

# Spiralwound

## Standard



### Description:

This gasket are manufactured by winding of metallic strip, preformed V, alternated with inorganic fillers, can be made on specific standards (ASME, API, UNI EN) or customer's design.

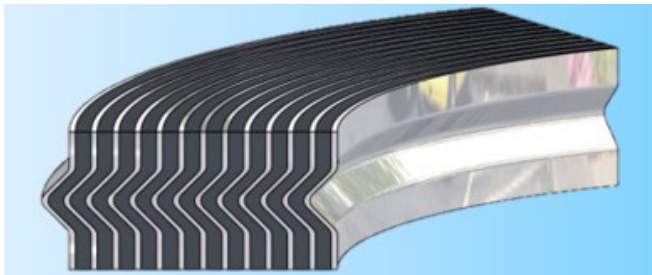
There are many materials used for gasket manufacturing, starting from common stainless steel (AISI 316/304) up to the alloys of nickel or titanium, while the fillers used are standard based on expanded pure graphite or PTFE.



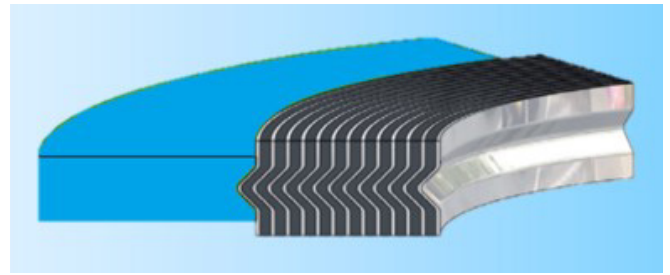
Another characteristic of these seals is the presence of containment and/or centering ring with standard thickness of 3.2 mm which are defined as follows:

- » Inner Ring, Usually made of the same metal material of the spiral; has the function of preventing the radial deformation of the seal and to protect the internal spirals from any turbulence and erosion by the fluid contained.
- » Outer/centering Ring standard gasket are manufactured in carbon steel material with anti corrosive treatment (tropicalization). Its function is to center the gasket during the assembly phase and protect the gasket from excessive compression.

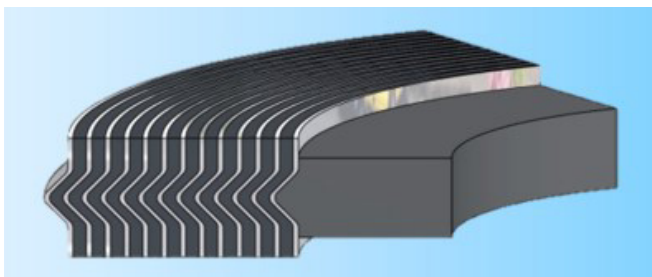
Depending on the requirements of use are divided into four different types such as:



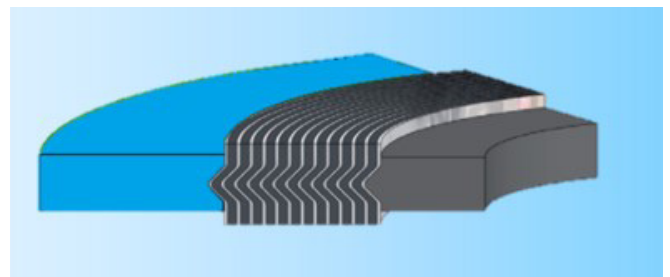
**SW** - Simple spiralwound, usually used on couplings with chamber, where it is not necessary limit the compression.



**SWO** - spiralwound with external centering ring, which is used for a better positioning of the gasket in flanged couplings, where is not necessary limit the compression of the gasket.



**SWI** - spiralwound inner ring containing inside of the spiral in order to increase the resistance especially in couplings with a passage of a turbulent fluid.



**SWIO** - spiralwound with outer and inner rings, ideal for most severe applications, where one wants to restrict the compression of the seal and avoid that the fluid could damage the inside of the gasket.

Since all properties, specifications and application parameters shown throughout this catalogue are approximate and may be mutually influenced, your specific application should not be undertaken without independent study and evaluation for suitability. All technical data and advice given is based on experiences KLINGER Italy has made so far. Failure to select proper sealing products can result in damage and/or personal injury. Properties, specifications and application parameters are subject to change without notice. KLINGER Italy does not undertake any liability of any kind whatsoever. Is not advised the use in the maximum temperature and at the same time with the maximum pressure.

### APPLICATION RANGE<sup>(1)</sup>:

Max. Working Temperature:		
With Graphite Filler	°C	550
With PTFE Filler	°C	260
Minimum Working Temperature <sup>(2)</sup>	°C	-200
Max. Pressure <sup>(3)</sup>	Bar	182

(1) The maximum exercise's condition depend on many factor as the gasket' s dimension, the clamping value between the flanges, etc

(2) With centering ring not in carbon steel.

(3) The operating pressure is correlated to the flange rating. Max pressure at 500°C (ASME S.2500).

### TEST & APPROVALS:

- TA Luft VDI 2440
- Fire Safe API 6FB

### CONSTANT TIGHTENING:

Code	Material	$\sigma_{VU}$ MPa	$\sigma_{VO}$ MPa	150 °C	$\sigma_{BO}$ MPa 200 °C	300 °C	Y MPa	m	R <sub>z</sub> µm
SW	AISI 316L /GRAPHITE	69	150	140	130	120	69	3,0	50
SWO		69	150	140	130	120	69	3,0	50
SWI		69	300	250	240	220	69	3,0	50
SWIO		69	300	250	240	220	69	3,0	50
SW	AISI 316L /PTFE	69	150	140	130	-	69	3,0	50
SWO		69	150	140	130	-	69	3,0	50
SWI		69	300	250	240	-	69	3,0	50
SWIO		69	300	250	240	-	69	3,0	50

### GROOVE DEPTH - THICKNESS OF COMPRESSION:

Gasket Thickness	Groove Depth	Tolerance on Groove Depth	Recommended Thickness of Compression
3,2	2,50	0 / -0,05	2,4 / 2,6
3,5	2,70	0 / -0,05	2,6 / 2,8
4,5	3,35	0 / -0,05	3,2 / 3,4
6,4	4,80	0 / -0,05	4,5 / 5,2
7,2	5,40	0 / -0,05	5,2 / 5,6

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