

▲ Model 127-80

The Model 127-80 has a wide range of applications: anywhere a pressure must be reduced to a manageable level, combined with a need for an on/off electrical operation.

Typical examples include:

- Pump systems
- Zone pressure control in municipal and industrial water
- Process pressure control
- Irrigation systems
- Petroleum loading terminals

## SERIES FEATURES

- ▶ Reduces a higher inlet pressure to a lower outlet pressure
- ▶ Constant outlet pressure over wide flow range
- ▶ Electrically operated solenoid allows valve to open (reduce pressure) or shut-off (close)
- ▶ Pilot-operated main valve not subject to pressure fall off
- ▶ Outlet pressure is adjustable with single screw
- ▶ Can be maintained without removal from the line
- ▶ Adjustable opening/response speed
- ▶ Factory tested and can be pre-set to your requirements

## OPERATION

When closed, a two-way solenoid causes the main valve to close. Opening the solenoid opens the valve and allows the normally open, spring loaded pilot, sensing downstream pressure, to respond to changes in pressure and cause the main valve to do the same. The net result is a constant modulating action of the pilot and main valve to hold the downstream pressure constant. The pilot system is equipped with an opening speed control that fine tunes the valve response to the system variables.

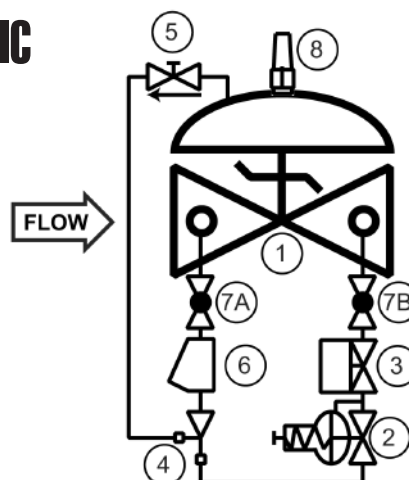
The solenoid can be supplied normally closed (energize to enable) or normally open (energize to close).

## COMPONENTS

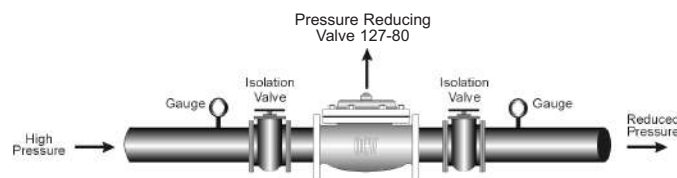
The Model 127-80 consists of the following components, arranged as shown on the schematic diagram:

- 1.) Model 65 Basic Control Valve
- 2.) Model 1340 Pressure Reducing Pilot
- 3.) Model 451 Two-Way Solenoid Pilot, N.C.
- 4.) Model 126 Ejector
- 5.) Model 141-3\* Flow Control Valve  
Opening Speed Control  
\*NOTE: Model 141-2 Needle Valve used on sizes 1-1/4" - 3"
- 6.) Model 159 Y-Strainer  
Protects pilot system from dirt/debris
- 7.) Model 141- 4 Isolation Ball Valves
- 8.) Model 155 Visual Indicator (Optional)

## SCHEMATIC



## RECOMMENDED INSTALLATION



## SIZING

Sizing is a critical issue in the selection of pressure reducing valves. Definitive sizing information can be found in the OCV Catalog, Series 127 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	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

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## 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)

## SPRING RANGES (outlet setting)

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

## 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 127-80 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 pressure reducing/solenoid shut-off valve shall function to reduce a higher upstream pressure to a constant, lower downstream pressure regardless of fluctuations in supply or demand. The valve shall be equipped with a two-way solenoid valve that will allow the valve to open when <energized, de-energized>.

## DESIGN

The pressure reducing/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 an opening speed control, a Y-strainer, solenoid valve and isolation ball valves. The pressure reducing 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 pilot shall be low-lead Bronze. The opening speed control and isolation ball valves shall be brass and control line tubing shall be copper. The solenoid shall have a weatherproof enclosure and suitable for operation on <voltage>.

## OPERATING CONDITIONS

The pressure reducing/ solenoid shut-off valve shall be suitable for reducing inlet pressures of <X to X> psi to a constant outlet pressure of <X> psi at flow rates ranging from <X to X> gpm.

## ACCEPTABLE PRODUCTS

The pressure reducing/ solenoid shut-off valve shall be a <size> Model 127-80, <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	--
	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
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.

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 127-80 valve

When Ordering please provide:

Fluid to be controlled -Model Number -Size

Globe or Angle -End Connection -Body Material

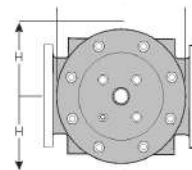
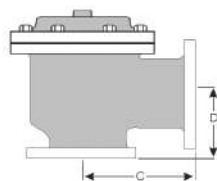
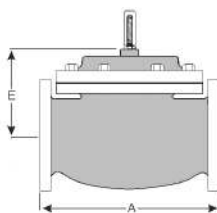
Trim Material -Pilot Options -Pressure Setting or

Spring Range -Solenoid Voltage -Energize to Open

or Close Valve -Solenoid enclosure Weatherproof

or Explosion Proof -Special Requirements /

Installation Requirements



QUALITY SYSTEM  
REGISTERED TO  
ISO 9001

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