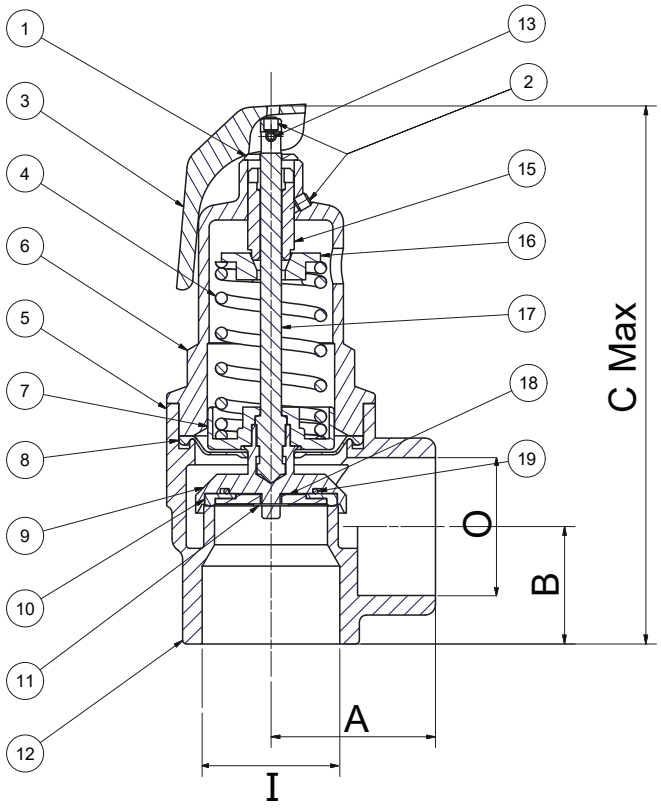
Bronze Safety Relief Valve

LV 1542

Screwed BSPP, PTFE Seat, Cap Top with Test Lever. Certified and Calibrated on request.

Pressure / Temperature Specifications	
Pressure	1.0 Bar to 10.5 Bar (½" to 1")
	0.3 Bar to 10.5 Bar (1¼" to 3")
Temperature	-20°C to 195°C

Dimensions					
I	**O**	**A**	**B**	**C**	**Kg**
½"	½"	30	23	113	0.35
¾"	¾"	34	23	118	0.53
1"	1"	39	27	132	0.8
1¼"	1¼"	46	33	153	1.33
1½"	1½"	54	38	198	2.3
2"	2"	64	46	236	4.2
2½"	2½"	76	55	275	7.8
3"	3"	90	65	335	12.5



Material Specifications	
1. Thrust Washer	CW609N Brass
2. Grub Screw	Steel
3. Test Lever	CC754S Brass
4. Spring	Chrome Vanadium Alloy
5. Label	Yellow Kapton®
6. Spring Cover	CC491K Bronze
7. Piston	CW609N Brass
8. Diaphragm	Silicone Rubber
9. Seat Seal Holder	CC491K Bronze
10. Seat Seal	PTFE
11. Starlock Washer	Stainless Steel
12. Body	CC491K Bronze
13. Lever Pin	Steel
14.* Lead Seal	Lead
15. Adjusting Screw	CW609N Brass
16. Spring Plate	CW609N Brass
17. Spindle	CW721R Spindle
18. Seat Seal Retaining Plate	CC491K Bronze
19. O-ring	Viton

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

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 3,400

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