PRESSURE REDUCING ANGLE VALVE

MODEL: SD-PRV105, SD-PRV205

- Adjustable restriction of residual pressure
- Working pressure of 175 psi
- Locking pin device restricts full opening of valve by untrained personnel, pin may be removed by fire fighters to allow full opening of valve
- Double Female NPT inlet and outlet or female NPT inlet x male hose thread outlet standard connections
- Forged brass valve body with red hand wheel
- Optional finishes - polished brass, royal chrome plated, polished chrome plated

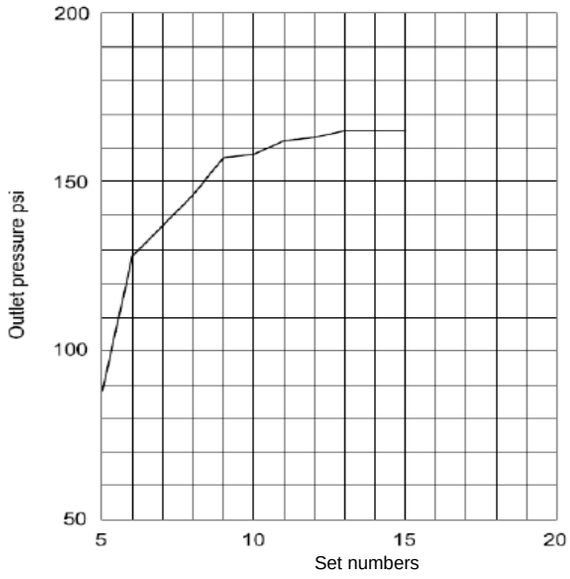
DETERMINING THE PROPER OUTLET PRESSURE

1. The valves are reducing the downstream water pressure under flowing (residual) condition only.

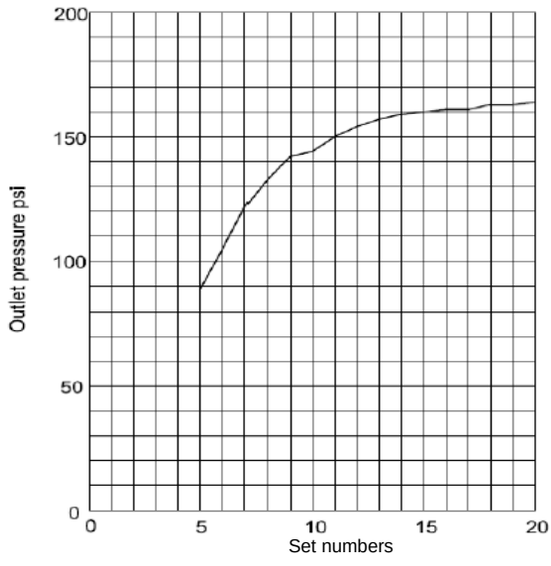
- The valve should not be set to provide less than the minimum pressure required by NFPA 14 while flowing 250 GPM for 2½" size and 100 GPM for 1½" size.
- NFPA 14 requires that Standpipe systems shall be hydraulically designed to provide the required water flow rate at a minimum residual pressure of 100 PSI at the outlet of hydraulically most remote 2½" hose connection and 65 PSI at the outlet at the hydraulically most remote 1½" hose station.
- Outlet pressures which do not correspond to NFPA 14 requirements must be authorized by local fire department. There will be a pressure drop due to friction between the outlet and the nozzle.
- The amount of this loss should be calculated by qualified personnel, to assure that the nozzle receives water pressure sufficient to its design needs. Note that some fire hose nozzles may not operate properly when valve outlet pressure is set at the 100 PSI minimum authorized in the 2007 edition of NFPA 14.
- The installer should consult with the fire authorities concerning pressures needed by their equipment.
- The outlet pressures indicated in the curves are at the outlet of the valve.

2. To determine the pressures at the hose nozzle, the hydraulic calculation information provided in NFPA. Fire Protection Handbook should be followed.

3. The valves are designed to reduce inlet pressures under flowing conditions: see the following graphs. Authorities having jurisdiction should be consulted to confirm that the outlet pressures and flowrates are acceptable.

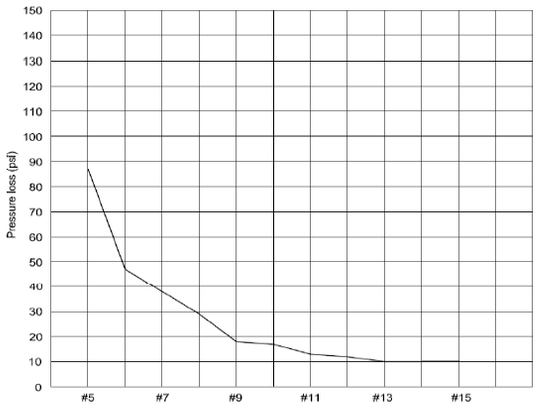


Set numbers are based on figures obtained using 50ft of 1 1/2" hose and a 1/2" non-adjustable nozzle. Inlet Pressure 175psi and flow 100Gpm



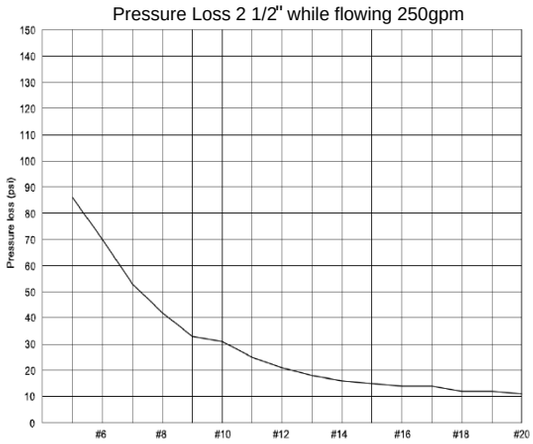
Set numbers are based on figures obtained using 50ft of 2 1/2" hose and a 1 1/8" non-adjustable nozzle. Inlet Pressure 175psi and flow 250Gpm

Pressure Loss 1 1/2" while flowing 100gpm



Valve setting

Pressure Loss 2 1/2" while flowing 250gpm



Valve setting

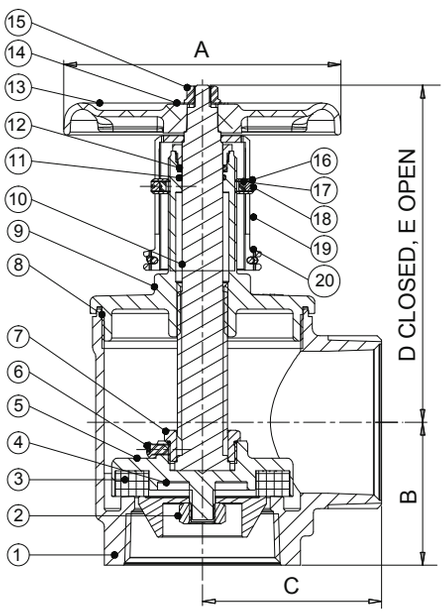
No.	Part Name	Material
1	Body	ASTM B283 C37700
2	Wheel Nut	ASTM B283 C37700
3	Washer	SS304
4	Seal Seat	NBR
5	Holder	ASTM B283 C37700
6	Set Screw	SS304
7	Locknut	ASTM B283 C37700
8	O-Ring	NBR
9	Bonnet	ASTM B283 C37700
10	Stem	ASTM B283 C37700
11	Lock Nut	ASTM B283 C37700
12	O Ring	NBR
13	Handle Wheel	DUCTILE IRON
14	Wheel Washer	SS304
15	Wheel Nut	ASTM B283 C37700
16	Collar	ASTM B283 C37700
17	Washer	PA6
18	Set Screw	ASTM B283 C37700
19	Set Numbers	ASTM B283 C37700
20	Wire	SS304

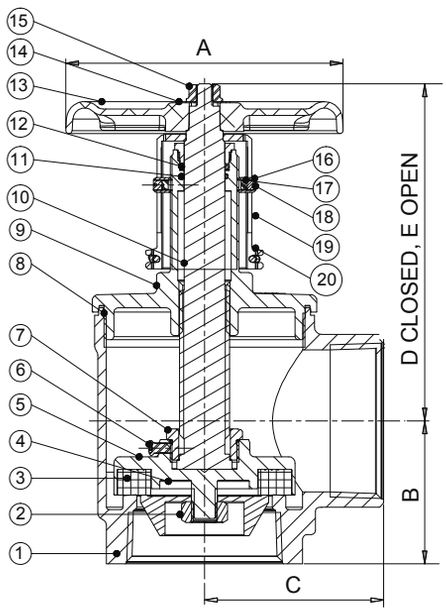
Female x Male

Size	A	B	C	D	E
1½"x1½"	100	50	58	129	153
2½"x2½"	125	68	79	164	206

Double Female

Size	A	B	C	D	E
1½"x1½"	100	50	63	119.5	145
2½"x2½"	125	68	79	157	200



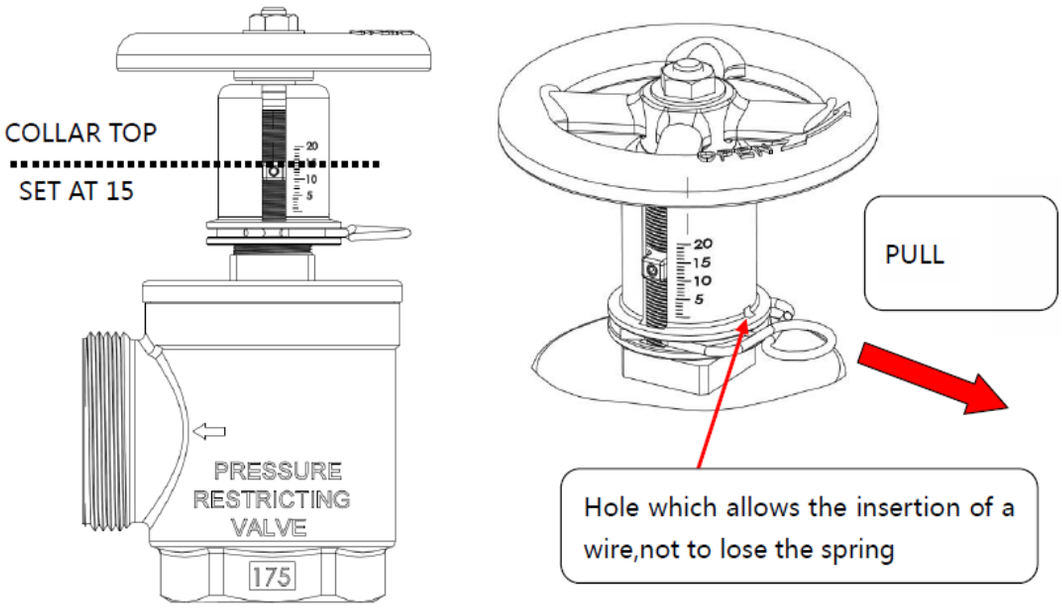


NOTES

- The graphs are referred only to the indicated conditions of flow and pressure, as tested.
- Should the local codes or the designing Engineer require graphs for different conditions, or the test procedure on the field is specified, please contact the factory or your local representative for alternate graphs to suit field conditions.

INSTALLATION

1. Pipe unions or rubber-gasketed fittings are to be installed immediately up-stream and downstream of the valve to permit easy replacement.
2. Connect the valve to the piping
3. Select setting number from proper graph
4. Close the valve hand-tight
5. Loosen set screw in collar
6. Rotate indicator - cap until top collar reaches selected setting number
7. Tighten set screw in collar valve is now set
8. To override pressure restriction, pull spring clip.



MAINTENANCE AND TESTING

Maintenance and testing should be accordance with NFPA 25.

1. In the event the valve leaks, the test valve should be opened again to flush the valve.
2. The valve should be inspected for damage or corrosion annually.
3. The valve is not designed to accept replacement parts.
4. The system should be drained every two or three years and all valves opened fully and lubricant applied to the valve stem. The valve seat should be inspected for debris.
5. The valve should be operated by hand, never using a torque bar or other device to exert pressure.
6. If the valve fails to perform as intended, the valve should be replaced.