

► Model 127-5

The Model 127-5 should be used in fuel delivery systems where a pressure must be reduced to a manageable level and demand can diminish rapidly (dead end service).

## SERIES FEATURES

- Reduces a higher inlet pressure to a lower outlet pressure
- Constant outlet pressure over wide flow range
- Minimizes downstream pressure build-up in the event of sudden reduction in flow
- Pilot-operated main valve not subject to pressure fall off
- 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.

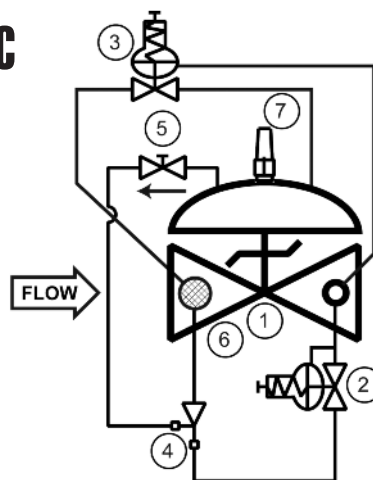
A normally closed, spring-loaded pilot, also sensing downstream pressure, is installed between the valve inlet and the bonnet (cover), and is typically set 5 psi higher than the normal reducing control. If downstream pressure rises to the set point of this pilot, it opens to close the main valve very quickly, minimizing downstream pressure build-up.

## COMPONENTS

The Model 127-5 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 1330 or 2470 Normally Closed Pilot (Surge Control)
- 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 123 Inline Strainer
- 7.) Model 155L Visual Indicator

## 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 at [www.controlvalves.com](http://www.controlvalves.com) in the ValveMaster Fuels Sizing & Selection Program, or consult the factory for assistance.

## MAX. PRESSURE

(The pressures listed here are maximum working pressures at 100°F)

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	----

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# Model 127-5 (Aviation Fueling)



## SIZES GLOBE/ANGLE

Screwed Ends - 1 1/4" - 3"

Grooved Ends - 1 1/2" - 6" (globe)  
1-1/2" - 6" (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)

Buna-N -20°F to 180°F

Viton 20°F to 230°F

Fluorosilicone -40°F to 150°F

EPDM 0°F to 230°F

## 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:** Bronze, Stainless Steel

**Other pilot system components:**

Bronze/Brass, Stainless Steel

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

## SPECIFICATIONS (Typical Aviation Fueling Application)

The pressure reducing & surge control valve shall function to reduce a higher upstream pressure to a constant, lower downstream pressure and prevent the downstream pressure from rising too far in the event of sudden reduction of flow.

### DESIGN

The pressure reducing & surge control 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 and an inline strainer. The pressure reducing & surge control valve shall be operationally and hydrostatically tested prior to shipment.

### MATERIALS OF CONSTRUCTION

The main valve body and bonnet shall be ductile iron. All ferrous surfaces shall be coated with 4 mils of epoxy. The main valve seat ring shall be stainless steel. Elastomers (diaphragms, resilient seats and O-rings) shall be Buna-N. The control pilots shall be stainless steel. The opening speed control and control line tubing shall be stainless steel.

### OPERATING CONDITIONS

The pressure reducing & surge control 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 & surge control valve shall be a <size> Model 127-5, <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
B	SCREWED	1 7/16	1 11/16	1 7/8	2 1/4	--	--	--	--	--	--	--	--
	GROOVED	1*	1 3/16	1 7/16	1 3/4	2 1/4	3 5/16	--	--	--	--	--	--
	150# FLGD	2 5/16-2 1/2	3	3 1/2	3 3/4	4 1/2	5 1/2	6 3/4	8	9 1/2	10 5/8	11 3/4	16
	300# FLGD	2 5/8-3 1/16	3 1/4	3 3/4	4 1/8	5	6 1/4	7 1/2	8 3/4	10 1/4	11 1/2	12 3/4	18
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
F	ALL	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8	8
G	ALL	6	6 3/4	7 11/16	8 3/4	11 3/4	14	21	24 1/2	28	31 1/4	34 1/2	52
H	ALL	10	11	11	11	12	13	14	17	18	20	20	28 1/2

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

\*\*Note: for military fueling valves, 6" 150# flanges have 20" face to face dimensions and 6" 300# flanges have 20-7/8" face to face dimensions.

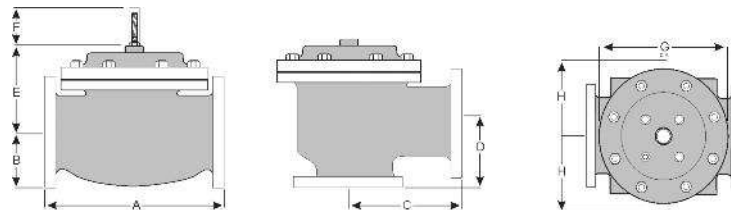
For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 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 127-5 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 • Special Requirements / Installation Requirements



QUALITY SYSTEM  
REGISTERED TO  
ISO 9001

United States/Canada Joint  
Certification Program (JCP)  
Certification Number 0073030

Represented by:

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