WATERWORKS

OCV SERIES 63

CONTROL VALVES

OCV® FLUID SOLUTIONS LLC

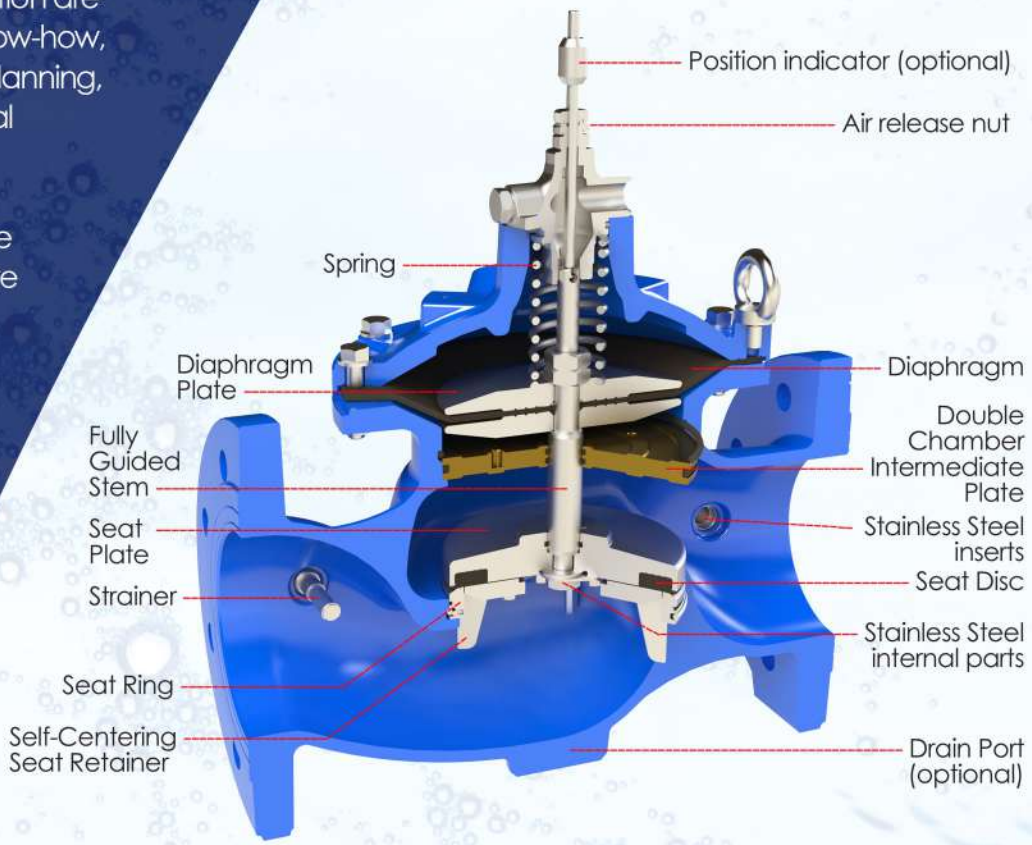
matholding group

Innovation & expertise

are the backbones of OCV, driving us to develop a diverse portfolio of water and fluid system solutions. Customer satisfaction and recognition are paramount as we dedicate our know-how, expertise and professionalism into planning, designing and providing the optimal hydraulic control systems.

As part of the Matholding group, we specialize in products that contribute to the production of sufficient quantities of healthy, safe and affordable food products, as well as to the sustainable use of water in agricultural and industrial activities. Our hydraulic controlled valves and air valves provide solutions around the world for waterworks distribution systems, mining, wastewater, water treatment, filtration, agriculture, irrigation, water metering and many more.

SERIES 63



FEATURES

- Capability to regulate near zero flow, as standard on all sizes.
- Air release nut allows easy air purging during commissioning and maintenance.
- Flange (face-to-face) dimensions meet ISO Standards.
- Stainless Steel inserts installed on all body ports to prevent corrosion.
- Resilient seat disc, guided by a frictionless centering device.
- Easy conversion from a single to a double chambered valve.
- Standard Stainless Steel seat that maintains excellent durability against erosion and ensures a drip-tight seal.
- All Stainless Steel connection points to maintain body coating integrity.
- Optional valve position indicator.

SOLENOID CONTROL VALVE

The OCV Solenoid Control Valve is designed to provide on/off or open/close control of fluids in response to an electrical signal. The valve consists of the basic OCV model 63 with solenoid-operated pilot. With the appropriate solenoid, the valve may be normally closed (energize to open) or normally open (energize to close). Certain models operate using dual solenoids to provide modulating control.

The valves can also be controlled via SCADA systems or an electronic controller.

PRESSURE REDUCING CONTROL VALVES

The OCV Pressure Reducing Valve is used in many applications worldwide. The primary function of this series is to reduce a greater upstream pressure to a lesser, more manageable downstream pressure, operating without regard to either upstream supply or downstream demand. The unique design gives it the ability to regulate to near zero flow without the use of a low flow bypass. A cavitation cage is available upon request.

PRESSURE SUSTAINING / RELIEF CONTROL VALVES

In many liquid piping systems, it is vital that line pressure is maintained within relatively narrow limits. This is the function of the OCV Pressure Sustaining/Relief Series. Installed in the main flow line, the standard model acts as a backpressure or pressure sustaining valve. In this configuration, the valve maintains a constant upstream pressure regardless of fluctuating downstream demand. When used in a bypass line, the same model will function as a relief valve, opening when the pilot senses a pressure above its set point to relieve unwanted system pressure.

A cavitation cage is available upon request.

SURGE ANTICIPATION CONTROL VALVE

The OCV Surge Anticipation Control Valve is designed to be installed in a bypass line and provide protection against damaging surges that can occur in pumping systems when a pump is suddenly stopped.

Unlike conventional relief valves, which open only when a high pressure wave hits, surge anticipation valves sense the precursor of the high pressure wave (pump power failure or low pressure wave) and open in anticipation of the returning high pressure wave that follows. By opening, the valve prevents the buildup of pressure before it occurs.

PRESSURE DIFFERENTIAL CONTROL VALVES

The OCV Pressure Differential Control Valve is designed to accurately control the pressure difference between any two points. In some systems this means the valve remains closed until pressure differential commands it to open. The Pressure Differential Control Valve is a pilot-operated modulating type valve which controls pressure accurately and consistently at the desired setting.

RATE OF FLOW CONTROL VALVE

The OCV Rate of Flow Control Valve is designed to control or limit flow to a predetermined rate, regardless of fluctuations in downstream or upstream pressure. Options include electronic solenoid control and/or excessive flow shut-off control that must be manually reset after the line break is fixed.

MODULATING FLOAT CONTROL VALVE

The OCV Modulating Float Control Valve continuously modulates to maintain a desired level in a tank or reservoir within extremely narrow limits by opening for filling the tank when fluid is below the high level point and closing tightly when the desired level is reached. The valve can be mounted top fill or bottom fill and can control level by flow-in or flow-out of the tank. Three pilot options are available and the valve uses a single control line from the valve to the pilot.

ELECTRIC FLOAT CONTROL VALVES

The OCV Electric Float Control Valve is an automatic, solenoid controlled valve. The valve will open at low level by an electric command from an electric float. When the level reaches its high set value, the valve will close drip tight.

NON-MODULATING FLOAT CONTROL VALVES

The OCV Non-Modulating Float Control Valve is designed to maintain a desired level in a tank or reservoir by opening for filling the tank when fluid is below the high level point and closing tightly when the desired level is reached. It does not modulate, but is either fully open or fully closed. The float pilot can be mounted separately from the main valve, which is common when the fill line is located at the bottom of the tank, or the float pilot can be mounted on the main valve, as is common when the fill line is located at the top of the tank.

ALTITUDE CONTROL VALVES

The elevated tank, standpipe or storage reservoir is a common and important element found in many water distribution systems. The function of the OCV Altitude Control Valve is accurate, automatic level control, without the use of floats or sensors. Pilot controls for the series can accommodate storage facilities up to 230 feet high, maintaining the liquid level to within inches of a predetermined set point. The valve also includes adjustable drawdown.

Options include models that allow one-way flow for tank fill only or models that can accommodate both flow into and out of the tank.

PUMP CONTROL VALVES

The OCV Pump Control Valves and Deep Well Pump Control Valves are designed to effectively eliminate the surges associated with the starting and stopping of the pump. Electrically interfaced with the pump motor, the valve opens and closes at an adjustable speed, providing a smooth predictable transition of pump discharge and pressure into the system. Features include built-in reverse flow, ability for the valve to automatically shut off the pump motor on loss of pump discharge pressure (shaft lock-up) and valve interlocking with pump motor to perform unified pump and valve operation.

CHECK VALVES

The OCV Check Valve is a simple on-off valve that opens to allow forward flow when inlet pressure exceeds outlet pressure and closes tightly to prevent backflow when outlet pressure exceeds inlet pressure.

MODEL 63 DIMENSIONS & WEIGHTS

VALVE BODY & BONNET	DUCTILE IRON		CAST STEEL		STAINLESS STEEL	
Material Specification	ASTM A-536/65-45-12 (epoxy coated)		ASTM A216/WCB (epoxy coated)		All Grades	
END CONNECTIONS						
Flanged Standard (also available in metric)	ANSI B16.42		ANSI B16.5		ANSI B16.5	
Flange Class	150#	300#	150#	300#	150#	300#
Flange Face	Raised	Raised	Raised	Raised	Raised	Raised
Maximum Working Pressure (at 100°F)	250 psi	360 psi	285 psi	360 psi	285 psi	360 psi
INTERNALS						
Stem	Stainless Steel					
Spring	Stainless Steel					
Seat Disc Retainer	Ductile Iron (epoxy coated) or Stainless Steel					
Diaphragm Plate	Ductile Iron (epoxy coated) or Stainless Steel					
Seat Ring (Trim)	Stainless Steel					
ELASTOMERS PARTS (Rubber)						
Diaphragm / Seat Disc / O-Rings	EPDM					
Fluid Operating Temperature *Consult factory when temperatures approach low or high temperature allowance. Other options available, consult factory	32°F to 180°F					
COATINGS	NSF-61 Epoxy Coating					
ELECTRICAL SOLENOIDS						
Bodies	Brass / Optional - Stainless Steel					
Enclosures	Water Tight, NEMA 1, 3, 4, & 4X					
Power	AC, 60hz - 24, 120, 240, 480 Volts / AC, 50hz - in 110 Volt Multiples / DC, 6 12, 24, 240 Volts					
Operation	Energize to Open (Normally Closed) Energize to Close (Normally Open)					

CONTROL PILOTS		
Bodies	Low-Lead Bronze	Stainless Steel
Internal	Stainless Steel	Stainless Steel
Tubing	Copper	Stainless Steel
Fittings	Low-Lead Brass	Stainless Steel

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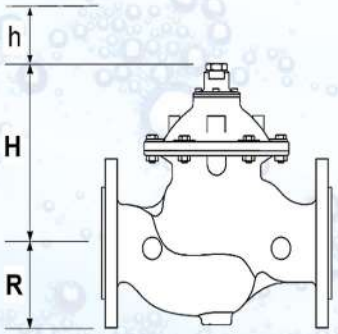
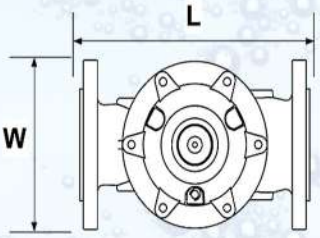
MODEL 63 DIMENSIONS & WEIGHTS

Globe Flanged Type

Valve Size	(1½")	40	(2")	50	(2½")	65	(3")	80	(4")	100	(6")	150	(8")	200	(10")	250
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
L	9 1/16	230	9 1/16	230	11 3/8	290	12 3/16	310	13 3/4	350	18 7/8	480	23 5/8	600	28 3/4	730
L (ANSI#300)	9 1/16	230	9 3/16	235	12 1/2	292	13 1/2	345	15 11/16	400	20 5/8	525	23 13/16	605	31 1/8	790
H	7 5/16	185	7 5/16	185	7 5/16	185	9 1/16	230	9 7/16	240	13	330	15 3/8	390	20 1/2	520
h**	5 1/2	140	5 1/2	140	5 1/2	140	6 11/16	170	7	180	9	230	11 13/16	300	15 1/4	390
W	6	153	6 11/16	170	7 3/16	185	7 1/8	200	9 1/4	235	13	330	16 5/16	415	20 11/16	525
R	3 1/4	82.5	3 1/4	82.5	3 5/8	92.5	3 15/16	100	4 5/16	110	5 5/8	142.5	6 3/4	172.5	8 1/16	205
Weight Lbs*/Kg	26 / 12		26 / 12		29 / 13		49 / 22		82 / 37		176 / 80		346 / 157		540 / 245	
Vol.control chamber gal/lit	0.02 / 0.1		0.02 / 0.1		0.02 / 0.1		0.08 / 0.3		0.2 / 0.7		0.4 / 1.5		1.1 / 4.3		2.6 / 9.7	



Valve Size	(12")	300	(14")	350	(16")	400	(18")	450	(20")	500	(24")	600	(28")	700	(32")	800
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
L	33 7/16	850	38 9/16	980	43 5/16	1100	47 1/4	1200	49 3/16	1250	57 1/16	1450	64 15/16	1650	72 7/8	1850
L (ANSI#300)	35 13/16	910	38 9/16	980	43 5/16	1100	47 1/4	1200	49 3/16	1250	57 1/16	1450	64 15/16	1650	72 7/8	1850
H	25	635	25	635	33 5/8	855	33 5/8	855	33 5/8	855	61 15/16	1574	65 15/16	1675	65 15/16	1675
h**	17 11/16	450	17 11/16	450	23 1/4	590	23 5/8	600	23 5/8	600	29 1/8	740	33 7/8	860	33 7/8	860
W	24	610	24	610	33 7/16	850	33 7/16	850	33 7/16	850	43 5/16	1100	43 5/16	1100	42 5/16	1090
R	9	230	10 11/16	272	11 7/16	290	12 3/16	310	14 1/16	357.5	19 5/16	490	19 5/8	498	23 3/4	603
Weight Lbs*/Kg	893 / 405		1124 / 510		1812 / 822		2083 / 945		2160 / 980		4299 / 1950		4560 / 2070		5730 / 2600	
Vol.control chamber gal/lit	4.9 / 18.6		4.9 / 18.6		13.2 / 50		13.2 / 50		13.2 / 50		22.2 / 84		22.2 / 84		22.2 / 84	

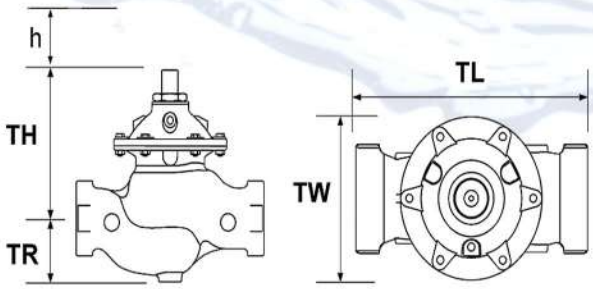


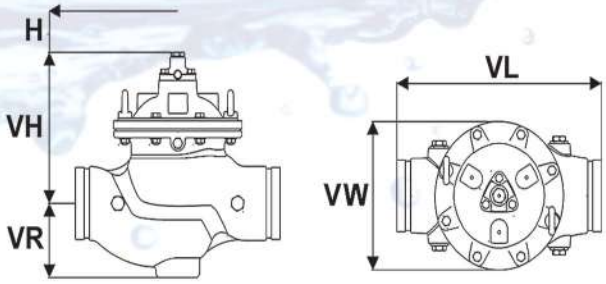
Globe Threaded Type

Valve Size	(1 1/2")	40 TH	(2")	50 TH
	inch	mm	inch	mm
TL	8 7/16	215	8 7/16	215
TH	7 5/16	185	7 5/16	185
h**	5 1/2	140	5 1/2	140
TW	5	129	5	129
TR	2 3/8	62	2 3/8	62
Weight Lbs*/Kg	15 / 7		15 / 7	

Grooved Type

Valve Size	(2")	50	(3")	80	(4")	100	(6")	150
	inch	mm	inch	mm	inch	mm	inch	mm
VL	8 1/2	215	13 13/16	351	14 13/16	376	20 1/2	521
VH	6 13/16	173	9	228	9 7/16	240	13	330
h**	5 1/2	140	6 11/16	170	7 1/16	180	9 1/16	230
VW	5	128	7 3/4	197	9 5/16	236	13 1/16	331
VR	3	78	4 3/16	106	4 5/8	118	5 13/16	147.5
Weight Lbs*/Kg	14.5 / 6.5		33.25 / 15.1		58.5 / 26.5		128.5 / 58.25	





* Approximate shipping Weight (PN 25)
** h = Minimal required maintenance space

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