

Class F Hose Pressure Regulator

The Class F Hose Pressure Regulator combines the features of a fire hydrant valve and a direct acting water pressure regulator, to give a single unit which protects the fire crew from excess pressure in the fire hose which could cause difficulties in handling the hose. High pressure fire systems are to be found in high rise buildings, oil, gas and chemical facilities.

OPERATION

The Class F hose pressure regulator incorporates a spring loaded "balanced" pressure reducing valve combined with a hydrant stop valve. The stop valve element is operated in exactly the same way as a conventional hydrant stop valve (clockwise rotation to close, anti-clockwise rotation to open).

The reducing valve element is opened by the load applied to the pressure adjusting spring and closed by the reduced pressure acting upon the underside of the diaphragm. Under working conditions the balance of these two forces determines the degree of valve opening required to maintain a steady outlet pressure.

Accurate pressure control is achieved by a venturi section in the outlet flow area, which ensures that there is a minimal rise in outlet pressure between the fully open and fully closed positions.

Under conditions of varying flow rates, the close control of the Class F ensures a uniform fire fighting pressure is maintained at any hydrant in a fire protection system.

APPLICATIONS

The Class F hose pressure regulator is suitable for:

- Fire mains systems in high rise buildings.
- High pressure systems on oil rig platforms and in oil refineries and chemical plants.
- Hand held hoses and fixed monitors, where individual pressure requirements vary.
- Applications with high pressure drops caused by the length of water mains.
- Applications with low pressure condition produced by pump characteristics.
- Floating production, storage and off-loading (FPSO) vessels.

TECHNICAL SPECIFICATION

Size	Valve size is always 1½"	
Connections		
Inlet	Standard	Flanged 1½"
	Options	Flanged 2, 2½, 3"
	Available as	ANSI 150/300
Outlet	Standard	2½" BS336 Instantaneous female coupling.
	Options	Screwed 2½" BSP male. To suit internationally recommended adaptors.

Materials

The standard valve construction is bronze with aluminium bronze trim, which is used for both fresh water and sea water.

This is also available in Titanium and AB2.

Our Technical Department will be pleased to advise on other required materials.

Inlet Pressure Range	4.8 to 20.7 Barg
Outlet Pressure Range*	4.1 to 8.3 Barg

* Setting including rise at dead end of 0.7 Barg (see page 56).

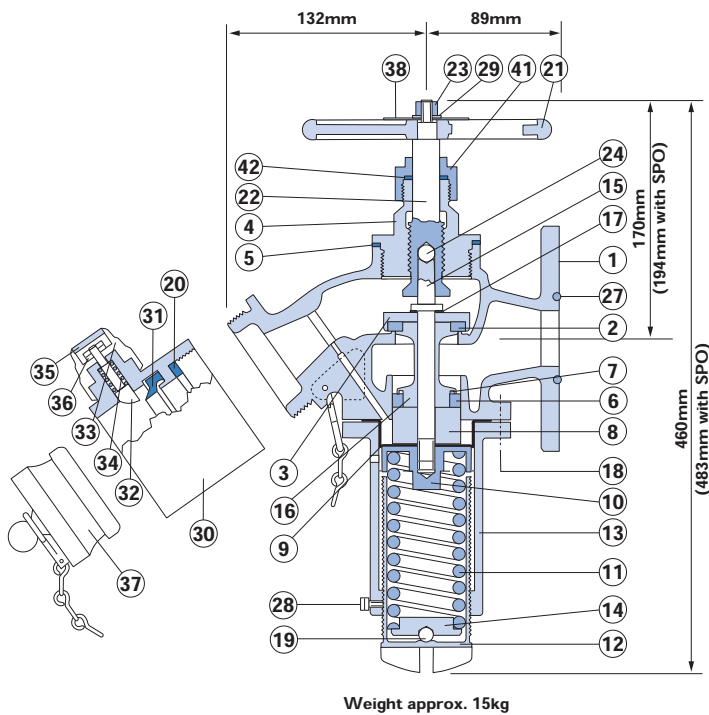
FEATURES AND BENEFITS

- Designed to meet the needs of modern fire protection technology.
- Maintains a uniform fire fighting pressure at every hydrant in a fire protection system, irrespective of location.
- Accurate pressure control is maintained despite varying flow levels and inlet pressures.
- Greatly reduces installation costs by completely eliminating expensive relief piping systems.
- Individual floor level pressure requirements met by quick and easy in-situ regulator adjustment.
- Sea-water resistant trim incorporated as standard.
- Available in a wide variety of material options, to suit particular applications.

CE MARKING

The Class F is not required to be PED certified on water applications, hence cannot be CE marked.

PARTS

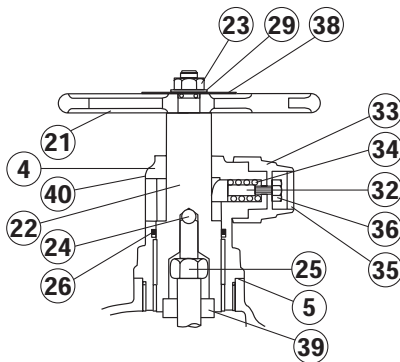


OPTIONAL 'SPO' DEVICE

Class F with set pressure override device

An optional feature of the valve is a set pressure override device (or SPO) which, when actuated, allows full opening of the valve without regulating the downstream pressure, thereby bringing it very close to the available inlet pressure.

The SPO can be used for manifolding applications where the valve has to supply a combination of units e.g. water cannons, hand held hoses or foam making equipment.



SPRING SELECTION

DEAD END PRESSURE SETTING RANGE (Barg)	DEAD END PRESSURE SETTING RANGE (Psig)	COLOUR CODE
4.1 to 5.5	60 to 80	Brown
5.5 to 8.3	80 to 120	Blue

ITEM	PART	MATERIAL
1	Body	Bronze
2*	Valve Disc	Nitrile
3	Disc Holder	Bronze
4	Bonnet	Bronze
5*	Bonnet Joint	NAF
6*	High Pressure Seal	Rubber
7	H.P. Seal Ring	Al. Bronze
8	Distance Piece	Al. Bronze
9*	Diaphragm	Nitrile
10	Piston	Bronze
11	Spring	Plt. Steel
12	Adjusting Screw	Bronze
13	Spring Chamber	Bronze
14	Adjusting Screw Plate	Al. Bronze
15	Valve Stem	Al. Bronze
16	Valve Stem Sleeve	Al. Bronze
17*	Valve Stem Joint	NAF
18	Set Screws	St. St.
19*	Adjusting Screw Ball	Phosphor Bronze
20	Washer	Rubber
21	Handwheel	Bronze
22	Handwheel Stem	Bronze
23	Handwheel Nut	Brass
24*	Handwheel Stem Ball	Phosphor Bronze
25	Valve Stem Nut	Brass
26	Handwheel Stem 'O' Ring	Rubber
27	Body 'O' Ring	Nitrile
28	Lock Screw	St. St.
29	Handwheel Washer	Brass
30	Adaptor Body	Bronze
31*	Coupling Washer	Neoprene
32*	Coupling Bolt	Bronze
33	Quick Release Cap	Bronze
34*	Coupling Spring	Phosphor Bronze
35	Screwed Cap	Brass
36	Philidas Nut	Bronze
37	Cap and Chain	Bronze
38	Nameplate	Aluminium
39	Retaining Nut	Bronze
40	Position Indicator	Aluminium
41	Gland	Bronze
42*	Gland 'O' Ring	Nitrile

*Repair pack; available from Safety Systems UK Ltd.

Recommended inspection every 12 months