

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

DN15 to DN25 - 1 bar and above;

DN32 to DN65 - 0.3 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 SET TEMPERATURE (°C)
DN15 to DN25 - 1 bar and above	-20 to 195
DN32 to DN65 - 0.3 bar and above	-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 / Brass, BS EN 12164 CW602N (DZR)
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.

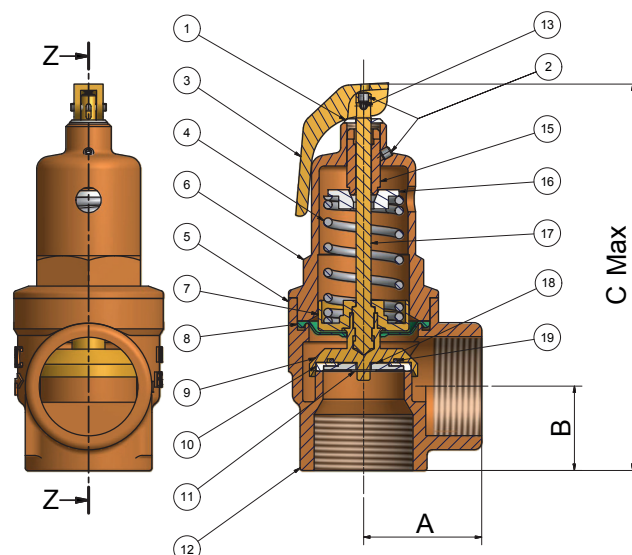
PIPE CONNECTIONS

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

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



Pressure Equipment Directive
2014/68/EU Certification

794912



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.

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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N Fig. 542
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3/3

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FIG 500 HIGH LIFT SAFETY VALVE

FEATURES & BENEFITS

The NABIC 500 is designed primarily 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

DN15 to DN25 - 1 bar and above;

DN32 to DN65 - 0.4 bar and above;

- Size Range: DN15 - 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 (complies with M&E3)
- Pressure setting locked and sealed
- Drain plug fitted on DN32 and above



PRESSURE RATINGS & TEMPERATURE RANGE

MIN - MAX SET PRESSURE (bar)	MIN - MAX SET TEMPERATURE (°C)
DN15 to DN25 - 1 bar and above	-20 to 195
DN32 to DN65 - 0.4 and above	-20 to 195

DIMENSIONS & WEIGHTS

SIZE DN	Rp BSP Inlet	Rp BSP Outlet	A (mm)	B (mm)	C (mm)	WEIGHTS (kg)
15	1/2"	3/4"	33	20	120	0.53
20	3/4"	1"	39	24	132	0.76
25	1"	1 1/4"	45	30	155	1.35
32	1 1/4"	1 1/2"	54	36	201	2.35
40	1 1/2"	2"	64	41	241	4.20
50	2"	2 1/2"	76	47	267	6.80
65	2 1/2"	3"	90	60	330	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 / Brass, BS EN 12164 CW602N (DZR)
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.

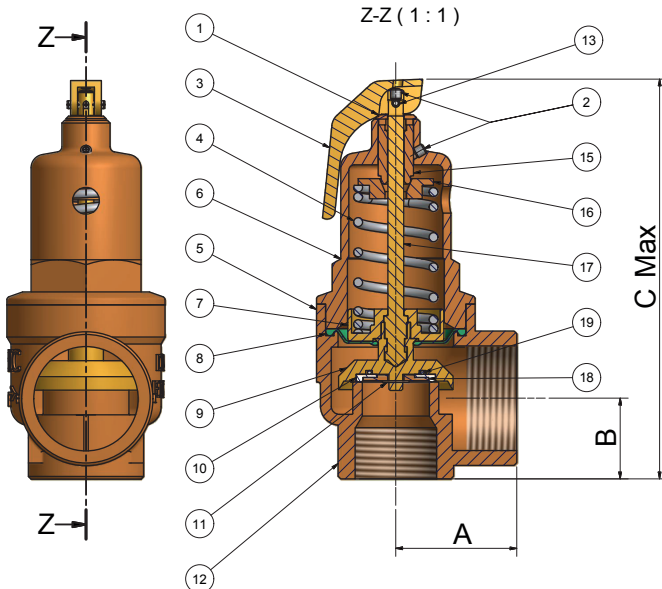
PIPE CONNECTIONS

Screwed female inlet and outlet connections. Outlet connection is one size larger than inlet connection. Threaded connections are 'Rp' parallel to BS EN 10226-1.

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



ISO 9001
Quality
Management
Systems
CERTIFIED

FM 00311

ISO 14001
Environmental
Management
CERTIFIED

EMS 553775



Pressure Equipment Directive
2014/68/EU Certification

794912



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=0.479)						
	DN15	DN20	DN25	DN32	DN40	DN50	DN65
1.0	34	61	95	156	244	381	644
2.0	52	93	145	238	372	581	982
3.0	70	125	195	320	500	780	1319
4.0	88	157	245	401	628	980	1656
6.0	124	221	345	565	883	1379	2331
8.0	160	284	445	728	1139	1778	3006
10.0	196	348	545	892	1394	2178	3681
12.5	241	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)						
	*DN15	DN20	DN25	DN32	DN40	DN50	DN65
1.0	93	166	259	425	664	1037	1752
2.0	142	253	395	647	1012	1580	2670
3.0	191	340	531	869	1359	2123	3588
4.0	240	427	667	1092	1707	2666	4506
6.0	338	600	938	1537	2402	3752	6341
8.0	436	774	1210	1981	3098	4838	8177
10.0	534	948	1482	2426	3793	5924	10013
12.5	657	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.

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=0.479)						
	* DN15	DN20	DN25	DN32	DN40	DN50	DN65
1.0	59	104	162	266	416	650	1098
2.0	89	158	248	405	634	990	1673
3.0	120	213	333	545	852	1330	2248
4.0	151	267	418	684	1070	1670	2824
6.0	212	376	588	963	1505	2351	3974
8.0	273	485	758	1242	1941	3032	5124
10.0	335	594	929	1520	2377	3712	6275
12.5	411	730	1141	1869	2922	4563	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.

WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)							
SET PRESSURE BAR	kg/min water (Kdr=0.479)						
	DN15	DN20	DN25	DN32	DN40	DN50	DN65
1.0	75	134	209	343	536	837	1414
2.0	107	189	296	485	758	1183	2000
3.0	131	232	363	594	928	1449	2450
4.0	151	268	419	685	1072	1674	2829
6.0	185	328	513	840	1313	2050	3465
8.0	213	379	592	969	1516	2367	4001
10.0	239	423	662	1084	1695	2646	4473
12.5	267	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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N_Fig.500
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3/3

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FIG 542F SAFETY RELIEF VALVE

FEATURES & BENEFITS

The NABIC Fig 542F is a versatile flanged 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 0.3 bar and above;

- Size Range: DN32 - 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	Inlet	Rp BSP Outlet	A (mm)	B (mm)	C (mm)	WEIGHTS (kg)
32	Flanged	1 1/4"	46	60	180	3.00
40	Flanged	1 1/2"	54	64	225	4.40
50	Flanged	2"	64	73	263	7.15
65	Flanged	2 1/2"	76	83	303	10.00
80	Flanged	3"	90	96	366	16.41

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 / Brass, BS EN 12164 CW602N (DZR)
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



FM 00311 EMS 553775



Pressure Equipment Directive
2014/68/EU Certification

794912



MEDIUM

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

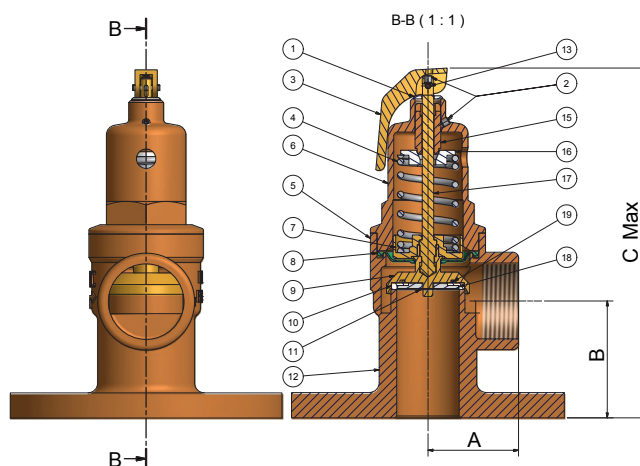
PIPE CONNECTIONS

Flanged inlet connections. Threaded female outlet connections, Rp (BSP) parallel 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



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 542F capacities are tabulated below to assist selection.

AIR CAPACITY - 10% OVERPRESSURE (BS EN 4126-1)					
SET PRESSURE BAR	std. litres/sec (Kdr=0.19)				
	DN32	DN40	DN50	DN65	DN80
1.0	62	97	151	256	387
2.0	94	148	230	389	590
3.0	127	198	310	523	793
4.0	159	249	389	657	995
6.0	224	350	547	925	1401
8.0	289	452	705	1192	1806
10.0	354	553	864	1460	2212
10.5	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)				
	DN32	DN40	DN50	DN65	DN80
1.0	168	263	411	695	1053
2.0	257	401	627	1059	1604
3.0	345	539	842	1423	2156
4.0	433	677	1057	1787	2707
6.0	610	953	1488	2515	3810
8.0	786	1229	1919	3244	4913
10.0	962	1505	2350	3972	6016
10.5	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.

HOT WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)					
SET PRESSURE BAR	Kw (Kdr=0.19)				
	DN32	DN40	DN50	DN65	DN80
1.0	106	165	258	436	660
2.0	161	251	393	664	1005
3.0	216	338	528	892	1351
4.0	271	424	663	1120	1697
6.0	382	597	933	1576	2388
8.0	493	770	1203	2033	3079
10.0	603	943	1472	2489	3770
10.5	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 (Kdr=0.19)				
	DN32	DN40	DN50	DN65	DN80
1.0	136	213	332	561	850
2.0	192	301	469	793	1202
3.0	235	368	575	972	1472
4.0	272	425	664	1122	1700
6.0	333	521	813	1374	2082
8.0	385	601	939	1587	2404
10.0	430	672	1050	1774	2687
10.5	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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N_Fig.542F
0624

3/3

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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

DN20 to DN25 - 1 bar and above;

DN32 to DN65 - 0.4 bar and above;

- 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)
DN15 to DN25 - 1 bar and above	-20 to 195
DN32 to DN65 - 0.4 bar and above	-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 / Brass, BS EN 12164 CW602N (DZR)
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



FM 00311 EMS 553775



Pressure Equipment Directive
2014/68/EU Certification

794912



MEDIUM

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

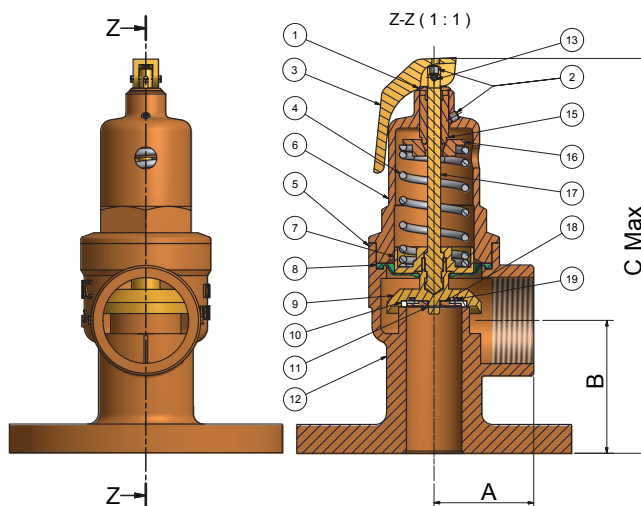
PIPE CONNECTIONS

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



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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N_Fig.500F
0624

OUR GENIUS IS VALVES



FIG 520 HIGH LIFT SAFETY VALVE

FEATURES & BENEFITS

The NABIC Fig 520 flanged valve has been designed primarily 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.

- Size Range: DN65 - DN100
- Resilient PTFE seating design with high degree of seat tightness
- Separate outlets reduce effects of back pressure
- High discharge capacity
- Available with Viton seat design
- Padlock available (complies with M&E3)
- Pressure setting locked and sealed
- Diaphragm protected working parts

PRESSURE RATINGS & TEMPERATURE RANGE

MIN - MAX SET PRESSURE (bar)	MIN - MAX SET TEMPERATURE (°C)
0.4 to 12.5	-20 to 195

DIMENSIONS & WEIGHTS

SIZE DN	Inlet	Ro BSP Outlet	ØA	B (mm)	C (mm)	D (mm)	E (mm)	RD
65	Flange	2"	40	350	152	175	64	1/4"
80	Flange	2 1/2"	50	390	166	195	76	1/4"
100	Flange	3"	65	480	205	210	90	3/8"

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 / Brass, BS EN 12164 CW602N (DZR)
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	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
20	Seat	Bronze, BS EN 1982 CC491K
21	Seat O-Ring	Viton
22	Drain Plug	Brass, BS EN 12164 CW609N

APPROVALS



FM 00311 EMS 553775



Pressure Equipment Directive
2014/68/EU Certification

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MEDIUM

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

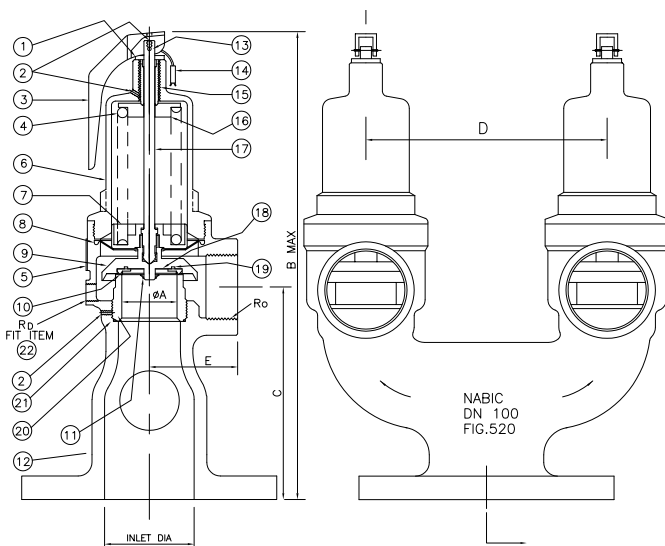
PIPE CONNECTIONS

Flanged inlet connections. Threaded female outlet connections, Rp (BSP) parallel 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



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 520 capacities are tabulated below to assist selection.

AIR CAPACITY - 10% OVERPRESSURE (BS EN 4126-1)			
SET PRESSURE BAR	std. litres/sec (Kdr=0.479)		
	DN65	DN80	DN100
1.0	488	762	1288
2.0	744	1161	1963
3.0	999	1561	2638
4.0	1255	1960	3313
6.0	1766	2758	4662
8.0	2278	3557	6012
10.0	2789	4355	7362
12.5	3428	5353	9049

To convert to ft³/min multiply by 2.1.

STEAM - 10% OVERPRESSURE (BS6759)			
SET PRESSURE BAR	kg/hr (Kdr=0.479)		
	DN65	DN80	DN100
1.0	1328	2073	3504
2.0	2023	3159	5340
3.0	2718	4245	7176
4.0	3414	5331	9011
6.0	4805	7503	12683
8.0	6196	9675	16354
10.0	7586	11847	20025
12.5	9325	14563	24615

To convert to lb/hr multiply by 2.2.

HOT WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)			
SET PRESSURE BAR	Kw (Kdr=0.479)		
	DN65	DN80	DN100
1.0	832	1299	2196
2.0	1268	1980	3346
3.0	1704	2660	4497
4.0	2139	3341	5647
6.0	3011	4702	7948
8.0	3883	6063	10249
10.0	4754	7424	12549
12.5	5844	9126	15425

To convert to Btu/hr multiply by 3,400.

The capacities tabulated are for unvented (pressurised or sealed) heating systems.

WATER - UNVENTED SYSTEM - 10% OVERPRESSURE (BS EN 4126-1)			
SET PRESSURE BAR	kg/min water (Kdr=0.479)		
	DN65	DN80	DN100
1.0	1072	1674	2829
2.0	1516	2367	4001
3.0	1856	2899	4900
4.0	2143	3347	5658
6.0	2625	4100	6929
8.0	3031	4734	8001
10.0	3389	5292	8946
12.5	3789	5917	10002

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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NL Fig. 520
0624

OUR GENIUS IS VALVES



FIG 500SS HIGH LIFT SAFETY VALVE

FEATURES & BENEFITS

The NABIC Fig 500SS has been designed for applications where the properties of Stainless steel are required for the service fluid being used, but the working environment does not necessitate a full stainless steel valve. It can be supplied with a test lever or as a sealed dome version. Designed and tested to BS EN ISO 4126-1.

- Size Range: DN15 - DN65
- Diaphragm protected working parts
- Ease of inspection and cleaning
- Resilient PTFE design with high degree of seat tightness
- Stainless steel wetted parts with PTFE to metal seating
- Available with Viton seat design
- Padlock available (complies with M&E3)
- Pressure setting locked and sealed

PRESSURE RATINGS & TEMPERATURE RANGE

MIN - MAX SET PRESSURE (bar)	MIN - MAX TEMPERATURE (°C)
DN15 to DN25 1.0 to 12.5	-20 to 195
DN32 to DN65 0.4 to 12.5	-20 to 195

DIMENSIONS

SIZE DN	R BSPT Inlet	Rp BSP Outlet	A (mm)	B (mm)	C (mm)
15	3/4"	3/4"	34	46	141
20	1"	1"	39	54	159
25	1 1/4"	1 1/4"	46	63	183
32	1 1/2"	1 1/2"	54	68	228
40	2"	2"	64	81	271
50	2 1/2"	2 1/2"	76	95	315
65	3"	3"	90	110	380

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 / Brass, BS EN 12164 CW602N (DZR)
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	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
20	Seat Adaptor	Stainless Steel, BS 970 316S11

APPROVALS



FM 00311 EMS 553775



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MEDIUM

Hot water, steam, air, all other fluids to be checked with Technical Department.

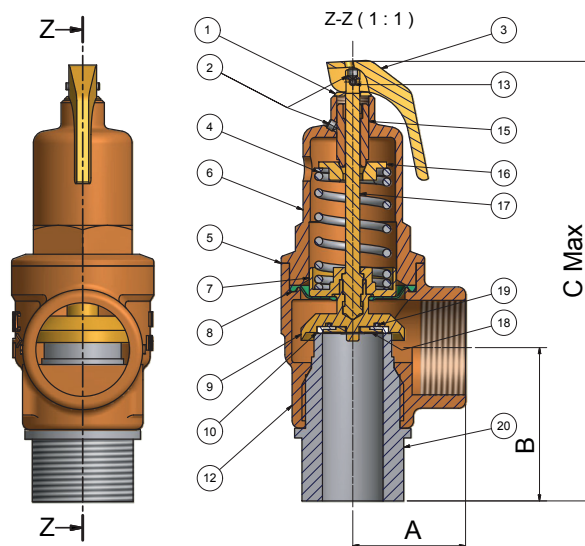
PIPE CONNECTIONS

Threaded male inlet connection R (BSPT) to BS EN 10226-2.
Threaded female outlet connections Rp (BSP) to BS EN 10226-1.

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 500SS capacities are tabulated below to assist selection.

AIR CAPACITY - 10% OVERPRESSURE (BS EN 4126-1)							
SET PRESSURE BAR	std.litres/sec (Kdr=0.479)						
	DN15	DN20	DN25	DN32	DN40	DN50	DN65
1.0	34	61	95	156	244	381	644
2.0	52	93	145	238	372	581	982
3.0	70	125	195	320	500	780	1319
4.0	88	157	245	401	628	980	1656
6.0	124	221	345	565	883	1379	2331
8.0	160	284	445	728	1139	1778	3006
10.0	196	348	545	892	1394	2178	3681
12.5	241	428	670	1096	1714	2677	4524

To convert to ft³/min multiply by 2.1.

STEAM CAPACITY - 10% OVERPRESSURE (BS 6759)							
SET PRESSURE BAR	kg/hr (Kdr=0.479)						
	*DN15	DN20	DN25	DN32	DN40	DN50	DN65
1.0	93	166	259	425	664	1037	1752
2.0	142	253	395	647	1012	1580	2670
3.0	191	340	531	869	1359	2123	3588
4.0	240	426	667	1092	1707	2666	4506
6.0	338	600	938	1537	2402	3752	6341
8.0	436	774	1210	1981	3098	4838	8177
10.0	534	948	1482	2426	3793	5924	10013
12.5	657	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.

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

WATER CAPACITY - 10% OVERPRESSURE (BS EN 4126-1)							
SET PRESSURE BAR	kg/min (Kdr=0.479)						
	DN15	DN20	DN25	DN32	DN40	DN50	DN65
1.0	75	134	209	343	536	837	1414
2.0	107	189	296	485	758	1183	2000
3.0	131	232	363	594	928	1449	2450
4.0	151	268	419	685	1072	1674	2829
6.0	185	328	513	840	1313	2050	3465
8.0	213	379	592	969	1516	2367	4001
10.0	239	423	662	1084	1695	2646	4473
12.5	267	473	740	1212	1895	2959	5001

To convert to galls/min multiply by 0.22.

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.

For valves without diaphragm and completely leak proof (no vent hole), reduce flow capacity by 30% i.e. multiply stated capacities by 0.7.

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N Fig. 500SS
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