



Category: KAMMLOCK®

Group: Kammlock® Profile Metallic gaskets



Kammlock® profile metallic gaskets consist of a metal core (Generally Stainless Steel) with concentric grooves on either side with sealing materials. The sealing layers (depending on the service duty) can be Graphite, PTFE (Teflon), CAF or Metal (e.g. Aluminium or Silver). Kammlock® can be used without sealing layers to provide an excellent seal but there is a risk of flange surface damage - especially at high seating loads. The sealing layers protect the flange surfaces from damage in addition to providing an effective seal.

### Profile Shapes



Style KP1



Style KP2



Style KP3

### Profile Shapes



Style CP1



Style CP2



Style CP3

### Characteristics

- \* The very wide seating stress range (minimum to maximum stress) of the kammlock® gasket makes it:
  - highly suitable for varying temperatures and pressures.
  - less sensitive to assembly faults (inaccurate bolt tensioning).
  - suitable for light and heavily constructed flanges.
- \* Dependent on layer material camprofile gaskets are resistant to temperatures up to circa 1000oC
- \* Resistant to media pressures up to 250 bar.

### Characteristics

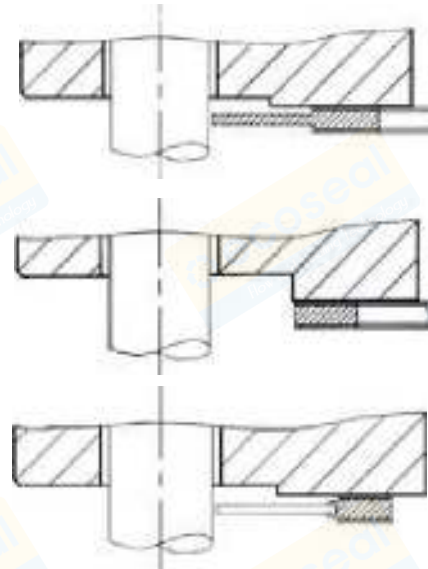
- The additional benefits are:

- \* When assembled the layer thickness of the sealing material is extremely small (0.1 - 0.2 mm) thus reducing leaks, reject rates and environment pollution.
- \* The gasket will not damage the flange surface and can be easily removed.
- \* kammlock® cores are re-usable after cleaning, inspection (including profile tracing) and re-layering. This is particularly interesting with costly heat exchanger gaskets (monel for instance).
- \* Reduces maintenance costs - thanks to the kammlock® gasket's super reliability and sealing performance.



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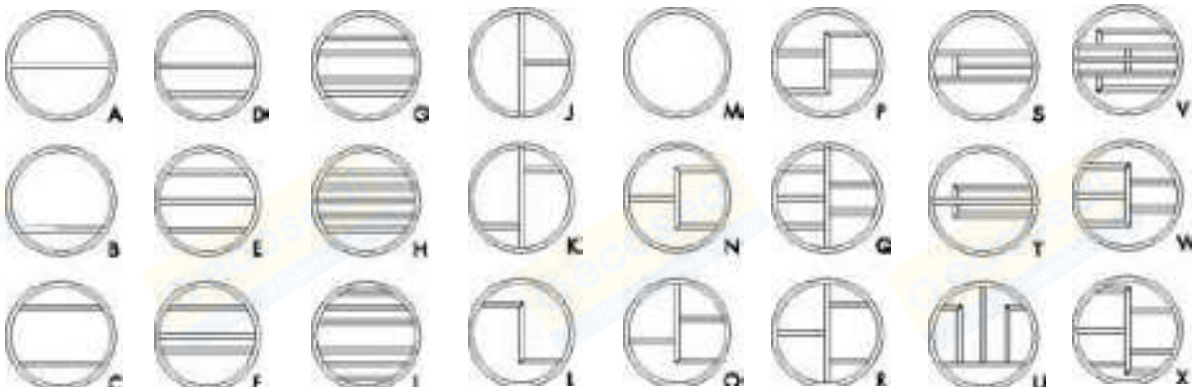
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### Kammlock® Gasket Formats

Apart from standard round gaskets the camprofile can be made in a variety of shapes - oval, rectangular and exchanger gaskets with pass-bars.

Correctly dimensioned drawings are required to make non-standard gaskets and gasket shapes.



Another new gasket product manufactured by Thermody

**NEW!!!** Kammlock® Profile gaskets are precisely manufactured and offer superior sealing performance for heat exchanger and standard flange applications. The Kammlock® Profile gasket is machined from steel plate using a tried and tested combination of groove dimension and facing thickness. Several different types are available to suit your application.



Engineering Design results in Improved Performance, The Kammlock®

Profile is the preferred gasket when needing improved performance at low seating stresses. It features excellent anti-blowout properties associated with the reliability of a solid metal-to-metal seal combined with soft sealing face to ensure a tighter joint.

**Kammlock® Profile gasket is an ideal replacement for problem applications associated with jacketed gaskets and standard flange spiral wound gaskets.**



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#### Design Features

- Fabricated in nominal pipe size and pressure.
- Configured in standard shapes for heat exchanger application.
- Available with centering ring for use on raised face flanges.
- Metal cores available in soft iron, stainless steel and exotic materials.
- Standard surface materials of flexible graphite or PTFE.
- Low seating stress.
- Optimum combination of solid core with soft sealing face.



#### Improved Performance

- Permits a tighter joint under operating conditions.
- Results in reduced emissions.
- Compensates for fluctuating ranges of temperature and pressures.
- Manufactured for all flanges including class 150LB to class 2,500LB
- Easy to install and effortless to remove.
- Improves plant efficiency
- Maintains a tight seal over variable range of bolt stresses.

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#### Advantages of Kammlock® Profile gaskets

- **Improved sealing at reduced bolt loads**
- **Ideal for pitted, worn or uneven flange faces**
- **Temperatures range from cryogenic to 1090°C**
- **Wide chemical resistance**
- **Size range up to 4m diameter**
- **Suitable for standard stock surface finishes 125 - 500 micro inch**
- **Same day refurbishment service ( Re-useable Gasket )**
- **Low seating stress**
- **Improved thermo-cycling performance compared to metal clad gaskets**
- **Improved sealability compared to metal clad gaskets and metallic gaskets in general**
- **No risk of dished ends or buckling which can occur with highly loaded spiral wound gaskets**



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#### Standard Winding Materials

316L Stainless Steel - Supplied as Standard  
Others available on request, including 304L stainless steel, Inconel, Incoloy, Monel, Hastelloy, Nickel and Titanium.

#### Coating Materials

PTFE  
Graphite

#### Temperature Limits

288°C  
550°C







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#### Standard Profiles

Kammlock® Profile Gasket is fabricated in six different styles to fit the most stringent application.

#### Style KP1



Lateral profiled joint

Most often used with for heat exchangers (with or without pass bars)

Graphite or PTFE surface over grooved gasket

#### Style KP2



Lateral profiled joint with guide ring.

Most often used for standard flanges.

Graphite or PTFE surface over grooved gasket with integral solid outer ring.

For nominal pipe size and pressure.

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#### Style KP3



Lateral profiled joint with floating guide ring.

Graphite or PTFE surface over grooved gasket with loose fitting outer ring,

"spin fit." Preferred for nominal pipe size and pressure.



#### Style CP1

Convex profiled joint with guide ring



#### Style CP2

Convex profiled joint



#### Style CP3

Convex profiled joint with floating guide ring

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The design features of the grooves in combination with the special properties of the facing materials results in optimal sealing performance. The simultaneous action of high compressibility facing material on the outside of the grooved metal and in combination with limited penetration of the tips of the solid metal core enhance the interaction of the two materials. This allows the components to perform individually to their optimum capabilities. Thermodynamics manufactures Kammlock® Profile gasket in a wide range of metals and alloys to exacting specifications for most applications.

