

W O R L D W I D E



Novus Sealing and our distributors are fully committed to ensuring our customers throughout the world receive the highest level of quality and technical support for our products and services. Our technical specialists can provide expertise on all issues associated with sealing performance.



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Corrugated Gaskets



Manufacturers and distributors of sealing and jointing materials.

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Corrugated Gaskets

Novus Corrugated Gaskets comprise of a corrugated metallic core, normally stainless steel, with a soft facing layer applied to each face. The corrugations provide resilience and reduce the sealing contact surface area of the gasket while the soft layer ensures outstanding sealing, even at low loads. These gaskets are particularly suited for heat exchanger applications as a replacement to metal jacketed gaskets.

Heat Exchanger Applications

Heat exchanger flanges, owing to the difference in thickness, of the mating flanges, heat and expand at different rates.

This differential expansion can cause radial shearing of the gasket and therefore it is critical that a gasket is selected which resists radial shear and maintains a seal even under thermal cycling conditions.

Corrugated metal gaskets have a proven record in problematic exchanger applications, offering low relaxation, high resistance to radial shear and high levels of tightness. For this reason these gaskets are replacing many of the older technologies such as metal jacketed particularly on heat exchangers.



Properties

- **Excellent resistance to radical shear**
- **Creates a tight seal at low bolt loads**
- **Can be used when there is insufficient bolt load to seal spiral wound gaskets**
- **Outstanding resistance to thermal cycling**
- **Safe to handle and fit**
- **Excellent thermal and chemical stability**
- **Tolerant to flange imperfections**

Practical Benefits

- **No sharp edges for safe handling**
- **Precompressed graphite resistant to damage and marking during fitting**
- **Excellent rigidity ensures easy posting between flanges**
- **Does not stick to flanges**

Seating Stress Range

Corrugated gaskets offer reliable sealing performance when seated within the following seating stress ranges

Seating Stress (20°C)		
Minimum (N/mm ²)	Optimum (N/mm ²)	Maximum (N/mm ²)
20	70	200

Thickness

Available in 1.5mm, 2mm and 3 mm

Flange Surface Finish

The recommended flange surface finish for corrugated gaskets with sealing layers is from 3.2 to 6.3um Ra (125-250 RMS), this is also referred to as a smooth finish.

Sizing Guidelines

DIN Sizes 10, 16, 25, 40 bar.
ANSI Sizes Class 150 and 300lb. Other sizes available on request. Also available for vessel and non-standard applications.

Chemical Suitability

PH Range 0-14.

Layer Material Selection

The following table may be used to determine the appropriate sealing layer material. Novus recommend the use of graphite layers for most applications. Only in cases where graphite may cause media pollution, or is not chemically resistant, should an alternative layer material be chosen.

Graphite

Graphite is a universal, high quality, non asbestos sealing material featuring - very good chemical resistance, resistance to high fluctuating temperatures and pressures, non ageing properties plus excellent gas tightness.

Graphite APX 2

Inhibited grade for oxidation resistance. Ideal for use at temperatures above the limit recommended for standard graphite grades. Often used in combination with Novus Hi-Temp for high temperature applications.

PTFE

PTFE is a high quality synthetic material featuring - excellent chemical resistance, temperature resistant up to 260°C, good ageing resistance and excellent gas tightness.

Hi-Temp

Hi-Temp is a mica based material suitable for high temperature applications, often used in combination with graphite up to temperatures of 800°C.

Layer Material Selection

Layer Material	Temperature (°C)		Maximum Operating Pressure (Bar)	Gas Tightness	Application
	Min	Max			
Graphite	-200	450	150	Good	Aggressive Media
Graphite APX2	-200	500	150	Good	Aggressive Media
PTFE	-200	260	50	Good	Aggressive Media
Hi-Temp + APX2	-200	800	100	Good	Gases

How to Order

A correct purchase order should contain the following information.

1. Standard of the gasket (flange standard)
2. Nominal size and pressure class
3. Material - core filler

Example

Novus CMG
Dimensions: ASME B16.20
2" 150lbs
SS316 Core
Graphite Coating Layer