

Mustang Series

M115 or M6115 (Globe)

Basic Valve Features

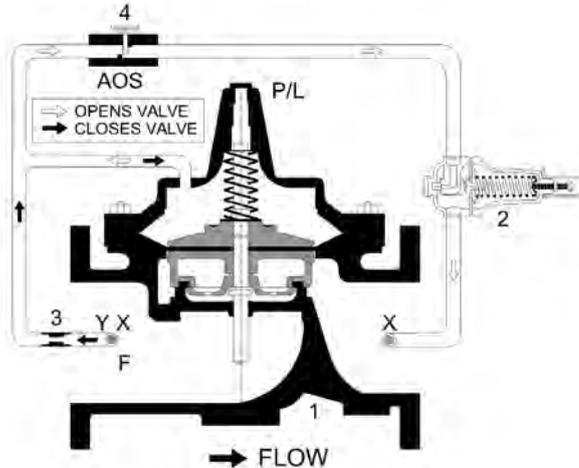
- **Single Piece Flat Diaphragm Designed**
Absolute no friction to the rubber diaphragm against the basic valve
- **Only Three Major Components**
Cover, Stem Assembly and Body
- **100% Fusion Bonded Epoxy Coated**
NSF 61 Certified Epoxy Coating Internally and Externally
- **Simplified Maintenance**
No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

Function

- Reduces a higher inlet pressure to a constant lower outlet pressure (Adjustable)



Schematic



Components

- | | |
|--|---------------------------------------|
| 1. Main Valve | F Flo-Clean Strainer |
| 2. Fig. P200 Pressure Reducing Control | X Isolation Cocks |
| 3. Fixed Orifice | Y Strainer |
| 4. Needle Valve – Adj. Opening Speed | P/L Position Indicator / Limit Switch |

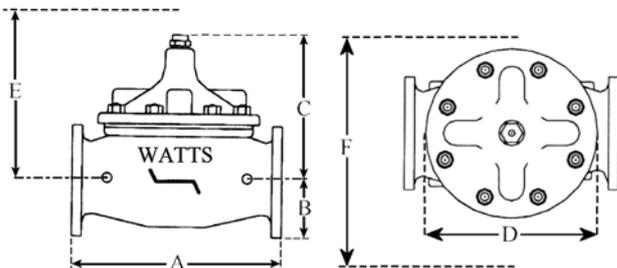
Operation

The WATTS ACV M115 Pressure Reducing Valve is designed to automatically reduce a fluctuating upstream (inlet) pressure to a constant lower downstream (outlet) pressure. It is controlled by a normally open Figure 263AP Pressure Reducing Control Pilot designed to : 1) Open (allowing fluid out of the basic valve cover chamber) when downstream (outlet) pressure is below the adjustable setpoint, and, 2) Close (allowing fluid to fill the basic valve cover chamber) when downstream pressure is above the adjustable setpoint.

A decrease in downstream (outlet) pressure due to high flow demand causes the Pressure Reducing Valve to modulate to an open position, raising downstream pressure. An increase in downstream (outlet) pressure due to less flow demand causes the Pressure Reducing Valve to modulate towards a closed position, lowering downstream pressure.

M115 is a Full Port designed Pressure Reducing Valve with M100 Basic Valve and M6115 is a Reduced Port designed Pressure Reducing Valve with M6100 Basic Valve.

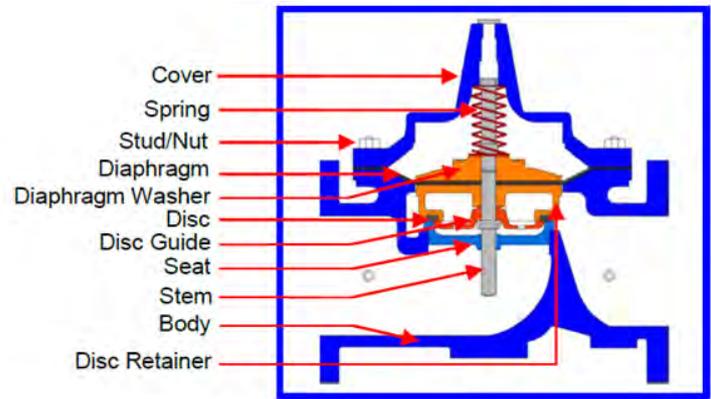
Dimensions (mm)



VALVE SIZE	A		B		C		D		E	F
	M 100	M 6100								
32	184	---	64	---	140	---	143	---	280	480
40	229	---	78	---	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 Ep
Stem, Seat and Disc Guide	- Stainless Steel ASTM 316
Stem Nut and Spring	- Stainless Steel AISI 304
Disc Retainer	- Ductile Iron "Epoxy Coated"
Diaphragm Washer	- Ductile Iron "Epoxy Coated"
Diaphragm	- Nylon Reinforced Buna-N ASTM D :
Disc	- Buna-N Rubber ASTM D 2000
Studs and Nuts	- Steel with Chrome Plated Stainless Steel (Optional)



Main Valve Technical Data

Valve Size	- 32 mm to 600 mm
Operating Pressure	- Class 150 Max. 250 PSI (17.2 Bar) - Class 300 Max. 500 PSI (34.5 Bar)
Operating Temperature	- -10 to 90 deg. C (Fluids)
End Connection	- 40 mm to 600 mm Flanged End - 32 mm to 80 mm Screwed End
Flange Standard	- ANSI Class 150, Class 300, BS 4504 PN 16 or PN 25

Pilot System Specifications

Pilot Models	- Figure P200
Body Material	- Stainless Steel
Trim Material	- Stainless Steel
Diaphragm	- Buna-N Nylon Reinforced
Disc	- Buna-N Synthetic Rubber
Spring Range	- 3 to 100 PSI (0.2 to 7 Bar), 0 to 30 PSI (0 to 2 Bar) and 100 to 300 PSI (7 to 20 Bar)
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. **Note** : 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.
- 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 and outlet pressure.
- If installation is subjected to very low flow or potentially static condition, WATTS recommends a pressure relief valve (1/2" minimum) to be installed downstream of the Pressure Reducing Valve for additional system protection.
- If pressure drop fall inside cavitations zone (refer to Cavitations Chart), two pressure reducing valves need to be installed in series may required to reduce the pressure to two stage reduction.
- If flow requirements fall outside the capacity of a single pressure reducing valve (refer to Control Valve Quick Sizing Table), two pressure reducing valves need to be installed in parallel may be required.

Flow Data Series M 100 / M 6100 (Globe)

Valve Size (mm)		32	40	50	65	80	100	150	200	250	300	350	400	450	500	600
Max. Continuous Flow Rate GPM	M100	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	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	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 Pressure Reducing Valve

M 115-2 / M 6115-2	Pressure Reducing with upstream Pressure Sustaining Feature
M 115-3 / M 6115-3	Pressure Reducing with Check Feature
M 115-74 / M 6115-74	Pressure Reducing with Low Flow By-pass Feature

THE AUTOMATIC ANSWER TO FLUID CONTROL!!!

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

