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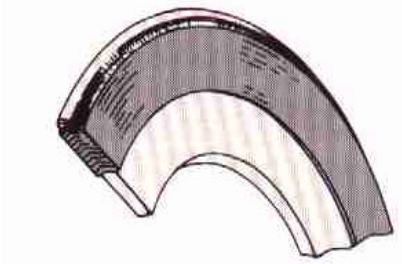
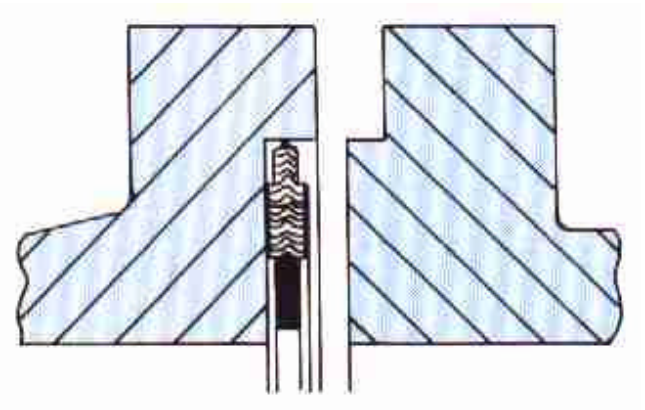
DATA SHEET FOR HX SPIRAL WOUND GASKETS

The HX style gasket uses a metal inner ring to provide gasket containment and compression limitation coupled with a spiral wound sealing element with outer location nose. The style of product has been specifically designed for usage on heat exchangers where limited sealing areas are available. The gasket is used where containment of the outer ring is achieved through equipment configeration.



Gasket Cross Section



Flange Configeration

A spiral wound gasket is manufactured by spirally winding a preformed metallic strip and a filler on the outer periphery of a metallic mandrel. Each spiral wound gasket is essentially a "customised" design, with the mechanical construction of the gasket determined by both the operating conditions and the available bolt stress.

In essence, a spiral wound gasket for a low pressure class (i.e. 150lb) is manufactured to a low density construction, with a low number a metallic windings per unit width. For a high density application, where a more resilient design is required, a high number of metallic windings per unit width is incorporated into gasket design.

For this reason, it is very difficult to offer a data sheet to cover all variations of the spiral wound gasket design. For this exercise, standard product specifications are detailed, 316S11 stainless steel winding strip and graphite filler material. In addition, a typical load/compression graph has been attached, detailing the general compression and recovery values of a spiral wound gasket. However, please note the load is dependent on the gasket construction.

APPLICATION

GASKET STYLE : **HX**
FILLER MATERIAL : **GRAPHITE (Flexicarb)**
WINDING STEEL : **316S11**
INNER RING STEEL : **316S31**

NOTE: The filler material (graphite), and the winding material (316S11) used in this construction have been evaluated and are suitable for the application stated above. An internal guide ring (316S31) has been used in this particular construction to avoid over compressing the sealing element. The outer wound nose locates the sealing element on the sealing face.

Graphite filler material (flexicarb)

Density:	1.0 to 1.1 g/cc	ASTM C559
Ash content:	2.0% (maximum)	ASTM C561
Total carbon:	98% (minimum)	ASTM C571
Leachable chlorides:	20ppm (maximum)	ASTM D512
Thickness:	0.5mm (+/- 10%)	
Tensile:	4.3 Mpa	

316 Winding steel

Grade: 316S11 from BS1449 Pt.2

Chemical analysis :

C	=	0.030 % max
Si	=	1.00 % max
Mn	=	2.00 % max
P	=	0.045 % max
S	=	0.030 % max
Cr	=	16.5 to 18.5 %
Mo	=	2.0 to 2.5 %
Ni	=	11.0 to 14.0 %

Mechanical properties:

Proof stress Rp 0.2 min.	=	190 N/mm²
Proof stress Rp 1.0 min.	=	225 N/mm²
Tensile strength Rm min.	=	490 N/mm²
Elongation A. min.	=	40 %
Hardness HV max.	=	195

Thickness: 0.178mm (+/- 10%)

316 Inner ring material

Grade : 316S31 from BS1449 Pt.2

Chemical analysis :

C	=	0.070 % max
Si	=	1.00 % max
Mn	=	2.00 % max
P	=	0.045 % max
S	=	0.030 % max
Cr	=	16.5 to 18.5 %
Mo	=	2.0 to 2.5 %
Ni	=	10.5 to 13.5 %

Mechanical properties:

Proof stress Rp 0.2 min.	=	205 N/mm²
Proof stress Rp 1.0 min.	=	240 N/mm²
Tensile strength Rm min.	=	510 N/mm²
Elongation A. min.	=	40 %
Hardness HV max.	=	205

Thickness: 2.97 to 3.33mm

This Data Sheet refers to the material as supplied. The information contained herein is given in good faith, but no liability will be accepted by the Company in relation to same.
We reserve the right to change the details given on this Data Sheet as additional information is acquired.
Customers requiring the latest version of this Data Sheet should contact our Applications Engineering Department.

The information given and, in particular, any parameters, should be used for guidance purposes only. The Company does not give any warranty that the product will be suitable for the use intended by the customer.