



An All-In-One Solution Company  
In PTFE Industry.



## TEFLEX GASKET CO.,LTD.

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## TEFLEX GASKET CO.,LTD.



## COMPANY PROFILE

### Founded

Teflex has a unique understanding of the PTFE industry. It was founded in 2011 as Teflex Gasket by Alex Xu. and Jack Lee. Teflex originally specialized in manufacturing PTFE gasket material in a small facility located in Ningbo, Zhejiang. The founders had the vision to provide customers with the excellent products, professional process knowledge, and efficient service.

### Growth

After several years' development, this company growing both organically and through collaboration. Teflex now encompasses two fabrication plants and one sales location in Zhejiang. Not only has our product lines grown significantly from the original gasket business, our organization researches and develops filtration material which is based on PTFE since 2015.

### Products

Nowadays, Teflex offers a broad range line of PTFE products and services, including industrial sealing and filtration components. We are manufacturing PTFE material like, ePTFE sheet, ePTFE membrane, ePTFE joint sealant, PTFE film, PTFE rod, PTFE tube etc. In the meantime, we are providing Metal gasket, Non-metallic gasket sheet, Gland Packing, and PTFE components necessary for the demanding applications as well. That's why Teflex can service for so many different industries of oil and gas, chemical, mining, electronic, food, and pharmaceutical.

### Quality

"Quality" is our top priority. Every day, Teflex meets the various product requirements of the customer base. Our policy is to continually improve customer satisfaction by maintaining an ISO 9001 quality management system. At the same time, Teflex has FDA, ROSH, REACH and many other certifications which approved by TUV, SGS, and BV. Teflex thrives as our dedicated teams deliver quality products on time as well as meeting the demands and expectations of our customers.

## MULTI-DIRECTIONAL EXPANDED PTFE SHEET

Style No: TMPS

Multi-directional expanded PTFE sheet made from 100% PTFE. This special manufacturing process results in almost equal tensile strength in all directions. Also, this material is more easier to compress, minimize creep and cold flow.

### Applications

- Aerospace
- Petrochemical
- General chemical
- Pulp and paper
- Food and beverage
- Power generation



### General Size

Thickness (mm)	Thickness Tolerance(mm)	Size(mm)	Size Tolerance(mm)
0.5	+0.20	1500 x 1500	±10
1	+0.20	1500 x 1500	±10
1.5	+0.30	1500 x 1500	±10
2	+0.30	1500 x 1500	±10
3	+0.40	1500 x 1500	±10
4	+0.40	1500 x 1500	±10
5	+0.60	1500 x 1500	±10
6	+0.60	1500 x 1500	±10

**Big Size 3000 x 1500mm and 4500 x 1500mm, Thickness: 0.5-7mm**

### Inquiry / Order Example

Size	Qty
1.5mm x 1500mm x 1500mm	10 sheets
3.0mm x 1500mm x 4500mm	5 sheets

## EXPANDED PTFE GASKET

Style No: TEPG

Expanded PTFE gaskets is cut from expanded PTFE sheets by the laser cutter or cutting die. The ePTFE gasket material has a high tensile strength, flexibility, hardness, and thermal resistance. Expanded PTFE gaskets with excellent material can be used for distillers, pharmaceutical, piping and equipment in chemical, pulp, paper, food, and beverage.



### Advantages

- Excellent chemical resistance.
- Soft, flexible, light clamping force to seal.
- Easy cutting, normal scissors.
- High-intensity, fibrosis, 3D structure.
- Greatly reduce the cold flow creep.

### Approvals

- FDA test: FDA 21 CFR177.1550
- REACH tested according to EC 1907/2006
- Comply with the requirement of RoHS directive 2011/65/EU (RoHS 2.0)

### Properties

Item	Data
Temperature Range	-240°C to 260°C
Pressure Max	Vacuum up to: 3000 psi
Density	0.75-0.85 g/cm³
Compressibility ASTM F36	63.4%
Recovery ASTM F36	9.1%
Fluid Services	Steam, Strong Acids, Strong Caustics, Aqueous, Anhydrous Hydrogen Fluoride

### Standard Size

Raised Face & Flat Face Flange Gasket  
ASME B 16.21 DIN 2690 / EN 1514-2

### Inquiry / Order Example

Size	Class	Qty
2"-RF	150#	100
4"-FF	300#	50
6"-RF	600#	100

## MULTI-DIRECTIONALLY EXPANDED PTFE GASKET TAPE

Style No:TMGT

Multi-directionally Expanded PTFE Gasket Tape is produced from 100% pure PTFE . This special manufacturing process results in almost equal tensile strength in both the longitudinal and cross direction. As a result of this, the material does not change its width under compression. This is in stark contrast to normal expanded PTFE tapes .

### Advantages

- Easy to install
- Forms to fit any shape
- Resistance cold flow & creep
- Reliable sealing performance
- Improve system reliability and safety

### Applications

- Food and beverage
- Steam vessel flanges
- Heat exchangers
- Manhole covers
- General chemical

### Properties

Item	Data
Density	0.75g/cm <sup>3</sup> -0.85g/cm <sup>3</sup>
Temerature	-240°C to 260°C
Operation Pressure	Vacuum up to 2900 psi
Tensile Strength	>18 Mpa
Compressibility ASTM F36	>60%
Recovery ASTM F36	>8%
pH	0 - 14
Test	FDA 21 CFR177.1550/ROHS/SDS/REACH

### Standard Size

Width ( mm )	12.7	19	25.4	38	50.8
Thickness ( mm )	3/6.4	3/6.4	3/6.4	3/6.4	3/6.4
Length (M)	50	50	50	25	25



## PTFE JOINT SEALANT

Style No:TPJS

PTFE Joint Sealant is produced of 100% monoaxially virgin PTFE resins with one side adhesive. ePTFE tape is a good sealing material for larger diameters metal, rough, concave, nonstandard shape flange surface. PTFE Joint Sealant tape with kinds size with a adhesive backing and easily cut the correct length during the install process.



### Applications

- Food and beverage
- Steam vessel flanges
- Heat exchangers
- Manhole covers
- General chemical

### Advantages

- Easy to work with adhesive
- Resistance to cold flow & creep
- Flexible & easy cutting
- Food grade
- Reliable sealing

### Properties

Item	Data
Density	0.75~1.0g/cm <sup>3</sup>
Temerature	-240°C to 260°C
Operation Pressure	Vacuum up to 2900 psi
Tensile Strength	>8 Mpa
Creep Relaxation	<40%
pH	0 - 14
Test	FDA 21 CFR177/ROHS/MSDS

### Standard Size

Width (mm)	3	5	7	10	14	17	20	25
Width (inch)	1/8	3/16	1/4	3/8	1/2	5/8	3/4	1
Thickness (mm)	2	2	3	4	5	5	7	8
Length (M)	300	300	150	150	100	100	50	50

## PTFE SHEET

Style No: TPS

PTFE Sheet is a high performance thermoplastic that offers very low moisture absorption, provides exceptionally low coefficient of friction has excellent dielectric strength. It is highly resistant to corrosion and hydrolysis, has a broad operating temperature. PTFE sheet is also food approved and resistant to UV.

### 1.PTFE Molded Sheet

PTFE molded sheet is manufactured by molding with PTFE granular resin.

#### Applications

It can be used to make corrosion-resistant liner, seal, lining and gasket, scrap, guide rail, dielectric material for different circumstances.



### 2.PTFE Skived Sheet

PTFE skived sheet is manufactured by PTFE resin, it's molded into work-blank at first and then skive to proper thickness skiving.

#### Applications

PTFE skived sheet are used in reaction kettle, storage tank, valve, container, liner and gasket which work under all kinds of corrosive dielectric. It also can be used as liner of anticorrosive pipes, oilless lubricator and adhesive material for sliding orbit of machines and dielectric at any frequencies.

#### Properties

Item	Data
Tensile strength	≥ 15.0 Mpa
Ultimate elongation	≥ 150 %
Density	2.2 ~ 2.3 g/cm <sup>3</sup>
Dielectric strength	10 kv/mm
Resistance of surface	3.7 x 10 <sup>16</sup> Ω

#### Properties

Item	Data
Tensile strength	≥ 15.0 Mpa
Ultimate elongation	150 ~ 400 %
Density	2.2 ~ 2.3 g/cm <sup>3</sup>
Dielectric strength	10 kv/mm
Resistance of surface	3.7 x 10 <sup>16</sup> Ω

#### Standard Size

Width/mm	Thickness/mm	Tolerance /mm
250 ~ 1200	5 ~ 100	±0.20 ~ ±0.50

#### Standard Size

Width/mm	Thickness/mm	Tolerance /mm
400-2500	1-3	±0.2
400-2500	4-5	±0.3

## PTFE ENVELOPE GASKET

Style No: TPE

Combine the low friction and chemical stability of PTFE with the mechanical strength of the elastic material. This provides the user with a gasket which have excellent resilience, outstanding mechanical strength and superb bolt retention.

#### Advantages

- Outstanding media resistance (especially for highly corrosive media)
- No ageing or brittleness
- Very low minimum surface pressure
- Very good adaptability
- Very good handling (transport, assembly and dismantling)
- No product contamination
- Good adjustment and elastic recovery properties
- Good long-term properties

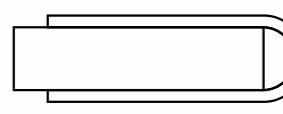
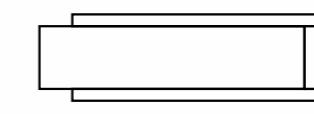
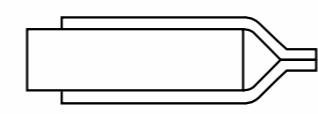


#### Applications

- Preferred for low leakage rates for gases and liquids
- For high pressure-temperature combinations
- For highly corrosive media
- For high flange unevenness
- For high requirements for cleanliness
- For seal connections with low surface compression
- For FDA applications
- For plastic, enamel or rubber flanges
- For flanges sensitive to tension and flexibility



#### Typical Models



**Core:** Graphite, Non Asbestos Gasket, Rubber, Mill board etc.

**Standard Size:** DN 10-600mm / NPS 1/2"~24" or custom-made size

**Temperature range:** -180°C - 260°C

## PTFE ROD

Style No: TPR

PTFE rod is manufactured from 100% PTFE resin, two types extruded PTFE rod and PTFE molded rod according to different sizes. PTFE rod exhibiting extreme resistance chemical, solvents, provides excellent thermally and electrically conductive and more. PTFE round rod, PTFE rectangular rod & PTFE square rod three shapes uses a different application.

### Advantages

- Low coefficient of friction
- PTFE temperature resistance
- Excellent electroconductibility performance
- Additional filled PTFE material to reduce cold flow
- FDA 21 CFR 177,1935/2004/EC
- MSDS, RoHS & REACH compliant



### Applications

- Gaskets and seals
- Slide bearings
- Petrochemical & chemical processing
- Food, beverage & pharmaceutical
- Semi-conductor industry

### Properties

Item	Data
pH	0-14
Color	White
Density	$2.2 \pm 0.1 \text{ g/cm}^3$
Tensile Strength	$\geq 14.0 \text{ Mpa}$
Ultimate Elongation	$\geq 230 \%$
Temperature Rating	-260°C to 260°C

### Extruded PTFE Rod Size

- DIA: 4-9mm Length: 3000mm
- DIA: 10-150mm Length: 1000mm

### General Filling Material

Glass	5-25%
Carbon	5-25%
Graphite	5-15%
Bronze	40/60%
Mos2	5%
Polyimide	5%

### PTFE Molded Rod Size

- DIA: 150- 300mm
- Length: 1500mm

## PTFE TUBE

Style : TPT

PTFE Tube has excellent resistance to most chemicals and solvents and is capable of operating at high and low temperatures. It also has a very low coefficient of friction and is commonly used in food contact applications. It provides good thermal stability and has good electrical properties, but is not suitable for wear applications and is difficult to bond. It also has good resistance to hot water and UV.

### Advantages

- Outstanding low friction/non-stick properties
- Excellent resistance to almost all solvents, acids & bases
- Virtually unaffected by oxygen, uv light & ozone
- Approved FDA CFR177.1550 & food grade tubing



### Applications

- Gaskets and seals
- Slide bearings
- Food, beverage, and pharmaceutical
- Petrochemical and chemical processing
- Semi-conductor industry

### Properties

Item	Data
pH	0-14
Color	White
Density	$2.2 \pm 0.1 \text{ g/cm}^3$
Tensile Strength	$\geq 14.0 \text{ Mpa}$
Ultimate Elongation	$\geq 230 \%$
Temperature Rating	-260°C to 260°C

### General Filling Material

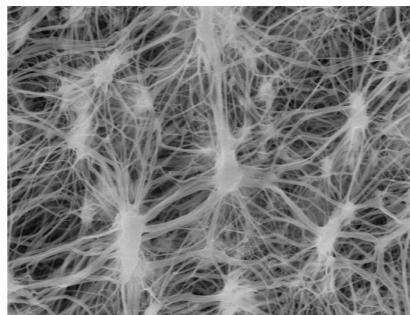
Glass	5-25%
Carbon	5-25%
Graphite	5-15%
Bronze	40/60%
Mos2	5%
Polyimide	5%

## EXPANDED PTEE POROUS MEMBRANE

Style No: TXFT

**TXFT** is made of ePTFE microporous material by unique nano-technology. The ePTFE membrane has a micropore structure with small pore size, high porosity and irregular permutation. It doesn't need to be reinforced with other material.

**TXFT** is also suitable for compounding with different basic fabric filter materials like woven cloth, non-woven cloth, needling felt, filter paper etc. It will greatly improve the efficiency of filter material without changing original chemical properties after ePTFE membrane coating.



### Advantages

- Non-toxic
- Excellent corrosion resistance
- Excellent chemical resistance
- High temperature resistance
- Super hydrophobic(could be hydrophilic after modification)
- Great longitudinal and transverse tensile strength
- Dust-free and clean
- Anti-aging
- Dimensional stability
- Flame resistance
- UV Resistance
- Low thermal conductivity
- Low coefficient of friction
- Low refractive index
- Low dielectric constant
- Working temperature -190°C~250°C

### Properties

Hydrophobic		
Standard Width	mm	200~1200
Wall thickness	mm	0.08-0.3
Aperture	µm	0.05-5
Porosity	%	>85
Temperature	°C	-190~250
Efficiency	%	85~99.99



Hydrophilic		
Standard Width	mm	200~1200
Wall thickness	mm	0.08-0.3
Aperture	µm	0.1-100
Porosity	%	50-95
Temperature	°C	-190~250
Efficiency	m³/m².h	>1



### Main Basic Fabric Material

- PET/PE/PTFE/PPS
- Fiberglass/Acrylic/Aramid
- Woven/Non-woven

## EXPANDED PTFE HOLLOW FIBER TUBULAR MEMBRANE

Style No:TETM

**TETM** is made by simple ePTFE material, non-toxic, with high temperature resistance, corrosion resistance and chemical resistance, without precipitation, seamless, with billions of micropores in the wall, along with surface smooth and super hydrophobic properties (after special hydrophilic modification, membranous tube could be hydrophilic) and great longitudinal and transverse tensile strength. Normally used between -190°C and 250°C



### Applications

#### Air Field

Suitable for food industry, medical industry, electronic industry, automobile industry and other pressure gas balance items, powder (such as flour food,powder) collection, providing limited space with efficient clean gas or hot gas filtration, fly ash handling in waste incineration industry etc.



#### Water Field by Hydrophobic Performance

Which can apply to the high concentrations of toxic and refractory organic wastewater, deep processing and discharge to the standard of chemical wastewater, pesticide wastewater, petro-chemical wastewater, pharmaceutical wastewater etc.



**Water field after hydrophilic treatment:** Which can apply to the filtration purification of corrosive industry and toxicwater, refilling water separation of petrochemical tail liquid, plating wastewater filtration, chloralkali refined brine system, heavy metals lead and zinc smelting waste acid recovery system etc.

### Properties

Parameter	Unit	Data	Remark
Standard diameter	mm	1~72	Can be custom-made
Wall thickness	mm	0.3-3	Can be custom-made
Aperture	µm	0.2-100	As per requirements
Porosity	%	50-95	As per requirements
Temperature	°C	-190~+250	
Tensile Strength	Mpa	10	
	m³/m².h	1	Tap water
Permeability	m³/m².h	0.5	Groundwater
	m³/m².h	0.025	Domestic sewage
Water flux	m³/m².h	0.025-1.3	Suitable for the hydrophilic tube membrane group, according to aperture, porosity and water quality.
Permeability	l/m².s	1-60	Suitable for the hydrophobic tube membrane group, the pressure difference 100~200pa, according to aperture and porosity

## PTFE FILM

Style No: TPF

PTFE Film is made from 100% PTFE resin and can be modified. It provides a low-friction, non-stick surface suitable for use in high-temperature, chemical-resistant and high-dielectric applications. Their anti-stick properties enable easy cleanup of hot plastic. PTFE Film can be supplied with one-side etched.

### Advantages

- Minimal water absorption
- Excellent machining
- Acid and chemical resistant
- Good electrical insulation
- High working temperatures
- Low friction & non-stick

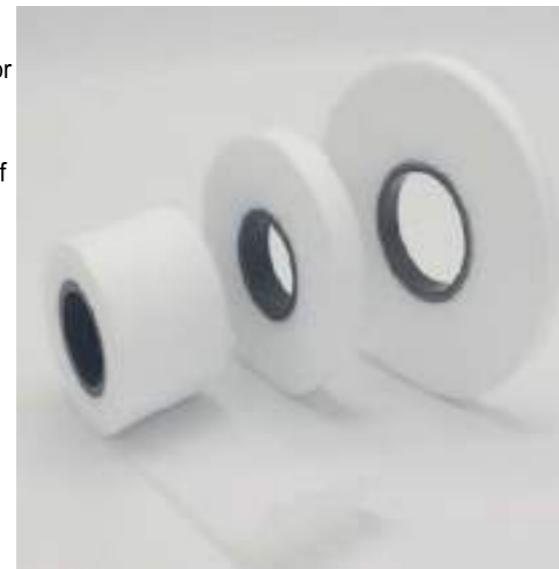
### Applications

- PCB's & flexible circuits
- Capacitor films & diaphragms
- Protective liners & cable harnesses
- Surface protection liners & gasket
- Fuel cell seals and separators
- Electrical insulation components
- Solar panel (photovoltaic) modules
- Expansion joint liners and sleeves
- Semiconductor processing components

### Virgin PTEE Film Specification

Item	Oriented	Semi-oriented	Common
General Thickness(mm)	0.030,0.035,0.040	0.030,0.035, 0.05-0.10	0.030,0.035,0.040-0.10, 0.05,0.08,0.10,0.15, 0.20,0.30
Tolerance(%)	±10	±10	±10
Width(mm)	30-90	60-90	60-90, 100-1000
Tolerance(mm)	+0.3	+0.3	+2.0
Length(mm)	≥50	≥100	≥50
Tensile Strength(Mpa)	≥30	≥30	≥10
Break elongation(%)	≥30	≥60	≥100
1MHz dielectric loss tangent ≥ 0.01	2.5x10 <sup>-4</sup>	None	None
1MHz dielectric constant	1.8-2.2(average)	None	None
Dc breakdown voltage(Kv/M ) ( normal tempature)	200(average)min.40	60(average) min.6	30(average)

Teflex provides Glass/Carbon/Graphite/Bronze/MoS<sub>2</sub> Filled PTFE Film and one side etched PTFE Film.



## PTFE FILM TAPE SILICONE ADHESIVE

Style No: TPFA

The high-density PTFE Film Tape is made of virgin PTFE and high-temperature silicone adhesive on one side. This tape offers an extremely low coefficient of friction which, in combination with a pressure-sensitive silicone adhesive, creates a smooth, non-stick surface over a variety of substrates to assist in the movement of materials in many types of lay-flat applications.



Color: White | Black

### Advantages

- Electrical insulation resistant
- High temperature resistant
- Excellent chemical resistant
- Good durability & tensile strength
- Superior flame resistant & low elongation

### Applications

- Roll-wrap for web processing, belts and plates
- Where sticky materials and inks may occur.
- High temperature wire bundling and harnessing.
- Squeak and noise reduction.
- Lining of chutes, troughs and ducts.
- Shielding and protecting against chemicals.
- Mold release for composite bonding.

### Properties

Item	Unit	Data
Tensile Strength	MPa	≥25
Elongation	%	≥125
Bonding Strength	N/25mm	≥6
Withstand Voltage	KV/mm	≥10
Temperature	°C	-50~+260

### Standard Size

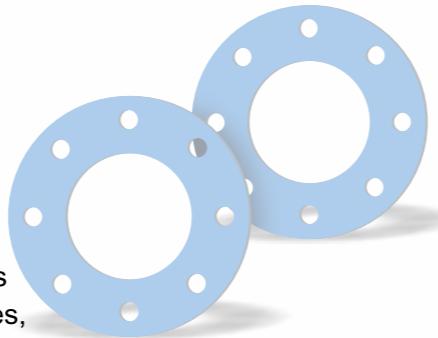
Thickness(mm)		Width(mm)		Length(m)
Size	Tolerance	Size	Tolerance	Tolerance
0.03-0.1	± 0.01	10-90	± 2	+ 2.0
0.13-0.25	± 0.02			
0.3	± 0.03			
0.4	± 0.04			
0.5	± 0.05			
0.8	± 0.08			

## FILLED PTFE SHEET/GASKET

Style No: TX

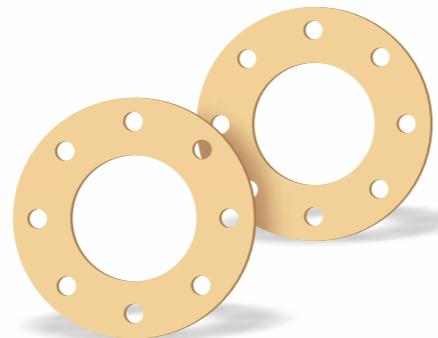
### TX 100

- Speciality:** The most tightly sealing, reduce creep relaxation, excellent bolt torque performance, chemical resistant.
- Stuffing:** Glass microspheres
- Applicable conditions media:**
  - Moderate concentration of acid ,some corrosion, hydrocarbons, solvents, water, refrigerants, cryogenic materials, hydrogen peroxide;
  - Acetic acid pharmaceutical clean pipelines, glass lining flanges have better surface roughness, surface defects, uneven flanges, heat exchangers, etc.
- Applicable industries:** Chemicals, pharmaceuticals, etc.



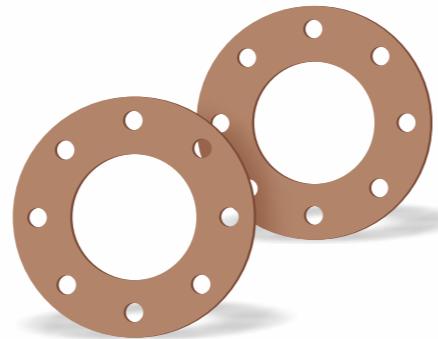
### TX 200

- Speciality:** The most tightly sealing, reduce creep relaxation, better anti-leakage performance, chemical resistance.
- Stuffing:** Silicon dioxide
- Applicable conditions media:**
  - Strong acid (except hydrofluoric acid),solvents,hydrocarbons, water,steam,chlorine,cryogenic materials;
  - Polycrystalline silicon (except hydrofluoric acid).
- Applicable industries:** Chemicals.



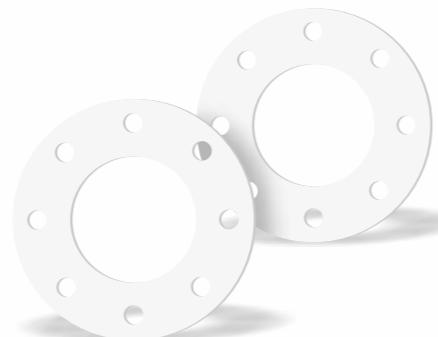
### TX 300

- Speciality:** The most tightly sealing, reduce creep relaxation, better anti-leakage performance, chemical resistant.
- Stuffing:** Silicon dioxide
- Applicable conditions media:**
  - Strong acid(except hydrofluoric acid),solvents,Hydrocarbons, water, steam, chlorine, cryogenic materials;
  - Polycrystalline silicon (except hydrofluoric acid).
- Applicable industries:** Chemicals.



### TX 400

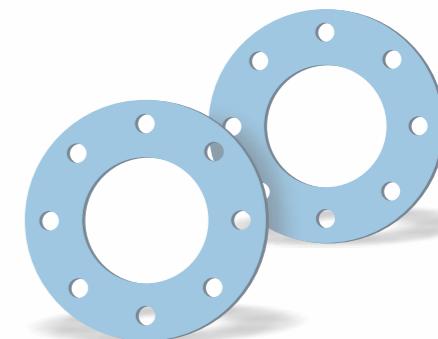
- Speciality:** The most tightly sealing, reduce creep relaxation, chemical resistant.
- Stuffing:** Barium sulfate
- Applicable conditions media:**
  - Strong corrosion, neutral acid, chlorine, gas water, steam, hydrocarbons, cryogenic materials, and aluminum fluoride;
  - Alkaline, chlorine occasions.
- Applicable industries:** Chemicals, paper industry.



## FILLED PTFE SHEET/GASKET

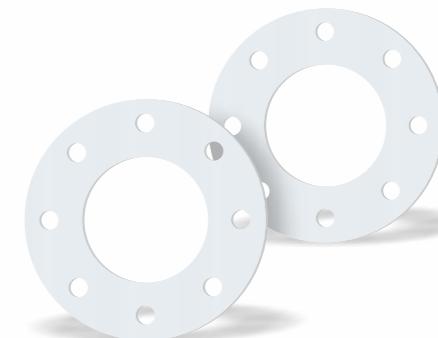
### TX 500

- Speciality:** The most tightly sealing, to improve on traditional PTEE material performance, reducing creep relaxation and product leakage, chemical resistance.
- Stuffing:** Glass fiber
- Applicable industries:** Chemicals.



### TX 600

- Speciality:** Good creep resistant, resistance to chemical attack.
- Stuffing:** Glass fiber
- Applicable industries:** Suitable for all kinds of seals, lining insulation, scraping deposit, rail industries.



### TX 700

- Speciality:** Heat resistance, chemical resistant and resistance to cold flow.
- Stuffing:** Kaoline
- Applicable industries:** Suitable for various chemicals (high concentration of hot sulfuric acid, hot nitric acid, etc.)



### Properties

	Unit	Standard	TX 100	TX 200	TX 300	TX 400	TX 500	TX 600	TX 700
Colour		Na	Blue	Yellow	Brown	White	Blue	Light Grey	Light Brown
Density	g/cm <sup>3</sup>	ASTM D792	1.55 ~ 1.65	2.1 ~ 2.3	2.1 ~ 2.3	2.5 ~ 2.9	2.1 ~ 2.3	2.1 ~ 2.3	2.1 ~ 2.3
Stuffing			Glass Microspheres	Silicon Dioxide	Silicon Dioxide	Barium Sulfate	Glass Fibre	Glass Fibre	Kaoline
Tensile Strength	Mpa	ASTM F152	≥ 10	≥ 20	12	8	13.8	12	18
Compression Ratio	%	ASTM F36	≥ 16	≥ 10	10	8	10	10	10
Recovery	%	ASTM F32	≥ 32	≥ 30	30	30	30	30	30

## GLAND PACKING

Style No: TFP

### PTFE PACKING GRAPHITED WITH OIL

Density: 1.2 g/cm<sup>3</sup>  
 Temperature: -250 °C to 650 °C  
 pH Range: 0 to 14  
 Speed: 10 m/s  
 Pressure: Pump: 507 psi / 35 bar  
 Valve: 4350 psi / 300 bar  
 Material: PTFE Graphite Yarn & Carbon Fiber  
 Construction: lattice braid



### PURE PTFE PACKING

Density: 1.3-1.45 g/cm<sup>3</sup>  
 Temperature: -255 °C to 255 °C  
 pH Range: 0 to 14  
 Speed: 10 m/s  
 Pressure: Pump: 300 psi / 20 bar  
 Valve: 4000 psi / 275 bar  
 Material: PTFE filament, PTFE dispersion, lubricating oil  
 Construction: lattice braid



### ACRYLIC PACKING

Density: 1.35-1.45 g/cm<sup>3</sup>  
 Temperature: -100 °C to 260 °C  
 pH Range: 0 to 14  
 Speed: 12 m/s  
 Pressure: Pump: 725 psi / 50 bar  
 Valve: 2900 psi / 200 bar  
 Material: Acrylic fiber, PTFE dispersion, lubricating oil  
 Construction: lattice braid



### PTFE GRAPHITE PACKING ARAMID CORNERS

Density: 1.35-1.5 g/cm<sup>3</sup>  
 Temperature: -212 °C to 288 °C  
 pH Range: 2 to 12  
 Speed: 12.5 m/s  
 Pressure: Pump: 500 psi / 34 bar  
 Valve: 4300 psi / 296 bar  
 Material: expanded PTFE w/graphite, Aramid, lubricating oil  
 Construction: lattice braid



### TANK LID PACKING

Density: 0.8-1.0 g/cm<sup>3</sup>  
 Temperature: -50 °C to 260 °C  
 pH Range: 0 to 14  
 Speed: 10 m/s  
 Pressure: Pump: 150 psi / 10.5 bar  
 Valve: 200 psi / 13.5 bar  
 Material: silicone rubber, acrylic fiber , PTFE dispersion, lubricating oil  
 Construction: lattice braid



### ARAMID PACKING

Density: 1.35-1.45 g/cm<sup>3</sup>  
 Temperature: -240 °C to 260 °C  
 pH Range: 2 to 12  
 Speed: 10 m/s  
 Pressure: Pump: 500 psi / 34 bar  
 Material: Aramid, PTFE, lubricating oil  
 Construction: lattice braid



### CARBON FIBER PACKING

Density: 1.1-1.2 g/cm<sup>3</sup>  
 Temperature: -100 °C to 260 °C  
 pH Range: 1 to 13  
 Speed: 15 m/s  
 Pressure: Pump: 725 psi / 50 bar  
 Valve: 3625 psi / 250 bar  
 Material: carbon fiber , PTFE dispersion,  
 Construction: lattice braid



### PURE GRAPHITE PACKING

Density: 1.05-1.15 g/cm<sup>3</sup>  
 Temperature: -240 °C to 455 °C  
 pH Range: 0 to 14  
 Speed: 20 m/s  
 Pressure: Pump: 400 psi / 27.5 bar  
 Valve: 4300 psi / 296 bar  
 Material: flexible graphite  
 Construction: lattice braid



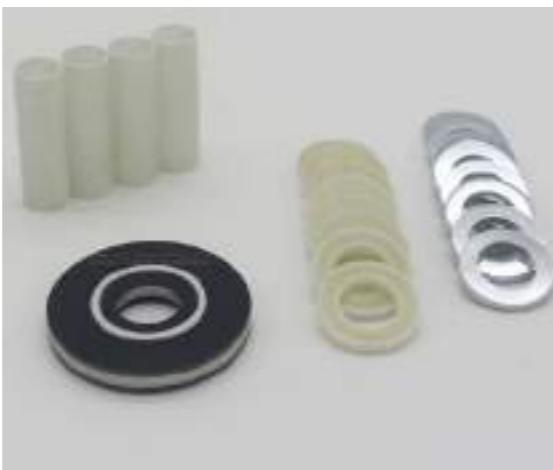
# INSULATION GASKET

Style No: TIG

In order to prevent the loss of protected current and interfere unprotected metal pipes and equipment. We use flange insulation kits in the import and export of pumping stations and oil depots, to avoid the cathodic protection current into the trunk. Flange Insulation Kits can also be used underground as well as different lots of stray current line (different material, old and new pipelines, etc.) connections, as an anti-corrosion measure.

Insulation Gasket Kits are following standards ANSI 16.5 & API 605, other standards need to provide more specifications according to our requirements.

Flange Insulation Kits consist of an insulating gasket, some insulating sleeves and washers which are all correctly sized for the application and conveniently packaged to minimize the possibility of lost component parts during installation.



## Gasket Material

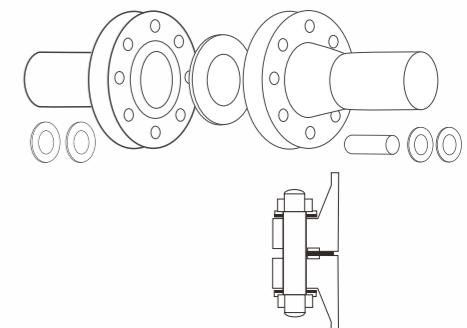
	Plain Phenolic	Neoprene Faced Phenolic	Reinforced PTFE	G-7 Silicone Glass	G-10 Epoxy /Glass	G-11 Epoxy /Glass	G-10 Bonded	G-11 Bonded
Dielectric Strength (Volts/Mil)	500	500	350	350	550	550	550	550
Compressive Strength (psi)	25000	25000	2300	40000	50000	50000	65000	50000
Water Absorption (%)	1.6	1.6	0.01	0.07	0.1	0.1	0.05	0.085
Tensile Strength (psi)	20000	20000	1450	25000	45000	43000	50000	45000
Operating Temp (°F)	-65~220	-65~175	-320~500	-320~450	-320~280	-320~349	-65~280	-50~349
Operating Temp (°C)	-54~104	-54~79	-196~260	-196~232	-196~138	-196~176	-54~138	-45~176

## Sealing Element Material

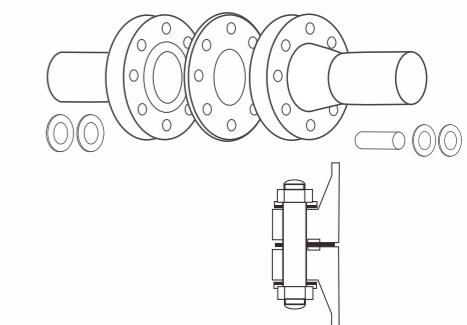
	Nitrile	Viton	PTFE	Neoprene	EPDM
Operating Temp (°F)	-40 to 250	-20 to 350	-320 to 450	-40 to 250	-40 to 250
Operating Temp (°C)	-40 to 121	-29 to 177	-196 to 232	-40 to 121	-40 to 121

Please attention the retainer and sealing elements' temperature limits should be considered together while choosing the material.

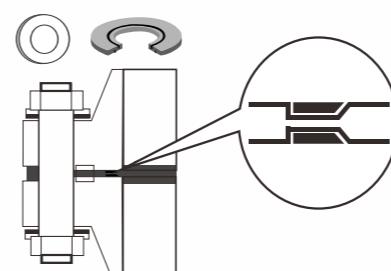
Type "F" gasket is made to fit the raised face portion of the flange only. As there are no bolt holes in the "F" gasket, the outside diameter of the gasket fit tightly into place assuring a well centered position.



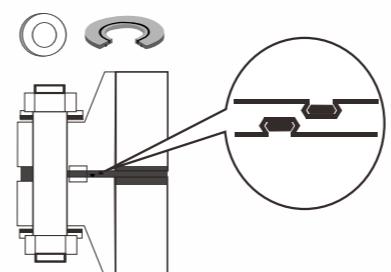
Type "E" is a full-face gasket with same outside diameter as the flange and precision cut bolt holes. This design facilitates proper alignment of the gasket during installation. This assembly minimizes the ingress of conductive foreign matter between the portions of the flanges outside the raise face and reduces the risk of bridging.



Type "D"-RTJ Ring type joint insulation kits comprise of an oval insulating ring type joint gasket and are suitable for use on standard RTJ flanges.



Special Type A sealing gaskets adopt one of the most effective methods for sealing and insulating all types' flanges. The quad ring, a rectangular sealing element, encapsulated in a specially designed groove, it provides near-zero "m" and "y" factors to make the controlled-pressure seal can always be obtained without tremendous bolt loads.



Special Type B the excellent sealing and insulating design for all types' flanges, The sealing elements encapsulated in the specially designed groove, avoid the sealing element broken when the torque of the bolt are not equal.

# SPIRAL WOUND GASKET

Style No:TMS

**Spiral wound gaskets** have to recover under the action of fluctuating loads caused by process fluid pressure and temperature changes, flange face temperature variations, flange rotation, bolt stress relaxation and creep.

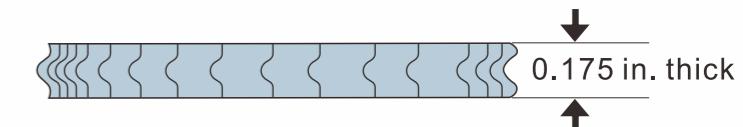
The gasket sealing element consists of a preformed metallic winding strip with layers of a softer, more compressible sealing material which, during compression, is densified and flows to fill imperfections in the flange surfaces when the gasket is seated. The metal strip holds the filler giving the gasket mechanical resistance and resilience. Spiral wound gaskets can be manufactured from a range of filler materials according to different service conditions.



Filler Material	Maximum	ASME B16.20 Colour
Graphite	550°C	Grey
PTFE	260°C	White
Nonas	350°C	Pink
Mica	1000°C	Light Green
<hr/>		
Winding	Maximum	ASME B16.20 Colour
Carbon Steel	500°C	Silver
S S304	650°C	Yellow
S S316	800°C	Green
Duplex	800°C	N/A
S S347	870°C	Blue
SS321	870°C	Turquoise
Monel 400	800°C	Orange
Nickel 200	600°C	Red
Titanium	540°C	Purple
Hastelloy B-2	1000°C	Brown
Hastelloy C-276	1000°C	Beige
Inconel 600	1000°C	Gold
Inconel 625	1000°C	Gold
Inconel X-750	1000°C	Light Grey
Incloy 825	1000°C	White

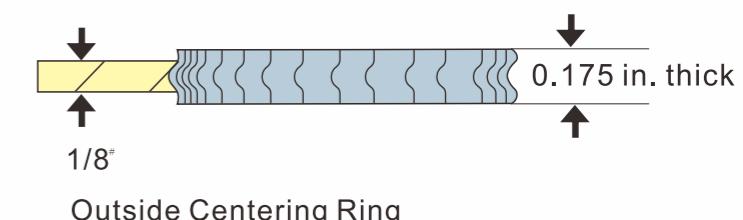
## Type CR

Type CR are spiral winding only. No inner or outer ring is utilized. Used in a variety of different applications, they may be furnished in many different sizes and thicknesses. This gasket can be used on tongue and groove flange mainly.



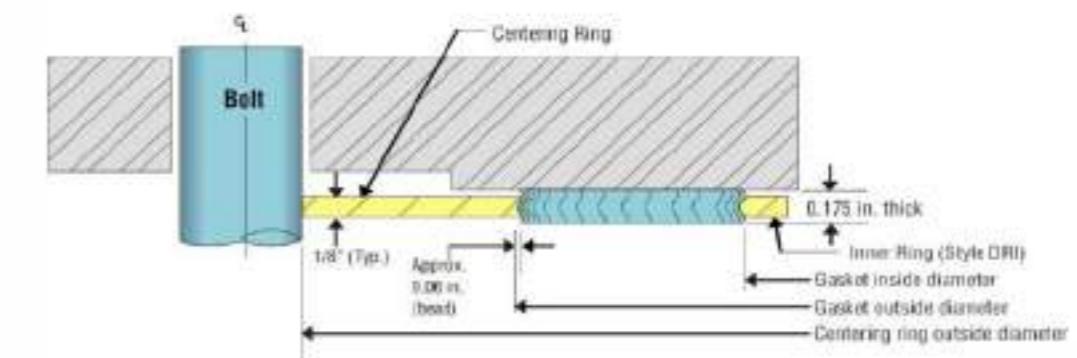
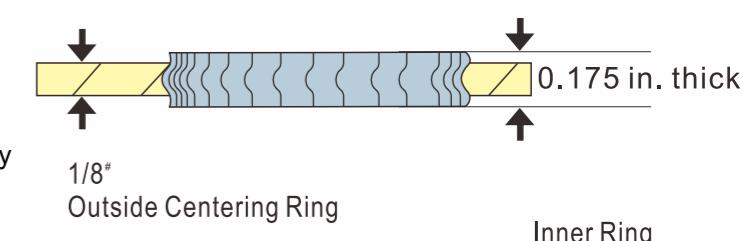
## Type RIR

Type RIR consist of a spiral wound sealing component with a solid metal outer guide ring. The outer guide ring serves to center the gasket properly in the flange joint, acts as an anti-blowout device, provides radial support for the spiral wound component, and acts as a compression gauge to prevent the spiral wound component from being over crushed. Normally the outer guide rings are furnished in mild steel, but can be supplied in other metals when required by operating conditions. This gasket can be used on flat face or raised face flange.



## Type CIR

Type CIR is identical to style WR, with the addition of an inner ring. The inner ring also serves several functions. Primarily, it provides radial support for the gasket on the ID to help prevent the occurrences of buckling or imploding. The inner ring also serves as an additional compression limiter. Its ID is normally sized slightly larger than the ID of the flange bore, minimizing turbulence in process flow. The inner rings are normally supplied in the same material as the spiral wound component. This gasket can be used on flat face or raised face flange.



# RING JOINT GASKET

Style No:TMR

**Ring Joint Gaskets** are heavy duty, high-pressure gaskets, largely used in offshore petrochemical applications. They are precision-engineered components designed to be used in conjunction with precision-machined flanges. All our Ring Joints are manufactured according to ASME B16.20 and API 6A.

Type	Nominal Pipe Size	Class Ratings
R	½" to 24" 26" to 36" 1½" to 20"	150 to 2500 ASME B16.20 300 to 900 ASME B16.20 Series A API 6A
RX	1 1/2" to 24" 26" to 36" 1 ½ " to 20"	720 to 5000 ASME B16.20 300 to 900 ASME B16.20 Series A API 6A
BX	1 11/16" to 21 1/4"	5000 to 20000 ASME B16.20

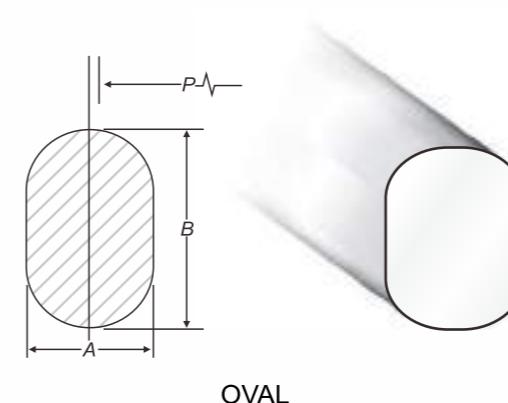


## Common Materials

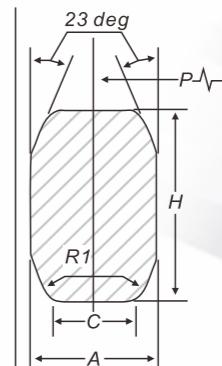
Material	Brinell Hardness	Temperature Limitation	Identification
Soft Iron	90	-60 to 500°C	D
Low Carbon Steel	120	-40 to 500°C	S
4-6% Cr 1/2 %Mo	130	-250 to 500°C	F5
304	160	-250 to 550°C	S304
316	160	-110 to 550°C	S316
321	160	-250 to 550°C	S321
347	160	-250 to 550°C	S347
410	170	-20 to 500°C	S410
Monel (N04400)	135	450°C	N04400
UNS N08904	180	400°C	904L
Inconel 625	-	450°C	625
Incoloy 825	-	450°C	825
Hastelloy C-276	-	450°C	C-276
Titanium	-	450°C	TI

The gasket material is selected on a number of grounds primarily, chemical compatibility with the media and the hardness of the flange. The gasket material ideally needs to be roughly 30 Brinell less than the flange material to ensure sufficient deformation of the gasket without damaging the flange facing.

R octagonal and oval Ring Gaskets to suit ASME B16.20 and API 6A

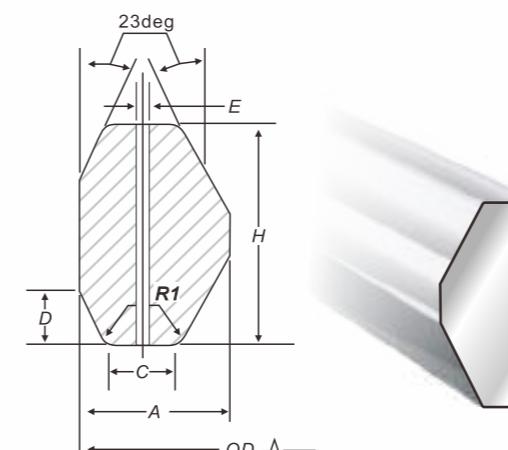


OVAL

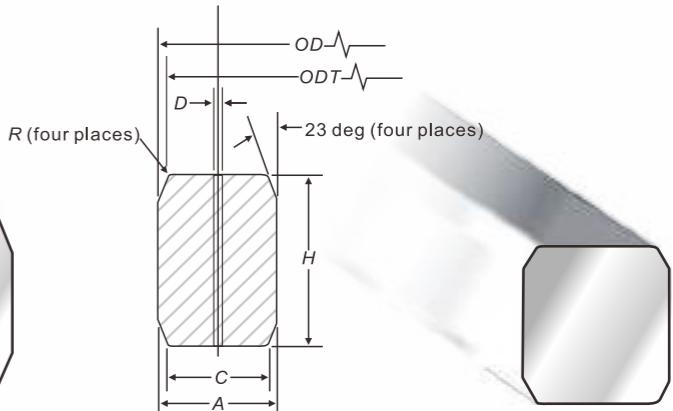


OCTAGONAL

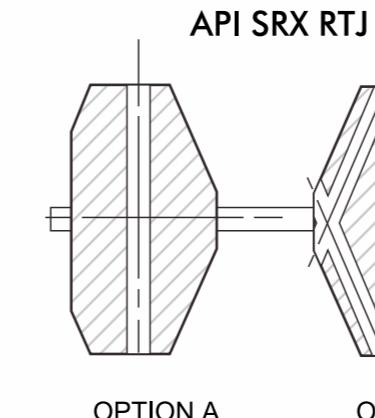
RX ring designations for API 6B flanges



BX ring designations for API 6BX flanges

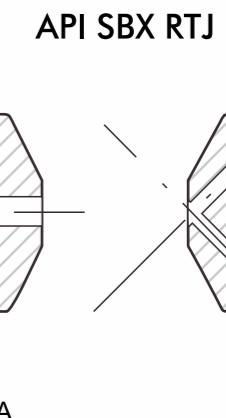


Special RTJ Gasket to suit subsea applications API 17D



OPTION A

OPTION B



OPTION A

OPTION B

## KAMM PROFILE GASKET

Style No: TMK

**Kammpfprofile Gasket** is a composite gasket, which utilises a serrated metal core with a soft facing material. The metal core is a machined on each contact face with concentric serrations which provide high pressure areas, ensuring that the soft coating flows into any imperfections in the flange even at relatively low bolt loads.

The result is a gasket, which combines the benefits of soft, cut materials with the advantages of seal integrity associated with metallic gaskets.



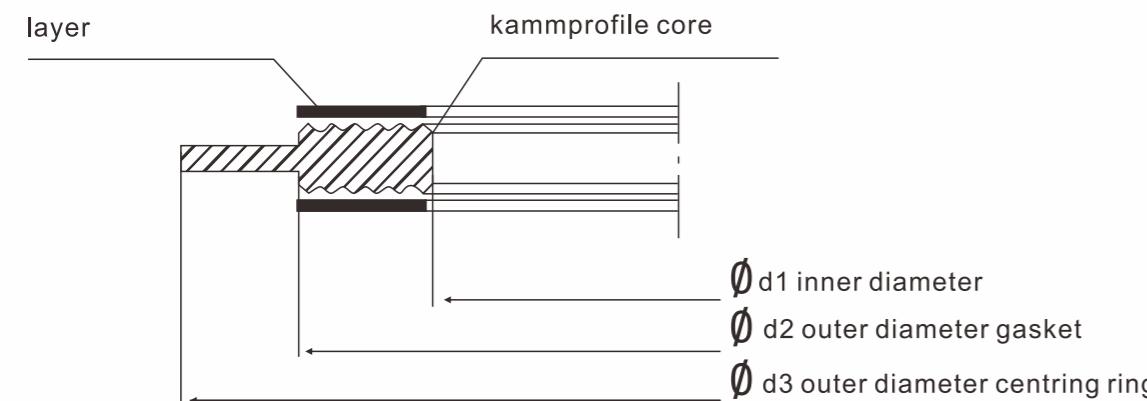
<b>Facing Material</b>	<b>Maximum Temperature</b>
Graphite	550°C
ePTFE	260°C
Mica	1000°C

Kammprofile gaskets can also be manufactured from a range of core materials according to media compatibility and temperature considerations.

Core Material	Maximum Temperature
Stainless Steel 316L	550°C
Stainless Steel 304	550°C
Monel 400	600°C
Nickel 200	600°C
Inconel 600	900°C
Inconel 625	450°C
Incoloy 825	450°C
Hastelloy B-2	450°C
Hastelloy C-276	450°C
Titanium	350°C

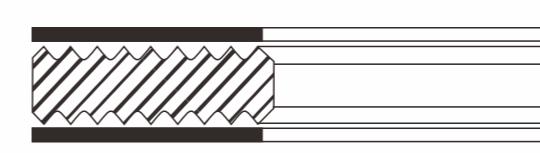
Expanded graphite is the most common facing material used for Kammprofile gaskets. However, other materials can be used, such as PTFE for chemically aggressive duties or mica for high temperature duties.

## Construction



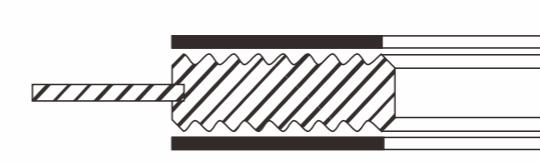
### Typical types

Kammprofile without centring edge for  
tongue and groove



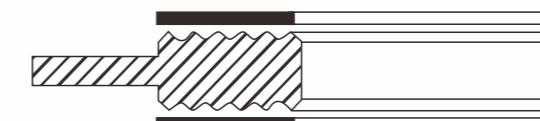
TMK-A

### Kammprofile with loose centering ring



TMK-1

## Kammprofile with integral centring ring and predetermined breaking point



TMK

### **Advantage:**

- Have a wide range of seating stresses under which the seal is effected and maintained.
  - Can be used when there is insufficient bolt load to seal conventional gasket materials.
  - Easy to handle and fit.
  - Suitable for a wide range of operating conditions.
  - The soft facing layer prevents damage to the flange.
  - Provide a high integrity seal including thermocycling and shock loading conditions
  - Sealing is not sensitive to uneven bolt loading conditions
  - Can be refurbished with a new facing layer and reused

## Applications

- Heat Exchanger and Vessel applications
  - High and low temperatures
  - Pressures of up to 250 bar
  - Low bolt loads
  - Small flange widths
  - Damaged flanges

## Inquiry / Order Example

Size	Pressure	Material	Qty
2"	300#	4.0mm TK SS316L core	100pcs
DN50	PN40	with Loose Guide Ring. 0.5mm TK Graphite Layer	100pcs

## FREE ASBESTOS GASKET SHEET

Style No: TFA

**Free Asbestos Jointing Sheet** is made from aramid fibre,synthetic rubber,filling material and dye,compressed and calendered under high temperature and pressure into a sheet form. It eliminates asbestos-rubber sheet essentially and thoroughly.

		TFA150	TFA200	TFA250	TFA300
Item	Unit				
Density	g/cm <sup>3</sup>	1.90±0.1	1.80±0.1	1.80±0.1	1.70±0.1
Temperature	°C	≤150	≤200	≤250	≤300
Tensile Strength ASTMF-152	Mpa	≥6.0	≥7.0	≥8.0	≥9.0
Compression Rate ASTMF-36	%	7~17	7~17	7~17	7~17
Recovery Rate ASTMF-36	%	≥35	≥40	≥40	≥40
Leakage Rate ASTMF-37	ml/min	≤2.0	≤1.0	≤1.0	≤1.0
Creep Relaxation Rate ASTMF-38B	%	≤40	≤40	≤35	≤35
Soft property	Bend in a round bar of 12 times the nominal thickness of the sample				

### Normal Characteristic

Color: Black,Red,Blue,Green etc.

Available with tin steel,copper,SS304 etc. wire mesh insertion.

Available with anti-stick graphite coating.

Available with logo printing.

### Standard Size

4500 x 1500 x (0.5 – 6.0)mm, 2000 x 1500 x (0.5 – 6.0)mm

1500 x 1360 x (0.5 – 6.0)mm, 3810 x 1270 x (0.5 – 6.0)mm

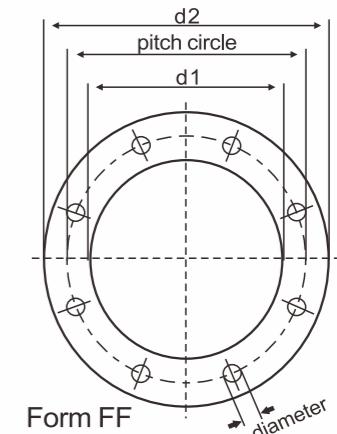
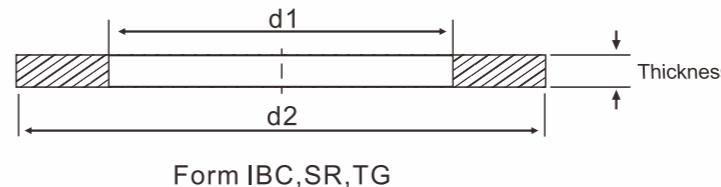
1270 x 1270 x (0.5 – 6.0)mm, 1500 x 1500 x (0.5 – 6.0)mm

### Inquiry / Order Example

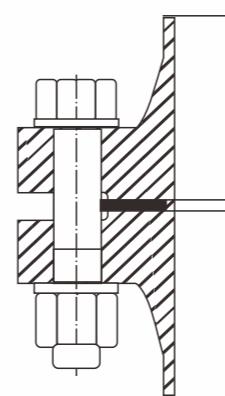
Style	Size	Color	Qty
TFA-150	2000x1500x2.0mm	Red	100sheets
TFA-200	2000x1500x3.0mm	Black	1000kgs

## FLAT GASKETS

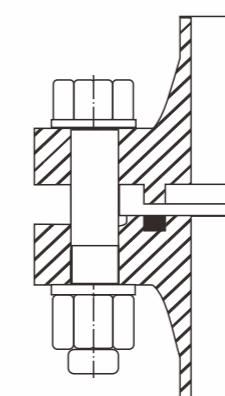
- Flat face and raised face flanges(IBC)
- Male-female flanges (SR)
- Tongue and groove flanges(TG)
- Flanges with screw holes(FF)



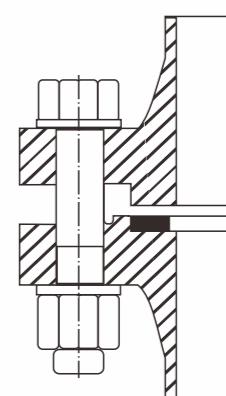
### Flange /Gasket Forms



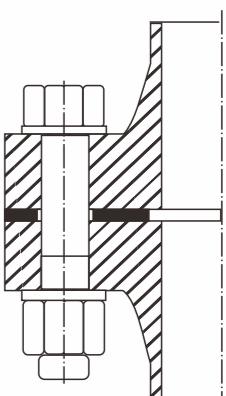
Form IBC  
raised face



Form SR  
male-female



Form TG  
tongue and groove



Form FF  
flat face

### Typical Non-metallic Gasket Material

Item	TMPS	TPS	TX100	TX200	TX300	TX400	TX500
Density g/cm <sup>3</sup>	0.75~0.85	2.2~2.3	1.55~1.65	2.1~2.3	2.1~2.3	2.5~2.9	2.1~2.3
Temperature °C	-240~260	-240~260	-240~260	-240~260	-240~260	-240~260	-240~260
Tensile strength Mpa	≤22	≥15	≥10	≥20	≥12	≥8	≥13.8
Compressibility %	≥63.4	≥10	≥16	≥10	≥10	≥8	≥10
Recovery %	≥9.1	≥40	≥32	≥30	≥30	≥30	≥30
Item	TX600	TX700	TFA150	TFA200	TFA250	TFA300	TFA350
Density g/cm <sup>3</sup>	2.1~2.3	2.1~2.3	1.8~2.0	1.7~1.9	1.7~1.9	1.6~1.7	1.6~1.7
Temperature °C	-240~260	-240~260	≤150	≤200	≤250	≤300	≤350
Tensile strength Mpa	≥12	≥18	≥6	≥6	≥7	≥7	≥7
Compressibility %	≥10	≥10	7~17	7~17	7~17	7~17	7~17
Recovery %	≥30	≥30	≥30	≥40	≥40	≥40	≥45



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CO.,LTD.**