



▲ Model 127-420

The Model 127-420 has a wide range of applications: anywhere a pressure must be reduced to a manageable level and the upstream system must be protected from low pressure.

Typical examples include:

- High rise and commercial buildings
- Pump systems
- Zone pressure control in municipal and industrial water
- Irrigation systems

SERIES FEATURES

- ▶ Reduces a higher inlet pressure to a lower outlet pressure
- ▶ Constant outlet pressure over wide flow range
- ▶ Prevents upstream pressure from falling below a predetermined minimum
- ▶ Check feature closes valve on pressure reversal
- ▶ Pilot-operated main valve not subject to pressure fall off
- ▶ Upstream and downstream pressure are 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 response to the system variables.

A normally closed, spring-loaded pilot, sensing upstream pressure, is installed in series with the reducing pilot. If upstream pressure falls to the set point of this pilot, it will begin to close to throttle the main valve to prevent the upstream pressure from falling any lower. At that point, downstream pressure will also begin to fall.

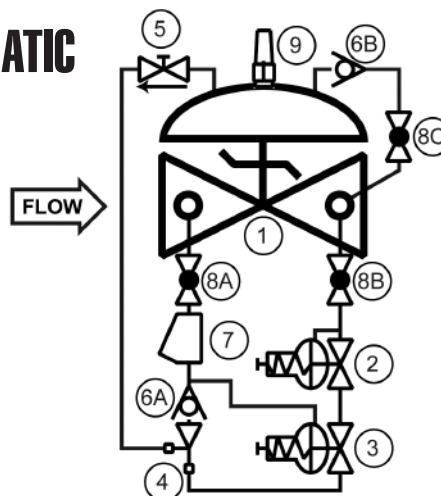
If downstream pressure becomes greater than upstream pressure, the valve will fully close to prevent reverse flow.

COMPONENTS

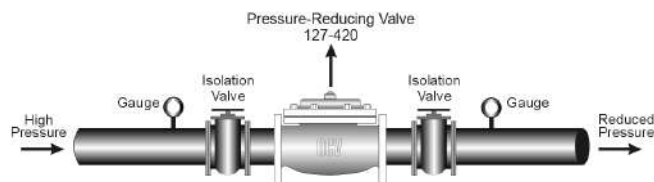
The Model 127-420 consists of the following components, arranged as shown on the schematic diagram:

- 1.) Model 65 Basic Control Valve
- 2.) Model 1340 Pressure Reducing Pilot
- 3.) Model 1330 Pressure Sustaining Pilot
- 4.) Model 126 Ejector - Fixed orifice pilot system supply restrictor
- 5.) Model 141-3 Flow Control Valve - Opening speed control
- 6.) Model 141-1 Check Valve
- 7.) Model 159 Y-Strainer - Protects pilot system from dirt/debris
- 8.) Model 141-4 Isolation Ball Valves
- 9.) 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	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

TOLL FREE 1.888.628.8258 • phone: (918)627.1942 • fax: (918)622.8916 • 7400 East 42nd Place, Tulsa, Ok 74145
 email: sales@controlvalves.com • website: www.controlvalves.com

Model 127-420



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

(Valve Elastomers)

EPDM 32°F to 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

*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 reducing/sustaining/check valve shall function to reduce a higher upstream pressure to a constant, lower downstream pressure, and prevent the upstream pressure from falling below a predetermined minimum. If downstream pressure becomes greater than upstream pressure, the valve will close fully to prevent reverse flow.

DESIGN

The pressure reducing/sustaining/check 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, Y-strainer, check valves and isolation ball valves. The pressure reducing/sustaining/check 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 reducing/sustaining/check 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, and sustain inlet pressure to a minimum of <X> psi.

ACCEPTABLE PRODUCTS

The pressure reducing/sustaining/check valve shall be a <size> Model 127-420, <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"

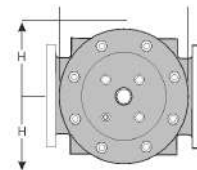
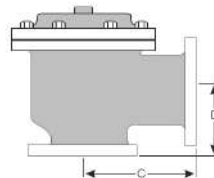
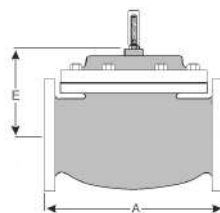
For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 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 127-420 valve

When Ordering please provide:

Fluid to be controlled -Model Number -Size
Globe or Angle -End Connection -Body Material
Trim Material -Pilot Options -Outlet Pressure
Setting or Spring Range -Inlet Pressure Setting or
Spring Range -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