

▲ Model 115-3

The Model 115-3 has a wide range of applications: anywhere it may be required to position a valve electrically.

Typical examples include:

- Process control
- Supervisory flow or pressure control
- Automated fountains

SERIES FEATURES

- ▶ Electrically operated solenoids enable the valve to be opened, closed, or held in any position
- ▶ Can be maintained without removal from the line
- ▶ Independently adjustable opening and closing speeds
- ▶ Factory tested

The Model 115-3 is also the basis for the OCV Series 22 and Series 88 electronic control valves.

OPERATION

Two two-way solenoids operate the Model 115-3. The first connects the main valve inlet to the diaphragm chamber and, when it is open, causes the main valve to close. The second solenoid connects the diaphragm chamber to the main valve outlet and, when it is open, allows the main valve to open. A needle valve is installed in series with each solenoid, giving separate adjustment of the valve opening and closing speeds.

The solenoids can be supplied to give one of the following "default" modes on absence or loss of electrical power:

- Default to closed
- Default to open
- Default in last position

COMPONENTS

The Model 115-3 consists of the following components, arranged as shown on the schematic diagram:

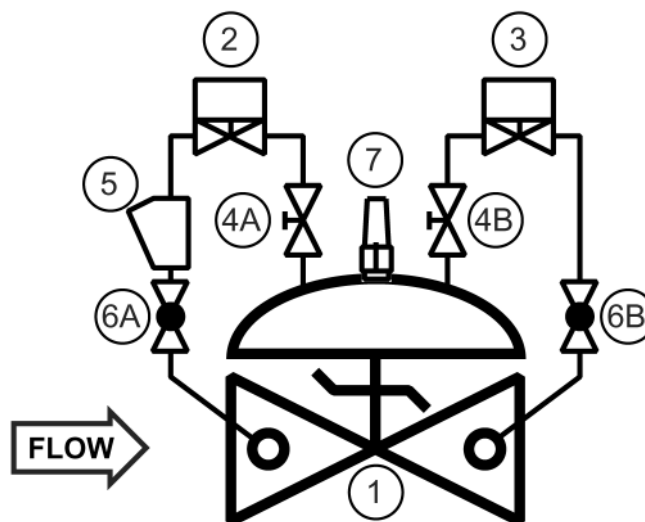
- 1.) Model 65 Basic Control Valve
- 2.) Model 450 Two-Way Solenoid Pilot, N.O.
- 3.) Model 451 Two-Way Solenoid Pilot, N.C.
- 4.) Model 141-2 Needle Valve
- 5.) Model 159 Y-Strainer
Protects pilot system from dirt/debris
- 6.) Model 141-4 Isolation Ball Valves
- 7.) Model 155 Visual Indicator (Optional)

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.

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

SCHEMATIC



MAX. PRESSURE

The pressures listed here are maximum pressures at 100°F. Also, working pressures of solenoids vary greatly, consult factory on application of OCV Model 115-3 valves when pressures exceed those stated in chart.

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

SIZES GLOBE/ANGLE

Screwed Ends - 1 1/4" - 3"

Grooved Ends - 1 1/2" - 6" (globe); 1-1/2"-4" (angle)

Flanged Ends - 1 1/4" - 24" (globe); 1 1/4" - 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 115-3 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 control valve shall operate by means of discrete electrical signals. The valve shall be equipped with two two-way solenoid valves that will allow the valve to be opened, closed, or held in any intermediate position. The solenoids shall be configured so that the valve will <open, close, hold position> on loss of electric power.

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 two needle valves, a Y-strainer, two solenoid valves and isolation ball valves. The solenoid 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 low-lead Bronze. Elastomers (diaphragms, resilient seats and O-rings) shall be EPDM. The needle valve and isolation ball valves shall be brass, and control line tubing shall be copper. The solenoid valves shall have brass bodies, weatherproof enclosures and be suitable for operation on <voltage>.

OPERATING CONDITIONS

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

ACCEPTABLE PRODUCTS

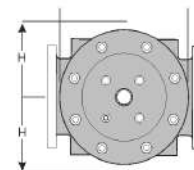
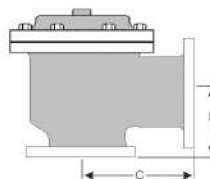
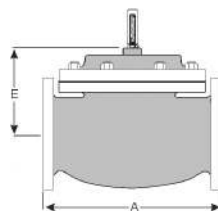
The solenoid control valve shall be a <size> Model 115-3, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

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	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	--
	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	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.

Represented by:

How to order your Model 115-3 valve

When Ordering please provide:

Fluid to be controlled -Model Number -Size -Globe

or Angle -End Connection -Body Material -Trim

Material -Solenoid Voltage -Power failure mode:

Open / Close / Hold last position -Solenoid enclo-

sure Weatherproof or Explosion Proof -Solenoid

exhaust to downstream or atmosphere -Special

Requirements / Installation Requirements

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