

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) |
|------------------------------|----------------------------|
| 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 |
| 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 |



MEDIUM

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

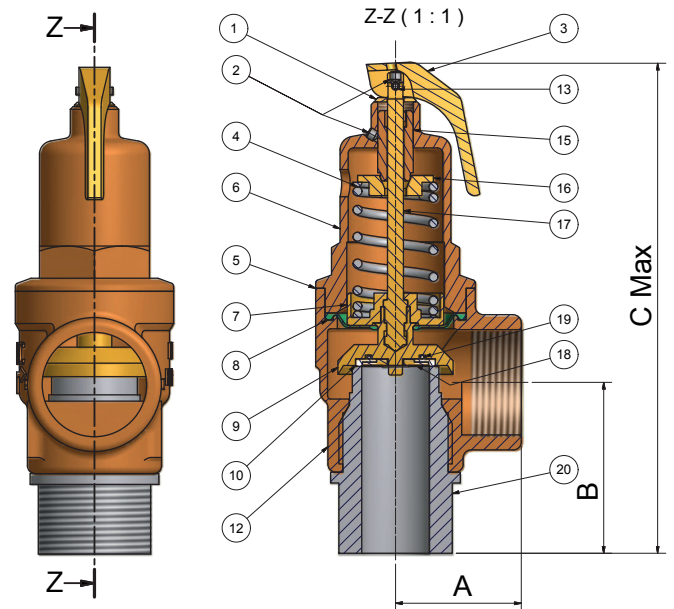
PIPE CONNECTIONS

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



APPROVALS



FM00311 ISO 9001



ISO 14001 Reg No. EMS 78657



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



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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