



▲ Model 115-4

The Model 115-4 has an extremely wide range of applications: anywhere it is necessary to open and close a valve electrically. Typical examples include:

- Process control
- Irrigation systems
- Storage tank level control
- Automated wash systems
- Automated fountains
- Emergency shut-off valve in fuel systems

## SERIES FEATURES

- ▶ Electrically operated solenoid allows valve to open or close
- ▶ High capacity pilot system provides positive response in larger valves
- ▶ Can be maintained without removal from the line
- ▶ Adjustable response speed
- ▶ Exhaust-to-atmosphere operation (optional) allows minimum pressure loss
- ▶ Factory tested

## OPERATION

A three-way solenoid operates a high-capacity three-way auxiliary pilot. In one position, the pilot connects supply pressure to the main valve diaphragm chamber, causing the main valve to close. In the other position, the pilot connects the diaphragm chamber downstream (or to atmosphere), allowing the valve to open. The pilot system is equipped with a needle valve that allows the opening and closing speed of the valve to be adjusted.

The solenoid can be supplied for either energize-to-open or energize-to-close operation.

## COMPONENTS

The Model 115-4 consists of the following components, arranged as shown on the schematic diagram:

- 1.) Model 65 Basic Control Valve
- 2.) Model 452 Three-Way Solenoid Pilot
- 3.) Model 3600 Three-Way Auxiliary Pilot
- 4.) Model 141-2 Needle Valve
- 5.) Model 159 Y-Strainer
- 6.) Model 141-4 Isolation Ball Valves
- 7.) Model 155 Visual Indicator (Optional)

## SIZING

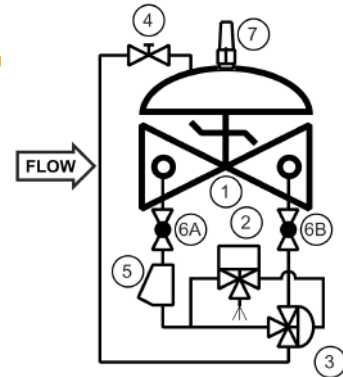
Definitive sizing information can be found in the OCV Catalog, Series 115 section and Engineering section Performance Charts. Consult the factory for assistance and a copy of the OCV ValveMaster Sizing program.

## MAX. PRESSURE

The pressures listed below are maximum pressures at 100°F.

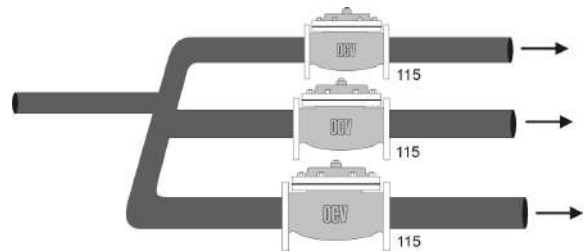
END CONNECTIONS	DUCTILE IRON	STEEL/STN STL	LOW-LEAD BRONZE
Threaded	400 psi	400 psi	400 psi
Grooved	300 psi	300 psi	300 psi
150# Flanged	250 psi	285 psi	225 psi
300# Flanged	400 psi	400 psi	400 psi

## SCHEMATIC

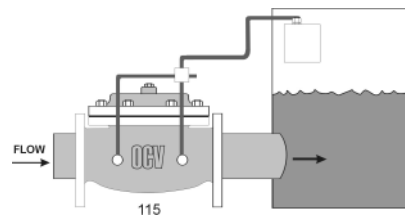


## RECOMMENDED INSTALLATION

**ZONE CONTROL**  
 Used in irrigation and industrial processes, each flow line can be activated independently of others.



**LEVEL CONTROL**  
 Valve, activated by level sensor, fills storage tank.



# Model 115-4



## SIZES GLOBE/ANGLE

Flanged Ends: 8" - 24" (globe); 8" - 16" (angle)

## FLUID OPERATING TEMPERATURE RANGE

(Valve Elastomers)

EPDM 32° F - 230°F\*

**MATERIALS** - Consult factory for others.

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

**Seat Ring:** low-lead Bronze, Stainless Steel

**Stem:** Stainless Steel, Monel

**Spring:** Stainless Steel

**Diaphragm:** EPDM\*

**Seat Disc:** EPDM\*

**Pilot:** low-lead Bronze, Stainless Steel

*Other pilot system components:* low-lead Bronze/Brass, All Stainless Steel

**Tubing & Fittings:** Copper/Brass, Stainless Steel

**Solenoid:** Enclosure: Weatherproof NEMA 4X / Explosion Proof NEMA 4X, 6P, 7, 9

*Body:* Brass, Stainless Steel

*Voltages:* 24, 120, 240, 480 VAC / 12, 24 VDC

*Note: Working pressures of solenoids vary greatly, consult factory on application of OCV Model 115-4 valves.*

\*Others available upon request.

\*\*Valves 1-1/4" through 24" are certified to NSF/ANSI 372. Valves 4" through 24" are also certified to NSF/ANSI 61-G.

## SPECIFICATIONS (Typical Commercial Plumbing Application)

The solenoid shut-off valve shall open and close via discrete electrical signals. The valve shall be equipped with a three-way solenoid valve that operates a three-way auxiliary pilot, allowing the valve to open when <energized, deenergized>.

### DESIGN

The solenoid 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 the pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include a needle valve, Y-strainer, solenoid valve, auxiliary pilot and isolation ball valves. The solenoid shut-off 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 low-lead Bronze. Elastomers (diaphragms, resilient seats and O-rings) shall be EPDM. The auxiliary pilot shall be low-lead Bronze. The needle valve and isolation ball valves shall be brass and control line tubing shall be copper. The solenoid shall have a brass body, weatherproof enclosure and be suitable for operation on <voltage>.

### OPERATING CONDITIONS

The solenoid shut-off valve shall be suitable for pressures of <X to X> psi at flow rates up to <X> gpm.

### ACCEPTABLE PRODUCTS

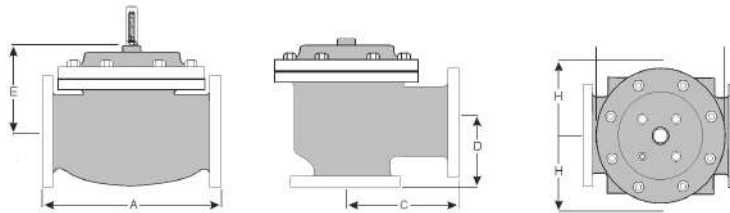
The solenoid shut-off valve shall be a <size> Model 115-4, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

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
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	--
E	ALL	6	6	7	6 1/2	8	10	11 7/8	15 3/8	17	18	19	27
	H	ALL	10	11	11	11	12	13	14	17	18	20	28 1/2

\*GROOVED END NOT AVAILABLE IN 1 1/4"

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.



QUALITY SYSTEM REGISTERED TO ISO 9001

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 115-4 valve

When Ordering please provide:

Fluid to be controlled -Model Number -Size -Globe or Angle -End Connection -Body Material -Trim Material -Solenoid Voltage -Energize to Open or Close Valve -Solenoid enclosure Weatherproof or Explosion Proof -Solenoid exhaust to downstream or atmosphere -Special Requirements / Installation Requirements

Represented by:

TOLL FREE 1.888.628.8258 • phone: (918)627.1942 • fax: (918)622.8916 • 7400 East 42nd Place, Tulsa, Oklahoma 74145  
email: sales@controlvalves.com • website: www.controlvalves.com