

▲ Model 127-3

The Model 127-3 is applicable anywhere a pressure must be reduced to a manageable level in fuel delivery systems.

SERIES FEATURES

- ▶ Reduces a higher inlet pressure to a lower outlet pressure
- ▶ Constant outlet pressure over wide flow range
- ▶ 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

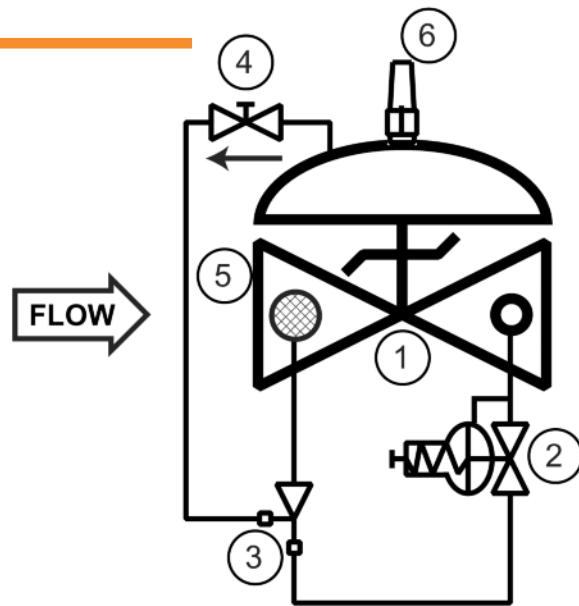
The normally open, spring loaded pilot, sensing downstream pressure, responds to changes in pressure and causes the main valve to do the same. The net result is a constant modulating action of the pilot and main valve to hold the downstream pressure constant. The pilot system is equipped with an opening speed control that fine tunes the valve's response to the system variables.

COMPONENTS

The Model 127-3 consists of the following components, arranged as shown on the schematic diagram:

- 1.) Model 65 Basic Control Valve (Fail Closed)
- 2.) Model 1340 Pressure Reducing Pilot
- 3.) Model 126 Ejector
- 4.) Model 141-3* Flow Control Valve (Opening Speed Control)
*NOTE: Model 141-2 Needle Valve used on sizes 1-1/4"-3"
- 5.) Model 123 Inline Strainer
- 6.) 155L Visual Indicator (optional)

SCHEMATIC



RECOMMENDED INSTALLATION

- ▶ Install the valve with adequate space above and around the valve to facilitate servicing. Refer to the Dimension Table.
- ▶ Valve should be installed with the bonnet (cover) at the top, particularly 8" and larger valves, and any valve with a limit switch.
- ▶ Shut-off valves should be installed upstream and downstream of the control valve. These are used to isolate the valve during start-up and maintenance.
- ▶ Install a pressure gauge downstream of the valve to enable adjustment to the required pressure setting. This gauge may be installed in the downstream side port of the valve body.

SIZING

Sizing is a critical issue in the selection of pressure reducing valves. Definitive sizing information can be found in the OCV Catalog under both the Series 127 section and the Engineering section Performance Charts. Consult the factory for assistance.

MAX. PRESSURE

| END CONNECTIONS | DUCTILE IRON | STEEL/STN STL | ALUMINUM |
|-----------------|--------------|---------------|----------|
| Threaded | 640 psi | 640 psi | 285 psi |
| Grooved | 300 psi | 300 psi | 200 psi |
| 150# Flanged | 250 psi | 285 psi | 285 psi |
| 300# Flanged | 640 psi | 740 psi | --- |

Model 127-3 (Fueling Service)



SIZES

GLOBE/ANGLE

| | |
|--------------|---|
| Screwed Ends | 1 1/4" - 3" |
| Grooved Ends | 1 1/2" - 6" |
| Flanged Ends | 1 1/4" - 24" (globe); 1 1/4" - 16" (angle) |

TEMPERATURE RANGE

(Valve Elastomers)

Buna-N -40° F - 180°F, Viton 0° F - 400°F

SPRING RANGES (outlet setting)

5-30 psi, 20-80 psi, 65-180 psi, 100-300 psi

MATERIALS

Consult factory for others.

Body/Bonnet: Ductile Iron (epoxy coated), Carbon Steel (epoxy coated), Stainless Steel, Aluminum

Seat Ring: Stainless Steel, Bronze

Stem: Stainless Steel, Monel

Spring: Stainless Steel

Diaphragm: Buna-N, Viton, (Nylon reinforced)

Seat Disc: Buna-N, Viton

Pilot: Stainless Steel, Bronze

Other pilot system components:

Stainless Steel, Bronze/Brass

SPECIFICATIONS (Typical Fuel Application)

The pressure reducing valve shall function to reduce a higher upstream pressure to a constant, lower downstream pressure regardless of fluctuations in supply or demand.

DESIGN

The pressure reducing 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, and include an opening speed control and an inline strainer. 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 CF8M Stainless Steel. Elastomers (diaphragms, resilient seats and O-rings) shall be Buna-N. The control pilot shall be CF8M stainless steel. The opening speed control and control line tubing shall be stainless steel.

OPERATING CONDITIONS

The pressure reducing 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

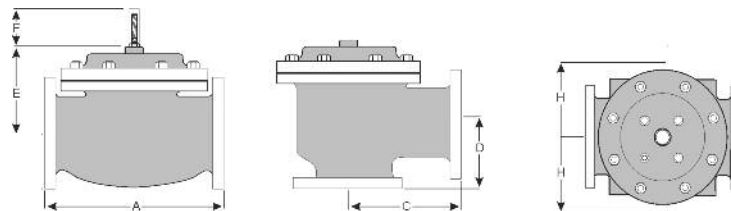
The pressure reducing valve shall be a <size> Model 127-3, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

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 |
| C | 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 | -- | -- | -- | -- | -- | -- | -- |
| D | 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 | -- |
| | SCREWED | 3 1/8 | 3 7/8 | 4 | 4 1/2 | -- | -- | -- | -- | -- | -- | -- | -- |
| E | 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 | -- |
| F | 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.

How to order your Model 127-3 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 - Elastomers -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