

▲ **Model 8000VM shown**

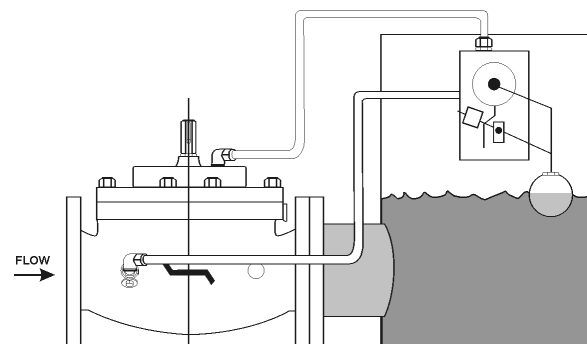
The OCV Series 8000 float control valves are designed to maintain a desired level in a tank or reservoir by opening for filling the tank when fluid is below the high level point and closing tightly when the desired level is reached.

## SERIES FEATURES

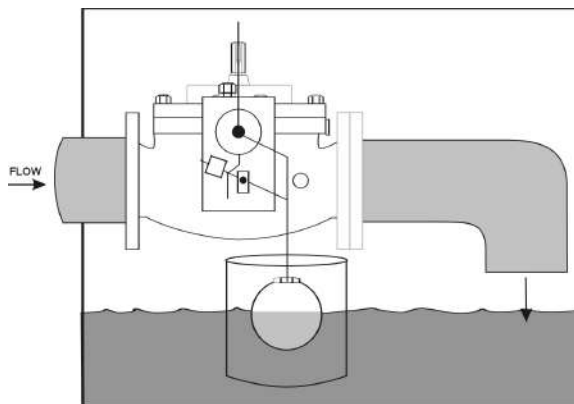
- ▶ The 8000 is a non-modulating valve; either full open or full closed. It is available in two basic configurations:
  1. Model 8000, with the float pilot provided separate from the main valve for remote mounting. This configuration is used when the fill line is located at the bottom of the tank.
  2. Model 8000VM, with the float pilot mounted on the main valve. This configuration is typically used when the fill line is located at the top of the tank.
- ▶ All Series 8000 valves include an OCV Model 65 Basic Valve assembly and a Model 814 three-way rotary float pilot. For faster operation, valves 8" and larger also include a Model 3600 three-way auxiliary pilot.

## VALVE FEATURES

- ▶ Operates automatically off line pressure.
- ▶ Heavy-duty, nylon-reinforced diaphragm.
- ▶ Rectangular-shaped, soft seat seal provides drip-tight Class VI closure.
- ▶ Diaphragm assembly guided top and bottom.
- ▶ Throttling seat retainer for flow and pressure stability.
- ▶ Easily maintained without removal from the line.
- ▶ Replaceable seat ring.
- ▶ Alignment pins assure proper reassembly after maintenance.
- ▶ Factory tested.
- ▶ Serial numbered and registered to facilitate replacement parts and factory support.



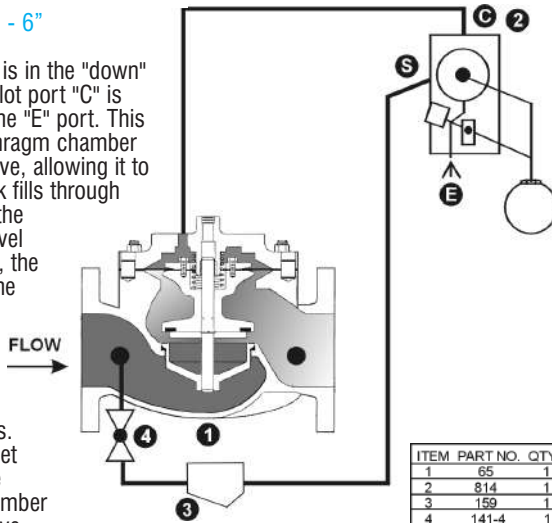
## TOP FILL PILOT VALVE MOUNTED



## VALVE OPERATION

### VALVES 1 1/4" - 6"

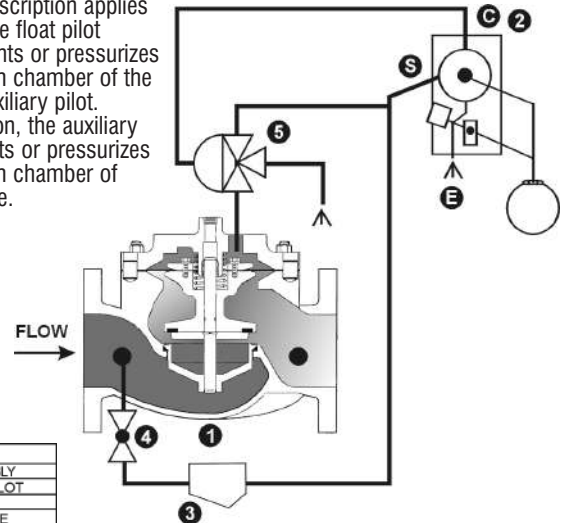
When the float is in the "down" position, the pilot port "C" is connected to the "E" port. This vents the diaphragm chamber of the main valve, allowing it to open. The tank fills through the valve until the desired high level is reached; i.e., the float reaches the "up" position. At this point, a connection is made in the pilot from "S" to "C" ports. This applies inlet pressure to the diaphragm chamber of the main valve, causing it to go fully closed.



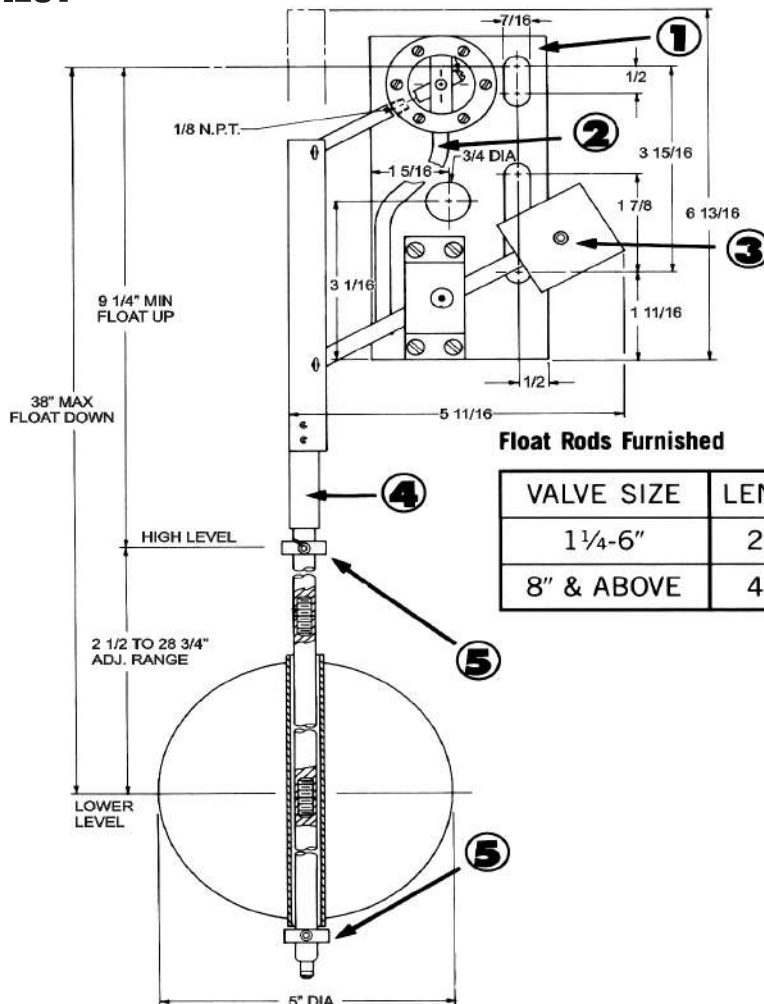
ITEM	PART NO.	QTY	DESCRIPTION
1	65	1	BASIC VALVE ASSEMBLY
2	814	1	THREE-WAY FLOAT PILOT
3	159	1	Y-STRAINER
4	141-4	1	ISOLATION BALL VALVE
5	3600	1	THREE-WAY AUXILIARY PILOT

### VALVES 8" - Larger

The above description applies except that the float pilot alternately vents or pressurizes the diaphragm chamber of the three-way auxiliary pilot. In relay fashion, the auxiliary pilot then vents or pressurizes the diaphragm chamber of the main valve.

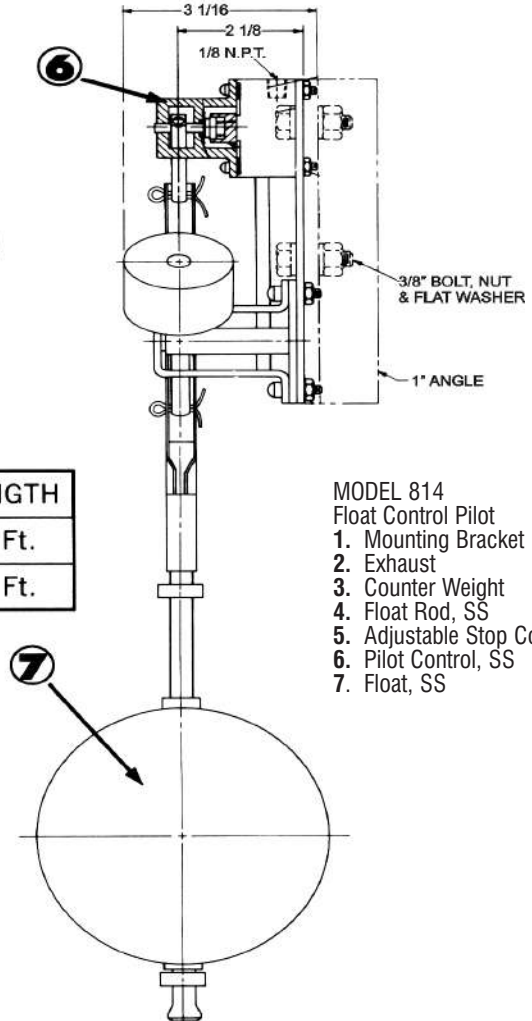


## PILOT



### Float Rods Furnished

VALVE SIZE	LENGTH
1 1/4"-6"	2 Ft.
8" & ABOVE	4 Ft.



- MODEL 814  
 Float Control Pilot  
 1. Mounting Bracket  
 2. Exhaust  
 3. Counter Weight  
 4. Float Rod, SS  
 5. Adjustable Stop Collars, SS  
 6. Pilot Control, SS  
 7. Float, SS

## FLOAT PILOT INSTALLATION

To protect the float ball from wave action within the tank, it is highly recommended that the float be installed in a stilling well. This is especially critical if the fill line exits into the top of the tank.

## VALVE INSTALLATION

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.

### Model 814 Float Pilot

The OCV Model 814 Float Pilot is a float-actuated, three-port, rotary disc pilot designed to provide on-off action to an OCV Model 65 main valve.

It features the following:

- (1) Integral mounting plate to facilitate installation within the tank.
- (2) Designed for mounting above the fluid level to prevent a cross-connection.
- (3) High and low level points are independently adjustable, allowing for optimum tank cycling.

The basic principle of operation of the 814 pilot is quite straightforward. There are three sets of ported passages in the pilot body, and matching sets in the lapped rotary disc.

- (A) With the float "down", the "S" port is blocked, and the "C" port is connected to "E" port. This allows the pilot to vent the diaphragm chamber of a main valve or auxiliary pilot, thus opening the main valve.
- (B) With the float "up", the "E" port is blocked, and "S" is connected to "C" port. This allows the pilot to pressurize the diaphragm chamber of the main valve or auxiliary pilot, thus closing the main valve.

## SIZING CONSIDERATIONS

### Sizing of Series 8000 Valves - Float Valves

While most Model 8000 valves are line sized, there are two factors that should be checked. Maximum flow rate should not exceed 25 ft/sec, in other words don't use a valve that is too small. At the same time, you don't want the valve so large that when it opens, it drops the system pressure so low that there is not enough pressure to close the valve when high level is reached. Our ValveMaster selection and sizing software covers this in detail. However, if you do not have access to the software on our web site, sizing within the flow limitations shown in the following table should result in satisfactory operation.

If the flow rate for a given valve will fall below the minimum shown, you might consider adding a pressure sustaining feature (Model 8000-3).

SIZE	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	24"
Min. flow, gpm	14	23	50	75	115	200	450	780	1225	1750	2100	2750	6250
Max. flow, gpm	115	160	260	370	570	1000	2250	3900	6150	8700	10,500	13,800	31,300

## VALVE SELECTION GUIDE

By combining various control pilots, multiple valve functions can be performed on a single Series 8000 Float Control Valve. To find the combination function valve, select the desired features and then the model number. This chart shows only a sample of those most often specified valves. Consult the factory for specific data on the model you selected.

Combination valves can often reduce or eliminate other equipment. Example: If the system requires a Pressure Sustaining function, the sustaining feature can be added as a function of the Float Valve, Model 8000-3.

Feature	8000	8000-1	8000-2	8000-3	8000-13	8000-23	8000VM	8000VM-1	8000VM-2	8000VM-3	8000VM-13	8000VM-23	Definition
Float Pilot Mounted On Valve							X	X	X	X	X		Pilot mounted on valve vs remote mount
Solenoid Override (Energize-to-Open)		X			X			X			X		Solenoid, when deenergized, overrides float pilot to close valve
Solenoid Override (Energize-to-Close)			X			X			X			X	Solenoid, when energized, overrides float pilot to close valve
Pressure Sustaining				X	X	X				X	X	X	Maintains minimum valve inlet pressure

## 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.



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](mailto:sales@controlvalves.com) • website: [www.controlvalves.com](http://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.

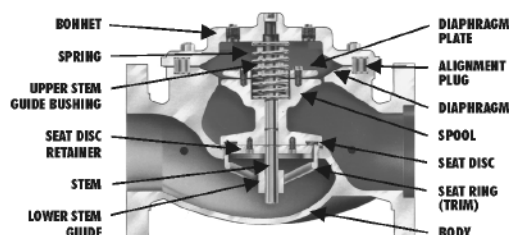


VALVE BODY & BONNET		DUCTILE IRON		CAST STEEL		STAINLESS STEEL	
Material Specification		ASTM A536/65-45-12 (epoxy coated)		ASTM A216/WCB (epoxy coated)		ALL GRADES	
END CONNECTIONS							
Flange Standard (also available in metric)		ANSI B16.42		ANSI B16.5		ANSI B16.5	
Flange Class		150#	300#	150#	300#	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*		32°F to 230°F					
*Consult factory when temperatures approach low or high temperature allowance.							
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			

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The diagram illustrates the internal mechanical components of a valve. On the left side, the BONNET is at the top, followed by a SPRING, UPPER STEM GUIDE BUSHING, SEAT DISC RETAINER, and the STEM. On the right side, the DIAPHRAGM PLATE is at the top, followed by an ALIGNMENT PLUG, DIAPHRAGM, SPOOL, and SEAT DISC. The components are shown in a cross-sectional view, highlighting their assembly and interaction within the valve body.

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### 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

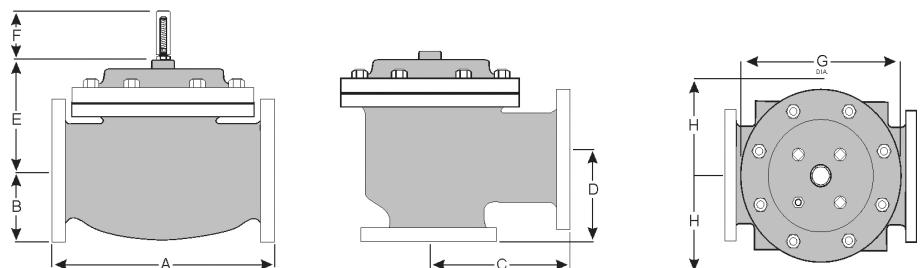
U.S. DIMENSIONS - INCHES													
DIM	END CONN.	1 1/4-1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	24
A	SCREWED	8 3/4	9 7/8	10 1/2	13	--	--	--	--	--	--	--	--
	GROOVED	8 3/4	9 7/8	10 1/2	13	15 1/4	20	--	--	--	--	--	--
	150# FLGD	8 1/2	9 3/8	10 1/2	12	15	17 3/4	25 3/8	29 3/4	34	39	40 3/8	62
	300# FLGD	8 3/4	9 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	3 5/16	--	--	--	--	--	--
	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	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	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	6	6	7	6 1/2	8	10	11 7/8	15 3/8	17	18	19	27
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	508	--	--	--	--	--	--
	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	84	--	--	--	--	--	--
	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	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	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	152	152	178	165	203	254	302	391	432	457	483	686
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.

Represented by:

### 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.

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