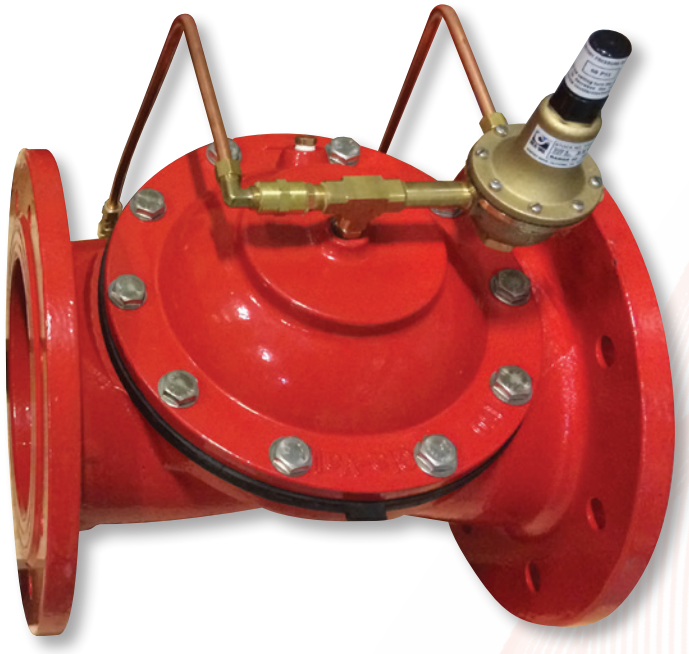
W Series Valves (100-48/8000G)

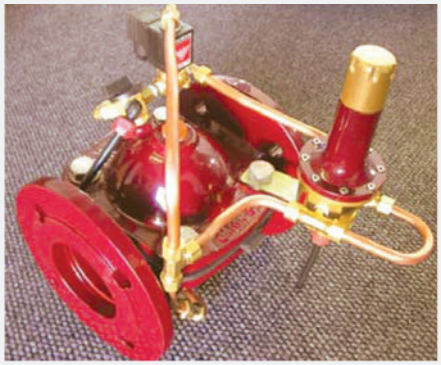
Hydraulic Control Valves



- **Sound hydraulic performance with improved flow dynamics resulting in a quiet and smooth water flow during operation**
- **Minimum head loss and low pressure required to operate the valve**
- **Durable and rugged raw materials are used in the construction of the product. This along with minimal moving parts, provides years of reliable service**
- **Easy inline maintenance with minimal parts**
- **Versatile and adaptable for almost any operating application**
- **Numerous operating formats such as: Manual, Electrical, Pressure Reducing, Pressure Sustaining, Remote Control and numerous other control combinations**
- **Useable with various different liquids including, slurries and abrasive liquids**
- **Available in various configurations and end connections**

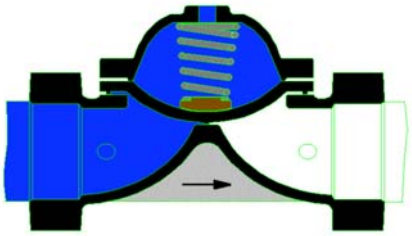
The W Series Valves are weir type single chamber control valves. This product range has been designed with simplicity in mind without compromising on operation versatility. Tried and tested materials and engineering design concepts have been incorporated into the product making it durable and reliable in performance.

This range of valves can be use in typical fire irrigation, waterworks and industrial applications.

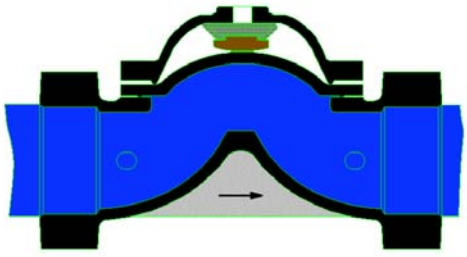


How it Works

The W Series Valves operate using the available pressure in the pipeline or an external pressure supply of air or water, provided this pressure is equal to or greater than the pressure of the pipeline in which the control valve is installed.



To close the valve, water or air pressure is induced into the upper chamber forcing the diaphragm to close against the weir within the valve and thereby stopping the flow of the liquid or gas within the pipeline.



To open the valve, the water or air trapped within the upper chamber is released into atmosphere or into the downstream of the valve, into the pipeline.

By incorporating other control mechanisms, the valve can be adapted to regulate flow without being fully closed or fully open. The valves diaphragm is the only moving part and is assisted to close under all pressures with the aid of a spring.

Accessories

The range of Control Valves is supported by a complete range of peripheral accessories including - solenoid operators and pilot valves, regulating pilot valves, 3 way ball valves, finger and inline filters, pressure gauges and test points and many other devices.

Pressure Rating

Minimum Opening Pressure = 0.7 Bar
Maximum Shut Off Pressure = 16.0 Bar
Maximum Recommended Operating Pressure = 12 Bar
Maximum Pressure Reduction Ratio = 3:1
Minimum Flow Velocity = 0.5m/sec
Maximum Continuous Flow Velocity = 8m/Sec
Absolute Maximum Sporadic Flow Velocity = 15m/sc limited to 30 seconds
Maximum Operating Temperature = 79 Deg. C (using standard diaphragms)

Points to take into consideration bearing the above in mind -

1) When selecting a valve for PRV purposes do not oversize the valve as this will result in sluggish closing response time. Work within the parameters (limitations) above and bear in mind that pressure reduction is destroying inline pressure so head loss is not necessarily a major constraint during this process.

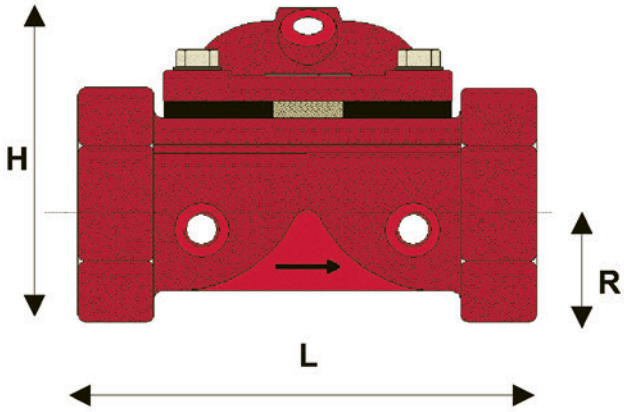
2) In the irrigation field we tend to work mainly with 3 way operating systems. Take cognizance of the limitations (see the presentation) of each of the operating system (2 way and 3 way) when applying them to any valve application.

3) The valve is not suite to carry out pressure control or even to close when no flow through the valve takes place. So in systems where shutoff conditions occur beyond the valve the valve cannot reduce or close as flow has ceased.

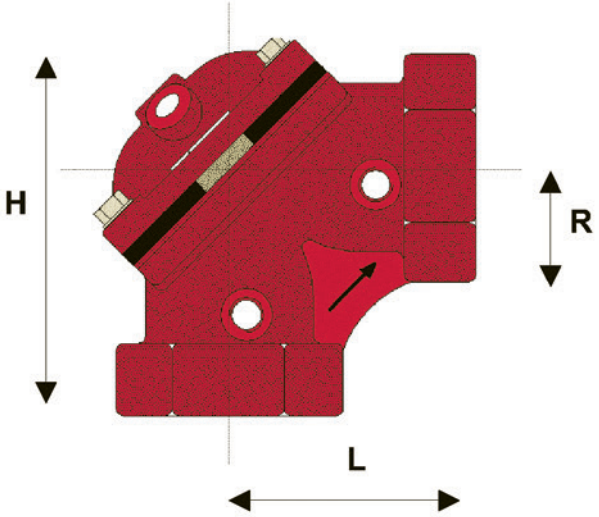
Recommended flow rates for normal use -

DN25 - 1 to 9 m“/hr
DN40 - 2.5 to 22 m“/hr
DN50 - 3.5 to 35 m“/hr
DN65 - 6 to 55 m“/hr
DN80/65/80 - 6 to 55 m“/hr
DN80 - 10 to 85 m“/hr
DN100 - 15 to 140 m“/hr
DN150 - 35 to 320 m“/hr
Dn200/150/200 - 35 o 320 m“/hr

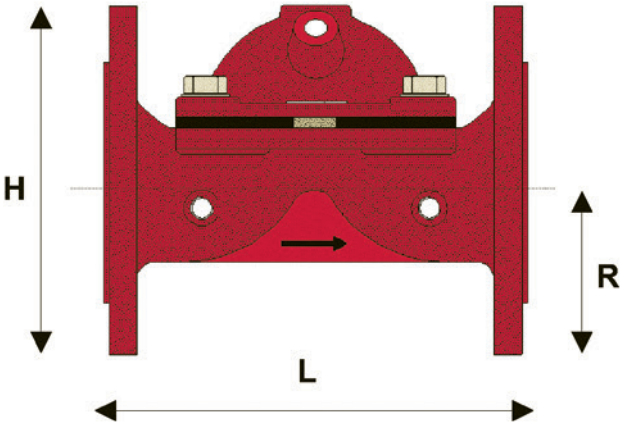
Dimensions



Valve Size	mm	40	50	65	80/65	80
	inches	1.5”	2”	2.5”	3”/2.5”	3”
Length	mm	145	169	230	230	280
	inches	5.7	6.65	9.05	9.05	11.02
Height	mm	103	117	154	154	169
	inches	4.05	4.6	6.06	6.06	6.65
Ht*	mm	188	202	239	239	309
	inches	7.04	7.95	9.41	9.41	12.17
Width	mm	109	127	145	145	190
	inches	4.3	5.0	5.71	5.71	7.48
Radius	mm	38	44	59	59	65
	inches	1.5	1.73	2.32	2.32	2.56
Weight	Kg	2.7	3.7	7.1	6.9	10.4
	Pounds	5.95	8.16	15.56	15.21	22.93



Valve Size	mm	50	65	80/65	80
	inches	2”	2.5”	3”/2.5”	3”
Length	mm	139	175	175	205
	inches	5.47	6.89	6.89	8.07
Height	mm	150	186	186	210
	inches	5.91	7.32	7.32	8.27
Ht*	mm	190	225	225	300
	inches	7.48	8.86	8.86	11.81
Width	mm	127	145	145	190
	inches	5.0	5.71	5.71	7.48
Radius	mm	44	59	59	65
	inches	1.73	2.32	2.32	2.56
Weight	Kg	3.7	7.06	7.08	10.9
	Pounds	8.16	15.56	15.61	24.03



Valve Size	mm	80	100	150
	inches	3”	4”	6”
Length	mm	242	315	403
	inches	9.53	12.4	15.87
Height	mm	202	243	331
	inches	7.95	9.21	13.03
Ht*	mm	342	383	N/A
	inches	13.46	15.08	N/A
Width	mm	203	228	305
	inches	7.99	8.98	12.0
Radius	mm	102	114	153
	inches	4.01	4.49	6.02
Weight	Kg	19.5	21.4	54.5
	Pounds	42.99	47.18	120.15

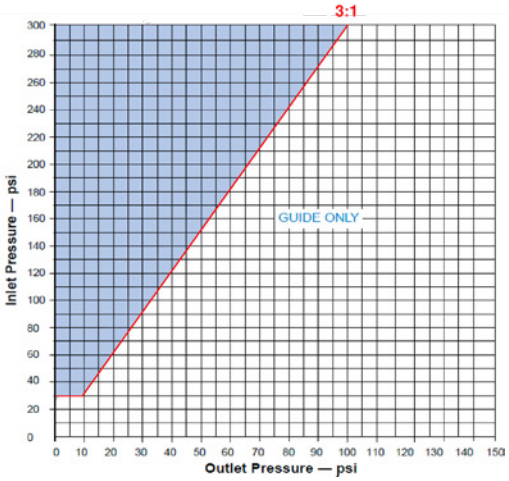
Specifications

Operating Parameters	
Minimum Opening Pressure	0.7 kg/cm² (10 psi)
Maximum Operating Pressure	16 kg/cm² (225 psi)
Maximum Temperature (H^2O)	70° Celsius (158° Fahrenheit)
Recommended Maximum Pressure Reduction Ratio	3 : 1
Recommended Flow Velocity Parameters	0.5 to 5 m/sec (1.6 to 16 ft/sec)
Maximum Recommended Flow Velocity	15 m/sec (49 ft/sec) for a max. period of 60 seconds

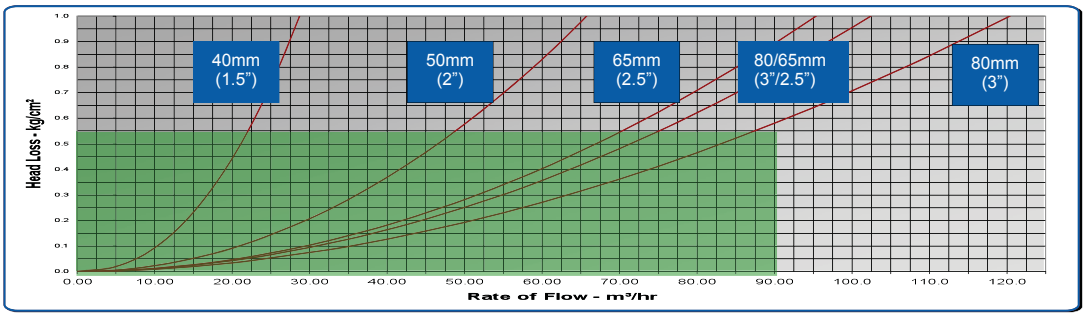
Materials	
Body & Bonnet	Ductile Iron options in Nickel Aluminium Bronze
Diaphragm	Reinforced Natural Rubber
Spring	Stainless Steel
Spring Retainer Disk	Glass Reinforced Nylon
Nuts & Washers	Stainless Steel
Coatings	Fusion Bonded Polyester Powder Coated (Other coatings available on request)

General Specifications	
End Connections	Threaded - Female ISO (BSP) & ANSI (NPT) Flanged - BS 10 Table D, E, F & H ANSI Class 150 ISO PN16 & PN25 Other available on request
Available Valve Sizes	40mm (1.5”) - Threaded Inline 50mm (2”) - Threaded Inline & Angle 65mm (2.5”) - Threaded Inline & Angle 80 / 65 / 80mm (3/2.5/3”) - Threaded Inline & Angle 80mm (3”) - Threaded Inline & Angle, Flanged Inline 100mm (4”) - Flanged Inline 150mm (6”) - Flanged Inline 200 / 150 / 200mm (8”) – Flanged Inline
Control Ports	Upstream on Valve Body - ¼” Female BSP Downstream on Valve Body – ¼” Female BSP Offset on Valve Bonnet - ¼” Female BSP
(Center of Valve Bonnet)	½” Female BSP on 80, 100 & 200mm Valves

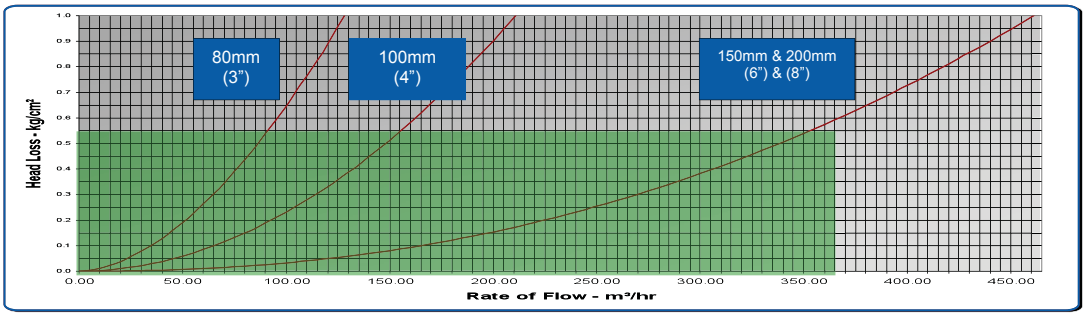
Cavitation Graph



Head Loss Table - Threaded Inline & Angle Valves



Head Loss Table - Flanged Inline Valves



Cla-Val Pacific
45 Kennaway Road, Woolston, Christchurch
Tel: +64 (0)3 964 4860
Email: aspacsales@cla-val.com
www.cla-valpacific.com