RANKINE
GASKETS

PRODUCT DATASHEET

Kammprofile gaskets

Serrated solid metal core with soft facings. ASME B16.20, EN 12560-6.



Kammprofile gasket with partial facing removed. Product images are 3D renders.

A solid metal core with concentric serrations on both faces, covered with thin soft facings. Seals at low bolt load and survives thermal cycling.

Construction and styles

- Core only or with integral outer ring
- Loose outer ring for large sizes
- Convex core for heat exchangers
- Graphite, PTFE or mica facings

Specification

Standards	**ASME B16.20, EN 12560-6, EN 1514-6**
Pressure	**Class 150 to 2500**
Flange faces	**Raised face, tongue and groove, male and female, heat exchanger**
Temperature	**−200 to 1000 °C**

TEMPERATURE RANGE, °C

−200 0 200 400 600 800 1000

Upper limit set by facing: PTFE 260 °C, graphite 450 °C in air, mica 1000 °C

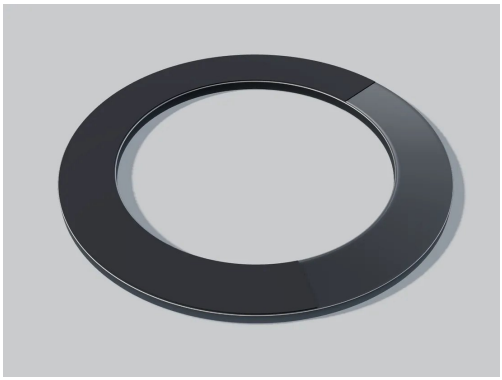
Notes

- Seals at lower seating stress than a spiral wound, which suits lightly bolted and Class 150 flanges.
- The solid core does not crush or unwind under thermal and pressure cycling.
- After inspection, a sound core can be cleaned and re-faced. Facings are not reused.

Specify when enquiring

- Nominal size and pressure class, or drawing
- Core style: core only, integral or loose outer ring, convex
- Core metal and facing material
- Service temperature, pressure and media

When to choose Kammprofile



Core with facing cut back. Product images are 3D renders.

Thermal and pressure cycling
The solid core does not crush or unwind, so the seal holds through repeated start-ups and shutdowns.

Low bolt load or weak flanges
Seals at lower seating stress than a spiral wound, which suits Class 150 flanges, glass-lined and non-standard equipment.

Heat exchangers
Made to drawing with integral pass partitions, and tolerant of flange rotation.

Reusable cores
After inspection, a sound core can be cleaned and re-faced, which lowers cost on large sizes.

Variants

Core only
For tongue-and-groove, male-female and recessed faces.

Integral outer ring
Machined from one piece, for raised-face flanges in standard sizes.

Loose outer ring
Ring attached by a step joint, for large diameters and thermal growth.

Convex core
Curved profile that keeps sealing as the flange rotates, for exchangers.

Pass partition
Bars machined or welded in any arrangement to drawing.

Facings

Flexible graphite — −200 to 450 °C
General process, steam and hydrocarbons. Higher limit in steam or inert gas.

PTFE — −200 to 260 °C
Strong acids, caustics and oxygen service.

Mica / vermiculite — −200 to 1000 °C
High temperature and oxidising service.

−200 0 500 1000 °C

Core metals

316L as standard. Also 321, 347, duplex 2205, Monel 400, Inconel 625, Incoloy 825, Hastelloy C276 and titanium, matched to the flange metal and media.

Standards	**ASME B16.20, EN 12560-6, EN 1514-6**
Pressure	**Class 150 to 2500, PN 10 to PN 250**
Core thickness	**3 or 4 mm, plus facings of 0.5 mm per side**
Sizes	**Standard flange sizes and any diameter to drawing**

Spiral wound or Kammprofile?

	SPIRAL WOUND	KAMMPROFILE
Seating stress needed	Higher	Lower
Thermal cycling	Good with inner ring	Excellent
Flange rotation	Tolerates some	Tolerates more, convex core most
Re-use	Single use	Core can be re-faced
Cost in standard sizes	Lower	Higher
Best fit	Standard process pipework	Exchangers, cycling and weak flanges