

Pressure – Temperature Limits for TopFilter cast TFOV filters

1.0 Scope

- 1.1 This specification outlines the temperature related pressure limits in line with various flange drillings for TopFilter Cast TFOV Filters.

2.0 Limitations

- 2.1 The maximum working pressure at any temperature is limited by either the flange drilling or the vessel rating - the lower value must always be used.
- 2.2 Ensure that suitable seal material is utilised for the intended operating temperature of the filter unit. The temperature limitations for common seal materials are shown below:

| | |
|-------------------------------------|-----------------|
| Viton® (or Fluorocarbon, FPM) | -20°C to +200°C |
| Nitrile (or Buna N, NBR) | -30°C to +120°C |
| Ethylene Propylene (or EP, EPDM) | -50°C to +150°C |
| PTFE (Teflon) encapsulated Viton | -20°C to +200°C |
| PTFE (Teflon) encapsulated Silicone | -55°C to +260°C |

Viton is a registered trademark of DuPont Performance Elastomers.

The above values are guidelines based upon absolute compatibility with the fluid and are not binding due to unaccountable factors that may be detrimental to the performance of the 'O' Rings.

- 2.3 All pressures are non-shock and do not account for excessive pressure or thermal cycling.
- 2.4 If in doubt about specific applications – contact SPX.
- 2.5 It is the customers responsibility to use suitable flange bolting materials and gaskets to connect the filter unit in line to facilitate the pressure values published.

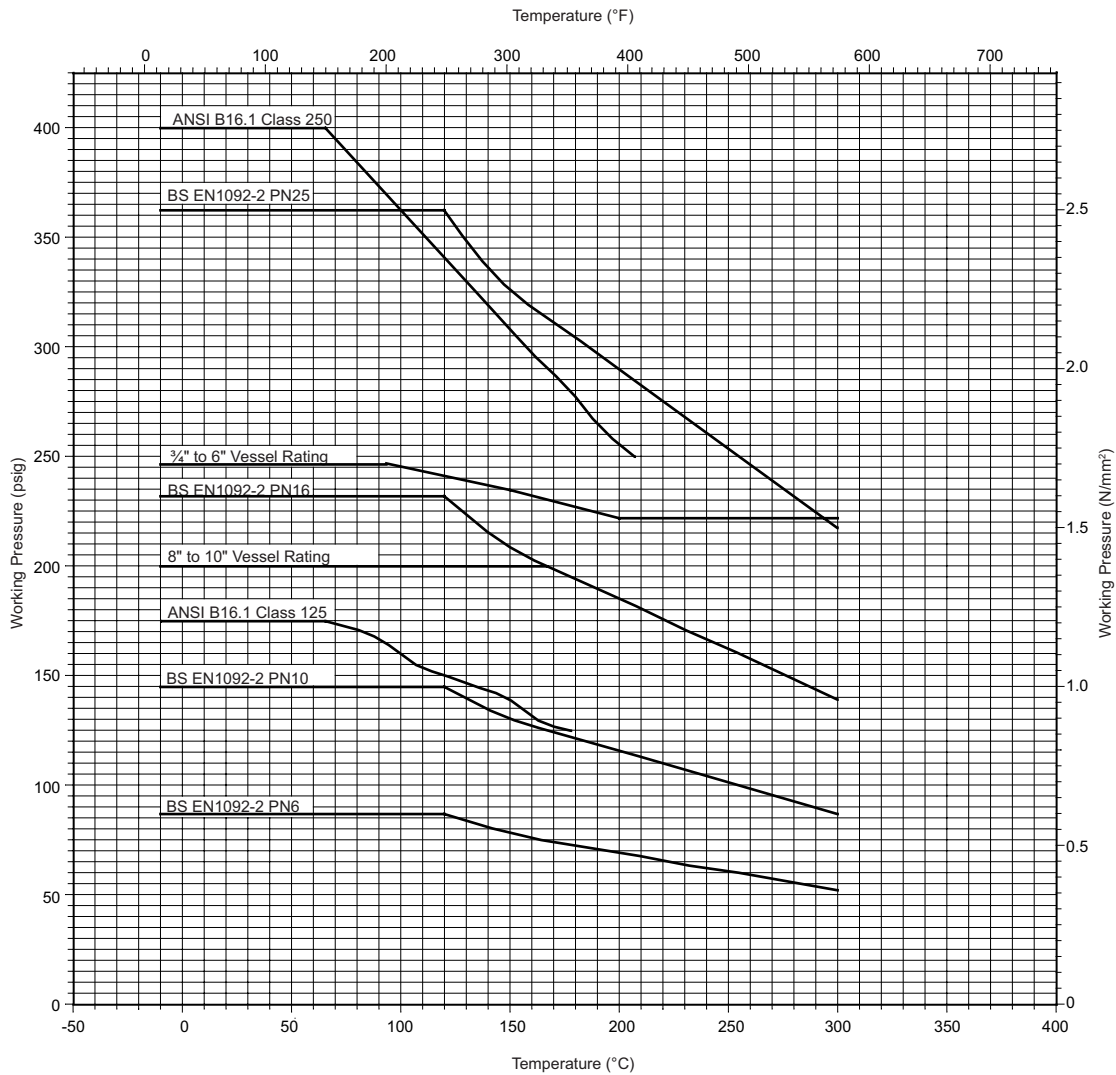
3.0 Reference Documents

- 3.1 The following standards have been referenced in this specification:
- ANSI B16.1, 16.24
 BSEN1092-2
 ASME B16.5a – 1998
 BS4504: Section 3.1, 3.3 – 1989

| Issue | Original | Rev.1 | Rev.2 |
|-------------|----------|-------|-------|
| Compiled by | J Wilson | | |
| Approved by | S. Ivey | | |
| Date | 13/05/02 | | |

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4.0 Pressure Temperature Curves – Cast Iron



5.0 Maximum Non-Shock Working Pressure At 50°C For TopFilter Cast Iron TFOV Filters:

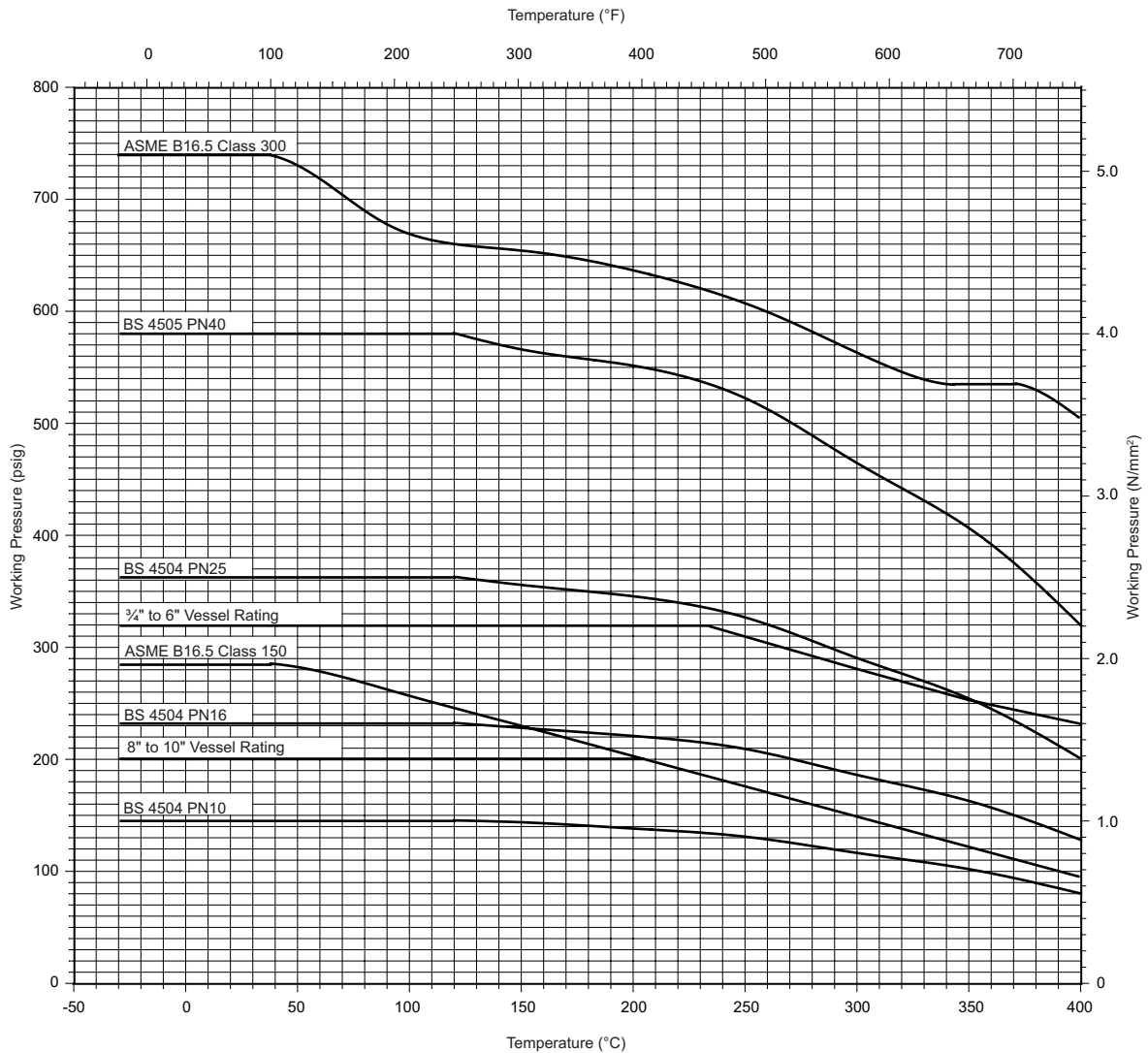
| | | |
|-------------------------------|-----------|--------|
| 1", 1 1/2", 2", 3", 4", 6" NB | 17 barg | @ 50°C |
| 8", 10" NB | 13.8 barg | @ 50°C |

Extreme caution should be taken on applications below 0°C and above 100°C.

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6.0 Pressure Temperature Curves – Carbon Steel TFOV:



7.0 Maximum Non-Shock Working Pressure At 50°C For TopFilter Cast Steel TFOV Filters:

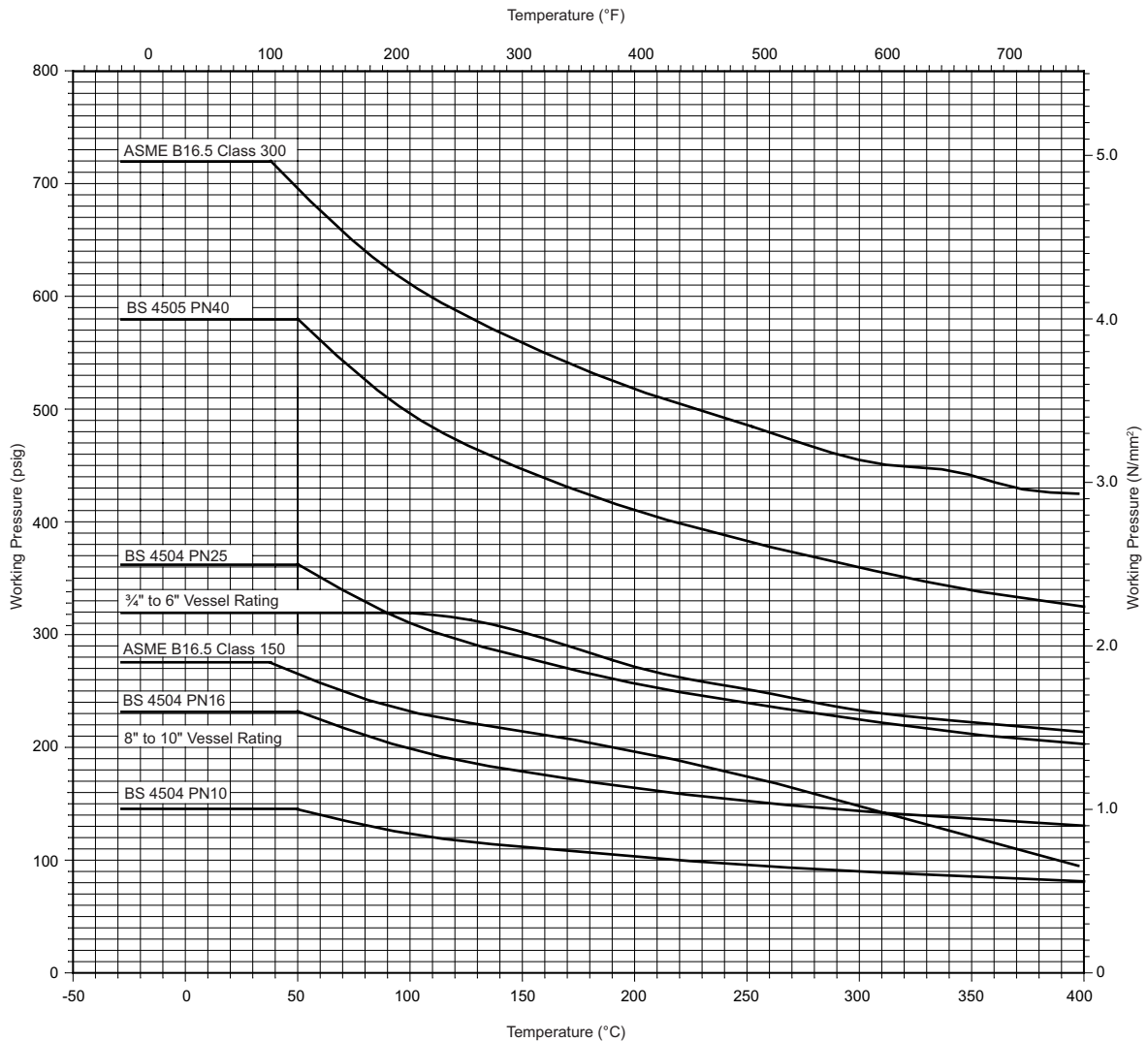
| | | |
|--|-----------|--------|
| 3/4", 1", 1 1/2", 2", 2 1/2", 3", 4", 6", NB | 22 barg | @ 50°C |
| 8", 10" NB | 13.8 barg | @ 50°C |

Caution should be taken on applications below 0°C (unless low temperature steel is specified).

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8.0 Pressure Temperature Curves – Stainless Steel TFOV:



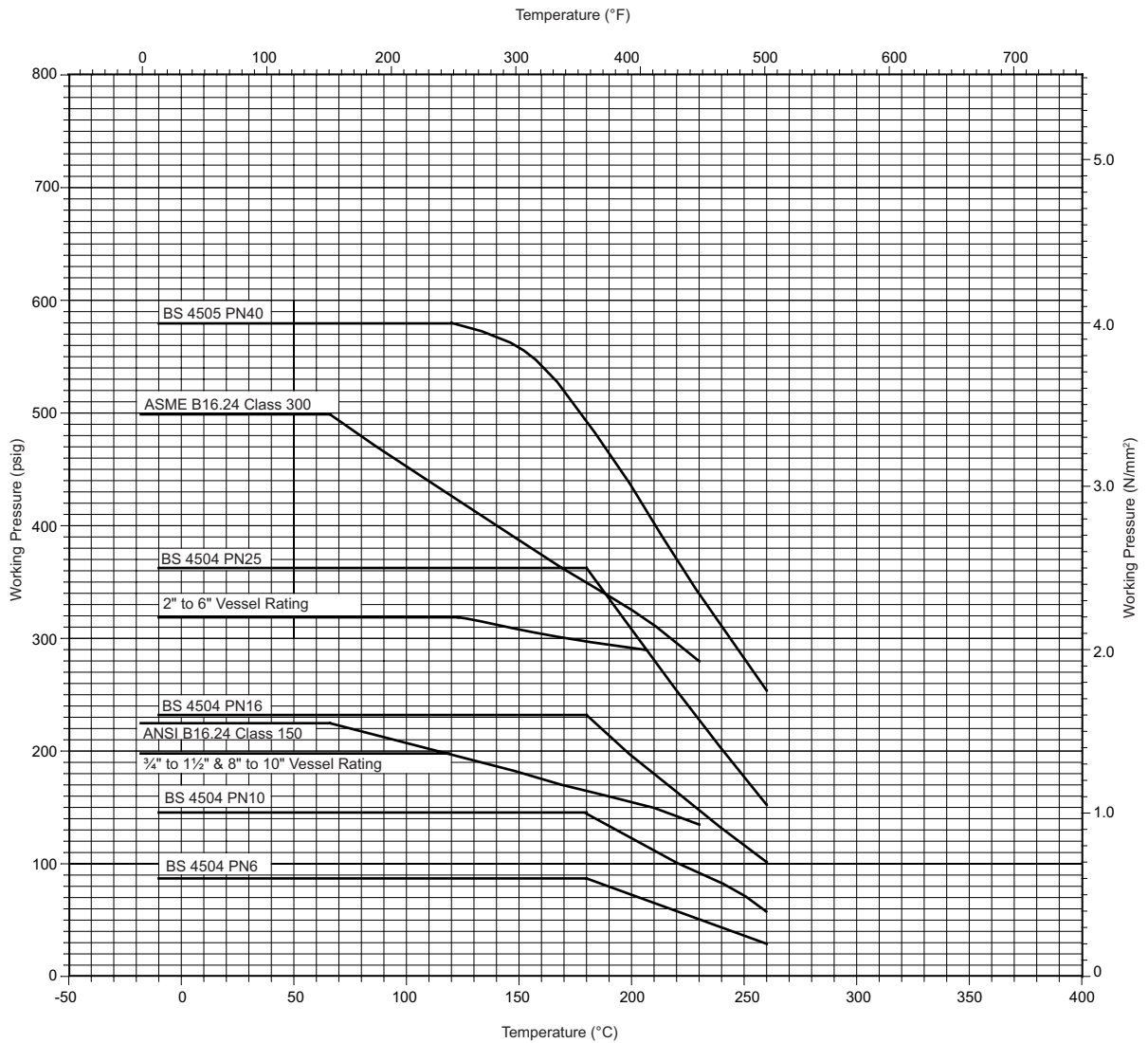
9.0 Maximum Non-Shock Working Pressure At 50°C For TopFilter Cast Stainless Steel TFOV Filters:

| | | |
|--|-----------|--------|
| 3/4", 1", 1 1/2", 2", 2 1/2", 3", 4", 6", NB | 22 barg | @ 50°C |
| 8", 10" NB | 13.8 barg | @ 50°C |

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10.0 Pressure Temperature Curves – Gunmetal TFOV:



11.0 Maximum Non-Shock Working Pressure At 50°C For TopFilter Cast Gunmetal TFOV Filters:

| | | |
|-------------------------|-----------|--------|
| 2", 2½", 3", 4", 6", NB | 22 barg | @ 50°C |
| ¾", 1", 1½", 8", 10" NB | 13.8 barg | @ 50°C |

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