EagleBurgmann®

Metallic Gaskets

Metallic Gaskets

Kammprofile Gasket 9598

The Kammprofile serrated gasket is designed for very sophisticated applications in load bearing connections with high demands on operating safety and tightness. The gasket provides chemical resistance and an outstanding performance in cases of severe temperature cycling. It is suitable for high and cryogenic applications.

Application

The gasket is easy to handle and particularly appropriate for flanges and flange-like connections in chemical and petrochemical industry, in power plants and nuclear power plants, etc.

Design

Concentrically machined serrated profile from a 4mm thick base plate and a layer of pure graphite (purity 99,8%) on both sides, each with 0,5mm thickness (thicker layers on request).

Installation Note

Recommended surface roughness RZ > 25 µm. For greater roughness up to max. 50 µm the thickness of pure graphite layer should be increased. After first warm-up, retightening of bolts is recommended (only without system pressure). This will insure optimum surface pressure.

Technical Data

Serrated ring: Standard 14541, 14571; Seal facing: Statotherm® pure graphite Art. No. 9591-P)

p	400 bar, > 400 bar on request
t	–200 °C ... +550 °C
pH	0 ... 14

Variants

9598-P (without centring ring – Form NR)
9598PZ (with centring ring – Form IR or LR)

Note

Recycling: The surface layer material can only be used once. The serrated gasket can be reused several times if not damaged.

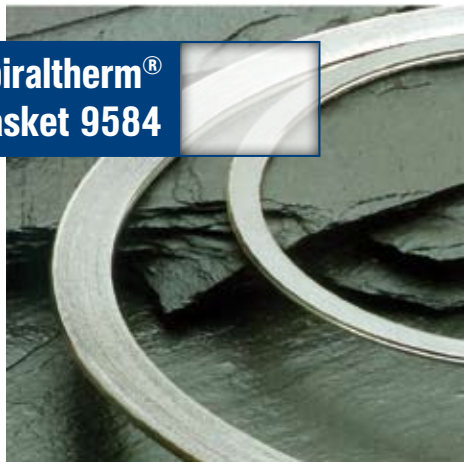
Supply Form

According to DIN EN 1514-6 and to factory standards. The gasket as supplied measures 4+1=5 mm thick. With optimum compression in the installed condition the graphite layer above each crest measures approximately 0,15mm, ensuring optimum sealing action while preventing damage to the flange faces. The facing is normally applied using a low chloride adhesive.

Certification

High-grade seal giving leakage rates to "TA-Luft" standards.

Spiraltherm® Gasket 9584



Spiraltherm® spiral wound gaskets are universal flat gaskets made from stainless steel strip with a v-shaped profile, wound spirally with 98% pure graphite filler.

Application

In high pressure pipes for all flanges and flange-type joints in chemical and petro-chemical installations with all types of gas pipes, including high temperature pipes, hot-air ducts, pipes for aggressive fluids. On-board ship and in power stations for low and high pressure steam systems, on boiler openings, hand-holes and manholes, steam and feed-water pipe flanges, valves bonnets, etc. In Nuclear power installations for valves and fittings, pressure boilers, pumps (KWU tested) and cooling circuits (Helium and Carbon dioxide)

Design

Gasketing tape:	98% pure Graphite
Metal winding:	Standard grades 1.4541 (AISI 321); 1.4571(AISI 316 Ti) Other materials on request.
Inner ring:	corresponds to material of metal winding
Outer ring:	galvanised steel or epoxy coated steel
9584-NF	for Tongue and Groove Flanges
9584-VR	for Recessed Flanges
9584-VRI	for Recessed Flanges with Inner ring
9584-GIA	for Raised Face Flanges with Inner and Outer ring
9584-GA	for Raised Face Flanges with Outer ring

Technical Data

p	up to 400 bar (Class 2500) for flanges according to DIN and ASME – higher pressures available on request. Helium Leak Tightness – 1.7 x 10^{-9} mbar*l/s
t	200 °C < +550 °C (higher temperatures are possible in an inert atmosphere depending upon steel grade – please enquire)
pH	0 ... 14

Variants

9594/... As 9584 except with 99.8% pure graphite filler.
9595/... As 9584 except with virgin PTFE filler.
9596/... As 9584 except with mica filler.

Supply Form

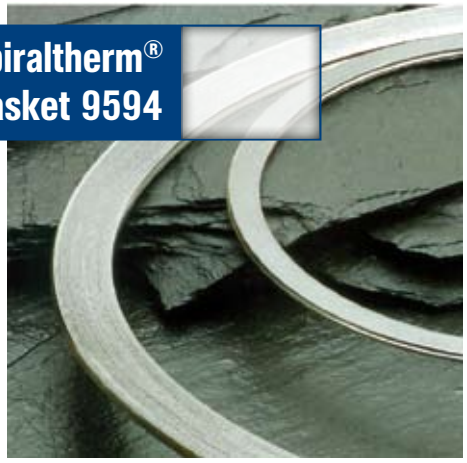
All sizes available for Standard Flange connections to DIN; ANSI; BS; JIS
Special dimensions available on request

Certification

- BAM certification for NR, VRI, GIA in Oxygen up to 350oC and 250 bar
- TA-Luft certification for #9584-GIA (3.5×10^{-6} mbar*l/(sm)
- Fire Safe to API 6FA

Metallic Gaskets

Spiraltherm® Gasket 9594



Spiraltherm® spiral wound gaskets with exceptionally high operating reliability for high pressure applications as well load bearing and non-load bearing installations. Spiraltherm® has good permanent elasticity in hot-cold cycles, created by pure Graphite or PTFE interlayers. The high volume recovery of approximately 10% of installed thickness is achieved through spirally wrapped stainless steel.

Application

In high-pressure pipes for all flanges and flange-like connections. In chemical and petrochemical industry for all, even high-temperature, gas pipes, hot air pipes, pipe flanges for aggressive media, valves, pumps, cracking plants, heat exchangers etc. In marine applications and in power plants for low- and high-pressure steam systems, in vessel-, hand- and manholes, steam- and boiler feed water pipe flanges, valve covers etc. Also suitable for rough operating conditions and for uneven and old flanges.

Design

Flange gasket, V-shaped profiled stainless steel tape with pure graphite (99,8%) wrapped alternating in spirals. The metal ends are spot-welded.

Installation Note

If the flange has no projection or retaining recess for the the gasket, it will need an outer back-up and centering ring. A very exact design calculation and measurements of seal as well as of groove is necessary because for Spiraltherm® in non-load bearing connections, no further compression of the gasket is possible when the flanges are in contact.

Technical Data

Materials: Metal spiral: standard grades 1.4541/ 1.4571 other materials on request
Inner ring: corresponds to material of metal spiral
Outer ring: generally galvanized steel

p	up to 400 bar
t	–200 °C ... +550 °C
pH	0 ... 14

Variants

Nuclear quality available on request
Deformation characteristic (compression curve) available on request
9595 (spiral wound gasket with PTFE filler)

Supply Form

95...NF for flanges with tongue and groove
95...VR for flanges with projection and recess
95...VRI for flanges with projection and recess with inner ring
95...GIA for flanges with flat faced with inner and outer ring
95...GA for flanges with flat face with outer ring

Certification

TA-Luft for # 9584GIA
Germanischer Lloyd 44510 HH

Spiraltherm® Gasket 9595

Spiraltherm® gaskets are universal flat gaskets made from stainless steel strip with a v-shaped profile, wound spirally with pure PTFE filler.

Application

In high pressure pipes for all flanges and flange-type joints in chemical and petro-chemical installations. All pipe systems for aggressive fluids. In Nuclear power installations for valves and fittings, pressure boilers, pumps (KWU tested) and cooling circuits (Helium and Carbon dioxide)

Design

Gasketing tape: Virgin PTFE
Metal winding: Standard grades 1.4541 (AISI 321); 1.4571 (AISI 316 Ti)
Other materials on request.
Inner ring : corresponds to material of metal winding
Outer ring : galvanised steel or epoxy coated steel
9595-NF for Tongue and Groove Flanges
9595-VR for Recessed Flanges
9595-VRI for Recessed Flanges with Inner ring
9595-GIA for Raised Face Flanges with Inner and Outer ring
9595-GA for Raised Face Flanges with Outer ring

Technical Data

p	up to 400 bar (Class 2500) for flanges according to DIN and ASME – higher pressures available on request. Helium Leak Tightness – 1.7 x 10^{-9} mbar*l/s
t	200 °C < +280 °C
pH	0 ... 14

Variants

9584/.... As 9595 except with 98.0% pure graphite filler.
9594/.... As 9584 except with 99.8% pure graphite filler.
9596/.... As 9584 except with mica filler.

Supply Form

All sizes available for Standard Flange connections to DIN; ANSI; BS; JIS
Special dimensions available on request

Certification

- BAM certification for NR, VRI, GIA in Oxygen up to 350oC and 250 bar
- TA-Luft certification for #9584-GIA (3.5×10^{-6} mbar*l/(sm)
- Fire Safe to API 6FA

Metallic Gaskets

Buralloy®
9956

Burgmann jacketed gaskets are produced in a wide variety of different materials (in various combinations), in many cross-sections, and in many styles. They are suitable for flanges in heat exchangers, pipe flanges, boilers, and process equipment.

Design

Metal Jacketed Gaskets, as the name suggests, consist of

- Metallic outer shell with either a metallic or non-metallic asbestos-free filler.
- The filler material gives the gasket resilience.
- The metal jacket protects the filler and resists pressures, temperatures and corrosion.

Materials of Construction:
Inner gasket materials:

- Non-asbestos fibre sheet
- NBR aramid fibre sheet
- Graphite

Metal Jacket materials:

- Soft Aluminium
- Soft Copper
- Brass
- Carbon steel
- 304 or 304L St. steel
- 316 or 316L St. steel
- 321 St. steel
- Hastelloy B® or C-276®
- Inconel 600®
- Monel 400®

Other metals and alloys available on request.

Technical Data

Pressure and temperature parameters in accordance to customer specifications.

Variants

Gasket Styles:

BHX200	Flat metal (solid)
BHX210	Flat metal, graphite covered
BHX 220	French style, single jacket
BHX230	French style, double jacket
BHX240	Single jacketed, Open style
BHX250	Single jacketed, Totally enclosed
BHX260	Double jacketed, Totally enclosed
BHX270	Double jacketed/Double shell, Totally enclosed
BHX310	Corrugated, solid, single
BHX320	Corrugated solid, single, graphite covered
BHX330	Corrugated, Double jacketed
BHX340	Corrugated, Double jacketed, Corrugated metal filler

Supply Form

Information required for the order – If no Customer drawing is available

- Outside diameter
- Inside diameter
- Thickness
- Configuration – according to standard chart – e.g. H10.
- Style number e.g. BHX 270.
- Materials of construction – Metals and Filler
- Rib size
- Distance from centreline of Gasket to centreline of Ribs

Media resistance

Corrosion resistance is dependent upon the choice of materials. Please ask for advice if you are uncertain of the correct selection.

Metallic Gaskets

Buralloy® 9961

A Ring Joint gasket is a metal gasket used in conditions involving very high temperatures and/or pressures. Ring joints are always used in combination with a special flange that ensures a good seal when the correct material and profile combination is selected.

Application
Pipeline flanges, Well-Head connections, high pressure equipment.

Design
The RTJ is manufactured according to ASME B16.20 standards and to API specification 6A with careful control of the hardness to ensure an effective seal without damaging the flanges.

Technical Data
Pressure and temperature parameters in accordance with ASME B16.20 standards.

Variants
9961/R
Octagonal profile; Interchangeable on flat bottomed groove flange which have a 23° angle groove wall. (Note: Oval profile available on request).

9961/RX
Designed for pressures up to approx. 700 bar (10,000 psi). This is self-sealing that uses a pressure-energised effect. The RX type is interchangeable with the Type R.

9961/BX
Designed for extremely high pressures up to approx. 1,500 bar (22,000 psi). These rings may only be used with API Type BX flanges and grooves. The BX has a horizontal through-hole for pressure equalisation.

9961/IX
Designed for NORSOK compact flanges. Available in carbon steel and 3 different grades of st. steel; Rings are colour coded using a PTFE surface coating to NORSOK L-005 (NCF5).

Supply Form
RTJ's are available to suit all ASME and DIN flanges from stock – ½" to 36" and 15mm to 900mm. Larger size and special requirements are available to order.

Certification
RTJ's are available with the API 6A monogram if required.

Media Resistance
Corrosion resistance is dependent upon the choice of ring material. Please ask for our advice if you are uncertain of the correct selection.

Materials	UNS No.	Hardness-HRB
Soft Iron		56
Low Carbon steel		68
St. steel – 304	S30400	83
St.steel – 316	S31600	83
St. steel – 254	S31254	89
St. steel – 904	N08904	83
Incoloy 825	N08825	(*)
Inconel 625	N06625	(*)
Inconel 600	N06600	(*)
Type 410	S41000	86
Type 347	S34700	83
Duplex	S31803	(*)
Titan	R ....(*)	(*)
Type F5	K41545	72

(*) Denotes customer specification

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EagleBurgmann is one of the leading international companies for industrial sealing technology. Our products are used everywhere when safety and reliability are important: In the oil and gas industries, petroleum refining, chemicals, energy, food, paper, water, marine applications, aerospace and mining. Every day, more than 5000 employees contribute their ideas, solutions and commitment to ensuring that customers all over the world can rely on our seals. Our modular seal service, TotalSealCare™, underlines our commitment to customer orientation and our provision of tailor-made services for every application.

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