

## 480/85/90 Relief Valve



### DESIGN

This spring operated liquid relief valve has a cartridge type assembly which can be withdrawn from the body without disturbing the spring setting and hence relieving pressure. This allows the seating surfaces to be cleaned without the need to reset the valve. The 480 is a bronze relief valve, the 485 is also bronze with a renewable stainless steel seat and disc, while the 490 is all stainless steel.

Typically for use on positive displacement pumps, for relief or bypass duties. The spring cartridge assembly can be supplied separately for use as an integral pump bypass relief valve.

The spindle is normally fitted with an 'O' ring to protect the spring particularly on corrosive duties.

### TECHNICAL SPECIFICATION

#### Approvals

BS6759 Pt 3  
PED certified Category IV

#### Materials

Body - Bronze (-20 to 120°C) with 'O' ring  
 - Bronze (-20 to 224°C) without 'O' ring  
 - Stainless Steel (-20 to 200°C) with 'O' ring  
 - Stainless Steel (-20 to 260°C) without 'O' ring  
 Trim - Bronze  
 - Stainless Steel

#### Size Range

Size	Orifice mm <sup>2</sup>	Min (Barg) Pressure	Max (Barg) Pressure
DN20 (3/4")	285	0.35	24
DN25 (1")	507	0.35	24
DN40 (1 1/2")	1140	0.35	24
DN50 (2")	2027	0.35	24
DN80 (3")	4560	0.35	10

#### Performance

	Kdr	Over pressure	Blow down
Liquid †or 0.6 Barg min	0.11	10%	20%†

#### Maximum Back Pressure

Barg	5.5
Constant	80%
Built-up	10%
Variable	0%
(Total % must not exceed Barg shown)	

#### Connections

Screwed In x Screwed Out

#### Construction

Top Guided

#### Cap Options

Pressure tight dome

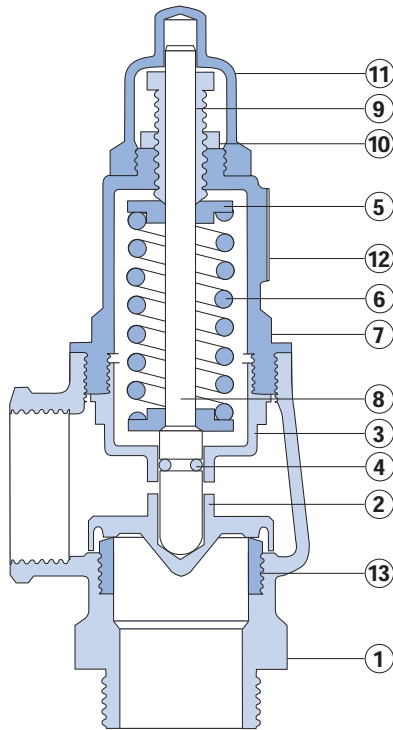
#### Sizing

Refer to Capacity Charts (page 60-67)

#### Spring Selection

Refer to Spring Selection Chart (page 79)

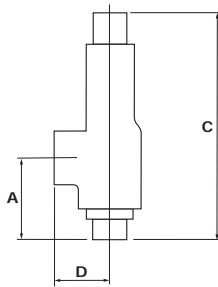
## PARTS



ITEM	PART	MATERIAL	
		480	490
1	Body	Bronze	St. St.
2	Valve Disc	Bronze*	St. St.
3	Guide	Bronze	St. St.
4	'O' Ring	Nitrile	Viton
5	Spring Plate	Brass	St. St.
6	Spring	C. S.	St. St.
7	Cover	Bronze	St. St.
8	Spindle	Bronze	St. St.
9	Adjusting Screw	Brass	St. St.
10	Locknut	Brass	St. St.
11	Dome	Bronze	St. St.
12	Nameplate	Aluminium	Aluminium
13	Renewable Seat	Bronze*	St. St.

\*Materials for Fig 485 are the same as Fig 480 except items 2 & 13 which are Stainless Steel.

## DIMENSIONS



Valve Type	Valve Size	Inlet & Outlet (BSP)	A	'C' Dome	D	Weight (kg)
Male x Female	DN20	3/4"	49	176	41	1
	DN25	1"	64	198	45	2
	DN40	1 1/2"	73	237	56	3
	DN50	2"	91	270	64	5
	DN80	3"	111	390	86	13

All dimensions in mm.

## FIGURE NUMBERING

FIGURE No.	BODY MATERIAL	TRIM MATERIAL	CAP	
480	Bronze	Bronze		Screwed
485	Bronze	Stainless Steel	Dome	
490	Stainless Steel	Stainless Steel		