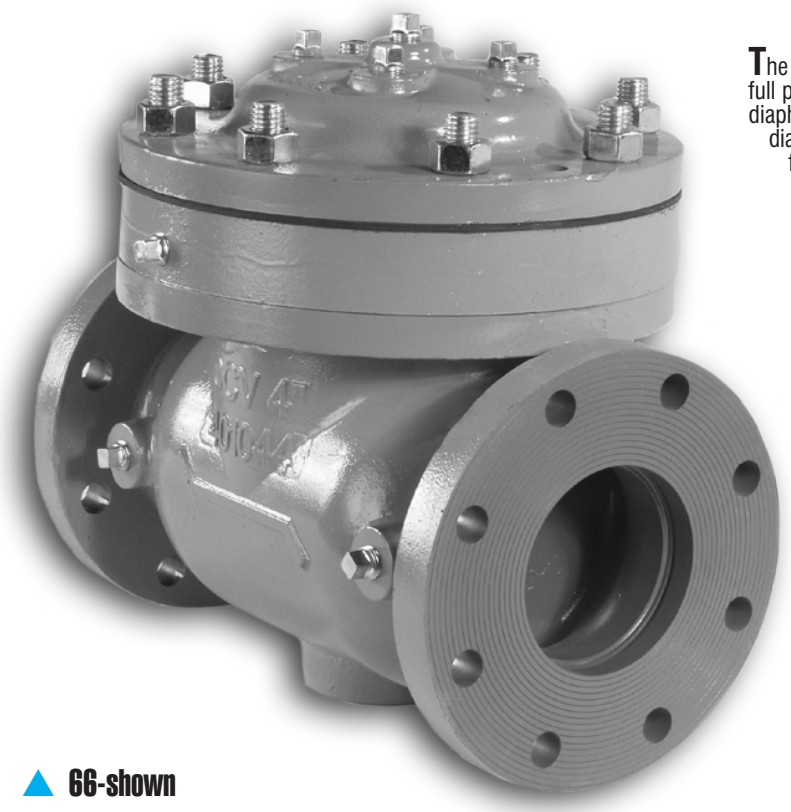


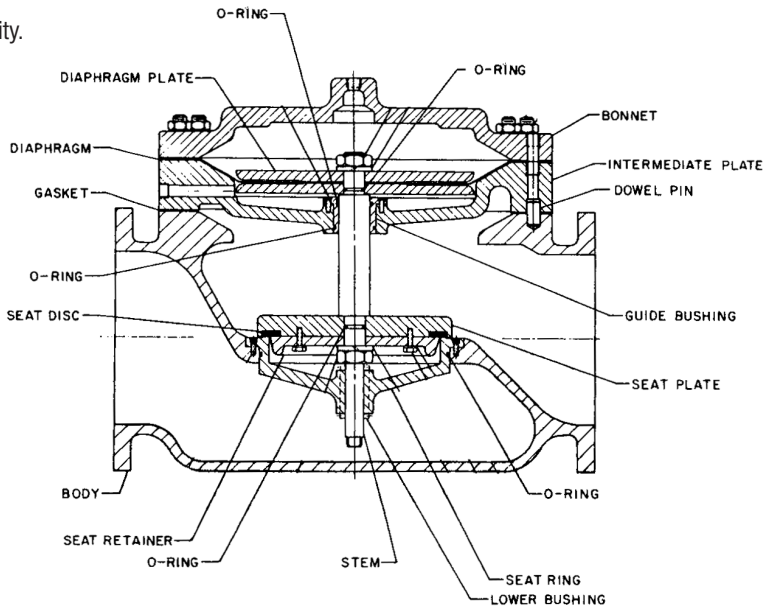
▲ 66-shown

The Basic Control Valve 66 Globe and 66 Angle is a full port engineered valve. Equipped with two diaphragm chambers, sealed from each other by the diaphragm, and isolated from the valve's main flow passage by an intermediate plate. By pressurizing one control chamber while simultaneously venting the other, the valve is positively powered to both open and close.

A large majority of OCV control valves have a single diaphragm chamber and operate off line pressure; more specifically, off the pressure differential between the inlet and outlet ports of the valve. There are, however, conditions that do not lend themselves to such an operation. For example, adequate differential to properly actuate the valve may not exist, the liquid being handled may be extremely dirty or otherwise unsuitable, or design of the system may, for some reason, make it preferable to use an outside power source. Under such conditions, the OCV Power Actuated Valve 66/66A provides an excellent

FEATURES / BENEFITS

- Operates automatically off line pressure or independent pressure source.
- Heavy-duty, nylon-reinforced diaphragm isolates top chamber operating pressure from bottom chamber line pressure.
- Rectangular-shaped, soft seat seal provides drip-tight Class VI closure.
- Diaphragm assembly guided center and bottom
- Throttling seat retainer for flow and pressure stability.
- Easily maintained without removal from the line.
- Diaphragm replaced without removing internal stem assembly.
- Replaceable seat ring.
- Alignment pins assure proper reassembly after maintenance.
- Center-tapped bonnet facilitates installation of position indicator or valve-actuated switches.
- Ductile iron and steel valves are epoxy-coated inside and out, for maximum corrosion protection.
- Valves are factory tested.
- Valves are serial numbered and registered to facilitate replacement parts and factory support.



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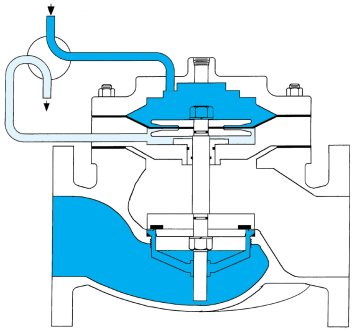
email: sales@controlvalves.com ● **website:** www.controlvalves.com

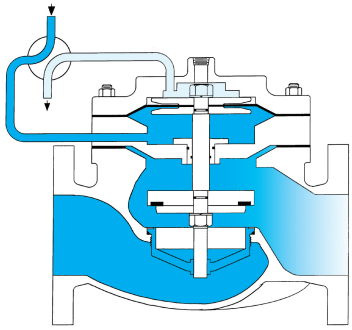
Power Actuated Valve 66/66A

Power Actuated Valve 66/66A

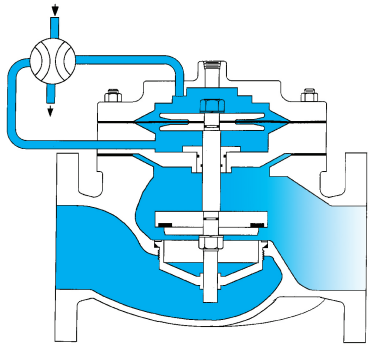
FUNCTIONAL OPERATION



Valve Closed
Applying pressure to the upper diaphragm chamber and simultaneously venting the lower chamber (typically to drain) causes the valve to go fully closed.



Valve Open
Applying pressure to the lower diaphragm chamber and simultaneously venting the upper chamber (typically to drain) causes the valve to go fully open.



Valve Modulating
Locking pressures in both the upper and lower diaphragm chamber simultaneously allows for holding the valve in a position other than full open or closed.

BASIC VALVE FLOW CHARACTERISTICS

VALVE SIZE	US METRIC	1 1/4" DN32	1 1/2" DN40	2" DN50	2 1/2" DN65	3" DN80	4" DN100	6" DN150	8" DN200	10" DN250	12" DN300	14" DN350	16" DN400	24" DN600
GLOBE	US	23	27	47	68	120	200	450	760	1250	1940	2200	2850	6900
Cv	METRIC	5.5	6.5	11.3	16.3	28.7	47.9	108	182	299	465	527	683	1653
ANGLE	US	30	35	65	87	160	270	550	1000	1600	2400	--	4000	--
Cv	METRIC	7.2	8.4	15.6	20.8	38.3	64.7	132	240	383	575	--	958	--

$$DP = sg\left(Q/Cv\right)^2$$

where:
Q = Flow Rate in USGPM (US) or Q = Flow Rate in liters/sec (Metric)
Cv = Flow Rate in USGPM @ 1 psi pressure drop (US) or Cv = Flow Rate in liter/sec @ 1 bar pressure drop (Metric)
DP = Pressure drop in psi (US) or DP = Pressure drop in bar (Metric)
sg = specific gravity of line fluid

ABOUT YOUR VALVE

OCV Control Valves was founded more than 60 years ago with a vision and commitment to quality and reliability. From modest beginnings, the company has grown to be a global leader just a half century later. In fact, OCV Valves can be found in some capacity in nearly every country around the world from fire protection systems in Malaysia to aircraft fueling systems in Africa and from oil refineries in Russia to water supply systems in the USA and Canada. You will also find our valves in irrigation systems in Europe, South America and the Middle East.

The original foundation on which the company was built allows our team of professionals to not only provide the service required to be a worldwide supplier, but more importantly the opportunity to afford the personal touch necessary to be each of our customers' best partner. Simply stated, we take pride in all that we do.

Committed to the work they do, our employees average over 15 years of service. This wealth of knowledge allows us to provide quality engineering, expert support, exacting control and the know-how to create valves known for their long life.

Being ISO 9001 certified means we are committed to a quality assurance program. Our policy is to supply each customer with consistent quality products and ensure that the process is right every time. Our valves meet and exceed industry standards around the world, including approvals by:

Check individual models for availability.

CLASSIFIED UL WATER QUALITY VALVE MH61756 ANSI/NSF 61-G & 372 · UL · FM APPROVED · CE · NSF NSF-ISR Registered to ISO 9001 · ABS TYPE APPROVED PRODUCT

All valves are not created equal. OCV Control Valves proves that day in and day out. We stand behind our valves and are ready to serve your needs.

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email: sales@controlvalves.com • **website:** www.controlvalves.com

SPECIFICATIONS

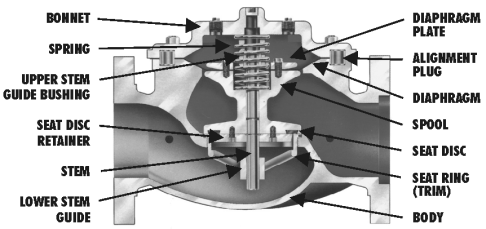
NOTE: ALL waterworks valves meet the Low-Lead laws of the United States, including individual state laws, as of March 2014.
**Valves 1-1/4" through 24" are certified to NSF/ANSI 372. Valves 4" through 24" are also certified to NSF/ANSI 61-G.*

CLASSIFIED UL WATER QUALITY VALVE MH61756 ANSI/NSF 61-G & 372

VALVE BODY & BONNET	DUCTILE IRON		CAST STEEL		STAINLESS STEEL	
Material Specification	ASTM A536/65-45-12 (epoxy coated)		ASTM A216/WCB (epoxy coated)		ALL GRADES	
END CONNECTIONS						
Flange Standard (also available in metric)	ANSI B16.42		ANSI B16.5		ANSI B16.5	
Flange Class	150#	300#	150#	300#	150#	300#
Flange Face	Flat	Raised	Raised	Raised	Raised	Raised
Maximum Working Pressure	250 psi	640 psi	285 psi	740 psi	285 psi	740 psi
Screwed Working Pressure: ANSI B1.20.1 640 psi			Grooved End Working Pressure: 300 psi			
INTERNALS						
Stem	STAINLESS STEEL					
Spring	STAINLESS STEEL					
Spool	DUCTILE IRON (epoxy coated) / OPTIONAL - STN. STL.				STAINLESS STEEL	
Seat Disc Retainer	DUCTILE IRON (epoxy coated) (10" & LARGER) STN. STL. (8" & SMALLER / OPTIONAL - ALL SIZES)				STAINLESS STEEL	
Diaphragm Plate	DUCTILE IRON (epoxy coated) / OPTIONAL - STN. STL.				STAINLESS STEEL	
Seat Ring (Trim)	LOW-LEAD BRONZE OR STN. STL.				STN. STL.	
Upper Stem Bushing	BRONZE OR TEFLON®				TEFLON®	
Lower Stem Bushing	NOT APPLICABLE FOR LOW-LEAD BROZE SEAT RINGS / TEFLON FOR FOR STN. STL. SEAT RINGS					
ELASTOMER PARTS (Rubber)						
Diaphragm/Seat Disc/O-Rings	EPDM					
Operating Temperature* *Consult factory when temperatures approach low or high temperature allowance.	32°F to 230°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)	DE-ENERGIZE TO OPEN (NORMALLY OPEN)				

CONTROL PILOTS		
Bodies	LOW-LEAD BRONZE	STN. STL.
Internal	STAINLESS STEEL	STAINLESS STEEL
Tubing	COPPER	STAINLESS STEEL
Fittings	LOW-LEAD BRASS	STAINLESS STEEL

TEFLON® is a registered trademark of DuPont.



Globe Flanged Sizes

1.25"	1.5"	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"*	20"*	24"
32mm	40mm	50mm	65mm	80mm	100mm	150mm	200mm	250mm	300mm	350mm	400mm	450mm*	500mm*	600mm

*CONSULT FACTORY

Angle Flanged Sizes

1.25"	1.5"	2"	2.5"	3"	4"	6"	8"	10"	12"	16"
32mm	40mm	50mm	65mm	80mm	100mm	150mm	200mm	250mm	300mm	400mm

Globe/Angle Screwed Sizes

1.25"	1.5"	2"	2.5"	3"
32mm	40mm	50mm	65mm	80mm

Globe/Angle Grooved Sizes

1.5"	2"	2.5"	3"	4"	6"*
32mm	50mm	65mm	80mm	100mm	150mm*

*GLOBE ONLY

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DIMENSIONS

U.S. DIMENSIONS - INCHES

DIM	END CONN.	1 1/4-1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	24
A	SCREWED	8 3/4	9 7/8	10 1/2	13	--	--	--	--	--	--	--	--
	GROOVED	8 3/4	9 7/8	10 1/2	13	15 1/4	--	--	--	--	--	--	--
	150# FLGD	8 1/2	9 3/8	10 1/2	12	15	17 3/4	25 3/8	29 3/4	34	39	40 3/8	62
	300# FLGD	8 3/4	9 7/8	11 1/8	12 3/4	15 5/8	18 5/8	26 3/8	31 1/8	35 1/2	40 1/2	42	63 3/4
B	SCREWED	1 7/16	1 11/16	1 7/8	2 1/4	--	--	--	--	--	--	--	--
	GROOVED	1*	1 3/16	1 7/16	1 3/4	2 1/4	--	--	--	--	--	--	--
	150# FLGD	2 5/16-2 1/2	3	3 1/2	3 3/4	4 1/2	5 1/2	6 3/4	8	9 1/2	10 5/8	11 3/4	16
	300# FLGD	2 5/8-3 1/16	3 1/4	3 3/4	4 1/8	5	6 1/4	7 1/2	8 3/4	10 1/4	11 1/2	12 3/4	18
C ANGLE	SCREWED	4 3/8	4 3/4	6	6 1/2	--	--	--	--	--	--	--	--
	GROOVED	4 3/8*	4 3/4	6	6 1/2	7 5/8	--	--	--	--	--	--	--
	150# FLGD	4 1/4	4 3/4	6	6	7 1/2	10	12 11/16	14 7/8	17	--	20 13/16	--
	300# FLGD	4 3/8	5	6 3/8	6 3/8	7 13/16	10 1/2	13 3/16	15 9/16	17 3/4	--	21 5/8	--
D ANGLE	SCREWED	3 1/8	3 7/8	4	4 1/2	--	--	--	--	--	--	--	--
	GROOVED	3 1/8*	3 7/8	4	4 1/2	5 5/8	--	--	--	--	--	--	--
	150# FLGD	3	3 7/8	4	4	5 1/2	6	8	11 3/8	11	--	15 11/16	--
	300# FLGD	3 1/8	4 1/8	4 3/8	4 3/8	5 13/16	6 1/2	8 1/2	12 1/16	11 3/4	--	16 1/2	--
E	ALL	7	7	8 1/2	7 3/4	9 3/4	11 3/4	14 5/8	19 1/8	20 3/4	22 1/4	24 1/4	33
F	ALL	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8	8
G	ALL	6	6 3/4	7 11/16	8 3/4	11 3/4	14	21	24 1/2	28	31 1/4	34 1/2	52
H	ALL	10	11	11	11	12	13	14	17	18	20	20	28 1/2

*GROOVED END NOT AVAILABLE IN 1 1/4"

METRIC DIMENSIONS - M.M.

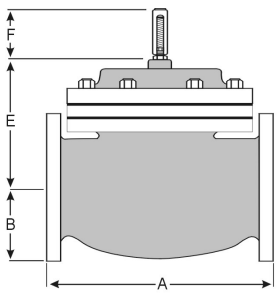
DIM	END CONN.	DN32-DN40	DN50	DN65	DN80	DN100	DN150	DN200	DN250	DN300	DN350	DN400	DN600
A	SCREWED	222	251	267	330	--	--	--	--	--	--	--	--
	GROOVED	222	251	267	330	387	--	--	--	--	--	--	--
	150# FLGD	216	238	267	305	381	451	645	756	864	991	1026	1575
	300# FLGD	222	251	283	324	397	473	670	791	902	1029	1067	1619
B	SCREWED	37	43	48	57	--	--	--	--	--	--	--	--
	GROOVED	25*	30	37	44	57	--	--	--	--	--	--	--
	150# FLGD	59-64	76	89	95	114	140	171	203	241	270	298	406
	300# FLGD	67-78	83	95	105	127	159	191	222	260	292	324	457
C ANGLE	SCREWED	111	121	152	165	--	--	--	--	--	--	--	--
	GROOVED	111*	121	152	165	194	--	--	--	--	--	--	--
	150# FLGD	108	121	152	152	191	254	322	378	432	--	529	--
	300# FLGD	111	127	162	162	198	267	335	395	451	--	549	--
D ANGLE	SCREWED	79	98	102	114	--	--	--	--	--	--	--	--
	GROOVED	79*	98	102	114	143	--	--	--	--	--	--	--
	150# FLGD	76	98	102	102	140	152	203	289	279	--	398	--
	300# FLGD	79	105	111	111	148	165	216	306	298	--	419	--
E	ALL	178	178	216	197	148	298	373	486	527	565	616	838
F	ALL	98	98	98	98	98	98	162	162	162	162	162	203
G	ALL	152	171	195	222	298	356	533	622	711	794	876	1321
H	ALL	254	279	279	279	305	330	356	432	457	508	508	724

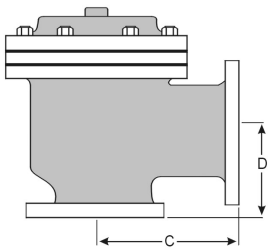
*GROOVED END NOT AVAILABLE IN DN32

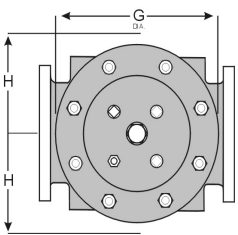
For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 8" and larger valves, or any valves with a limit switch, in positions other than described. Space should be taken into consideration when mounting valves and their pilot systems.

A routine inspection & maintenance program should be established and conducted yearly by a qualified technician. Consult our factory @ **1-888-628-8258** for parts and service.

How to order your valve
When Ordering please provide:
Series Number - Valve size - Globe or Angle - Pressure Class - Screwed, Flanged, Grooved - Trim Material - Adjustment Range - Pilot Options - Special needs / or installation requirements.







Represented by:

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