High Lift Safety Valves

NABIC®

Applications:

The Fig 500 High Lift Safety Valve has been designed primarily for use on unvented hot water heating systems, where a high capacity, emergency steam relief capability is required. High capacity and resilient PTFE seating, also make the Fig 500 ideal for steam, air and inert gas applications. A PTFE to Viton seating design is also available where greater seal tightness is required.

Construction:

The Fig 500 is constructed in gunmetal, with diaphragm protected working parts and PTFE to metal seating. All wetted parts are manufactured from dezincification resistant materials, approved by the Water Research Centre for use on potable water. Standard inlet and outlet connections have female threads to BS 21, with the outlet connection one size larger than the inlet. Sizes from DN20 upwards, are available with flanged inlet connections; other thread forms are also available.

Available options are: stainless steel springs, high pressure versions and Viton seat design.

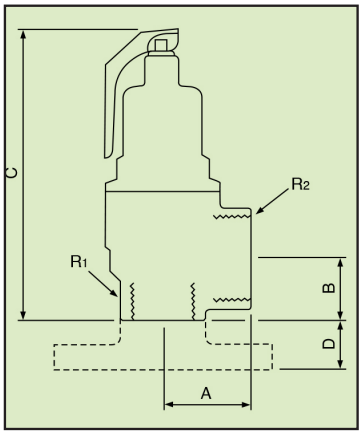
Features:

- Resilient PTFE seating design
- High degree of seat tightnes
- Suitable for hot water, steam and air
- High discharge capacity
- Diaphragm protected working parts
- Safe manual testing
- Easy inspection and cleaning
- Pressure setting locked and sealed
- Designed and tested to BS 6759
- Capacities certified by AOTC
- Approved by water research centre
- UKWFBS Listed
- Padlock available

Fig 500

Body Material: Gunmetal
Max Set Pressure: 12.5 bar
Max Temperature: 195°C

Dimensions



Size DN	R1 BSP	R2 BSP	A mm	B mm	C mm	D mm
10	3/8	1/2	26	21	101	-
15	1/2	3/4	33	20	120	-
20	3/4	1	39	24	134	28
25	1	1.1/4	45	30	155	30
32	1.1/4	1.1/2	54	36	201	30
40	1.1/2	2	64	41	241	32
50	2	2.1/2	76	47	267	36
65	2.1/2	3	90	60	330	36

Discharge Capacities

The discharge capacity of a safety valve must be equal to or greater than the output of the boiler or system it is protecting.

Fig 500 capacities are tabulated below to assist selection.

Hot Water - Unvented System - 10% Overpressure								
Set Pressure bar	kW							
	DN10*	DN15*	DN20	DN25	DN35	DN40	DN50	DN65
1.0	31	58	104	162	266	416	650	1098
2.0	48	89	158	248	406	634	990	1673
3.0	64	120	213	333	545	852	1331	2249
4.0	81	150	267	418	684	1069	1671	2824
6.0	114	212	376	588	963	1505	2352	3974
8.0	147	273	485	758	1242	1941	3032	5125
10.0	180	334	594	928	1521	2376	3713	6275
12.5	221	411	730	1141	1869	2921	4564	7713

To convert to Btu/hr multiply by 3,400. The capacities tabulated are for unvented (pressurised or sealed) heating systems. For vented systems we generally recommend the use of Fig 542 Safety Relief Valves. Fig 500 Safety Valves can be used for high output systems where its greater discharge capacity is advantageous.

For unvented hot water supply systems, Fig 500T Combined Pressure & Temperature Relief Valves should be used.

Steam- - 10% Overpressure								
Set Pressure bar	kg/hr							
	DN10*	DN15*	DN20	DN25	DN35	DN40	DN50	DN65
1.0	50	93	166	259	425	664	1037	1752
2.0	76	142	253	395	647	1011	1580	2670
3.0	103	191	340	531	870	1359	2123	3588
4.0	129	240	427	667	1092	1706	2666	4506
6.0	182	338	600	938	1537	2402	3753	6342
8.0	234	436	774	1210	1982	3097	4839	8178
10.0	287	533	948	1481	2427	3792	5925	10014
12.5	353	655	1165	1821	2983	4661	7283	12308

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 the smaller sizes in the above tables, are for applications outside the scope of these standards.

Air- - 10% Overpressure								
Set Pressure bar	std. litres/sec							
	DN10*	DN15*	DN20	DN25	DN35	DN40	DN50	DN65
1.0	18	34	61	95	156	244	381	644
2.0	28	52	93	145	238	372	581	982
3.0	38	70	125	195	320	500	781	1319
4.0	47	88	157	245	401	627	980	1657
6.0	67	124	221	345	565	883	1380	2331
8.0	86	160	285	445	729	1138	1779	3006
10.0	105	196	349	545	892	1394	2178	3681
12.5	130	241	428	669	1097	1714	2677	4525

To convert to ft3/min multiply by 2.1

In all of the above tables, the discharge capacities have been calculated in accordance with BS 6759, using a derated coefficient of discharge (Kdr) of 0.479, approved by AOTC.