

▲ Model 101-D

The Model 101-D is an automatic control valve that is designed to separate two systems from one another, remaining closed until needed. It has specific use where "System B" must, at times, be fed from "System A". Typical examples would include:

- ▶ Domestic water systems
- ▶ Fire water systems
- ▶ Other emergency water systems

## SERIES FEATURES

- ▶ Feeds "System B" from "System A"
- ▶ Opens fully when activated
- ▶ Field adjustable opening set point
- ▶ Field adjustable closing set point
- ▶ Separate opening and closing speed controls
- ▶ Manual override for opening and closing
- ▶ Can be maintained without removal from the line
- ▶ Factory tested and can be pre-set to your requirements

## OPERATION

The normally open, spring-loaded pilot, sensing downstream pressure, responds to "System B" pressure decrease and causes the main valve to open at its field adjustable opening set point, when needed, as in the case of an emergency. The pilot system is equipped with an opening speed control that fine tunes the opening speed to the systems needs.

The normally closed, spring-loaded pilot, sensing downstream pressure, responds to "System B" pressure increase and causes the main valve to close at its field adjustable closing set point, when "System B" pressure returns to normal. The pilot system is equipped with a closing speed control that fine tunes the closing speed to the systems needs.

## COMPONENTS

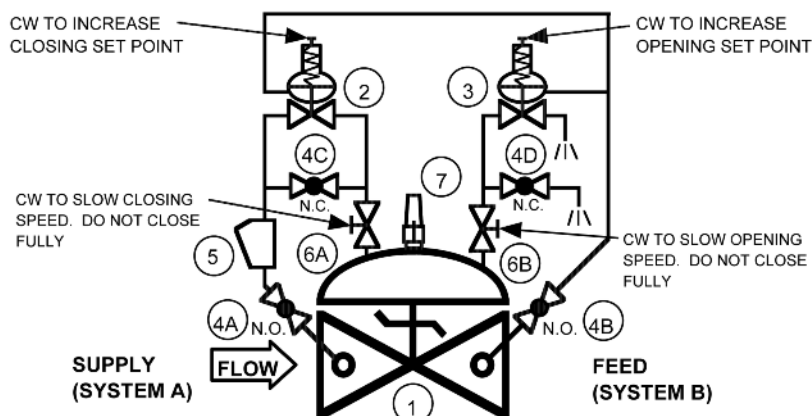
The Model 101-D consists of the following components, arranged as shown on the schematic diagram:

1. Model 65 Basic Control Valve
2. Model 1330 Closing Pilot
3. Model 1340 Opening Pilot
4. Four Model 141-4 Ball Valves (troubleshooting and manual override)
5. Model 159 Y-Strainer (dirt / debris protection)
6. Two Model 141-2 Needle Valves (opening / closing speed controls)
7. Model 155 Visual Indicator (Optional)

## SIZING

Sizing for this model involves generally selecting line sized valves. Consult the factory for assistance if needed.

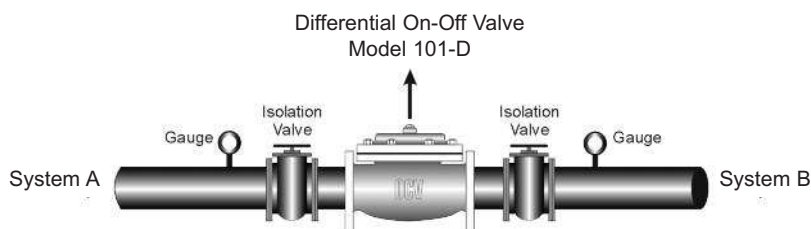
## SCHEMATIC



NOTE:

For best results, set closing pilot 15psi higher than opening pilot as a minimum.

## RECOMMENDED INSTALLATION



## MAX. PRESSURE

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

END CONNECTIONS	DUCTILE IRON	STEEL/STN STL	LOW-LEAD BRONZE
Threaded	640 psi	640 psi	500 psi
Grooved	300 psi	300 psi	300 psi
150# Flanged	250 psi	285 psi	225 psi
300# Flanged	640 psi	740 psi	500 psi

# Model 101-D



## 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 to 230°F\*

## SPRING RANGE (opening/closing setting)

5-30 psi, 20-80 psi, 2-200 psi,  
100-300 psi

## MATERIALS

Consult factory for others.

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

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

**Stem:** Stainless Steel, Monel

**Spring:** Stainless Steel

**Diaphragm:** EPDM\*

**Seat Disc:** EPDM\*

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

## Other pilot system components:

low-lead Bronze/Brass -All Stainless Steel

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

\*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 Water Application)

The pressure differential on-off valve shall function to open, feeding "System B" from "System A" when the opening set point is reached. The valve shall also function to close again when the closing set point is reached.

### DESIGN

The pressure differential on-off 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 opening and closing speed controls, Y-strainer and isolation ball valves. The pressure differential on-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. Control pilots shall be low-lead bronze. The opening speed control and isolation ball valves shall be brass, and control line tubing shall be copper.

### OPERATING CONDITIONS

The pressure differential on-off valve shall be suitable for outlet opening pressures of X to X psi. The valve shall be suitable for outlet closing pressures of X to X psi. Flow rates will range from X to X gpm.

### ACCEPTABLE PRODUCTS

The pressure differential on-off valve shall be a <size> Model 101-D, <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
C ANGLE	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
	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	--
D ANGLE	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	--
	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	--	--	--	--	--	--	--
E	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	--
H	ALL	6	6	7	6 1/2	8	10	11 7/8	15 3/8	17	18	19	27
	ALL	10	11	11	11	12	13	14	17	18	20	20	28 1/2

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

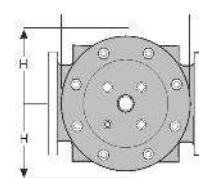
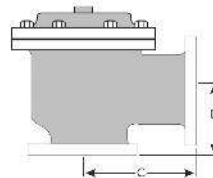
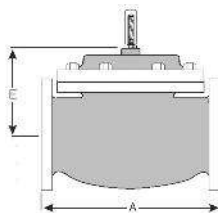
For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 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.

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 101-D valve

When ordering please provide:

Fluid to be controlled -Model Number -Size  
Globe or Angle -End Connection -Body Material  
Trim Material -Pilot Options -Opening / Closing -  
Outlet Pressure Setting or Spring Range -Inlet  
Pressure Setting or Spring Range -Special  
Requirements / Installation Requirements.



QUALITY SYSTEM  
REGISTERED TO  
ISO 9001

Represented by:

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