General information

Product information

20080301

Asbestos-free gaskets (Novus® en Uniflon®) as well as graphite gaskets(Econgraph®, ®Sigraflex Hochdruck) can be provided with a metal inner eyelet. Gaskets with a metal inner eyelet are used in places where more stringent demands apply regarding leak tightness. A major advantage of this type of gasket is the safety against Blow-out, i.e. that the gasket is not blown out between the flanges when the gasket load falls away. The pressure and temperature range is higher than for a gasket of the same quality without an inner eyelet.

Characteristics
- Very gas-tight
- Blow-out proof
- High pressure range
- High temperature range
- Prevents contamination of media

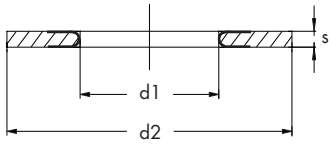
Inner eyelet materials
- AISI 316Ti
- Monel 400
- Hastelloy C276
- Other materials available on request

Delivery
Ring gaskets with metal inner eyelet can be supplied in all qualities of Novus®, Uniflon® and graphite, in all standard sizes as per EN(DIN) and ASME. Different (non-standard) sizes are also available at short notice.
The inner eyelet is produced standard from AISI 316Ti, 0.15 mm. thick. Other inner eyelet materials are available on request.

Ordering information
Specify the following data when ordering:
Desired gasket quality and metal quality of the inner eyelet. You should also specify the standard, nominal size, rating and thickness.
Non-standardized gasket rings can be ordered by specifying the outer diameter (d2) the inner diameter (d1) and the thickness (s).
Refer to our product specialists for the correct material combinations.

econosto®

Series 1003/1013
- 1003 soft gasket with inner eyelet
- 1013 graphite gasket with inner eyelet
- Very gas-tight
- Blow-out proof
- Higher pressure and temperature range
- Prevents contamination of media



20080301

econosto®

General

Mica Hi-Temp gaskets are specifically developed for applications at high temperatures up to 1000 °C.
Mica is a 100% asbestos-free sealing material and is resistant to most chemicals such as solvents, acids, bases and mineral oils.
Thanks to its excellent sealing properties at high temperatures, Mica Hi-Temp gasket material is exceptionally suitable for sealing in exhaust systems (automotive), gas turbines, gas and oil burners, heat exchangers and other high-temperature loaded flange connections.
Mica Hi-Temp sealing material can also be used as layer material for camprofile gaskets and as filler material for spiral wound gaskets.

Mica Hi-Temp is composed of a high percentage of Mica (phlogopite), bonded with a silicon rubber. Mica, an aluminium silicate of mineral origin, has a laminary, non-fibrous structure.

Property	Value
Mica type	Phlogopite
Binder	Silicon rubber
Mica component	~90%
Max. temperature	+1000 °C
Max. operating pressure	5 bar

Gaskets

Ring gaskets in standard dimensions as per EN(DIN) and ASME are primarily delivered from stock.
Non-standard sizes and shapes are also available (on request) at short notice.

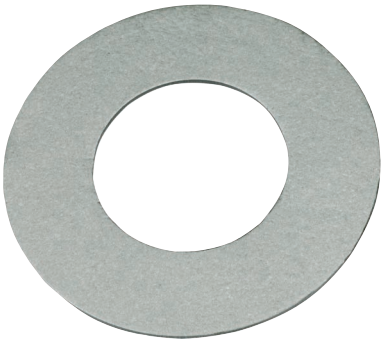
Remarks

Mica Hi-Temp is also available with a tanged SS 316 insert of 0.1mm thickness.

Ordering information

Ordering code	Material	Sheet/Flange standard	Thickness [mm]
1030051	Mica Hi-Temp	Sheet 1200x1000	1.5 - 3
1032151	Mica Hi-Temp	Rings/ASME RF	1.5 - 3
1032551	Mica Hi-Temp	Rings/EN(DIN) RF	1.5 - 3

When ordering, please specify the following data: Figure number, nominal size, pressure rating and thickness
Standard, nominal size and pressure rating as per dimension tables
Non-standardised gasket rings can be ordered by specifying the outer diameter (d2) the inner diameter (d1) and the thickness (s).



Mica Hi-Temp

- fig. 1030051
- fig. 1032151
- fig. 1032551

- Silicon-bonded Mica
- Max. temp.: 1000 °C
- Max. operating pressure 5 bar
- High chemical-resistance
- Colour: green

20080301

PTFE envelope gaskets are composite gaskets, comprising an insert (core) surrounded by a sleeve of PTFE. The result is a gasket that possesses the chemical resistance of PTFE, but with the strength and the compression and recovery properties of the insert material. For the manufacture of PTFE envelopes, a very high quality and tight PTFE is used to attain the maximum mechanical properties. PTFE envelope gaskets are a perfect solution for those applications where an almost unlimited chemical resistance is required and the mechanical properties should approach those of a high pressure gasket. In the food and process industries in particular, where contamination of the medium is not permitted, PTFE envelope gaskets can provide excellent service. PTFE envelope gaskets are mostly used with PTFE lined flanges and enamelled flanges.

Temperature range
Can be used up to 250 °C depending on the insert

Variants
PTFE envelope gaskets are available in many versions, namely:

Y or V-shape
A solution for lower pressures at an economical price. Choice of insert of Novus® gasket material or e.g. rubber, maximum 2 mm thick.

U-shape
For use at average and higher pressures. Choice of insert can be a Novus® quality or rubber; the thickness of the envelope can be adjusted to the desired thickness of the gasket.

C-shape
For a more flexible insert, otherwise identical to the U-shape.

C shape envelopes with diffusion barrier
Specially developed gasket with a 3 mm thick diffusion-stop. The insert material can be chosen according to the application. The thickness of the total gasket can be modified.

C-shape envelopes for enamelled flanges
Special PTFE envelope gasket for use with enamelled flanges and installations. As a rule, the insert consists of an SS corrugated ring with on both sides a Novus® gasket or Econograph® FI. The total thickness can be adjusted to the actual situation.

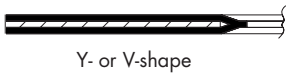
C-shape envelopes for installations
In columns and installations with an enamelled inner wall the unevenness is sometimes very high. In those situations, a very thick PTFE envelope gasket with an additional glass fibre insert can offer a solution. Packets to a thickness of 12 to 13 mm are certainly possible.

Ordering information
Our PTFE envelopes can be ordered in all standard sizes for flanges according to EN(DIN) and ASME standards. Furthermore, PTFE envelope gaskets are very often produced based on the specific requirements of the application.

Remarks
The PTFE envelopes without SS corrugated rings can be replaced by the Intertex® SQ-S "V" gasket rings. For information, see section HB-02-005.

econosto®

Series 1027
- Chemically resistant
- Max. temp.: +250 °C
- Min. temp.: -200 °C

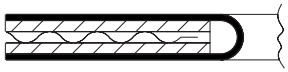


Y- or V-shape

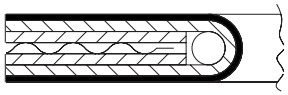
U-shape

C-shape

C-shape
envelopes with diffusion stop



C-shape
for enameled flanges



Cshape
envelopes for installations

page 989

Inertex® UHF Joint Sealant

- 100% pure PTFE
- Chemically resistant
- For enamel and plastic flanges
- Max. temp.: +270 °C
- Min. temp.: -240 °C
- Colour: white

page 990

Inertex® Isotropic tape

- Expanded PTFE
- Excellent chemical resistance
- Compliant with FDA guidelines
- Very gas-tight
- Easy to handle
- Max. temp.: +270 °C
- Colour: white

econosto®

Inertex® UHF Joint Sealant tape is an inorganic sealing material for static uses, produced from 100% pure PTFE. A unique process converts the PTFE to a microporous fibre structure. This produces a sealing product with an unsurpassed combination of mechanical and chemical properties. Inertex® UHF Joint Sealant is delivered with a self-adhesive strip, so that the material can be very easily applied. Inertex® UHF Joint Sealant is especially suitable for sealing flange joints, piping systems, hydraulic and pneumatic systems, etc. In addition, Inertex® UHF Joint Sealant is perfect for seals in glass, enamel and plastic flanges and vessels. It is also excellent for use with covers and doors. Inertex® UHF Joint Sealant can be used with acids, bases, solvents, gases etc.

Temperature range
Maximum short term service temperature 310 °C
Continuous service temperature between -240 °C and 270 °C

Delivery
Inertex® UHF Joint Sealant is delivered in a rectangular shape, and has a self-adhesive strip on one side. The product is shipped standard on 10 metre rolls. Non-standard roll lengths available on request.

Recommended size per flange diameter

Flange diameter [mm]	Joint sealant size
0- 50	3 x 1.5
50- 200	5 x 2
200- 600	7 x 2.5
600-1500	10 x 3
>1500	12 x 4
>1500	14 x 5
>1500	17 x 6
>1500	20 x 7

Property	Value
Pressure	200 Bar 1)
Temperature	-240 °C - 270 °C
pH range	0 – 14
1) depending on the application	

Ordering information

Ordering code	Dimension [mm]
1060091	3 x 1.5
1060091	5 x 2
1060091	7 x 2.5
1060091	10 x 3
1060091	12 x 4
1060091	14 x 5
1060091	17 x 6
1060091	20 x 7
Specify the following data when ordering: Figure number 1060091 and the size.	

inertech, Inc.

Inertex® UHF Joint Sealant
- fig. 1060091

- 100% pure PTFE
- Chemically resistant
- For enamel and plastic flanges
- Max. temp.: +270 °C
- Min. temp.: -240 °C
- Colour: white

20080301

Inertex® Isotropic sealing tape is a latest generation of biaxially expanded Teflon® tape.
A special production process produces a tape that shows minimum creep and flow behaviour and has a very high tensile strength in all directions. This tape possesses almost the same characteristics as the Inertex® SQ-S V sheet gasket. For more information see the section on sheet gaskets and flange gaskets. Inertex® Isotropic sealing tape is very suitable for large flange joints, plastic and glass/ceramic lined flanges, heat exchangers and high pressure applications.

Temperature range
Continuous service temperature between -268° C to 270° C
Maximum short term service temperature 315° C

Chemical resistance
Resistant to all chemicals with the exception of elementary fluorine and molten alkali metals.

Approvals
Inertex® Isotropic tape complies with the FDA 21 CFR 177.1550 regulations of the American Food & Drug Administration.

Delivery
Inertex® Isotropic tape has standard a self-adhesive strip on one side to ease fitting.
Inertex® Isotropic tape is shipped standard on 10 metre rolls. Non-standard roll lengths available on request.

Choosing the size
The width of Isotropic tape for standard flanges must be as near as possible equal to the width of the sealing surface.
Account must be taken of the available bolt force when selecting the width for non-standard flange joints.
For flanges smaller then 500 mm nominal size, 3 mm thick Isotropic tape is used. For larger diameters, Econosto recommends 6 mm thick Isotropic tape.

Ordering information

Ordering code	Dimension [mm]
1060090	10 x 3
1060090	15 x 3
1060090	20 x 3
1060090	25 x 3
1060090	20 x 6
1060090	30 x 6
1060090	55 x 6
When ordering, please specify the following data: Figure number 1060090 and the dimensions. Non-standard sizes are available on request.	

econosto®

inertech, Inc.

Inertex® Isotropic tape
- fig. 1060090

- Expanded PTFE
- Excellent chemical resistance
- Compliant with FDA guidelines
- Very gas-tight
- Easy to handle
- Max. temp.: +270 °C
- Colour: white

20080301

econosto®

General

PTFE thread sealing tape is a general purpose seal for threaded connections in pipelines. It can be used in combination with plastic, brass, copper or steel pipe joints. PTFE thread sealing tape is made from a high-quality PTFE dispersion polymer, free of oil and grease and therefore extremely suitable for use in oxygen pipe joints, etc. PTFE thread sealing tape does not harden or dry out.
Temperature resistance from -100 to +260 °C.
Given that the PTFE thread sealing tape is produced from 100% PTFE it can also be used for applications in the foodstuff industry.

Most common applications

- Industrial and mechanical constructions
- Plumbing work
- Automotive and aviation industry
- Hydraulic and pneumatic systems

Property	Value
Chemical composition	100% PTFE unsintered
Length	12 mtr per roll
Width	12 mm
Thickness	0.1mm
Temperature range	-100 °C +260 °C
Type approval	GASTEC

Ordering information

Ordering code	Roll length [m]	Width [mm]	Thickness [mm]
4016171	12	12	0.1

PTFE thread sealing tape, Gastec

- fig. 4016171

- 100% PTFE
- Does not age
- High chemical-resistance
- Max. temp.: +260 °C
- GASTEC approval

20080301

econosto®

The ban on the use of gaskets containing asbestos has, in a number of cases, had far-reaching consequences. This is certainly the case for the sealing of manhole covers, hand hole covers and mud hole covers in boilers. The familiar manhole gaskets containing asbestos had very good characteristics for this use. However, excellent alternatives have been developed, and the gaskets described below are among very good solutions imaginable.
These gaskets are produced from an inorganic sealing material for static uses, made from pure PTFE. The special production process converts the PTFE into a microporous fibre structure, which results in a unique material with very good chemical and mechanical properties. A special bonding process is used to produce seamless gaskets. The manhole, hand hole and mud hole gaskets are used in boilers and vessels in: power plants, chemical plants, greenhouses; in short, everywhere boilers are used.

Temperature range
Maximum short term service temperature 285 °C
Continuous service temperature from -240 °C to 250 °C
Maximum operating temperature in steam 230 °C at 25 bar

Property	Value
Pressure	100 Bar 1)
Temperature	-240 °C - 250 °C
pH range	0 – 14
1) depending on the application	

Assembling
Fitting manhole gaskets is very easy. Leave the gasket in the packaging until the moment that it must be fitted. Fix the gasket to the cover and place the cover. If desired the gasket can be cemented to the cover with a few drops of quick-drying cement, so that fitting to the underside of the boiler is also possible. The bolts of the cover must be re-tightened while the boiler is heating up.

Ordering information

Ordering code	Size, internal	Width [mm]	Thickness
1061000	425 x 325	20	8
1061000	420 x 320	20	8
1061000	410 x 310	20	8
1061000	400 x 300	20	8
1061000	370 x 260	20	8
1061000	320 x 220	20	8
1061000	310 x 210	20	8
1061000	300 x 200	20	8
1061000	250 x 180	20	8
1061000	240 x 200	20	8
1061000	240 x 170	20	8
1061000	200 x 150	20	8
1061000	195 x 145	20	8
1061000	180 x 130	15	8
1061000	175 x 125	15	8
1061000	165 x 115	15	8
1061000	150 x 100	15	8
1061000	130 x 100	15	8
1061000	120 x 80	15	8
1061000	110 x 80	15	8
Specify the following data when ordering: Figure number 1061000 and the dimensions.			

PTFE Manhole gasket
- fig. 1061000

- 100% pure PTFE
- Chemically resistant
- Boiler gasket
- Max. temp.: +250 °C
- Min. temp.: -240 °C

20080301

econosto®

ECON BDJ PG

These gaskets are produced from braided expanded graphite with a standard thickness of 6 mm and are the ideal solution to replacing the former braided manhole, asbestos-containing gaskets applied in boilers.
Because ECON BDJ PG (Boiler Door Joint) consists of pure expanded graphite, without binders and fillers, it is especially suitable for use at higher temperatures (up to 450 °C). It is also highly chemical resistant.

Property	Value
Pressure	45 Bar 1)
Temperature	-100 °C - +450 °C
Thickness	6 mm
1) depending on the application	

Fitting

Fitting manhole gaskets is very easy. Leave the gasket in the packaging until the moment that it must be fitted. Fix the gasket to the cover and place the cover. If desired the gasket can be cemented to the cover with a few drops of quick-drying cement, so that fitting to the underside of the boiler is also possible. The bolts of the cover must be re-tightened while the boiler is heating up.

Ordering information

Ordering code	Size, internal	Width [mm]	Thickness
1061345	457 x 330	25	6
1061345	457 x 356	25	6
1061345	450 x 350	25	6
1061345	420 x 325	30	6
1061345	420 x 320	30	6
1061345	406 x 305	30	6
1061345	406 x 305	25	6
1061345	396 x 300	25	6
1061345	396 x 295	20	6
1061345	381 x 305	25	6
1061345	381 x 279	25	6
1061345	356 x 254	25	6
1061345	320 x 222	30	6
1061345	320 x 220	25	6
1061345	305 x 229	25	6
1061345	254 x 203	20	6
1061345	203 x 152	20	6
1061345	203 x 127	25	6
1061345	152 x 102	15	6
1061345	127 x 102	15	6
1061345	127 x 89	15	6
1061345	127 x 76	15	6
1061345	114 x 76	15	6
1061345	102 x 76	15	6
1061345	89 x 64	15	6
1061345	76 x 51	15	6
When ordering, please specify the following data: Internal size and rim width			

ECON BDJ PG

- fig. 1061345

- 100% pure expanded graphite
- Boiler gasket
- Endless construction
- Min. temp. -100 °C
- Max. temp.: +450 °C
- Max. pressure 45 bar

20080301

econosto®

ECON BDJ PS

This is a fine alternative for applications at lower temperatures, e.g. steam up to 12 bar/ 190 °C, water heating systems, dryers and hot air installations.
ECON BDJ PS is a high-quality rubber polymer of 6 mm thickness standard and aside from the standard manhole, hand hole and mud hole dimensions it can also be supplied in all non-standard shapes up to dimensions of 1250 mm.

Property	Value
Pressure	12 Bar 1)
Temperature	-30 °C - +190 °C
Thickness	6 mm
1) depending on the application	

Fitting

Fitting manhole gaskets is very easy. Leave the gasket in the packaging until the moment that it must be fitted. Fix the gasket to the cover and place the cover. If desired the gasket can be cemented to the cover with a few drops of quick-drying cement, so that fitting to the underside of the boiler is also possible. The bolts of the cover must be re-tightened while the boiler is heating up.

Ordering information

Ordering code	Size, internal [mm]	Size internal ["]	Width [mm]	Width ["]	Thickness [mm]	Thickness ["]
1061346	420 x 320		25		6	
1061346		16⅛" x 9⅜"		1¼ "		¼"
1061346		16 " x 12 "		1¼ "		¼"
1061346		16 " x 12 "		1 "		¼"
1061346		16 " x 11 "		1 "		¼"
1061346	400 x 300		25		6	
1061346		15¾" x 12 "		1 "		¼"
1061346		15½" x 12 "		1 "		¼"
1061346		15 " x 12 "		1 "		¼"
1061346		15 " x 11 "		1 "		¼"
1061346		14¾" x 9¾"		1¼ "		¼"
1061346		14½" x 11½"		1 "		¼"
1061346		14 " x 10 "		¾ "		¼"
1061346	320 x 220		25		6	
1061346		12 " x 9 "		1 "		¼"
1061346		11 " x 8 "		1 "		¼"
1061346		10 " x 8 "		1 "		¼"
1061346		10 " x 6 "		¾ "		¼"
1061346		8 " x 6 "		¾ "		¼"
1061346		8 " x 5 "		¾ "		¼"
1061346		6 " x 4 "		⅝ "		¼"
1061346		5 " x 3½"		¾ "		¼"
1061346		5 " x 3½"		½ "		¼"
1061346		5 " x 3 "		½ "		¼"
1061346		4½" x 3 "		½ "		¼"
1061346		4 " x 3 "		½ "		¼"
1061346		3½" x 2½"		½ "		¼"
1061346		3 " x 2 "		5/16"		¼"
When ordering, please specify the following data: Internal size and rim width						

ECON BDJ PS

- fig. 1061346

- High-quality rubber polymer
- Boiler gasket
- Max. temp.: 190 °C
- Max. pressure 12 bar

20080301

Econgraph®-RB is a ribbed tape produced from graphite foil materials. The graphite foil is cut to the desired width and corrugated by means of a special process, producing a graphite tape, that can be easily laid in all desired shapes.
Econgraph®-RB is used as layer material for different types of gaskets. Further as filler material in PTFE envelope gaskets especially for use in enamelled piping systems and equipment. Lastly, the Econgraph®-RB is extremely suitable for customers to use to make their own pressed gland packing rings. Econosto also uses this material to produce pressed gland packing rings, in our own factory. Econgraph®-RB is regularly used in maintenance situations when fast repair of a gasket is necessary.

Temperature range
For temperatures between –200 °C and +450 °C

Delivery
Econgraph®-RB is shipped in rolls of 10 metres with a standard thickness of 0.5 mm and a specific density of 0.7 g/cm3. The tape has a self-adhesive layer with a protective foil on one side, making it easy to handle.
Tapes without a self-adhesive layer or with other specific density are available on request

Property	Standard	Value
Thickness [mm]		0.5
Specific weight graphite (g/cm³)		0.7
Ash content (%)		<2
Chloride content (ppm)		<50
Compressibility (%)	ASTM F36	25-67
Recovery (%)	ASTM F36	>10
Residual stress (Mpa)	DIN 52913	>48
Gas permeability (cc/min)	DIN 3535	<0,6

Ordering information

Ordering code	Width [mm]
1016601	10
1016601	12
1016601	15
1016601	20
1016601	25

Specify the following data when ordering:
Figure number 1016601 and width. Non-standard widths are available on request.

econosto®

Econgraph® - RB
- fig. 1016601

- Ribbed graphite
- Self-adhesive
- Max. temp.: +450 °C
- Min. temp.: -200 °C
- Colour: black

20080301