

Leader Ring Joint Type R Oval High Integrity Metallic Sealing



Description

Leader Ring Joint gaskets have been developed for heavy duty use in the petroleum industry. Specific applications are wellhead and Christmas tree, drilling and oil & gas equipment. These precision machined metallic gaskets are suitable for high temperature and pressure applications. The grooved ASME B16.5- or API 6A flanges form a high integrity seal. The main seal is obtained through the plastic deformation of the gasket material. The seal is enhanced by the overall shape of the oval RTJ.

Sealing Characteristics

- Non blow-out type
 - Interchangeable in relation with a corresponding type R Octagonal Style and type RX number.
 - Solid metallic gaskets such as ring joint gaskets show minimum recovery characteristics.
- Please note, the gaskets require an optimal amount of surface pressure. This is especially the case involving applications with large fluctuations in temperature.

Application

- Ring Joint gaskets are widely used between pipeline flanges, valves and pressure vessels in the Oil & Gas industry.

- High pressure up to 400 bar (pending on flange construction and rating)
- Style R gaskets are suitable for ASME B16.5 ring joint flanges up to 2500 lbs. In case API 6A type 6B flanges are used, pressure up to 5000 psi can be applied.

Chemical compatibility, pressure and temperature

Corrosion and chemical resistance depend on the selected RTJ gasket material.

The pressure and temperature ranges can be found in the Technical Specifications, see table 1.

Delivery options

Oval shaped RTJ gaskets are available in ring numbers R11 up to R105. ERIKS is able to produce custom made gaskets according to customer specifications.

ERIKS has a large stock in Soft Iron and SS316(L) materials. Other materials are also available, see table 2.

Approvals and Certificates

Leader Ring Joint gaskets are manufactured in strict accordance with API 6A (ISO 10423) and ASME B16.20 specifications.

EN10.204 3.1 certificates can be delivered on request, as well as a NACE MR0175/ISO 15156 conformity statement.

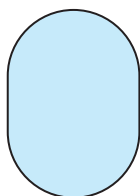


Table 1: Technical data

| | |
|---|----------------------------|
| Max. pressure | 400bar (40,0 Mpa) |
| Min- en maximum temperatures | see material table 2 |
| Maximum pressure and temperatures limitations | acc. ASME B16.5 and API 6A |
| M-value (ASME Boiler & Pressure Vessel code Div. I, section VIII, Appendix 2) : | |
| Soft Iron (D) and Soft Steel (S) | 5,5 |
| Stainless Steel | 6,5 |
| Monel and F5 (4-6% Cr + 0,5% Mo) | 6 |
| y-value (ASME Boiler & Pressure Vessel code Div. I, section VIII, Appendix 2) : | |
| Soft Iron (D) and Soft Steel (S) | 18000 psi (124 Mpa) |
| Stainless Steel | 26000 psi (179 Mpa) |
| Monel and F5 (4-6% Cr + 0,5% Mo) | 21800 psi (150 Mpa) |
| Gasket- and required flange roughness (Ra) | Ra = 1,6 micron max. |
| Gasket- and required flange roughness (RMS) | RMS = 63 max. |

D20230100020-en_03.08.2015

Table 2: Materials

| | Identification | Max. Hardness Rockwell B | Max. Hardness Brinell | Temperature Range |
|---|-------------------------|-----------------------------|-----------------------|-------------------|
| | ASME B16.20 / API 6A | EN-ISO 6508 | EN-ISO 6506 | Degrees C. |
| Soft Iron | D | 56 | 90 | - 40 / + 500 |
| Low Carbon Steel | S | 68 | 120 | - 25 / + 500 |
| 4-6 % Chrome - 1/2 % Molybdenum (F5) | F5 | 72 | 130 | - 25 / + 550 |
| SS304(L) | S304(L) | 83 | 160 | - 200 / + 550 |
| SS316(L) | S316(L) | 83 | 160 | - 100 / + 550 |
| SS321 | S321 | 83 | 160 | - 200 / + 550 |
| SS347 | S347 | 83 | 160 | - 200 / + 550 |
| SS410 | S410 | 86 | 170 | - 50 / + 500 |
| Duplex (ASTM A182-F51) / SAF 2205 / 1.4462 | S31803 | 98 | 220 | - 60 / + 300 |
| Avesta 254 SMO (6Mo) | S31254 | 92 | 195 | - 100 / + 550 |
| Nickel 200 | N02200 | 71 | 125 | - 100 / + 450 |
| Nickel 201 | N02201 | 71 | 125 | - 100 / + 550 |
| Monel® / Alloy 400 | N04400 | 72 | 130 | - 50 / + 500 |
| Inconel® / Alloy 600 | N06600 | 91 | 190 | - 100 / + 650 |
| Inconel® / Alloy 625 | N06625 | 93 | 200 | - 100 / + 800 |
| Incoloy® / Alloy 800 | N08800 | 88 | 180 | - 100 / + 700 |
| Incoloy® / Alloy 800H | N08810 | 88 | 180 | - 100 / + 800 |
| Incoloy® / Alloy 825 | N08825 | 88 | 180 | - 100 / + 550 |
| Hasteloy® / Alloy B2 | N010665 | 95 | 210 | - 100 / + 500 |
| Hasteloy® / Alloy C276 | N010276 | 93 | 200 | - 100 / + 600 |
| 1) This information is for general reference only. It does not take into consideration specific application conditions such as pressure or process fluid. | | | | |
| 2) Special hardness requirements on request. | | | | |

Disclaimer: The content of this document has been composed with the utmost care. However, it is possible that certain information changes over time, becomes inaccurate or incomplete. ERIKS does not guarantee that the information provided on this document is up to date, accurate and complete; the information provided is not intended to be advice. ERIKS shall never be liable for damage resulting from the use of the information provided.

For more information, quotations or orders: Phone +31 72 514 18 44 or E-mail seals@eriks.nl