

DESCRIPTION

A127 PRESSURE REDUCING VALVE

- 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
- Isolation ball valves to facilitate maintenance and troubleshooting
- Adjustable opening speed
- Factory tested and can be pre-set to your requirements

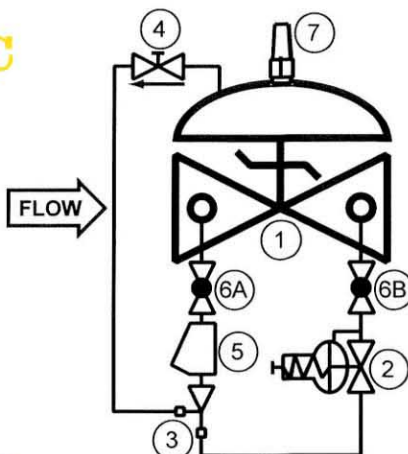
The Model A127 has a wide range of applications, anywhere a pressure must be reduced to a manageable level.

Typical examples include:

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

SCHEMATIC

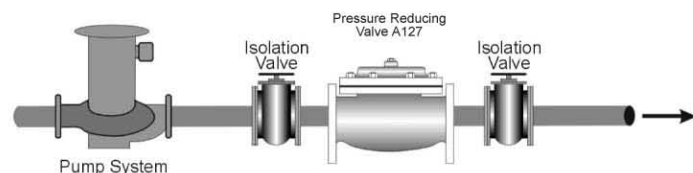
1. Basic Valve Assembly
2. Pressure Reducing Pilot
3. Ejector
4. Flow Control Valve
5. Y-Strainer
6. Isolation Ball Valve
7. Visual Indicator (optional)



OPERATION

The normally open, spring loaded pilot, sensing downstream pressure, responds to changes 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.

RECOMMENDED INSTALLATION



Sizes: GLOBE/ANGLE

Threaded Ends
1 1/4" - 3"

Grooved Ends
1 1/2" - 4"

Flanged Ends
1 1/4" - 24"



SIZING GUIDELINES

The following chart is a guide to valve sizing. Determine the valve differential pressure: inlet minus outlet. See the differential column for minimum and maximum flows for each valve size.

For assistance or higher differentials, contact Apollo Engineering Department.

VALVE SIZE	Differential Pressure, PSID				
	20	30	40	50	60
1 1/4"	3-93	4-113	4-115	5-115	5-115
1 1/2"	4-109	4-133	5-154	6-160	6-160
2"	6-189	8-210	9-210	10-210	11-210
2 1/2"	9-274	11-335	13-375	14-375	16-375
3"	16-483	20-570	23-570	25-570	28-570
4"	27-805	33-986	38-1000	42-1000	46-1000
6"	50-1489	61-1824	70-2106	78-2250	86-2250
8"	101-3019	123-3697	142-3900	159-3900	174-3900

Other sizes and differentials, consult Apollo Engineering.

MAX. PRESSURE

(Ductile Iron Construction)

Threaded Ends, 640 psi ANSI Class 150, 250 psi

Grooved Ends, 300 psi ANSI Class 300, 640 psi

TEMPERATURE RANGE

(Buna-N Elastomers)

32° F - 180°F

SPRING RANGES

(outlet setting)

25 - 75 psi Standard

10 - 35 psi Opt.

75 - 125 psi Opt.

See order codes for others.

STANDARD MATERIALS

Consult factory for others.

Body/Bonnet: Ductile Iron (epoxy coated), Carbon Steel (epoxy coated), Stainless Steel, B61 Bronze, Others available (consult factory)

Seat Ring: Bronze B61, Stainless Steel

Stem: Stainless Steel, Monel

Spring: Stainless Steel

Diaphragm: Nylon Reinforced, Buna-N, Viton, EPDM

Seat Disc: Buna-N, Viton, EPDM

Pilot: Bronze, Stainless Steel

Other pilot system components: Bronze/Brass, All Stainless Steel

Tubing & Fittings: Copper/Brass, Stainless Steel

SPECIFICATIONS

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 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 pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve, and shall include an opening speed control, a Y-strainer 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 internal ferrous surfaces shall be coated with 4 mils of epoxy. External surfaces shall be coated with 4 mils of epoxy followed by a coat of enamel paint. The main valve seat ring shall be bronze per ASTM B61. Elastomers (diaphragms, resilient seats, and O-rings) shall be Buna-N. Control pilot shall be bronze. The opening speed control and isolation ball valves shall be brass and control line tubing shall be copper.

OPERATING CONDITIONS

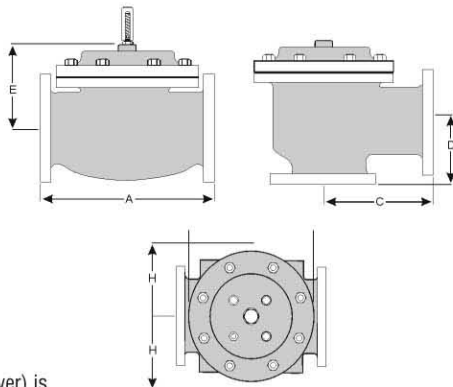
The pressure reducing valve shall be suitable for reducing from inlet pressures of <X to X> psi to a constant outlet pressure of <X> psi at flow rates ranging from <X to X> gpm.

ACCEPTABLE PRODUCTS

The pressure reducing valve shall be a <size> Model A127, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by Conbraco Industries, Matthews, NC.

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	--	--	--	--	--	--	--
	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	--
H	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

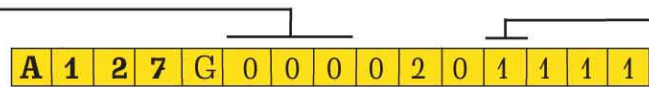
*GROOVED END NOT AVAILABLE IN 1 1/4"



For maximum efficiency, the Apollo 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.

Special Functions

000=Apollo 36C Pilot, 25 - 75psi
 00H=Apollo 36C Pilot, 75 - 125psi
 00L=Apollo 36C Pilot, 10 - 35psi
 00A=1340 Pilot, 0 - 30psi
 00B=1340 Pilot, 20 - 80psi
 00C=1340 Pilot, 65 - 180psi
 00D=1340 Pilot, 100 - 300psi



Model Number

Valve Type / Connection

A=Angle / Flanged ANSI 150 Class
 B=Angle / Flanged ANSI 300 Class
 C=Angle / Threaded (1-1/4 - 3")
 E=Angle / Grooved Ends (1-1/2 - 4")
 F=Angle / Flanged 300clsX150cls
 G=Globe / Flanged ANSI 150cls
 H=Globe / Flanged ANSI 300cls
 J=Globe / Threaded Ends (1-1/4 - 3")
 V=Globe / Grooved Ends (1-1/2 - 4")

Valve Size

012= 1 - 1 1/4"
 015= 1 - 1 1/2"
 020= 2"
 025= 2 1/2"
 030= 3"
 040= 4"
 060= 6"
 080= 8"
 100= 10"
 120= 12"
 140= 14"
 160= 16"
 240= 24"

Seat Ring Material

1=Bronze, B61
 2=Stainless Steel

Body & Bonnet Material

1=Ductile Iron
 2=Cast Steel
 4=Bronze
 7=Stainless Steel

Elastomers

1=Buna-N 2=Viton 3=EPDM

Pilot, Fittings, Tube MATERIAL

CODE	PILOT	FTGS	TUBE
1	BZ	BRS	CU
4	SS	BRS	CU
8	SS	SS	SS
9	BZ	SS	SS