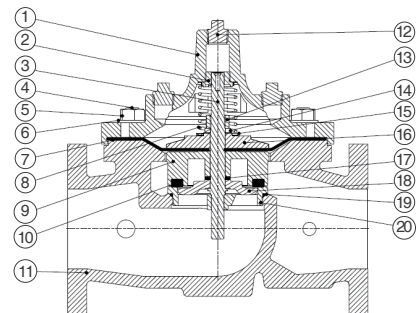
#### Specification

- Design Standard: AWWA C530
- Test Standard: ISO/DIS 5208:2007
- Control Voltage: Standard Voltage AC220 50/60HZ  
Optional Voltage AC 240V 60HZ, AC24V 60HZ
- Connection Type:  
Thread & Flanged is available  
W-M113-12-BSPT CL 300 BSPT to ISO 7-1  
W-M113-12/6-Flange to PN16 to BS EN 1092-2 & CL150 to ANSI B16.42
- Working Status: Normally open/closed
- Medium: water

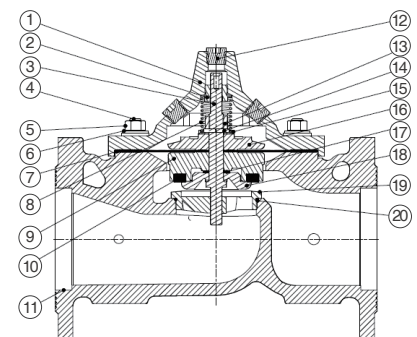
#### Pressure - Temperature

- Nominal Pressure: PN16/CL150/ CL300
- Temperature Range: 0°C~80°C
- Minimum Different Pressure: 5PSI (0.03MPa)

Mustang Series Main valve



EU Series Main valve



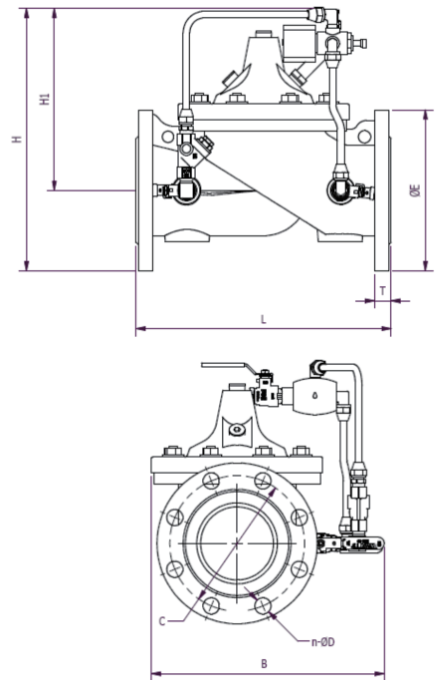
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## Installation Dimensions

Connection Dimension: PN16 to BS EN1092-2.

Type	Size DN (mm)	Dimensions(mm)				Flange Dimensions(mm)				Weight (Kg)
		L	H	H1	B	ØC	n-ØD	E	T	
W-M113-12	32 BSPT	184	305	271	170	/	/	/	/	17.2
	40 BSPT	184	305	271	170	/	/	/	/	17.2
	50 BSPT	238	315	268	170	/	/	/	/	18.0
	50	230	310	228	170	125	4-Ø19	165	19	18.3
	65	290	340	250	185	145	4- Ø 19	185	19	18.9
	80	310	345	245	200	160	8- Ø 19	200	19	19.8
W-M113-6	100	350	360	250	320	180	8- Ø 19	220	19	36.2
	125	400	410	285	380	210	8- Ø 19	250	19	58.3
	150	480	505	360	420	240	8- Ø 23	285	19	71.5
	200	600	508	410	508	295	12- Ø 23	340	20	139
	250	660	650	450	550	355	12- Ø 28	406	30.5	264.5
	300	762	755	520	655	410	12- Ø 28	482	31.8	464.5

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

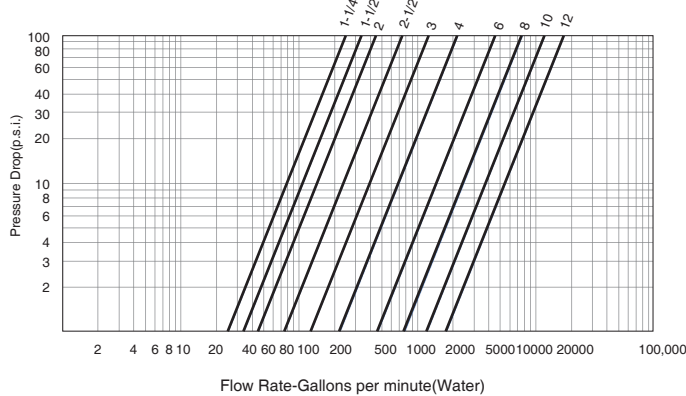


## Flow Rates

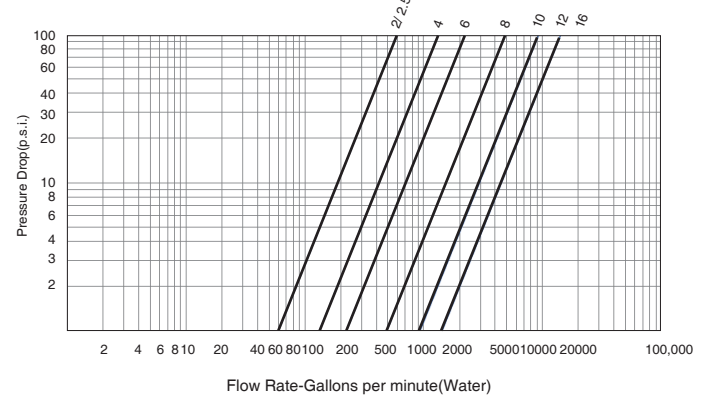
Size DN (mm)	32	40	50	65	80	100	150	200	250	300
Maximum Continuous (GPM)	95	130	210	300	485	800	1850	3100	5000	7000
Maximum Intermittent (GPM)	119	161	265	390	590	1000	2300	4000	6250	8725
Minimum Continuous (GPM)	1	1	1	20	30	50	115	200	300	400
CV Factor GPM (Globe)	25	30	45	75	100	175	490	770	1200	1750

## Characteristic Curves

### Full Port Series



### Reduce Port Series



\*NOTE: 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.

Cv factor can be used in the following equations to determine Flow (Q) and Pressure Drop (Δ P):

$$Q (\text{Flow}) = C_v \sqrt{\Delta P} \quad \Delta P (\text{Pressure Drop}) = (Q/C_v)^2$$

The above table 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.

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