

PRODUCT DATASHEET

SWG Style CGI

The spiral wound style CGI gasket is a versatile semi-metallic gasket capable of sealing across a wide range of applications.



Service:

Spiral wound style CGI gaskets are widely used in many industries to seal a vast array of media across a wide range of temperatures and pressures. The key to the gaskets versatility is the inherently resilient sealing element. The spiral wound sealing element is manufactured by spirally winding a preformed metallic strip and filler material around the periphery of a metal mandrel.

Properties:

Spiral wound style CGI gaskets can be supplied to national or international standards where properties are controlled by adherence to construction codes. This is normally the case for bolted connections utilizing standard flanges. Spiral wound style CGI gaskets may also be manufactured on a customized basis where gasket style, geometry and sealing element stiffness are chosen to best suit the flange arrangement, available gasket load and operational conditions.

Materials:

Spiral wound gaskets can be constructed using many different combinations of materials. Material selection is generally dictated by application conditions namely temperature, pressure and media. In the oil, gas and power generation industries a common sealing element material combination is 316L stainless steel metallic strip with Flexicarb™ (graphite) filler material. However gaskets made from many other material combinations are commonly available. Temperature guideline for common winding materials are as follows:

| Material Guide (Winding Options)* | Maximum Temperature | Minimum Temperature | Other Metal Winding Options* |
|--------------------------------------|------------------------|------------------------|---------------------------------|
| Flexicarb™ (Graphite) | 842°F (450°C) | -400°F (-240°C) | Alloy 20 |
| Thermiculite® 835 | 1800°F (982°C) | -400°F (-240°C) | Hastelloy |
| PTFE | 500°F (260°C) | -400°F (-240°C) | Inconel/Incolloy |
| 316L SS | 1500°F (815°C) | -320°F (-195°C) | Monel |
| 304 SS | 1000°F (540°C) | -320°F (-195°C) | Stainless Steel |

*Note: Other materials are available, please consult with engineering for more details

Usage:

Flat and raised faced diameter flanges up to and inclusive of Class 2500.

Gasket Pressure Rating:

Based upon flange pressure rating

Applicable Standards:

ASME B16.20

BS3381

Suited for ASME B16.5 and B16.47 series flanges

Design Factors (ASME):

$m = 3; y = 10,000$ psi

Recommended Surface Finish:

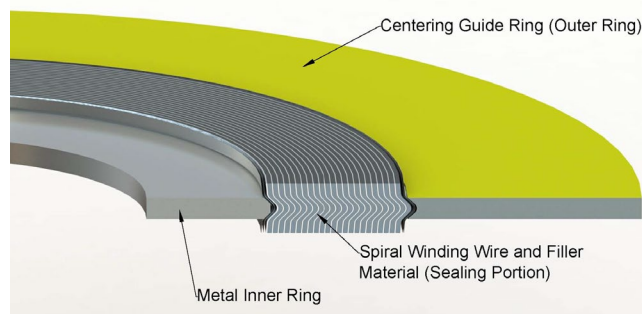
125-250 Microinch RA (Concentric or Phonographic)

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Technical Benefits:

- Metallic winding suited for cyclic loading
- Outer ring center gasket
- Inner/outer ring provides additional blow-out strength
- Inner/outer ring provides a compression stop
- Prevents flange erosion
- Prevents inward buckling
- Reduces turbulent flow
- Recommended for high pressure/temperature applications

Gasket Profile:



Design Parameters:

| Gasket Thickness | Maximum Inside Dimension | Maximum Recommended Sealing Width | Recommended Compressed Thickness** |
|------------------|--------------------------|-----------------------------------|------------------------------------|
| 0.0625" | Up to 6" | 3/8" | 0.050"/0.055" |
| 0.0625" | 6" to 15" | 1/4" | 0.050"/0.055" |
| 0.100" | 10" | 1/2" | 0.075"/0.080" |
| 0.125" | Up to 20" | 1" | 0.090"/0.100" |
| 0.125"* | 20" to 40" | 3/4" | 0.090"/0.100" |
| 0.175" | Up to 40" | 1" | 0.125"/0.135" |
| 0.175"* | 40" to 60" | 1" | 0.125"/0.135" |
| 0.175"* | 60" to 70" | 7/8" | 0.125"/0.135" |
| 0.175"* | 70" to 75" | 3/4" | 0.125"/0.135" |
| 0.250" | 90" | 1" | 0.180"/0.200" |
| 0.285" | 185" | 1" | 0.200"/0.220" |

Preferred size range in relation to thickness shown in bold type.

*PTFE filled FLEXITALLIC gaskets in this size range are unstable and are subjected to "springing apart" in shipping and handling. Specify next gasket thickness up.

** The recommended compressed thickness is what experience has indicated to be optimum range in order to achieve maximum resiliency of the gasket. Please consult with engineering for more details.

Manufacturing Capabilities*

| Diameter of Ring | Minimum Width* | |
|----------------------------|----------------|------------|
| | Outer Ring | Inner Ring |
| Up to 10" Inside Diameter | 3/8" | 1/4" |
| 10" to 24" Inside Diameter | 7/16" | 3/8" |
| 24" to 50" Inside Diameter | 1/2" | 3/8" |
| 50" to 70" Inside Diameter | 5/8" | 1/2" |
| 70" and larger | 3/4" | 1/2" |

*Note: Other options are available, please consult with engineering .

Sealing Portion Tolerances*

| Inside Diameters | Tolerance | Outside Diameter | Tolerance |
|---------------------|-----------|--------------------|-----------------------|
| Up to 9.25" | ± 0.016" | Up to 10.38" | ± 0.030" |
| Over 9.25" to 35.5" | ± 0.030" | Over 10.38" to 27" | + 0.060"/ - 0.030" |
| Over 35.5" | ± 0.060" | Over 27" | ± 0.060" |

Tolerances on thickness is ± 0.005", (measured across metal winding) on all thicknesses.

*These tolerances apply only for custom dimensioned Style CGI gasket. Otherwise, standard tolerances per ASME B16.20 will apply. Values shown above are subjected to change.

This data sheet refers to the material as supplied. The information contained herein is given in good faith, but no liability will be accepted by the Company in relation to same.

We reserve the right to change the details given on this data sheet as additional information is acquired. Customers requiring the latest version of this data sheet should contact our Applications Engineering Department.

The information given and, in particular, any parameters, should be used for guidance purposes only. The company does not give any warranty that the product will be suitable for the use intended by the customer.