



Manufacturers and distributors of sealing and Jointing Materials

DATA / SPECIFICATION SHEET



Camprofile Gaskets

DESCRIPTION

Camprofile gaskets consist of a metal core, generally of stainless steel, with concentric grooves on either side. A sealing layer is usually applied on both sides and depending on the duty the material for this layer can be graphite, PTFE(Teflon), Mica, Novus Therm or soft alloys like aluminium or silver. The sealing material layers protect the flange surfaces from damage as well as providing an excellent seal.

PROPERTIES

Camprofiles have a wide seating stress range which makes them:-

Highly suitable for varying temperatures and pressures
 Less sensitive to assembly faults (inaccurate bolt tensioning)
 Suitable for both light and heavy designed flanges.

Temperature resistant up to approx 1000°C dependent on layer material.

Resistant to media pressures up to 250 bar.

When assembled the remaining thickness of the sealing material is extremely low (0.1 - 0.2mm) thus reducing leaks, fail rates and environmental pollution.

Will not damage flange surface and is easily removed.

Camprofile cores are re-usable after cleaning, inspection, profile tracing and relayering with new sealing material. This is of particular interest in the case of costly heat exchanger gaskets when using Monel and other exotic materials.

Reduces maintenance costs and leakage

SEATING STRESS

The following seating stress ranges offer reliable and effective performance.

Layer Material	Seating Stress (20°C)		
	Minimum (N/mm ²)	Optimum (N/mm ²)	Maximum (N/mm ²)
Graphite	20	90	400
PTFE	20	90	400
Non Asbestos	40	125	400
Silver	125	240	450

The above values are based on parallel root form gaskets. The values have slight variations for convex root form gaskets.

FLANGE SURFACE

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

CORE THICKNESS

Core thickness depends on the assembly circumstances. When a camprofile is replacing an existing gasket, the use of a 4mm thick core (M21L and M41L, should not be problematic. Only in exceptional situations using a thicker gasket might cause unnecessary stress on existing pipe runs, especially in rigid systems.

Piping System	Core Thickness (mm)	Thickness after assembly Core + Layers (mm)
Existing	3 (recommended)	Approx. 3.1 - 3.4
New	4	Approx. 4.1 - 4.4

Styles M21LM and M41LM are available in 4mm thickness only due to their construction.



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PARALLEL ROOT CORES

The advantages of parallel root cores are:-

- Uniform spread of stress at the cams
- Uniform spread of stress across the flange surfaces

CONVEX ROOT CORES

The advantages of convex root cores are:-

- Highly suitable for underbolted flanges
- Effective seal at low seating stress

The gasket design ensures a high seating stress area (centre) and a lower seating stress area (gaskets outside),

GASKET PROFILES

All profiles feature as standard a 1mm cam pitch and a maximum groove depth of 0.5mm. Alternative profiles are available on request e.g. 1.5mm cam pitch and a maximum groove depth of 0.75mm (DIN profile).



M18L

Parallel root core with integral centering ring



M20L

Parallel root core without centering ring for male and female, tongue & groove and grooved flanges



M21LM

Parallel root core with floating centering ring attached outside the sealing ring



M38L

Convex root core with integral centering ring



M40L

Convex root core for male/female, tongue & groove and grooved flanges



M41LM

Convex root core with floating centering ring, attached outside the sealing ring

GASKET SHAPES

Camprofile gaskets can be made in a variety of shapes and with pass-bars for heat exchanger applications. Accurate drawings are required for non-standard and shaped camprofiles.

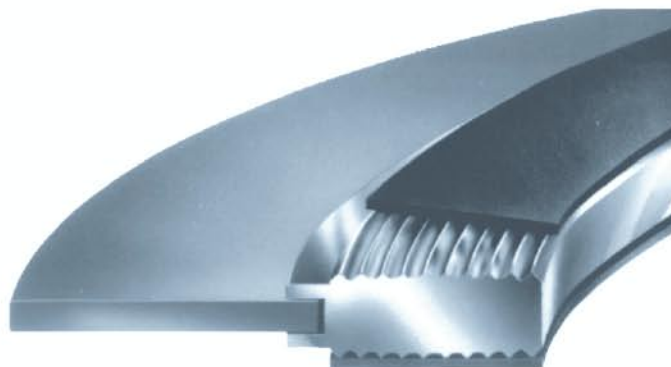
CORE MATERIAL SELECTION

The core material is generally fabricated in identical material to the piping system to prevent corrosion problems. 316 Stainless steel camprofiles cores are generally used with carbon steel pipe systems to prevent gasket corrosion.

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. In cases where graphite may contaminate the media or if not chemically resistant, an alternative layer material should be chosen.

Material	Temp °C		Maximum operating pressure (Bar)	Gas tightness	Application
	Min.	Max.			
Graphite	-200	450	250	Good	Aggressive
PTFE	-200	260	100	Good	Aggressive
Non-Asbestos	-100	250	100	Good	Gas & Liquids
Silver	-200	750	250	Good	Aggressive



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