

## Nabic 542 High Temperature Safety Relief Valve

**Size:** 1 1/4" BSP F X F

**Body Material:** Gunmetal Body

**Seals:** PTFE Seat

**Pressure:** 10.5 Barg Max

**Temperature:** 195 degC Max

**Body:** OT58 Brass – UNI 5705

**Filter:** AISI 304 INOX Steel

**O Ring:** NBR Rubber O-Ring



**Description:** Expansion relief valve.

*Preset Pressure: can be preset to your required pressure prior to dispatch*

The Fig 542 Safety Valve is an extremely versatile valve, suitable for use on hot water, steam or air. Although designed primarily for the protection of hot water boilers, its wide range of applications make it an ideal general purpose safety valve.

### Features

- \* Resilient PTFE seating design
- \* Suitable for Hot Water, steam or air
- \* High degree of seat tightness
- \* Diaphragm protected working parts
- \* Safe manual testing
- \* Easy inspection and cleaning
- \* Pressure setting locked & sealed
- \* Designed and tested to HS 6759
- \* Capacities certified by AOTC
- \* Approved by Water Research Centre
- \* UKWFB Listed
- \* Padlock available

### Construction

The Fig 542 is of gunmetal construction, 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, Inlet and outlet connections are of equal size, with female threads to BS 21.

### 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. 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.

| HOT WATER - VENTED SYSTEM |      |      |      |      |      |      |      |
|---------------------------|------|------|------|------|------|------|------|
| SIZE                      | DN20 | DN25 | DN32 | DN40 | DN50 | DN65 | DN80 |
| kW                        | 264  | 352  | 440  | 528  | 732  | 1142 | 1640 |

To convert to Btu/Hr multiply by 3400.

The capacities tabulated above include a vent allowance and must only be used for open vented systems.

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| HOT WATER - UNVENTED SYSTEM - 10% OVERPRESSURE |       |      |      |      |      |      |      |      |
|--|-------|------|------|------|------|------|------|------|
| SET PRESSURE BAR                               | kW    |      |      |      |      |      |      |      |
|  | 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  | 47    | 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 |
| 10.5   | 139   | 246  | 385  | 631  | 986  | 1540 | 2603 | 3943 |

To convert to Btu/hr multiply by 3400.

| STEAM - 10% OVERPRESSURE |       |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|
| SET PRESSURE BAR         | kg/hr |      |      |      |      |      |      |      |
|                          | 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  | 1058 | 1787 | 2708 |
| 6.0                      | 134   | 238  | 372  | 610  | 953  | 1489 | 2516 | 3811 |
| 8.0                      | 173   | 307  | 480  | 786  | 1228 | 1919 | 3244 | 4914 |
| 10.5                     | 221   | 393  | 615  | 1007 | 1573 | 2458 | 4154 | 6293 |

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 DN15 size in the above table are for applications outside the scope of these standards.

| AIR - 10% OVERPRESSURE |                 |      |      |      |      |      |      |      |
|------------------------|-----------------|------|------|------|------|------|------|------|
| SET PRESSURE BAR       | std. litres/sec |      |      |      |      |      |      |      |
|                        | DN15*           | DN20 | DN25 | DN32 | DN40 | DN50 | DN65 | DN80 |
| 1.0                    | 14              | 24   | 38   | 62   | 97   | 151  | 256  | 387  |
| 2.0                    | 21              | 37   | 58   | 94   | 147  | 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  | 706  | 1192 | 1806 |
| 10.5                   | 81              | 145  | 226  | 370  | 578  | 904  | 1527 | 2313 |

To convert to ft<sup>3</sup>/min multiply by 2.1

The unvented hot water, steam and air discharge capacities tabulated above, have been calculated in accordance with BS 6759, using a derated coefficient of discharge (K<sub>dr</sub>) of 9.19, approved by AOTC