

470 Pressure Reducing Valve

The 470 direct acting pressure reducing valve is best suited for use on steam and is designed to automatically maintain a reduced pressure on the downstream side of the valve. A simple and reliable design has been adopted to allow for ease of maintenance.

OPERATION

The steam enters at the inlet port (upstream), passing through the strainer screen and seat to the valve outlet (downstream). The amount of valve opening is controlled by the diaphragm.

The diaphragm moves in accordance with the forces exerted upon it by the main spring and the downstream pressure acting on the underside of the diaphragm, which opposes the main spring.

When the force exerted by the main spring is greater than that exerted by the downstream pressure, the valve is pushed off its seat by means of the push rod, thus allowing steam to flow from inlet to outlet. When the force exerted by the downstream pressure is equal or greater than that exerted by the main spring, the diaphragm will return to a horizontal position, and the valve spring, assisted by the steam pressure, will force the valve against the seat, thus cutting off the flow.

In actual operation, the valve will find a steady, open position in relation to the seat.

FEATURES AND BENEFITS

- Spherical stainless steel valve - self cleaning.
- Renewable seats - gunmetal or stainless steel.
- Integral strainer to maximise operability and increase reliability.
- Simple design - enables the valve to be easily maintained and serviced without removal from the line.
- Self activation/regulation - requires no external power source.

CE MARKING

The 470 has been certified to the requirements of the PED (Category II). Valve sizes below 32mm (1¼ inch), do not require, and hence, cannot be CE marked.

TECHNICAL SPECIFICATION

Size 15, 20, 25, 32, 40, 50 mm
(½, ¾, 1, 1¼, 1½, 2 inch)

Connection Screwed BSP parallel female.
Others available on request.

Material Bronze.

Temperature Range -20 to 230°C.

Maximum Inlet Pressure

Steam: 17.2 Barg.

Maximum Outlet Pressure

15 to 20mm: 10.3 Barg.
25 to 50mm: 8.6 Barg.

Minimum Outlet Pressure*

0.7 Barg

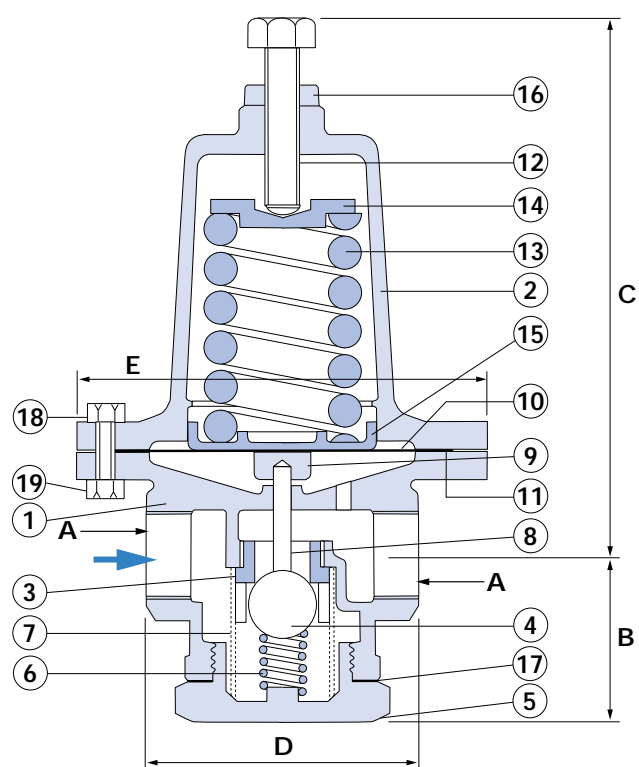
Outlet pressure should not be less than 10% of the inlet pressure.

* Setting including rise at dead end (see pages 90 and 87).

SPRING SELECTION

DEAD END PRESSURE SETTING RANGE (Barg)	DEAD END PRESSURE SETTING RANGE (Psig)	COLOUR CODE	VALVE SIZE
0.7 to 3.5	10 to 50	Orange	All
2.1 to 6.2	30 to 90	Purple	All
3.5 to 10.3	50 to 150	Green	15 to 20mm
3.5 to 8.6	50 to 125	Green	25 to 50mm

PARTS



ITEM	PART	MATERIAL
1	Body	Bronze
2	Cover	Brass
3	Seat	Bronze
4	Valve	St. St.
5	Cap	Bronze
6	Valve Spring	St. St.
7	Strainer	Brass
8	Pusher Rod	St. St.
9	Pusher Disc	Brass
10	Diaphragm	St. St.
11	Diaphragm Gasket	NAF
12	Adjusting Screw	Brass
13	Main Spring	Steel
14	Spring Plate	Brass
15	Guide Plate	Bronze
16	Lock Nut	Brass
17	Cap Gasket	NAF
18	Cover Bolt	Steel
19	Cover Nut	Steel

DIMENSIONS

SIZE	DN15	DN20	DN25	DN32	DN40	DN50
A BSP	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
B	41	54	64	70	87	87
C	159	175	200	259	298	305
D	73	89	108	130	159	165
E	114	137	152	178	222	222
Kg	3.5	5	8	12	19	20

All dimensions in mm.