# Slip On Flanged Diaphragm Seal
# TETROSEAL SF



## Introduction

The TETROSEAL SF is a slip-on flanged diaphragm seal designed for applications requiring exotic wetted materials. The diaphragm and wetted insert, including the sealing face, are manufactured from the specified process-compatible material, while the flange material can be selected independently to suit the mechanical, environmental and project requirements of the application. This allows the use of different flange materials without requiring the complete flange to be manufactured from the same exotic material as the wetted parts.

The design is particularly suited to RTJ flange connections where an exotic diaphragm and sealing face are required.

## Special features

- Flush welded diaphragm (free of dead space)
- Diaphragm protected against rupture with backup convolution
- Helium leak tested to verify diaphragm weld integrity
- All wetted parts, including the sealing face, are manufactured from the same material

## Diaphragm seal specifications

- Flange type: ASME B16.5 Ring Type Joint (RTJ)
- Flange material: AISI 316L
- Wetted parts and diaphragm material: Hastelloy C276
- Connection: Ø12 × 5 mm

## Measuring range

- Dependent on diaphragm size and measuring instrument. Maximum working pressure subject to flange rating and process temperature.

## Options for diaphragm seal

- Alternative instrument connections: threaded connector or capillary connector, available on request.
- Diaphragm and wetted parts material: Duplex, Hastelloy, Inconel, Monel, Titanium
- Other flange and wetted parts materials on request
- Other flange types and sealing faces on request
- Custom capillary lengths from 1 m to 15 m
- Diaphragm extension 50 mm to 200 mm

| Diaphragm and wetted parts | Process temperature limit |
|---|---|
| Duplex 2205 | 300 °C |
| Hastelloy C276 | 400 °C |
| Inconel 600 | 400 °C |
| Monel 400 | 400 °C |
| Titanium | 150 °C |

Maximum operating temperature may be limited by the flange rating, fill fluid, measuring instrument and other components of the completed diaphragm seal system.

| Flange sealing face roughness | |
|---|---|
| **Standard and facing** | **Roughness** |
| ASME B16.5 RTJ | Ra < 1.6 µm |

## Available certification

- 2.1 Certificate of conformity
- 3.1 Material certificate
- 3.1 Material certificate with NACE MR0175 conformity
- PMI Positive Material Identification
- Others on request

## How to order

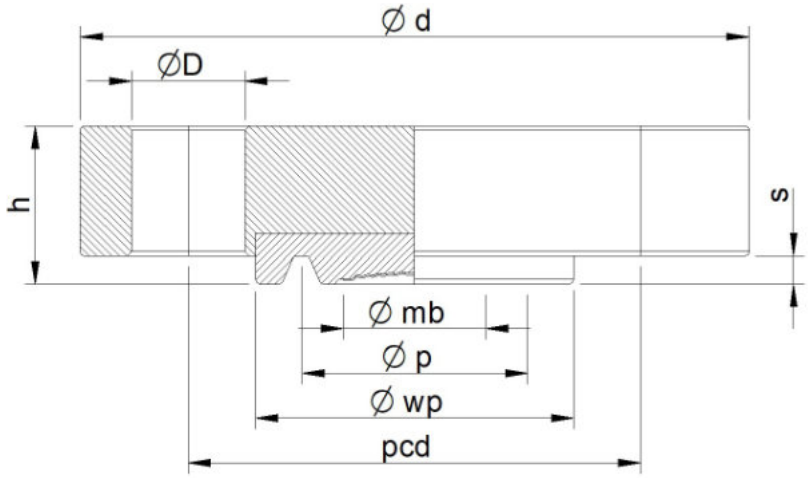
Please specify: model, instrument connection, size, rating, sealing face, flange material, diaphragm and wetted parts material, options, certificates
Example: TETROSEAL SF, capillary connector, 2” ASME 150# RTJ, 316L flange, Hastelloy C276 wetted parts, 3.1 material certificate



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## ASME B16.5 RTJ




mb = diaphragm diameter
p = RTJ groove pitch diameter

| Flange connection according to ASME B16.5 RTJ (Ring Type Joint) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Size | Class | Dimensions in mm | | | | | | | | Bolt holes |
| | | mb | d | h | D (inch) | pcd | wp | s | p | |
| 1” | 150 | 32 | 110 | 19 | 5/8” | 79 | 64 | 6 | 47.63 | 4 |
| | 300 | 32 | 125 | 22 | 3/4” | 89 | 70 | 6 | 50.80 | 4 |
| | 400-600 | 32 | 125 | 24 | 3/4” | 89 | 70 | 6 | 50.80 | 4 |
| | 900-1500 | 32 | 150 | 35 | 1” | 102 | 72 | 6 | 50.80 | 4 |
| | 2500 | 32 | 160 | 41 | 1” | 108 | 83 | 6 | 60.33 | 4 |
| 1 1/2” | 150 | 44 | 125 | 22 | 5/8” | 98 | 83 | 6 | 65.07 | 4 |
| | 300 | 44 | 155 | 26 | 7/8” | 114 | 91 | 6 | 68.28 | 4 |
| | 400-600 | 44 | 155 | 29 | 7/8” | 114 | 91 | 6 | 68.28 | 4 |
| | 900-1500 | 44 | 180 | 38 | 1 1/8” | 124 | 92 | 6 | 68.28 | 4 |
| | 2500 | 44 | 205 | 53 | 1 1/4” | 146 | 114 | 8 | 82.55 | 4 |
| 2” | 150 | 57 | 150 | 24 | 3/4” | 121 | 102 | 6 | 82.55 | 4 |
| | 300 | 57 | 165 | 29 | 3/4” | 127 | 108 | 8 | 82.55 | 8 |
| | 400-600 | 57 | 165 | 33 | 3/4” | 127 | 108 | 8 | 82.55 | 8 |
| | 900-1500 | 57 | 215 | 46 | 1” | 165 | 124 | 8 | 95.25 | 8 |
| | 2500 | 57 | 235 | 59 | 1 1/8” | 171 | 133 | 8 | 101.60 | 8 |
| 3” | 150 | 81 | 190 | 29 | 3/4” | 152 | 133 | 6 | 114.30 | 4 |
| | 300 | 81 | 210 | 35 | 7/8” | 168 | 146 | 8 | 123.83 | 8 |
| | 400-600 | 81 | 210 | 40 | 7/8” | 168 | 146 | 8 | 123.83 | 8 |
| | 900 | 81 | 240 | 46 | 1” | 191 | 156 | 8 | 123.83 | 8 |
| | 1500 | 81 | 265 | 56 | 1 1/4” | 203 | 168 | 8 | 136.53 | 8 |
| | 2500 | 81 | 305 | 76 | 1 3/8” | 229 | 168 | 10 | 127.00 | 8 |
| 4” | 150 | 81 | 230 | 29 | 3/4” | 191 | 171 | 6 | 149.23 | 8 |
| | 300 | 81 | 255 | 38 | 7/8” | 200 | 175 | 8 | 149.23 | 8 |
| | 400 | 81 | 255 | 43 | 1” | 200 | 175 | 8 | 149.23 | 8 |
| | 600 | 81 | 275 | 46 | 1” | 216 | 175 | 8 | 149.23 | 8 |
| | 900 | 81 | 290 | 52 | 1 1/4” | 235 | 181 | 8 | 149.23 | 8 |
| | 1500 | 81 | 310 | 62 | 1 3/8” | 241 | 194 | 8 | 161.93 | 8 |
| | 2500 | 81 | 355 | 87 | 1 5/8” | 273 | 203 | 11 | 157.18 | 8 |




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