

FIG 542 SAFETY RELIEF VALVE

FEATURES & BENEFITS

The NABIC Fig 542 is a versatile valve and although designed primarily for the protection of hot water boilers, its wide range of applications make it an ideal general purpose safety valve. All wetted parts are manufactured from dezincification resistance materials. Designed and tested to BS EN ISO 4126 -1. WRAS approved (1 bar and above).

- Size Range: DN15 - DN80
- Resilient PTFE seating design with high degree of seat tightness
- Easy inspection and cleaning
- Available with Viton seat design
- Padlock available
- Pressure setting locked and sealed
- Drain plug fitted on sizes DN40 and above
- Diaphragm protected parts

PRESSURE RATINGS & TEMPERATURE RANGE

MIN - MAX SET PRESSURE (bar)	MIN - MAX TEMPERATURE (°C)
0.3 to 10.5	-20 to 195

DIMENSIONS & WEIGHTS

SIZE DN	Rp BSP Inlet & Outlet	A (mm)	B (mm)	C (mm)	WEIGHTS (kg)
15	1/2"	30	23	113	0.35
20	3/4"	34	23	118	0.53
25	1"	39	27	132	0.80
32	1 1/4"	46	33	153	1.33
40	1 1/2"	54	38	198	2.30
50	2"	64	46	236	4.20
65	2 1/2"	76	55	275	7.80
80	3"	90	65	335	12.50

PART NAME & MATERIALS

ITEM NO.	PART NAME	MATERIAL
1	Thrust Washer	Brass, BS EN 12164 CW609N
2	Grubscrew	Steel
3	Test Lever	Brass, BS EN 1982 CC754S
4	Spring	Chrome Vanadium Alloy Steel, BS 2803 735 A50 HS (Stainless Steel, BS 2056 302S26 Opt)
5	Label	Yellow kapton
6	Spring Cover	Bronze, BS EN 1982 CC491K
7	Piston	Brass, BS EN 12164 CW609N
8	Diaphragm	Silicon Rubber
9	Seat Seal Holder	Bronze, BS EN 1982 CC491K / Brass BS EN 12164 CW602N (DZR)
10	Seat Seal	PTFE (Viton Opt)
11	Starlock Washer	Stainless Steel
12	Body	Bronze, BS EN 1982 CC491K
13	Lever Pin	Steel
14	Lead Seal (Not shown)	Lead
15	Adjusting Screw	Brass, BS EN 12164 CW609N
16	Spring Plate	Brass, BS EN 12164 CW609N
17	Spindle	Brass, BS EN 12164 CW721R
18	Seat Seal Retaining Plate	Bronze, BS EN 1982 CC491K / Brass BS EN 12164 CW602N (DZR)
19	O-Ring	Viton

APPROVALS



ISO 14001 Reg No. EMS 78657



FM00311 ISO 9001



Pressure Equipment Directive
PED 97/23/EC and
Article 13 of 2014/68/EU



MEDIUM

Hot water, steam, compressed air and inert gasses, CO2 (to 20°C), ethylene glycol, potable water.

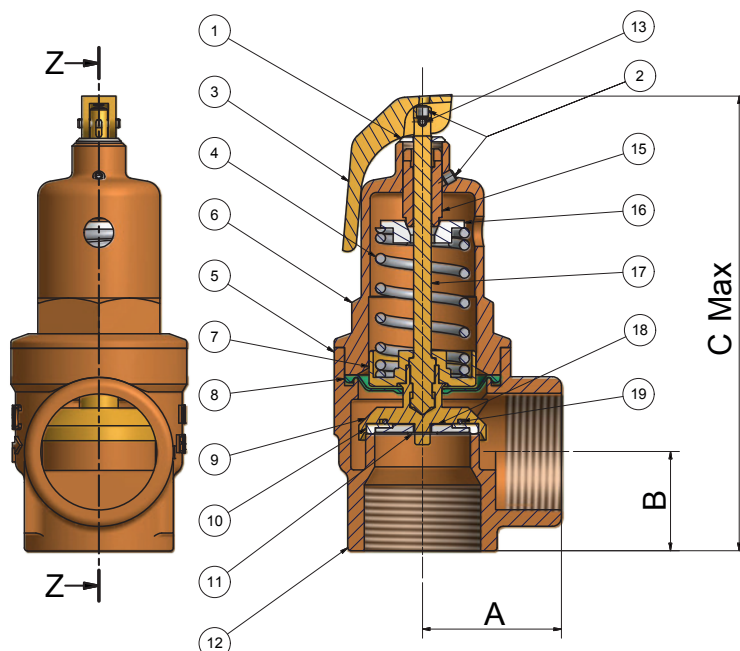
PIPE CONNECTIONS

Threaded female inlet and outlet connections. Inlet and outlet connections are of equal size. Threaded connections are Rp (BSP) parallel to BS EN 10226-1. NPT connections are available upon request.

PRODUCT TESTING

All valves are shell and seat tested (to confirm set pressure) before leaving the factory and all valves are supplied pre-set with a tamper proof seal. Pressure Test Certificate and Letters of Conformity available on request.

DIMENSIONAL DRAWING



DISCHARGE CAPABILITIES

The discharge capacity of a safety valve must be equal to or greater than the output of the boiler or system it is protecting. To ensure that the correct method of sizing is used, reference should be made to the relevant BS specification for the design of the boiler or system. Fig 542 capacities are tabulated below to assist selection.

AIR CAPACITY - 10% OVERPRESSURE (BS EN 4126-1)								
SET PRESSURE BAR	std. litres/sec (Kdr=0.19)							
	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
1.0	14	24	38	62	97	151	256	387
2.0	21	37	58	94	148	230	389	590
3.0	28	50	77	127	198	310	523	793
4.0	35	62	97	159	249	389	657	995
6.0	49	88	137	224	350	547	925	1401
8.0	64	113	176	289	452	705	1192	1806
10.0	78	128	216	354	553	864	1460	2212
10.5	81	145	226	370	578	903	1527	2313

To convert to ft³/min multiply by 2.1.

STEAM - 10% OVERPRESSURE (BS 6759)								
SET PRESSURE BAR	Kg/hr (Kdr=0.19)							
	* DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
1.0	37	66	103	168	263	411	695	1053
2.0	56	100	157	257	401	627	1059	1604
3.0	76	135	211	345	539	842	1423	2156
4.0	95	169	264	433	677	1057	1787	2707
6.0	134	238	372	610	953	1488	2515	3810
8.0	173	307	480	786	1229	1919	3244	4913
10.0	212	376	588	962	1505	2350	3972	6016
10.5	222	393	615	1006	1574	2457	4154	6292

To convert to lb/hr multiply by 2.2.

*The minimum bore size permitted by BS specifications for steam and hot water boilers is 20mm.

Capacities given for DN15 size in the tables are for applications outside the scope of these standards.

FIG 542 SAFETY RELIEF VALVE

HOT WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)								
SET PRESSURE BAR	kW (Kdr=0.19)							
	* DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
1.0	23	41	64	106	165	258	436	660
2.0	35	63	98	161	251	393	664	1005
3.0	48	84	132	216	338	528	892	1351
4.0	60	106	166	271	424	663	1120	1697
6.0	84	149	233	382	597	933	1576	2388
8.0	108	192	301	493	770	1203	2033	3079
10.0	133	236	368	603	943	1472	2489	3770
10.5	139	246	385	631	986	1540	2603	3943

To convert to Btu/hr multiply by 3400.

WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)								
SET PRESSURE BAR	kg/min water (Kdr=0.19)							
	* DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
1.0	30	53	83	136	213	332	561	850
2.0	42	75	117	192	301	469	793	1202
3.0	52	92	144	235	368	575	972	1472
4.0	60	106	166	272	425	664	1122	1700
6.0	73	130	203	333	521	813	1374	2082
8.0	85	150	235	385	601	939	1587	2404
10.0	95	168	263	430	672	1050	1774	2687
10.5	97	172	269	441	689	1076	1818	2754

In the above tables, discharge capacities have been calculated in accordance with BS EN 4126-1 & BS 6759, using a derated coefficient of discharge (Kdr) 0.19, approved by AOTC.

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