



## Spiral Wound Gaskets

*UNI KLINGER LIMITED is offering a full range of Spiral Wound Gaskets. The primary objective is to make available in India, Spiral Wound Gaskets manufactured to the most exacting international standards such as API 601, ASME B16.20, ASME B16.47 A & B series, DIN, British Standards, JIS standards and others as specified.*

*Superior quality of UKL Spiral Wound Gaskets meeting international standards, is achieved by means of imported computer controlled winding machines, which ensure total repeatability in such critical areas as:*

- *Winding profile*
- *Tension of winding*
- *Winding pressure*
- *Number of primary, secondary and tertiary windings*
- *Number of weld points*
- *Weld penetration*

*All of these factors are vital for control of manufacturing spiral wound gaskets for critical service applications.*



### **The design principle of UKL Spiral Wound Gaskets :**

The basic sealing component of every Spiral Wound Gasket is the wound element. The unique profiled metal strip is spirally wound to integrate with the specified sealing element material. To improve the mechanical strength and other sealing characteristics and to comply with international standard, some layers at the beginning and at the end are wound without soft material and spot-welded over the total circumference. Consistency of winding tension combined with the profile of the winding, provide for a superior sealing performance.

This advantage is achieved by special process of feeding preformed metal strip and soft filler material.

This gives the gasket, the required recovery properties at designed bolt load, even at fluctuating operating conditions. UKL Spiral Wound Gaskets are now available as sealing elements and also with inner and / or outer rings.

A major requirement of any gasket is its ability to recover and maintain a constant sealing force under variable loads.

The effect of pressure and temperature fluctuations, together with radial forces, stress relaxation and creep, demand a gasket with adequate flexibility and recovery to maintain a seal even under trying conditions. UKL Spiral Wound Gaskets can meet this requirement adequately.



**KLINGER Vertical Spiral Winding PLC Machine**

### **Seal Maintained Under The Most Exacting Conditions**

- From cryogenic to +900°C
- From high vacuum to 400 bar
- Thermal cycling, Vibration, Mechanical shock, Dry gases.

### **Ease of Installation**

- Quick and simple to fit
- Do not need grooved or lapped flange face finishes
- Can often be used on flanges where other gaskets have failed
- Will not cause corrosion
- Will not adhere to flange faces when opened, thus minimizing expensive cleaning time.

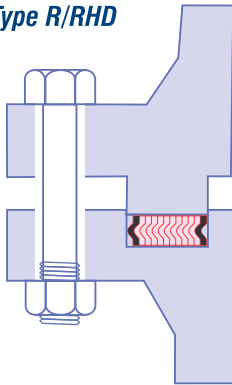
The components and construction of UKL Spiral Wound Gaskets, undergo a constant evaluation and improvement programme to keep pace with the ever increasing demands of industry, in both precision and performance.



**UKL Gasket Test Laboratory showing machines for testing compressibility, recovery and sealability.**

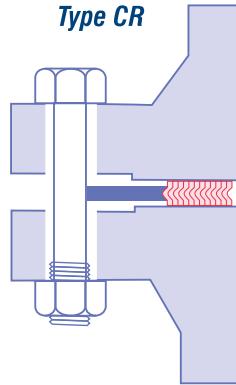
UKL Spiral Wound Gasket are subjected to compressibility and recovery test as per IS 7719 and sealability test are conducted at ambient / elevated pressure and temperature.

**Type R/RHD**



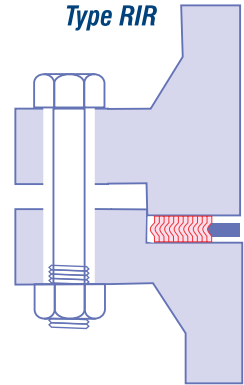
- Wide choice of materials for metal strip and filler. (Low/ high density).
- Suitable for high pressures and temperatures application.
- Recommended for flanges with tongue and groove.

**Type CR**



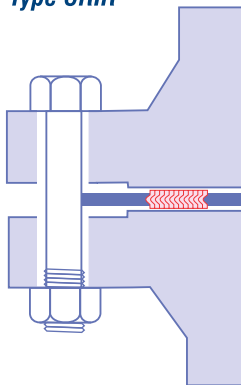
- Solid metal outer ring used as a centering device and compression stop.
- Used on raised face and flat face flanges.

**Type RIR**



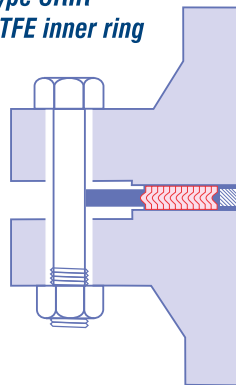
- Consists of solid metal inner ring.
- Suitable for high pressures and temperatures.
- Recommended for male and female flanges.

**Type CRIR**



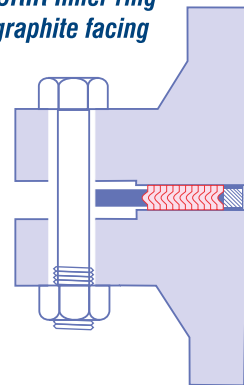
- Consists of solid metal outer and inner rings.
- Suitable for high pressures and temperatures applications.
- Used on raised face or flat face flanges.
- Prevents turbulence and erosion damage to flange.
- Prevents damage to the gasket bore and inner windings.
- Acts as a corrosion barrier.

**Type CRIR  
PTFE inner ring**



- Consists of solid PTFE inner ring solid metal outer ring.
- To be used on raised face or flat face flanges.
- Acts as a secondary seal & corrosion barrier.
- Recommended for chemically inert & non-toxic applications.

**Type CRIR Inner ring  
with graphite facing**

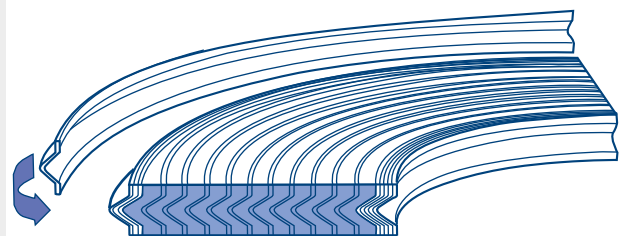


- Consists of solid metal inner ring with UKL graphite facing.
- For use at high pressures and temperatures.
- Suitable for raised face or flat face flanges.
- Suitable for corrosive media.
- Graphite facing inner ring acts as an additional gasket.

## Recommended Flange Surface Finish

UKL Spiral Wound Gaskets are capable of giving an excellent seal over a wide range of flange surface finishes, but as a general guide we offer the following:

	Micro Inch	Micro Metre
General	125-200	3.2-5.1
Critical	125	3.2
Vacuum	80	2.0





## Technical Specification

### Gasket Size Range:

Standard	15 NB	to	1500 NB
Non- standard	15 mm ID	to	3000 mm ID

### Standard Filler Materials      Temperature Limits

Asbestos	550°C
PTFE	260°C
Flexible Graphite	500°C
Mica	1000°C

### Outer Ring and Inner Ring Standard Materials

Cabon Steel (Zinc Plated with Chrome Passivation / Painted / Powder coated)
Stainless Steel 304 / 410 / 316L
Monel, Nickel, Incoloy
Titanium, Inconel 600 / 625

### Metal Winding Standard Material

Stainless Steel 304 / 316L / 321 / 410 / 347
Monel 400
Inconel 600 / 625
Nickel 200
Titanium, Hastelloy, Incoloy 800 / 825

### Standard Gasket thickness

Nominal thickness	Compressed thickness	Outer / Inner ring thickness
3.2 mm	2.3 - 2.5 mm	2.0 - 2.2 mm
4.5 mm	3.2 - 3.4 mm	3.0 - 3.3 mm
6.4 mm	4.6 - 4.9 mm	4.0 - 4.2 mm
7.2 mm	5.0 - 5.5 mm	5.0 - 5.5 mm

Also available : **KLINGER** / **UKL** Fluid Sealing Division:

**Compressed Absbestos Gasket Sheeting**  
**UNISIL Compressed Non-Absbestos Gasket Sheeting**  
**Full Range of Cut Gaskets, Metal Jacketed Heat Exchanger Gaskets,**  
**Non-Absbestos Gland Packing, Kamprofile, & all types of PTFE Gaskets**

**Fluid Control Division:**

**PISTON VALVES - Seatless & Glandless, Forged Piston Valves**  
**STEAM TRAPS - Thermodynamic, IBT, Ball Float, Thermostatic**  
**MANUAL & ACTUATED BALL & BUTTERFLY VALVES**  
**STRAINERS 'Y' Type / LEVEL GAUGES - Reflex, Transparent, Bicolor**  
**BELLOW SEALED VALVES**

In view of technical progress designs and dimensions are subject to change without notice.



## UNI KLINGER LIMITED (Fluid Sealing Division)

A joint venture of the Neterwala group of companies and KLINGER AG, Switzerland.

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