

716 Safety Relief Valve



DESIGN

The 716 Safety Relief Valve combines a top guided, unobstructed seat bore with full lift capability to provide maximum discharge capability.

Positive reseating is achieved with freely pivoting EPDM discs for gas, hot water and other liquid duties up to 150°C. Optional Aflas soft seats increase the range to 200°C. Precision lapped stainless steel trim gives positive re-seating for steam duty at higher temperatures. Fitted with a test lever for inline safety checking, or alternatively with a sealed dome for service conditions requiring a pressure tight seal on the discharge side, eg. liquid service.

TECHNICAL SPECIFICATION

Approvals

BS6759 Pt 1, 2, & 3
PED certified Category IV

Materials

Body - Bronze (-29 to 220°C)
- Stainless Steel (-29 to 260°C)
Trim - St. St. / EPDM (-29 to 150°C)
- St. St. / Aflas (-29 to 200°C)
- St. St. (-29 to 260°C)

Size Range

Size	Orifice mm ²	Min (Barg) Pressure	Max Pressure (Barg)		
			Cl & SS All media	Bronze Gas & liquid	Bronze Steam & hot water
DN15 (1/2")	109	0.35	12.5	32	22
DN20 (3/4")	314	0.35	12.5	24.5	22
DN25 (1")	415	0.35	12.5	20.5	20
DN32 (1 1/4")	660	0.35	12.5	18	18
DN40 (1 1/2")	1075	0.35	12.5	18	18
DN50 (2")	1662	0.35	12.5	18	18

Performance

	Kdr	Over pressure	Blow down
Steam	0.7	5%	15%*
Hot water ‡	0.7	5%	15%*
Air / Gas	0.7	10%	10%*
Liquid	0.46	10%	20%†

* or 0.3 Barg min † or 0.6 Barg min ‡ above 100°C

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
Flanged In x Screwed Out

Construction

Top Guided / Full Lift

Cap Options

Open lever
Pressure tight dome

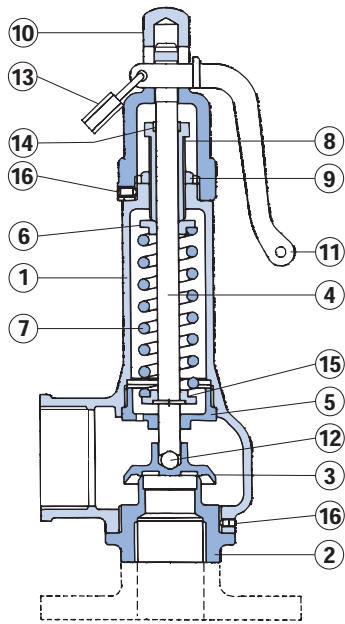
Sizing

Refer to Capacity Charts (page 60-67)

Spring Selection

Refer to Spring Selection Chart (page 80)

PARTS



ITEM	PART	MATERIAL	
		St.St.	Bronze
1	Body	St.St	Bronze
2	Seat	St.St	Bronze
3*	Disc	Various	Various
4	Spindle	St.St	Brass
5	Guide	Nickel alloy	Bronze
6	Top Spring Cap	St.St	Brass
7*	Spring	St.St	Chrome vanadium
8	Adjusting Screw	St.St	Brass
9	Lock Nut	St.St	Brass
10†	Dome	St.St	Nylon
11	Lever	N/A	Brass
12*	Ball	Monel	St.St
13	Padlock	N/A	Brass
14	Bush	PTFE	PTFE
15	Bottom Spring Cap	St.St	Brass
16	Pinning Screw	St.St	Brass

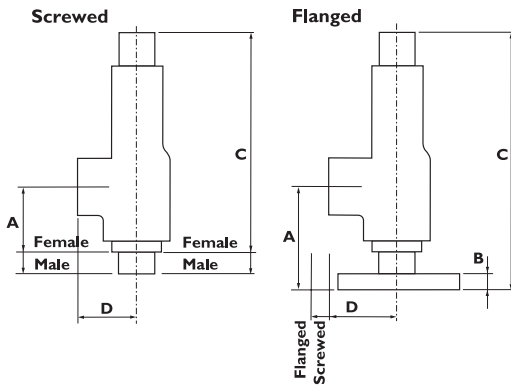
Note:

* Recommended spares; available from Safety Systems UK Ltd.

† Synthetic dome should not be adjacent to external heat sources.

Recommended inspection every 12 months.

DIMENSIONS



	Valve Type	Valve Size	Inlet	Outlet	A	B	'C' Dome	'C' Lever	D	Weight (kg)
Male x Female	DN15	1/2"	3/4"	58	-	173	192.5	40	1.0	
	DN20	3/4"	1 1/4"	63	-	229	252	55	1.6	
	DN25	1"	1 1/2"	70	-	257	280	60	2.1	
	DN32	1 1/4"	2"	80	-	318.5	351	70	4.0	
	DN40	1 1/2"	2 1/2"	91	-	366.5	405.5	81	7.0	
	DN50	2"	3"	110	-	414.5	456.5	96	10.0	
Female x Female	DN15	1/2"	3/4"	40	-	158	178	40	1.0	
	DN20	3/4"	1 1/4"	44	-	209	232	55	1.6	
	DN25	1"	1 1/2"	48	-	235	258	60	2.1	
	DN32	1 1/4"	2"	58	-	295	328	70	4.0	
	DN40	1 1/2"	2 1/2"	67	-	340	380	81	7.0	
	DN50	2"	3"	80	-	382	424	96	10.0	
Flange x Female	DN20	3/4"	1 1/4"	75	10	242	265	55	2.5	
	DN25	1"	1 1/2"	75	11	261	284	60	3.2	
	DN32	1 1/4"	2"	95	12.7	332	365	70	5.7	
	DN40	1 1/2"	2 1/2"	105	12.7	379	418	81	9.0	
	DN50	2"	3"	120	12.7	422	464	96	12.5	

All dimensions in mm

FIGURE NUMBERING

716

CODE	TRIM	BODY	CONNECTIONS	CAP
AS BS	St. Steel Aflas	St. Steel	Screwed in and out (Inlet available Male or Female)	D Pressure tight dome
ES VS SS	EPDM Aflas St. Steel	Bronze		
AF BF	St. Steel Aflas	St. Steel	Flanged in screwed out	L Open lever
EF VF SF	EPDM Aflas St. Steel	Bronze		