

FLAT COMPOSITE

HIGH-PERFORMANCE REVERSE ACTING RUPTURE DISC

An economic solution offering enhanced protection, reliability and leak tightness for very low pressure applications.



OsecoElfab's forward-acting Flat Composite rupture disc has a composite design with a unique tri-membrane construction.

We fit this non-fragmenting composite disc with a Flo-Tel actuator as standard for instantaneous burst detection. The Flat Composite compatible with our non-invasive, reusable detection systems Flo-Tel and Flo-Tel XD.

We can also manufacture the disc with various slotting arrangements to meet your specific application requirements. Install the disc into OsecoElfab's forward rupture disc holder.

| | |
|--|-----------------|
| Size | 25mm - 800mm |
| Burst Pressure | 0.07 - 3.5 barg |
| K_R Value (K_{RGL}) | 3.94 |
| Operating Ratio | 40% |
| Performance Tolerance | +/- 5% |
| Manufacturing Range | 0% |

Let us help you with all your pressure relief questions.

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REQUEST A QUOTE FOR
THE FLAT COMPOSITE





| | |
|------------------------|---|
| Size range | 25mm to 800mm (1" to 32") |
| Burst pressure range | 0.07 barg to 3.5 barg (1 psig to 50 psig) |
| Standard materials | 316 Stainless Steel (others available on request) |
| K _R Value | 3.94 |
| Max. Operating Ratio | 40% of minimum burst pressure (36% of nominal burst pressure) |
| Performance Tolerance | +/-5% |
| Manufacturing Range | 0% |
| Fragmentation | Non-fragmenting design |
| Vacuum Service | Opening or non-opening vacuum support available. Back pressure support required. |
| Fluid compatibility | Gas service, liquid service, vapour service |
| Torque requirements | Not torque sensitive |
| Relief Valve Isolation | Suitable for safety relief valve isolation |
| Design Standards | Designed to meet ISO 4126-2:2019 or ASME XIII |

Certifications

ASME UD
CE
SIL

Related Products

Sensors

Flo-Tel
Flo-Tel XD

HOLDERS

Forward holders

Accessories

Test-Tel
System-Loc
Excess Flow Valves
Tel-Tale Gauge

Burst Pressure Ranges

Flat Composite Min/Max Burst Pressure @ 15-30°C (59-86°F)



| SIZE | | MATERIAL* | MIN barg (psig) | MAX barg (psig) |
|---------|--------|---------------------------------|-----------------|-----------------|
| DN (mm) | inches | | | |
| 25 | 1 | 316 Stainless Steel top section | 0.42 (6) | 2.07 (30) |
| | | Nickel top section | 0.21 (3) | 1.04 (15) |
| 40 | 1.5 | 316 Stainless Steel top section | 0.28 (4) | 1.38 (20) |
| | | Nickel top section | 0.14 (2) | 0.7 (10) |
| 50 | 2 | 316 Stainless Steel top section | 0.28 (4) | 1.38 (20) |
| | | Nickel top section | 0.14 (2) | 0.7 (10) |
| 65 | 2.5 | 316 Stainless Steel top section | 0.28 (4) | 1.38 (20) |
| | | Nickel top section | 0.14 (2) | 0.7 (10) |
| 80 | 3 | 316 Stainless Steel top section | 0.28 (4) | 1.38 (20) |
| | | Nickel top section | 0.14 (2) | 0.7 (10) |
| 100 | 4 | 316 Stainless Steel top section | 0.28 (4) | 1.38 (20) |
| | | Nickel top section | 0.14 (2) | 0.7 (10) |
| 150 | 6 | 316 Stainless Steel top section | 0.14 (2) | 0.7 (10) |
| | | Nickel top section | 0.07 (1) | 0.35 (5) |
| 200 | 8 | 316 Stainless Steel top section | 0.14 (2) | 0.7 (10) |
| | | Nickel top section | 0.07 (1) | 0.35 (5) |
| 250 | 10 | 316 Stainless Steel top section | 0.14 (2) | 0.7 (10) |
| | | Nickel top section | 0.07 (1) | 0.35 (5) |
| 300 | 12 | 316 Stainless Steel top section | 0.14 (2) | 0.7 (10) |
| | | Nickel top section | 0.07 (1) | 0.35 (5) |
| 350 | 14 | 316 Stainless Steel top section | 0.07 (1) | 0.6 (8.7) |
| | | Nickel top section | - | - |
| 400 | 16 | 316 Stainless Steel top section | 0.07 (1) | 0.5 (7.25) |
| | | Nickel top section | - | - |
| 450 | 18 | 316 Stainless Steel top section | 0.07 (1) | 0.5 (7.25) |
| | | Nickel top section | - | - |
| 500 | 20 | 316 Stainless Steel top section | 0.07 (1) | 0.5 (7.25) |
| | | Nickel top section | - | - |
| 600 | 24 | 316 Stainless Steel top section | 0.07 (1) | 0.5 (7.25) |
| | | Nickel top section | - | - |
| 700 | 28 | 316 Stainless Steel top section | 0.07 (1) | 0.5 (7.25) |
| | | Nickel top section | - | - |
| 800 | 32 | 316 Stainless Steel top section | 0.07 (1) | 0.5 (7.25) |
| | | Nickel top section | - | - |

*All with fluoropolymer seal

Free Flow Area / Minimum Net Flow Area (MNFA)



| NOMINAL BORE | | MNFA with no vacuum support (XXX) | | MNFA with non-opening vacuum support (NVS) | |
|--------------|--------|--------------------------------------|---------------------|---|---------------------|
| DN (mm) | inches | mm ² | Sq. Inch (UD range) | mm ² | Sq. Inch (UD range) |
| 25 | 1 | 448 | 0.607 | 270 | 0.42 |
| 40 | 1.5 | 1,164 | 1.655 | 721 | 1.12 |
| 50 | 2 | 1,908 | 2.774 | 1,199 | 1.86 |
| 65 | 2.5 | 3,166 | 4.678 | 1,912 | 2.96 |
| 80 | 3 | 4,839 | 7.216 | 3,412 | 5.29 |
| 100 | 4 | 7,869 | 11.81 | 4,736 | 7.34 |
| 150 | 6 | 17,319 | 26.246 | 9,253 | 14.34 |
| 200 | 8 | 30,946 | 47.19 | 17,182 | 26.63 |
| 250 | 10 | 48,500 | 74.22 | 28,084 | 43.53 |
| 300 | 12 | 69,980 | 107.4 | - | - |
| 350 | 14 | 94,569 | 146.5 | - | - |
| 400 | 16 | 123,785 | 191.9 | - | - |
| 450 | 18 | 156,929 | 243.2 | - | - |
| 500 | 20 | 188,574 | 292.3 | - | - |
| 600 | 24 | 273,397 | 422.6 | - | - |
| 700 | 28 | 373,928 | 578.9 | - | - |
| 800 | 32 | 490,167 | 764.77 | - | - |

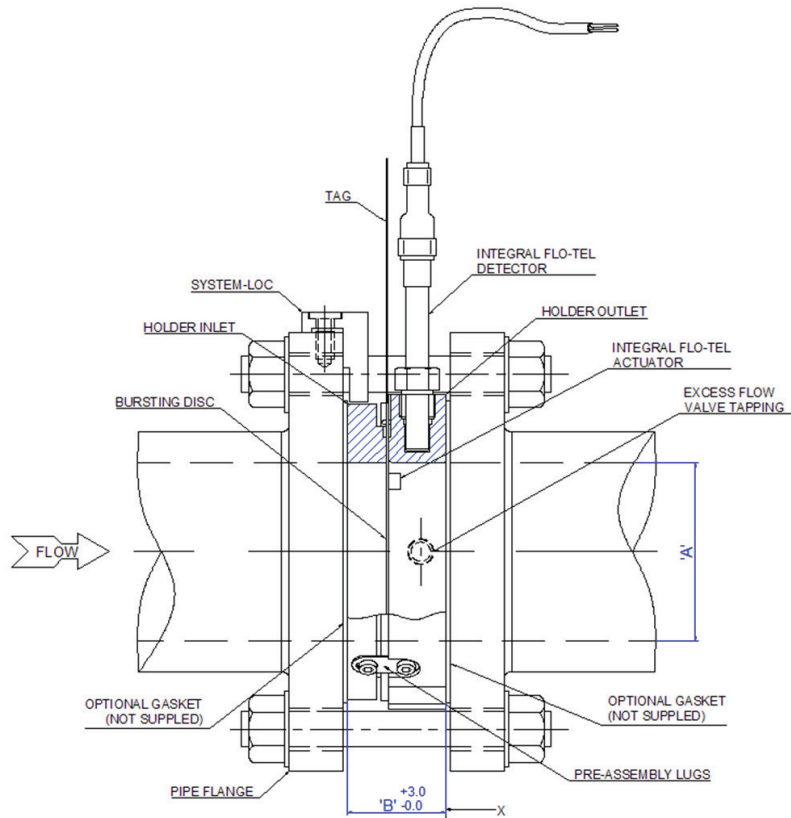
Burst Tolerance

+/- 0.026 barg ≤ 0.24 barg
 +/- 0.053 barg > 0.24 – ≤ 0.5 barg
 +/- 5% > 0.5 barg

+/- 0.375 psig ≤ 3.5 psig
 +/- 0.75 psig > 3.5 – ≤ 7.25 psig
 +/- 5% > 7.25 psig

K_R Value (Frictional Loss Factor)

| | |
|------------------|----------------|
| K _R | Flat Composite |
| K _{RGL} | 3.94 |



| NOMINAL BORE (A) | | FACE-TO-FACE (B) |
|------------------|--------|---------------------------|
| DN (mm) | inches | With dome protection (mm) |
| 25 | 1 | 37.9 |
| 40 | 1.5 | 37.9 |
| 50 | 2 | 37.9 |
| 65 | 2.5 | 40 |
| 80 | 3 | 42 |
| 100 | 4 | 46.5 |
| 150 | 6 | 62 |
| 200 | 8 | 58 |
| 250 | 10 | 58 |
| 300 | 12 | 58 |
| 350 | 14 | 50 |
| 400 | 16 | 50 |
| 450 | 18 | 50 |
| 500 | 20 | 50 |
| 600 | 24 | 50 |

| FLANGE SPECIFICATIONS | |
|----------------------------|---------------------------------|
| EN 1092-1 PN DESIGNATED | BS EN 1759-1 ANSI DESIGNATED |
| PN 6 | ANSI 150 |
| PN 10 | ANSI 300 |
| PN 16 | ANSI 600 |
| PN 20 | ANSI 900 |
| PN 25 | ANSI 1500 |
| PN 40 | ANSI 2500 |
| PN 50 | - |
| PN 63 | - |
| PN 100 | - |

Face-to-face dimensions account for the disc and holder assembly only. They do not account for gasket thickness.