

FIG 500F HIGH LIFT SAFETY VALVE

FEATURES & BENEFITS

The NABIC 500F is ideal for use on unvented hot water heating systems, where a high capacity, emergency steam relief capability is required. All wetted parts are manufactured from dezincification resistance materials. Designed and tested to BS EN ISO 4126 -1. WRAS approved.

- Size Range: DN20 - DN65
- Resilient PTFE seating design with high degree of seat tightness
- Easy inspection and cleaning
- High Discharge capacity
- Diaphragm protected parts
- Available with Viton seat design
- Padlock available
- Pressure setting locked and sealed
- Drain plug fitted on size DN32 and above



PRESSURE RATINGS & TEMPERATURE RANGE

MIN - MAX SET PRESSURE (bar)	MIN - MAX SET TEMPERATURE (°C)
DN20 to DN25 1.0 to 12.5	-20 to 195
DN32 to DN65 0.4 to 12.5	-20 to 195

DIMENSIONS & WEIGHTS

SIZE DN	Inlet	Rp BSP Outlet	A (mm)	B (mm)	C (mm)	WEIGHTS (kg)
20	Flanged	1"	39	52	162	1.70
25	Flanged	1 1/4"	45	60	185	2.45
32	Flanged	1 1/2"	54	64	231	3.87
40	Flanged	2"	64	73	273	4.60
50	Flanged	2 1/2"	76	83	303	10.10
65	Flanged	3"	90	96	366	15.00

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

MEDIUM

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

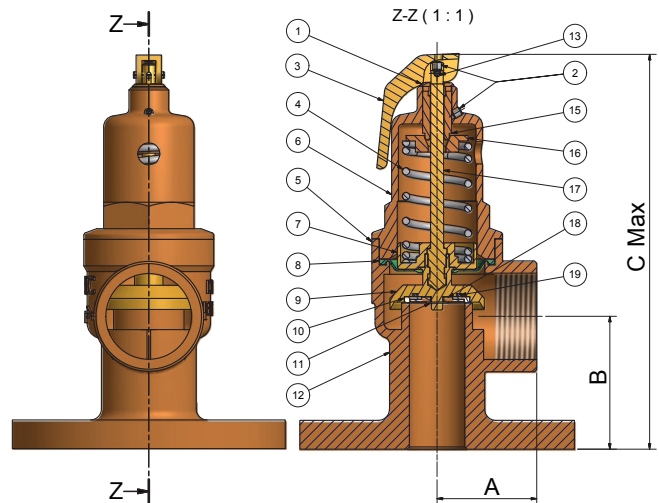
PIPE CONNECTIONS

Flanged inlet connections size DN20 upwards. Threaded female outlet connection Rp (BSP) to BS EN 10226-1. Most flange standards can be accommodated.

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



APPROVALS



FM 00311 EMS 553775



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 500F capacities are tabulated below to assist selection.

AIR CAPACITY - 10% OVERPRESSURE (BS EN 4126-1)						
SET PRESSURE BAR	std. litres/sec (Kdr=0.479)					
	DN20	DN25	DN32	DN40	DN50	DN65
1.0	61	95	156	244	381	644
2.0	93	145	238	372	581	982
3.0	125	195	320	500	780	1319
4.0	157	245	401	628	980	1656
6.0	221	345	565	883	1379	2331
8.0	284	445	728	1139	1778	3006
10.0	348	545	892	1394	2178	3681
12.5	428	670	1096	1714	2677	4524

To convert to ft³/min multiply by 2.1

STEAM - 10% OVERPRESSURE (BS 6759)						
SET PRESSURE BAR	Kg/hr (Kdr=0.479)					
	DN20	DN25	DN32	DN40	DN50	DN65
1.0	166	259	425	664	1037	1752
2.0	253	395	647	1012	1580	2670
3.0	340	531	869	1359	2123	3588
4.0	426	667	1092	1707	2666	4506
6.0	600	938	1537	2402	3752	6341
8.0	774	1210	1981	3098	4838	8177
10.0	948	1482	2426	3793	5924	10013
12.5	1165	1821	2982	4663	7281	12307

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.

HOT WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)						
SET PRESSURE BAR	kW (Kdr=0.479)					
	DN20	DN25	DN32	DN40	DN50	DN65
1.0	104	162	266	416	650	1098
2.0	158	248	405	634	990	1673
3.0	213	333	545	852	1330	2248
4.0	267	418	684	1070	1670	2824
6.0	376	588	963	1505	2351	3974
8.0	485	758	1242	1941	3032	5124
10.0	594	929	1520	2377	3712	6275
12.5	730	1141	1869	2922	4563	7713

WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)						
SET PRESSURE BAR	kg/min water (Kdr=0.479)					
	DN20	DN25	DN32	DN40	DN50	DN65
1.0	134	209	343	536	837	1414
2.0	189	296	485	758	1183	2000
3.0	232	363	594	928	1449	2450
4.0	268	419	685	1072	1674	2829
6.0	328	513	840	1313	2050	3465
8.0	379	592	969	1516	2367	4001
10.0	423	662	1084	1695	2646	4473
12.5	473	740	1212	1895	2959	5001

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) 0.479, approved by AOTC.

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