Data Sheet 10.31
Issue E

Pressure Regulating Valve for Wet Riser
Model: DRV010 & DRV020

Product Description

DRV010/DRV020, 65mm diameter Gun Metal high pressure "bib nose" pattern regulating landing valve is field adjustable which allows the user to set the valve outlet pressure as desired, according to the conditions of the fire protection system in which the valves are installed. The valve comes with flanged inlet connections.

The design and construction of the landing valves are strictly in accordance with BS5041:Part 1 and the requirements of BS9990:2015.

The valve is suitable for connection of a high pressure water supply of up to 25 bar (362 psi) and will provide a reduced outlet pressure which can be set in-situ during testing and commissioning of the fire protection system.

The shut-off of the valve watertight sealing is achieved by using a high quality rubber bonded seat disc which acts as a primary rubber to metal seal, whilst a secondary metal to metal shut-off is also incorporated in the design of the valve.

Valve body is hydrostatically tested to 30 bar. The Seat is tested at low pressure (1 bar) and high pressure (25 bar)

The internal casting finish of every valve is of high quality ensuring a low flow restriction that meets the standards water flow test requirement.

The valve comes complete with standard "red" plastic plug and chain. Alternative plugs made of brass or gun metal are also available upon request.

Standards

The Rapidrop DRV010/DRV020 Pressure regulating valve is designed and built in accordance with BS5041 Part 1 to meet the requirements of BS9990: 2015.

Manufactured from LG2 bronze DRV010/DRV020 have PN25/PN40 inlet connection and a BS336 Female connection.

Features

When the valve is open, the inlet pressure flows into the upper part of the pressure chamber. By adjusting the spring below, a balance pressure of these two forces determines the degree of the valve opening to maintain a constant outlet pressure.

When the valve outlet pressure is regulated, it will remain set unless it is being tempered. The valve outlet pressure setting can only be regulated under a flowing condition. A small flow coming out of the valve outlet is sufficient to perform the task.

The valve counter balance spring design allows the outlet pressure range from 0 bar to supplied inlet pressure.

The valve/spring can be adjusted and set to the desired flow by rotating the lower valve housing using a 36mm spanner.

Specifications

Size	DN65 (2 ½")
Max. Working Pressure	25 bar (362 psi)
Min. Inlet Pressure	12 bar (175 psi)
Max. Test Pressure	30 bar (435 psi)
Material	LG2 Gun Metal
Inlet Connection	DRV010 - PN25 Flange (Flat Face) DRV020 - PN40 Flange (Flat Face)
Outlet Connection	BS336 Female
Manufactured in Accordance to	BS5041 Part 1
Weight	12 kg

Working Pressure Important Information

Maximum inlet pressure is 25bar. With supplied inlet pressure of 12-20 bar the outlet static pressure is preset to 10-11 bar. The outlet dynamic pressure is 8 ± 0.5bar and the flow is 750LPM ± 75LPM as per BS9990.

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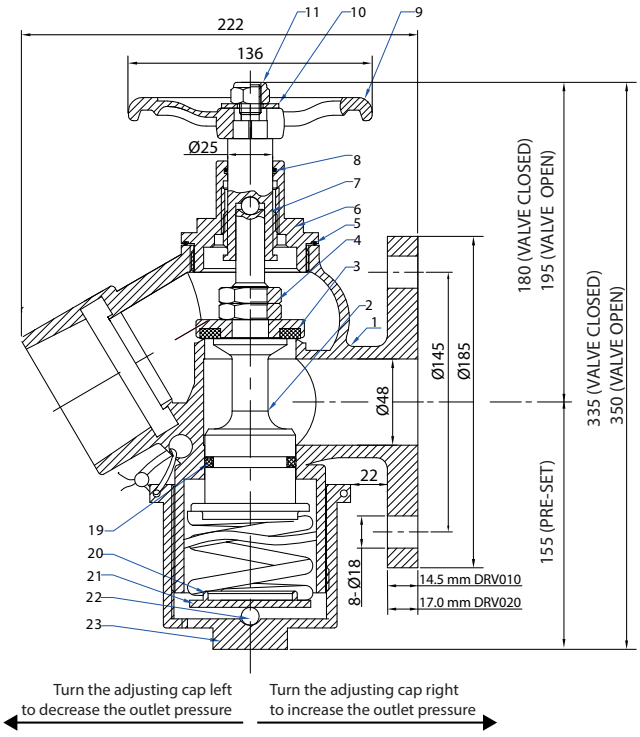
Installation

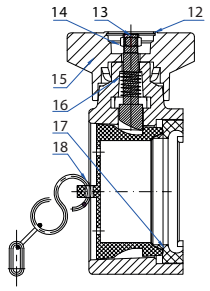
1. As per BS9990 isolation valves should be installed every three floors, it is also advisable to install one before the feed main.
2. The best way to seat the valve seal is on commissioning along with pumps (ensure minimum inlet pressure is achieved)
3. Close all isolation valves after successfully testing feed main
4. Open the first isolation valve slowly and introduce water pressure to the first three floors
5. You may experience leaking from the drain hole on the base of the valve, this should cease after around 4/5 minutes
6. Repeat the process floor by floor until all isolation valves are open and PRVs seated.
7. Set the outlet pressure of each valve to 8 bar following steps below.

Outlet Pressure Adjustment

1. Leaving the system fully pressurised attach T piece with gauge and drain hose to the outlet of PRV.
2. Water from PRV outlet should be diverted to drain test line whilst this procedure is carried out.
3. Open up the PRV, rotate the Adjusting Cap of valve with 36mm spanner until gauge reads required pressure. Rotate the cap right to increase the pressure and left to decrease the pressure.
4. Outlet pressure of all valves is factory set to 10-11 bar, you may find some valves may not need adjustment depending on what level they are installed.

Note: Adjustment cap can be rotated (left) up to approx. 10 turns from the pre-set position to the minimum outlet pressure. Thread appearing on valve body above the adjusting cap indicates that the valve outlet pressure is set to minimum.





Material Specification

Item	Part Description	Qty	Material
1	Valve Body	1	LG2 Gun Metal
2	Bottom Stem	1	Brass
3	Press Plate	1	Brass + NBR
4	Locknut	2	Brass
5	Cover O-ring	1	Nitrile
6	Top Cover	1	LG2 Gun Metal
7	Top Stem	1	Brass
8	Stem O-ring	1	Nitrile
9	Handwheel	1	Cast Iron
10	Handwheel Gasket	1	Steel
11	Handwheel Locknut	1	Steel
12	Knob Cap	1	Polyethylene

Item	Part Description	Qty	Material
13	Knob Bolt	1	Brass
14	Locking Nut	1	Steel
15	Knob	1	Brass
16	Spring	1	Stainless Steel
17	Sealing Ring	1	Nitrile
18	Cap with Chain	1	Plastic and Steel
19	Seal	1	Nitrile
20	Spring	1	Spring Steel
21	Spring Carrier	1	LG2 Gun Metal
22	Ball	2	Steel
23	Adjusting Cap	1	LG2 Gun Metal

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