

▲ Model 8000

The Model 8000 is applicable anywhere it is necessary to automatically maintain the water level in storage tanks or reservoirs. Such applications occur in:

- Fire protection systems
- Municipal water
- Rural water
- Industrial plants

SERIES FEATURES

- ▶ Automatic tank fill and shut-off
- ▶ Accurate shut-off
- ▶ Opening and closing levels independently adjustable
- ▶ Pilot can be valve-or remote-mounted
- ▶ Float pilot design provides air gap to prevent cross connection
- ▶ Can be maintained without removal from the line
- ▶ Adjustable response speed
- ▶ Factory tested

OPERATION

The model 8000 is designed for tank fill only. A rotary, 3-port, float activated pilot controls the main valve. With the float at the low position on the rod, the pilot shifts to vent water from the diaphragm chamber of the main valve. This allows the valve to open and fill the tank. When the float/fluid level reaches the high position, the pilot shifts to apply full valve inlet pressure to the diaphragm of the main valve, forcing the valve fully closed.

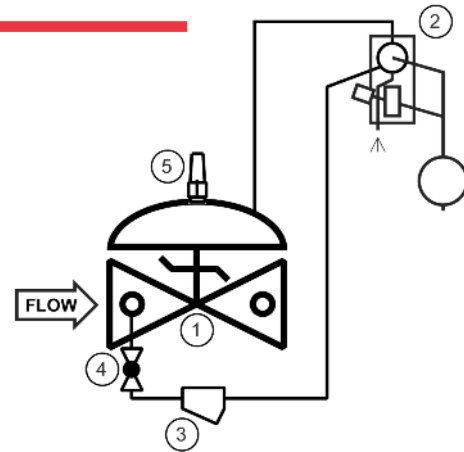
On 6" (DN150) and smaller valves, the float pilot operates the main valve directly. On 8" (DN200) and larger valves, the float pilot operates the main valve through a high-capacity, three-way auxiliary pilot for more positive response.

COMPONENTS

The Model 8000 consists of the following components, arranged as shown on the schematic diagram:

- 1.) Model 65 Basic Control Valve
- 2.) Model 814 Float Pilot
- 3.) Model 159 Y-strainer
- Protects pilot system from dirt/debris
- 4.) Model 141-4 Isolation Ball Valves
- 5.) Model 155 Visual Indicator (Optional)

SCHEMATIC



RECOMMENDED INSTALLATION

- Install the valve with adequate space and around the valve to facilitate servicing. Refer to dimension table.

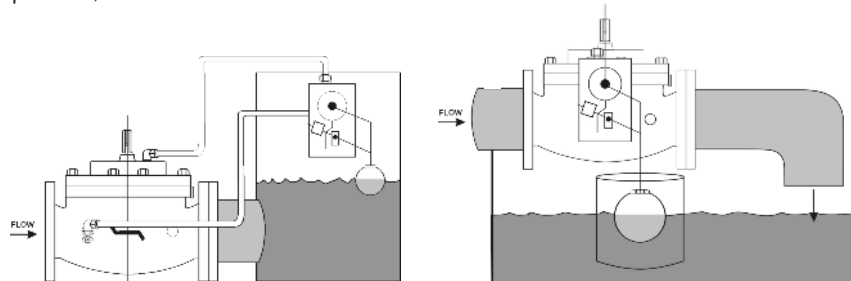
- Valve should be installed with the bonnet (cover) at the top, particularly 8" (DN200) and larger valves, and any valve with a limit switch.

- VALVE AT TOP OF TANK (valve mounted float pilot)

A shut-off valve should be installed upstream of the control valve to allow for isolation of the valve during startup and maintenance. Install a stilling well to protect the float ball assembly from surface turbulence.

- VALVE AT THE BOTTOM OF TANK (remote mounted float pilot)

Shut-off valves should be installed upstream and downstream of the control valve to allow for isolation of the valve during start and maintenance. If necessary, install a stilling well to protect the float ball assembly from surface turbulence. The float pilot ports must be connected to the main valve via field installed tubing, minimum 3/8" O.D. Refer to Operations/Maintenance Manual for details.



SIZING

While most Model 8000 Float Valves are line size, there are two factors to check. To keep from using too small a valve, flow rate should be limited to a maximum of 7.6 m/s velocity. Too large a valve can result in loss of inlet pressure, which is needed to close the valve on high level. Definitive sizing information can be found in the OCV Catalog, Series 8000 section and Engineering section Performance Charts. Consult the factory for assistance and a copy of the OCV ValveMaster Sizing program.

SIZE DN	32 - 40	50	65	80	100	150	200	250	300	350	400	600
MIN. FLOW M ³ /HR	3 - 5	11	17	26	45	102	177	278	398	477	625	1420
FLOW M ³ /HR	26 - 36	59	84	130	227	511	886	1398	1977	2386	3136	7114

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Model 8000 Float Valve METRIC

SIZES

GLOBE/ANGLE

Screwed Ends: 1 1/4" (DN32) - 3" (DN80)

Grooved Ends: 1 1/2" (DN40) - 6" (DN150)

Flanged Ends:

(globe) 1 1/4" (DN32) - 24" (DN600)

(angle) 1 1/4" (DN32) - 16" (DN400)

FLOAT PILOT- Rods

Sizes 1 1/4" (DN32) - 6" (DN150) supplied with

(2) 305mm rods; 8" (DN200) and larger valves

supplied with (4) 305mm rods

TEMPERATURE RANGE

(Valve Elastomers)

Buna-N: 0°C - 82°C

Viton: 0°C - 204°C

EPDM: 0°C - 148°C

MAX. PRESSURE

Limited by float pilot to 17.2 bar maximum, all materials and end connections.

MATERIALS

Body/Bonnet: Ductile Iron (epoxy coated), Carbon Steel (epoxy coated), Stainless Steel, Bronze, Others available (consult factory)

Seat Ring: Bronze, Stainless Steel

Stem: Stainless Steel, Monel

Spring: Stainless Steel

Diaphragm: Nylon Reinforced, Buna-N, Viton, EPDM

Seat Disc: Buna-N, Viton, EPDM

Pilot: Bronze, Stainless Steel

Other pilot system components: Bronze/Brass, All Stainless Steel

Tubing & Fittings: Copper/Brass, Stainless Steel

SPECIFICATIONS

The float control valve shall control the level in the tank by (a) opening when the float is down, indicating the tank needs filling, and (b) closing tightly when the float is up, indicating the tank is full. The primary control shall be a three-way, rotary disc, air gap float pilot which is adjustable for both the high and low level points.

DESIGN

The float control valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall pistons be used as an operating means. The pilot system shall include a Y-strainer and isolation ball valves. The float pilot shall be furnished separately for remote mounting in the tank. The float control valve shall be operationally and hydrostatically tested prior to shipment.

MATERIALS OF CONSTRUCTION

The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. All ferrous surfaces shall be coated with 4 mils of epoxy. The main valve seat ring shall be bronze. Elastomers (diaphragms, resilient seats and O-rings) shall be Buna-N. The float pilot shall be bronze, with stainless steel internals. The 127mm spherical float shall be stainless steel, as shall the float rods and linkage. The isolation ball valves shall be brass and control line tubing shall be copper.

OPERATING CONDITIONS

The float control valve shall be suitable for mounting at the base of the tank, with the float pilot remotely mounted inside the tank. Two field-installed lines shall connect the main valve and float pilot. The valve shall be capable of a maximum fill rate of <X> M³/HR at inlet pressures ranging from <X to X> bar with an outlet tank level of <X> meters.

ACCEPTABLE PRODUCTS

The altitude valve shall be a <size> Model 8000, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

METRIC CONVERSION - MM

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
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
H	ALL	254	279	279	279	305	330	356	432	457	508	508	724

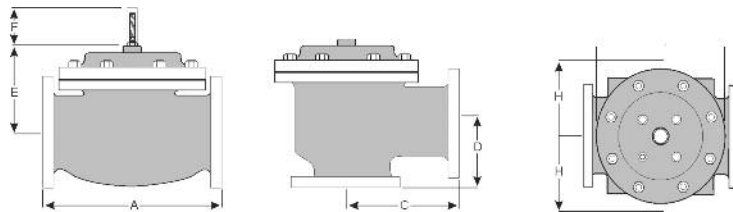
*GROOVED END NOT AVAILABLE IN DN32

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" (DN200) 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 Model 8000 valve

When Ordering please provide:
 Fluid to be controlled - Model Number - Size
 Globe or Angle - End Connection
 Body Material - Trim Material - Pilot Options
 Pilot Mounting: on valve or remote - Special Requirements / Installation requirements



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