www.taehwa1.com

# TaeHwa Kalpa Seal

## Compressed Sheet & Gasket

GASKET & JOINT SHEET

(주)태화칼파씰

TaeHwa Kalpa Seal Co., Ltd.

# TaeHwa Kalpa Seal

## Compressed Sheet & Gasket

Persistence of the technology and the best 45 years a proud tradition!!

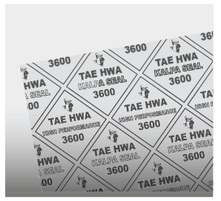
# TaeHwa Kalpa Seal

## Greeting

저희 태화칼파씰은 1979년에 설립하여 씰링 제품의 제조 설비 제작 및 수리업을 바탕으로 성장하여 1984년에는 압축 시트 제조설비를 도입하여 생산을 시작하였고, 새천년을 맞아 새로운 도약과 각오로 1999년에 부산 녹산 국가공단에 부지를 마련하여 국내 유일의 초대형 자동화 설비를 도입, 국내 최초로 광폭(2540mm*3850mm) 압축비석면판 및 GASKET을 생산할 수 있는 체제를 갖추고 국내 최고의 기술진이 최고의 제품을 생산, 공급하고 있습니다.

저희 회사는 고객 여러분들이 제품을 믿고 찾을수 있도록 ISO-9001, ISO-14001,ABS, Lloyd's, DNV.GL, RMRS 등의 인증서를 획득 하였습니다.

저희 태화 임직원들은 현재에 만족하지 않고 품질관리 및 공정관리를 보다 더 철저히 하여 경쟁력있는 제품생산으로, 저희 제품을 애용해 주시는 고객 여러분과 함께 성장할 수 있도록 최선을 다하겠습니다.



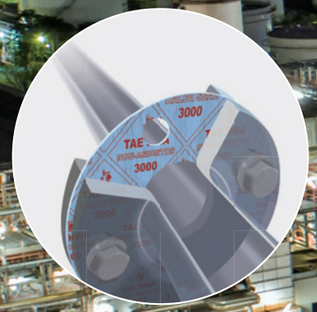

Established in 1979, **TaeHwa Kalpa Seal** has manufactured sealing products and provided maintenance services for the products. TaeHwa Kalpa Seal also started to manufacture compressed sheet from 1984. Our growth is based on the continuing support from our customers.

In 1999 at the turn of the new millennium, we constructed the only one and large manufacturing facility within Noksan National Industrial Complex in Busan to manufacture wide compressed non-asbestos sheet (2540mm*3850mm) and gaskets based on the best technologies and engineers of Korea.

Our technologies and quality of our products are proved as we acquired ISO-9001 Quality Management System, ISO 14001 Environment Management System and certificates from ABS, Lloyd's, DNV.GL, RMRS.

All employees at TaeHwa Kalpa Seal will spare no efforts to produce highly competitive products through the effective quality and process management for the growth of both our company and our customers.

We thank our customers for their continuing use of our products and their support.






## Non-Asbestos Sheet & Sheet Gasket

**TH1000** Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트 & 시트 가스켓

**TH1100** Non Layer Asbestos-Free Sheet & Sheet Gasket
비적층 시트 & 시트 가스켓

**TH3000** Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트 & 시트 가스켓

**TH3000W** Wire Reinforced Compressed Non-Asbestos Joint Sheet & Sheet Gasket
금망입 압축 비석면시트 & 시트 가스켓

**TH3200** High-Performance Line Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트 & 시트 가스켓

**TH3200W** High-Performance Line Wire Reinforced Compressed Non-Asbestos Joint Sheet & Sheet Gasket
금망입 압축 비석면시트 & 시트 가스켓

**TH3600** High-Performance Line Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트 & 시트 가스켓

**TH3600W** High-Performance Line Wire Reinforced Compressed Non-Asbestos Joint Sheet & Sheet Gasket
금망입 압축 비석면시트 & 시트 가스켓

## Graphite Sheet & Sheet Gasket

**TH4000** Homogeneous Graphite Sheet & Sheet Gasket

**TH4000T** Graphite Reinforced with Tanged Sheet & Sheet Gasket

**TH4000P** Graphite Reinforced with Flat Sheet & Sheet Gasket

**TH4000W** Graphite Reinforced with Wire-mesh Sheet & Sheet Gasket

## MICA Sheet & Sheet Gasket

**TH4010** MICA Sheet & Sheet Gasket

## Graphite Tape

**TH4024** Flexible Graphite Crinkled Tape
흑연 양면 테이프

## PTFE Gasket

**TH4025** PTFE Cushion Gasket(Enveloped Gasket)
불소수지 쿠숀 가스켓

**TH4026** PTFE Gasket _불소수지 가공품

**TH4027** PTFE Solid Gasket _불소수지 솔리드 가스켓

**TH4028** PTFE Serration Gasket _불소수지 톱니형 가스켓

**TH4029** Special PTFE Sheet & Gasket

**TH4030** PTFE Joint Sealant _테프론 조인트 실런트

## Rubber Gasket

**TH4032** Silicon Rubber

**TH4033** Natural Rubber

**TH4034** Neoprene:CR Rubber

**TH4035** NBR

**TH4036** EPDM

**TH4037** SBR

**TH4038** Viton:FPM

**TH4039** Steel Rubber Gasket Type-A, B

**TH4040** E-FLON Gasket

**TH4041** Red Rubber

**TH4042** EPDM Low Stress

## Insulation Kit

**TH 4050** Insulation Kit _인슐레이션 키트

## Spiral Wound Gasket

**TH4060** Basic Type _기본형

**TH4061** Inner Ring Type _내륜형

**TH4062** Outer Ring Type _외륜형

**TH4063** Inner/Outer Ring Type _내외륜형

**TH4064** FSG Gasket _고온용 스파이럴형 가스켓

**TH4065** Manhole Type _맨홀형

## Double Jacketed Gasket

**TH4070** Double Jacketed Gasket

## Kammprofile Gasket

**TH4072** Basic Type _기본형

**TH4073** In Collor _내륜형

**TH4074** Out Collor _외륜형

**TH4075** In Out Collor _내외륜형

**TH4076** Loose Outer Ring

## Ring Type Joint Gasket

**TH4080** Oval Type _타원형

**TH4080R** Octagonal Type _팔각형

**TH4081 RX** Rx Type _Rx 형

**TH4082 BX** Bx Type _Bx 형

**TH4083** Bridgeman Type _브랫지맨형

**TH4084** Delta Type _델타형

**TH4085** Lens Type _렌즈형

**TH4086** Solid Metal Gasket

**TH4087** Corrugated Gasket_파형 가스켓

## Gland Packing

**TH5001** PTFE Fiber Packing _ 테프론 섬유 패킹

**TH5002** Lubricated PTFE Fiber Packing _ 윤활유입 테프론 섬유 패킹

**TH5003** Graphite PTFE Fiber Packing _ 흑연입 테프론 섬유 패킹

**TH5004** Aramid Fiber impregnated with PTFE Packing
테프론 함침 아라미드 섬유 패킹

**TH5005** Carbonized Fiber Packing impregnated with PTFE
테프론 함침 탄화섬유 패킹

**TH5006** Carbonized Fiber Packing impregnated with Lubrication Oil
윤활유입 테프론 함침 탄화섬유 패킹

**TH5009** Graphite Fiber Packing _ 그라파이트 섬유 패킹

**TH5009-I** Graphite Fiber Packing Reinforced with wire
선입 그라파이트 섬유 패킹

**TH5010** Carbon Fiber Packing impregnated with Graphite and Oil
윤활유입 흑연 함침 카본섬유 패킹

**TH5010-I** Carbon Fiber Packing Reinforced with wire
선입 흑연 함침 카본섬유 패킹

**TH5011** Hatch cover Packing _ 해치커버 패킹

**TH5012** Graphite Mold Ring Packing _ 그라파이트 몰드 링패킹

## Insulation Products

**TH5300** Glass Fiber Cloth_유리섬유 포

**TH5310** Glass Fiber Type_ 유리섬유 테이프

**TH5320** Ceramic Fiber Cloth_세라믹섬유 포

**TH5330** Ceramic Fiber Type_세라믹섬유 테이프

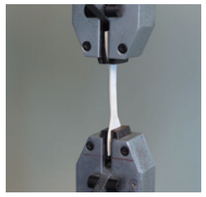
**TH5340** Ceramic Paper_세라믹 페이퍼

**TH5350** Ceramic Blanket_세라믹 블랑킷

**TH5360** Ceramic Rope_세라믹 로프

**TH5370** Insulation Board_절연 보드

# Certificate of Company



Our technologies and quality of our products are proved as we acquired ABS ISO-9001 Quality Management System, ABS ISO 14001 Environment Management System and certificates from ABS, Lloyd's, DNV.GL, RMRS.
All employees at TaeHwa Kalpa Seal will spare no efforts to produce highly competitive products through the effective quality and process management for the growth of both our company and our customers.

## SYSTEM


ISO 9001


ISO 14001


ISO 45001


유자격공급자등록증

## TYPE APPROVAL


ABS


DNV·GL


Lloyd's

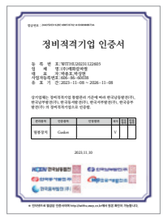

제품인증서

## MANUFACTURE


PED

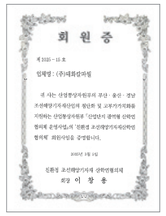

INNO-BIZ


벤처기업확인서

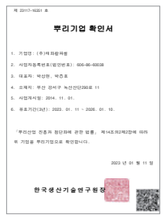



정비적격기업인증서

## ETC







TRADEMARK


PATENT


PATENT


CITATION



# Joint Sheet & Sheet Gasket

# TH1000

## Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트 & 시트 가스켓

### Characteristic

This is manufactured by the hot calender process using high quality non-asbestos fibers and oil resistant synthetic rubber. Specially, this sheet has oil superior sealability with excellent oil resistance.

우수한 품질의 비석면 섬유와 내유 합성고무를 사용하여 기름에 안정적이며, 특히 기존 비석면 시트 대비 sealing 성능이 우수하며, 프랜지 고착 방지(Anti-Stick) 처리 제품입니다.

| | | |
|---|---|---|
| **Size** | Thickness(mm) | 0.5 ~ 4.8 |
| | Sheet(mm) | 1270 x 1270 / 1270 x 3850 / 2540 x 3850 |
| | | 1500 x 1500 / 1500 x 2000 / 1500 x 4000 |

### Typical Physical Properties

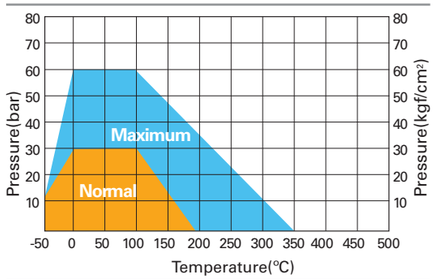
| Test Method | Description | TH1000 |
|---|---|---|
| | Density[g/cm³] | 1.6~1.7 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 10.8(1.1) |
| ASTM F36J | Compressibility[%] | 7~17 |
| | Recovery[%] | 40% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Tensile Loss[%] | 40% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

* All data are typical values

### Application

| | |
|---|---|
| Short-term peak Temp. | 350°C [ 662°F ] |
| Short-term peak Pressure | 60kgf/cm² [ 5.88 MPa ] |
| **Applied Fluids**<br>Hot oil, Fuels, Water, Sea water, Organic, Oil gas, Organic solvent | |

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |
| 0.8 | 3.50 | 457(6500) |

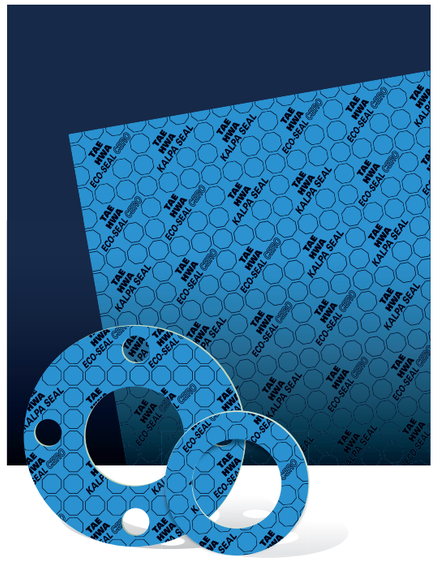
**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.





# TH1100

## Non Layer Asbestos-Free Sheet & Sheet Gasket
비적층 시트 & 시트 가스켓



### Characteristic

TH1100, produced with special process, is the perfect solution for solving penetration leakage which is one of the problems of non-asbestos sheet and very easy to replace due to its anti-stick function.

특수한 공법 적용을 통해 제작된 TH1100제품은 기존 비석면시트의 문제점 중 하나인 침투누설을 완벽하게 해결한 제품이며, 프랜지 고착방지(Anti-Stick) 기능으로 가스켓 교체가 매우 용이합니다.

| | | |
|---|---|---|
| **Size** | Thickness(mm) | 1.5 ~ 3.0 |
| | Sheet(mm) | 1270 x 3000 |

### Typical Physical Properties

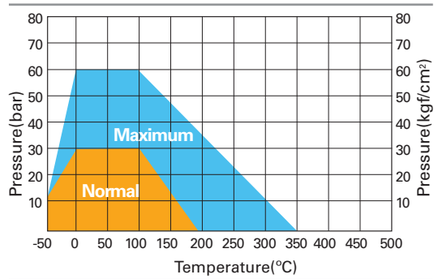
| Test Method | Description | TH1100 |
|---|---|---|
| | Density[g/cm³] | 1.6~1.7 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 10.8(1.1) |
| ASTM F36J | Compressibility[%] | 20~30 |
| | Recovery[%] | 55% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Tensile Loss[%] | 40% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

* All data are typical values

### Application

| | |
|---|---|
| Short-term peak Temp. | 350°C [ 662°F ] |
| Short-term peak Pressure | 60kgf/cm² [ 5.88 MPa ] |
| **Applied Fluids**<br>Hot oil, Fuels, Water, Sea water, Organic, Oil gas, Organic solvent | |

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

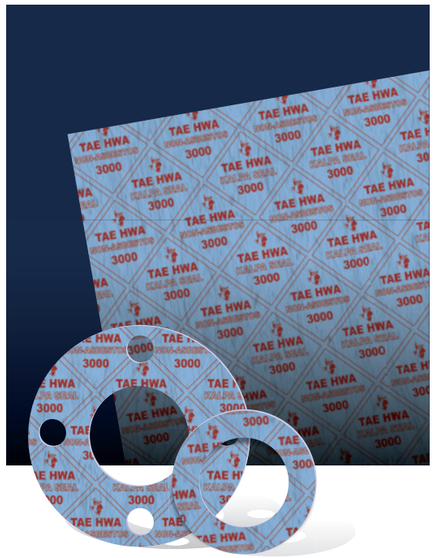
### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |
| 0.8 | 3.50 | 457(6500) |

**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.

# TH3000

## Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트 & 시트 가스켓



### Characteristic

This is manufactured by the hot calender process using high quality non-asbestos fibers and oil resistant synthetic rubber. Specially, this sheet has oil superior sealability with excellent oil resistance.

우수한 품질의 비석면 섬유와 내유성이 뛰어난 합성고무를 사용하여 기름에 특히 안정적이며 seal성이 우수한 제품입니다.

* KS L5406 B종 / Anti-stick Coating은 당사로 문의 바랍니다.

| | | |
|---|---|---|
| **Size** | Thickness(mm) | 0.5 ~ 4.8 |
| | Sheet(mm) | 1270 x 1270 / 1270 x 3850 / 2540 x 3850 |
| | | 1500 x 1500 / 1500 x 2000 / 1500 x 4000 |

* Other Sizes can be available, If required.
* One or both sides Graphite & PTFE coating available, If required.

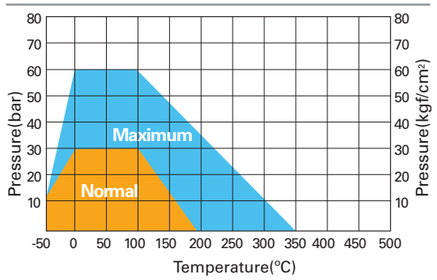
### Application

| | |
|---|---|
| Short-term peak Temp. | 350°C [ 662°F ] |
| Short-term peak Pressure | 60kgf/cm² [ 5.88 MPa ] |

**Applied Fluids**
Hot oil, Fuels, Water, Sea water, Organic, Oil gas, Organic solvent

- **30K Air Line or F.O Line**
  - Apply gasket paste on the cut surface of the gasket inner diameter side
  - Use gasket with a minimum thickness as much as possible(1.5mm or less)

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

### Typical Physical Properties

| Test Method | Description | TH3000 |
|---|---|---|
| | Density[g/cm³] | 1.6~1.7 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 10.8(1.1) |
| ASTM F36J | Compressibility[%] | 7~17 |
| | Recovery[%] | 40% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Tensile Loss[%] | 40% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

* All data are typical values

### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |
| 0.8 | 3.50 | 457(6500) |

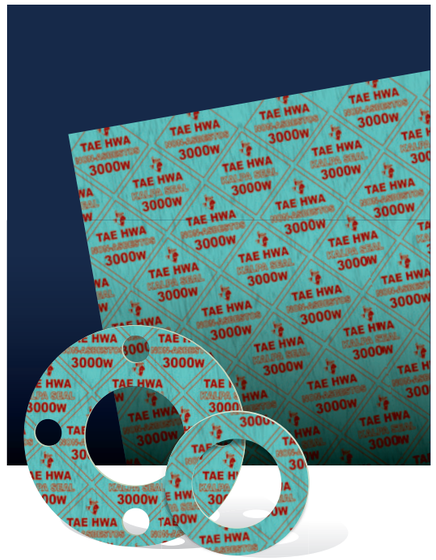
**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.





# TH3000W

## Wire Reinforced Compressed Non-Asbestos Joint Sheet & Sheet Gasket
금망입 압축 비석면시트 & 시트 가스켓



### Characteristic

This is an excellent quality asbestos free gasket material with stainless steel wire-mesh inserted to be suitable for high temperature and high pressure. Manufactured by the hot calender process using high quality non-asbestos fibers and oil-resistant rubber.

우수한 품질의 비석면 섬유와 내유성이 뛰어난 고무를 사용하여 시트내부에 스테인레스 금망을 넣어 만든 고온, 고압에 우수한 금망입 비석면 제품이다.

* Anti-stick Coating은 당사로 문의 바랍니다.

| | | |
|---|---|---|
| **Size** | Thickness(mm) | 1.0 ~ 3.2 |
| | Sheet(mm) | 1500 x 1000 / 1500 x 1500 |
| | | 1500 x 2000 / 1500 x 4000 |

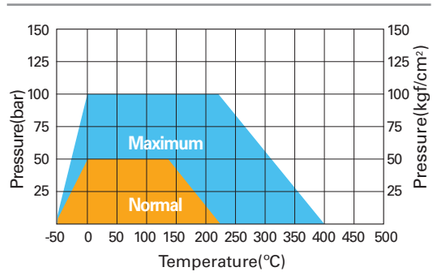
* Other Sizes can be available, If required.
* One or both sides Graphite & PTFE coating available, If required.

### Application

| | |
|---|---|
| Short-term peak Temp. | 400°C [ 752°F ] |
| Short-term peak Pressure | 100kgf/cm² [ 9.8 MPa ] |

**Applied Fluids**
Suitable for water, Hot oil, Alkali, Salt Solutions, etc.
Not be used in Steam, Strong Acid and Alkali, Soluble Chemicals.

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

### Typical Physical Properties

| Test Method | Description | TH3000W |
|---|---|---|
| | Density[g/cm³] | 1.7~1.8 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 17.7(1.8) |
| ASTM F36J | Compressibility[%] | 7~17 |
| | Recovery[%] | 40% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Tensile Loss[%] | 40% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

* All data are typical values

### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |

**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.

# TH3200

## High-Performance Line Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트 & 시트 가스켓


### Characteristic

TH3200 compressed fiber sheet gasket is made with high-quality aramid and carbon fiber with NBR binder. Excellent oil and heat resistance as well as outstanding chemical stability. In particular, it provides superior sealing performance in high-temperature thermal oil and oil gases. Graphite-coated surface prevents flange sticking.

고품질의 아라미드 섬유와 카본섬유를 사용하여 내유성 및 내열성이 뛰어난 제품이며, 우수한 화학적 안정성을 가진 압축비석면판이다. 특히 고온의 열유, 유가스등의 기름에서 우수한 밀봉성을 발휘하고 표면에 Graphite처리를 적용해 플랜지의 고착을 효과적으로 방지 합니다.

| | | |
|---|---|---|
| **Size** | Thickness(mm) | 0.5 ~ 3.2 |
| | Sheet(mm) | 1500 x 1000 / 1500 x 1500 |
| | | 1500 x 2000 / 1500 x 4000 |

* Other Sizes can be available, If required.

### Typical Physical Properties

| Test Method | Description | TH3200 |
|---|---|---|
| | Density[g/cm³] | 1.5~1.7 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 13.7(1.4) |
| ASTM F36J | Compressibility[%] | 7~17 |
| | Recovery[%] | 40% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Increase[%] | 10% Max |
| | - Tensile Loss[%] | 30% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

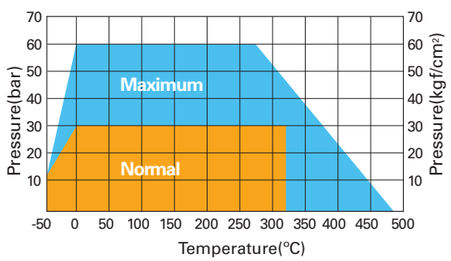
* All data are typical values

### Application

| | |
|---|---|
| Short-term peak Temp. | 480°C [ 896°F ] |
| Short-term peak Pressure | 60kgf/cm² [ 5.88 MPa ] |

**Applied Fluids**
Oil, Water, Fuels, Hot oils, Steam, Salt solution, Mild acids and alkalis

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |
| 0.8 | 3.50 | 457(6500) |

**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.





# TH3200W

## High-Performance Line Wire Reinforced Compressed Non-Asbestos Joint Sheet & Sheet Gasket
금망입 압축 비석면시트 & 시트 가스켓


### Characteristic

TH3200W compressed fiber sheet gasket is made with high-quality aramid and carbon fiber with NBR binder. In particular, it is reinforced with stainless wire mesh to provide excellent sealing performance even in high-temperature oil and gas environments. Graphite-coated surface prevents flange sticking.

고품질 아라미드 섬유와 카본 섬유를 사용한 압축 비석면판으로, 우수한 내유성·내열성과 함께 뛰어난 화학적 안정성을 갖추고 있습니다. 특히 스테인리스 금망으로 강도를 보강하여 고온의 열유 및 유가스 환경에서도 탁월한 밀봉성을 발휘하며, 표면에 Graphite 처리를 적용해 플랜지의 고착을 효과적으로 방지합니다.

| | | |
|---|---|---|
| **Size** | Thickness(mm) | 1.0 ~ 3.2 |
| | Sheet(mm) | 1500 x 1000 / 1500 x 1500 |
| | | 1500 x 2000 / 1500 x 4000 |

* Other Sizes can be available, If required.

### Typical Physical Properties

| Test Method | Description | TH3200W |
|---|---|---|
| | Density[g/cm³] | 1.7~1.8 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 17.7(1.8) |
| ASTM F36J | Compressibility[%] | 7~17 |
| | Recovery[%] | 40% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Increase[%] | 10% Max |
| | - Tensile Loss[%] | 30% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

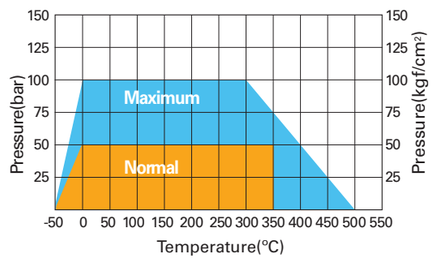
* All data are typical values

### Application

| | |
|---|---|
| Short-term peak Temp. | 500°C [ 932°F ] |
| Short-term peak Pressure | 100kgf/cm² [ 9.8 MPa ] |

**Applied Fluids**
Oil, Water, Fuels, Hot oils, Steam, Salt solution, Mild acids and alkalis

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

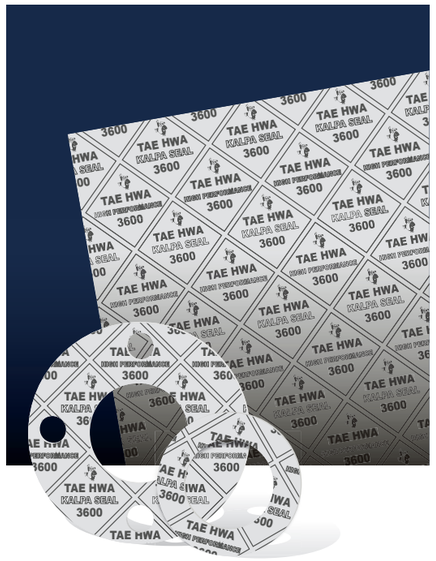
### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |

**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.

# TH3600

## High-Performance Line Compressed Non-Asbestos Joint Sheet & Sheet Gasket
압축 비석면시트



### Characteristic

TH3600 compressed sheet gasket material is engineered with premium aramid and carbon fibers with NBR. Outstanding oil, heat, and chemical resistance. Special coating surface ensures superior sealing in thermal oil and oil gas applications, prevents flange sticking for reliable, long-lasting performance.

고품질 아라미드 섬유와 카본 섬유를 사용한 압축 비석면판으로, 우수한 내유성·내열성과 함께 뛰어난 화학적 안정성을 갖추고 있습니다. 특히 특별한 고온 코팅처리를 통해 고온의 열유 및 유가스 환경에서도 탁월한 밀봉성을 발휘하며, 플랜지의 고착을 효과적으로 방지합니다.

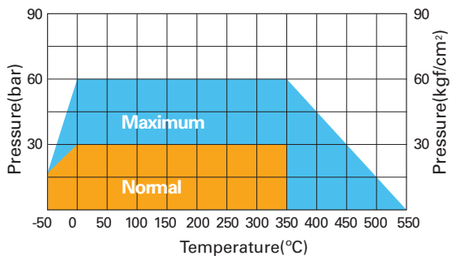
| | | |
|---|---|---|
| **Size** | Thickness(mm) | 0.5 ~ 3.2 |
| | Sheet(mm) | 1500 x 1000 / 1500 x 1500 |
| | | 1500 x 2000 / 1500 x 4000 |

* Other Sizes can be available, If required.

### Application

| | |
|---|---|
| Short-term peak Temp. | 550°C [ 1022°F ] |
| Short-term peak Pressure | 60kgf/cm² [ 5.88 MPa ] |
| **Applied Fluids**<br>Oil, Water, Fuels, Hot oils, Steam<br>Salt solution, Mild acids and alkalis | |

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

### Typical Physical Properties

| Test Method | Description | TH3600 |
|---|---|---|
| | Density[g/cm³] | 1.5~1.7 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 13.7(1.4) |
| ASTM F36J | Compressibility[%] | 7~17 |
| | Recovery[%] | 40% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Incease[%] | 10% Max |
| | - Tensile Loss[%] | 30% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

* All data are typical values

### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |
| 0.8 | 3.50 | 457(6500) |

**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.





# TH3600W

## High-Performance Line Wire Reinforced Compressed Non-Asbestos Joint Sheet & Sheet Gasket
금망입 압축 비석면시트

### Characteristic

TH3600W compressed sheet gasket material is engineered with premium aramid and carbon fibers with NBR. Outstanding oil, heat, and chemical resistance. In particular, it is reinforced with stainless wire mesh to provide excellent sealing performance even in high-temperature oil and gas environments. Special coating surface ensures superior sealing in thermal oil and oil gas applications, prevents flange sticking for reliable, long-lasting performance.

고품질 아라미드 섬유와 카본 섬유를 사용한 압축 비석면판으로, 우수한 내유성·내열성과 함께 뛰어난 화학적 안정성을 갖추고 있습니다. 특히 특별한 고온 코팅처리 및 스테인레스 금망으로 고온의 열유 및 유가스 환경에서도 탁월한 밀봉성을 발휘하며, 플랜지의 고착을 효과적으로 방지합니다.

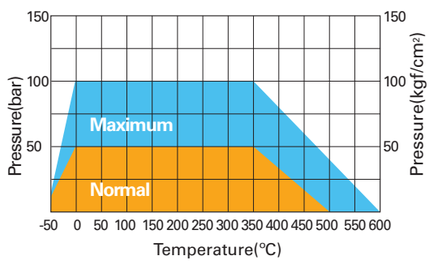
| | | |
|---|---|---|
| **Size** | Thickness(mm) | 1.0 ~ 3.2 |
| | Sheet(mm) | 1500 x 1000 / 1500 x 1500 |
| | | 1500 x 2000 / 1500 x 4000 |

* Other Sizes can be available, If required.

### Application

| | |
|---|---|
| Short-term peak Temp. | 600°C [ 1112°F ] |
| Short-term peak Pressure | 100kgf/cm² [ 9.8 MPa ] |
| **Applied Fluids**<br>Oil, Water, Fuels, Hot oils, Steam<br>Salt solution, Mild acids and alkalis | |

### Pressure/Temperature Operating Guidelines




* Not available with maximum temp. & pressure at the same time.
* Maximum shows short term peak temp. & pressure.

### Typical Physical Properties

| Test Method | Description | TH3600W |
|---|---|---|
| | Density[g/cm³] | 1.7~1.8 |
| ASTM F152 | Tensile strength | |
| | Across grain. MPa(kgf/mm²) | 17.7(1.8) |
| ASTM F36J | Compressibility[%] | 7~17 |
| | Recovery[%] | 40% Min |
| ASTM F146 | Fluid Resistance after 5hrs immersions | |
| | ASTM #3 Oil (150°C) | |
| | - Thickness Increase[%] | 10% Max |
| | - Tensile Loss[%] | 30% Max |
| | ASTM Fuel B (20~30°C) | |
| | - Thickness Increase[%] | 15% Max |
| | - Weight Increase[%] | 15% Max |
| ASTM F147 | Flexibility | No Crack |

* All data are typical values

### Design Data

| Thickness(mm) | Gasket Factor(m) | Min. Design Seating Stress(y) kgf/cm²(psi) |
|---|---|---|
| 3.2 | 2.00 | 112(1600) |
| 1.6 | 2.75 | 260(3700) |

**Note:** Water type fluids : For steam line, spiral wound gasket or graphite sheet gasket is recommended.

# TH4000 Series

## Graphite Sheet & Sheet Gasket
팽창흑연시트 & 가스켓


### Characteristic

Expanded graphite gasket shows a good adherence to flange and performs a sealing ability even under low seating stress. There is no property change under temperature variation. It shows good corrosive resistance.

팽창 흑연 가스켓은 플랜지와의 밀착성이 양호하여 낮은 체부압으로도 밀봉성이 뛰어나다. 온도에 따른 재질변화가 없으며 극저온에서 고온까지 다양하게 사용할 수 있으며, anti-stick 기능으로 제품 해체시 쉽게 분리되며, 내식성이 우수한(pH range 0-14) 가스켓이다.

| Standard sizes | | |
|---|---|---|
| | Sheet Size | 1000mm×1000mm, 1500mm×1500mm |
| | Thickness | 1.0mm, 1.5mm, 3.0mm |

### Service Range

| Reinforced Inserted Material | | TH 4000<br>Homogeneous | TH 4000T<br>Graphite Reinforced with Tanged Sheet | TH 4000P<br>Graphite Reinforced with Steel Flat Sheet | TH 4000M<br>Graphite Reinforced with Steel wire-mesh Sheet |
|---|---|---|---|---|---|
| Construction | |  |  |  |  |
| Temp.(°C) | Minimum | -200 | -200 | -200 | -200 |
| | Max. in atmosphere | 450 | 450 | 450 | 450 |
| | Max. in steam | 650 | 650 | 650 | 650 |
| ASTM F36 | Compressibility (%) | 30 ~ 40 | 30 ~ 40 | 30 ~ 40 | 30 ~ 40 |
| | Recovery (%) | 15 ~ 20 | 15 ~ 20 | 15 ~ 20 | 15 ~ 20 |
| DN3535 Part4 (1) | Gas Permeability(cc/min) | <0.5 | <0.5 | <0.5 | < 0.5 |
| ASTM F38 | Creep Relaxation(%) | <5 | <5 | <5 | <5 |
| Design Data | Gasket factor(m) | 2 | 2 | 2 | 2 |
| | Min. Design seating stress(y) | 900 psi | 2500 psi | 900 psi | 900 psi |

# TH4010

## MICA Sheet & Sheet Gasket


### Characteristic

MICA for hight temperatures is made of shelly Mica compressed in sheets reinforced with perforated stainless steel.
This material is suitable at high temperatures gaskets at low pressures and specially designed for services where high temperatures combined with fluids could promote the oxidising process of materials such as graphite.

TH 4010 가스켓은 고 품질의 운모에 스테인레스 타공금속을 보강한 제품으로 온도 변화에 따른 변화가 없고, 최고 1000°C까지 사용할수 있다. 내식성, 내약품성이 뛰어나 광범위한 조건에서 사용 가능한 제품이다.

### Standard sizes

| | |
|---|---|
| Sheet Size | 1000mm×1200mm,<br>1500mm×1500mm |
| Thickness | 1.5mm, 2.0mm, 3.0mm |

### Typical Physical Properties

| | |
|---|---|
| Color | Gold |
| Pressure | 5kgf/cm² Max |
| Temperature | 1000°C Max |

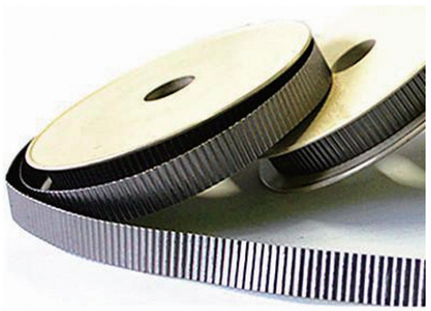
**Recommended** for high temperature turbines, turbochargers, heat exchangers, hot dry gas applications and on the whole for high temperature serveices. It automotive industry is suitable to be used in exhaust maniflids and engines.



# Non-Metallic Gasket

# TH4024

## Flexible Graphite Crinkled Tape
## 그라파이트 테이프



### Characteristic

Corrugated (Crinkled) Flexible Graphite Tape is made from plain flexible graphite tape pressed under corrugated mould. The tapes designed for use as packing, widely used for pump and valves. It is easily installed for small diameter valves.Corrugated flexible graphite tape with adhesive backed is used for flange sealing as gasket, especially for large diameter flanges.

### Size

| Thickness(mm) | Width(mm) | Length(M) |
|---|---|---|
| 0.4T | 6.4 | 15 |
| 0.4T | 12.7 | 15 |
| 0.4T | 19.1 | 15 |
| 0.4T | 25.4 | 15 |

* Other sizes can be available, if required

# TH4025

## PTFE Cushion Gasket (Enveloped Gasket)
## 불소수지 쿠숀 가스켓

### Characteristic

Elastic cushion material (non-asbestos sheet) is enveloped with PTFE sheet into a gasket.

탄력있는 압축비석면판을 CUSHION재로 이용하여 PTFE로 피복한 가스켓 이다.

S type　　F type　　M type

| | |
|---|---|
| Pressure | 20kgf/cm² Max |
| Temperature | 150°C Max |

### Standard size

**JIS :** 5K, 10K　/ **ASME :** B16.5 150LB





# TH4026

## PTFE or Material Filled PTFE
## 불소수지 가공품

### Characteristic

PTFE or Teflon is especially known for its chemical inertness and resistance to a wide range of temperatures. It is used to make seals, bushings and insides of pipes.

PTFE 제품은 내약품성 및 내화학성 아주 우수하여 여러 산업분야에 널리 적용되고 있다. 각종 밸브,기계구조물, 정밀기계장치 등에 주로 사용되며 기계가공성이 우수하여 아주 정밀한 제품도 가공이 가능함.

| | |
|---|---|
| Density | 2.2 ~ 2.3 g/cm³ |
| Temp. (°C) | -200 ~ 200 |
| PH | 0~14 |

# TH4027

## PTFE Solid Gasket
## 불소수지 솔리드 가스켓

### Characteristic

PTFE sheet is made into cut gasket. Carbon, glass or other filler material can be used for special service area.

불화에틸렌수지로 성형한 PTFE SHEET를 소정의 평면상으로 가공한 가스켓이다. 내부 충진제로 Carbon과 Glass 등을 사용하면 사용범위를 한층 더 넓힐 수 있다.

| | |
|---|---|
| Pressure | 20kg/cm² Max |
| Temperature | 100°C Max |

# TH4028

## PTFE Serration Gasket
## 불소수지 톱니형 가스켓

### Characteristic

Developed in place of PTFE GASKET and added Serration to the friction surface of the product. This can be available for enough pressure.

일반 PTFE GASKET의 문제점인 Creep문제를 개선하기 위해 가스켓 마찰면에 Serration을 추가하여 만든 제품임.

| | |
|---|---|
| Pressure | 20kgf/cm² Max |
| Temperature | 150°C Max |

# TH4029 Series

## Special PTFE Sheet & Gasket 불소수지 가스켓

### 1) SOFT PTFE

Cryogenic Test

**Characteristic**

This sheet is made of 100% expanded PTFE with multidirectional orientation of the very soft material with high elasticity and adaptability, and can seal uneven and damaged flanges. TH4029 has got the universal chemical resistance and the long shelf life of PTFE.

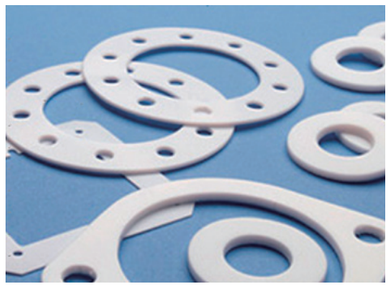
**Typical Physical Properties**

| | |
|---|---|
| Color | White |
| Density | 0.75 g/cm³ ~ 0.85g/cm³ |
| Compressibility(ASTM F-36) | 50% ~ 60% |
| Recover (ASTM F-36) | 9% ~ 12% |
| Gas permeability (DIN 3535-6) | 0.01 ml/h |
| Maximum Service Pressure | 40Kg/cm² |
| Maximum Service Temp. | -196℃ ~ 260℃ |

**Standard size**

1500mm x 1500mm x 3.0T / 1500mm x 1500mm x 1.5T
(Tolerance : Thickness ±10% , Length & Width ±50mm)

### 2) GLASS FILLED PTFE



**Design data**

| | |
|---|---|
| Min. design seating Stress (y) | 1.5T : 1700psi<br>3.0T : 3000psi |
| Gasket factor(m) | 1.5T : 3.0<br>3.0T : 2.5 |

**Characteristic**

This is very special PTFE gasket that is reinforced with 15%~25% glass material. To improve Cold-Flow phenomenon as the Week point of PTFE gasket.

**Typical Physical Properties**

| | |
|---|---|
| Color | White |
| Density | 2.10 g/cm³ ~ 2.25g/cm³ |
| Tensile strength(ASTM 152) | 12~14MPa |
| Compressibility(ASTM F-36) | 25% ~ 40% |
| Recover (ASTM F-36) | >30% |
| Gas permeability (DIN 3535-6) | 0.01 ml/h |
| Pressure range<br>Temperature range | 0 ~120psi<br>-200℃ ~ 260℃ |

**Standard size**

1500mm x 1500mm x 3.0T / 1500mm x 1500mm x 1.5T
(Tolerance : Thickness ±10% , Length & Width ±50mm)

*NOT AVAILABLE WITH MAXIMUM TEMP. & PRESSURE AT THE SAME TIME.





# TH4030

## PTFE joint sealant PTFE 조인트 실란트


**Heat-Resistant**

Joint Sealant can be used on the wide range of temperature from -200°C to + 260°C.

-200℃에서 +260℃의 넓은 온도 범위에서 사용할 수 있다.

**Characteristic**

Joint Sealant is a PTFE product by a new method and is safe even under a severe corrosive environment and is a versatile gasket that can seal simply and economically.

조인트 실란트는 새로운 방법에 의해 만들어진 불화에틸렌수지 제품으로서 부식이 매우 심한 조건에서도 안전하며 간편하고 경제적으로 밀봉 역할을 할 수 있는 만능 가스켓.

# TH4032 Series

## Rubber Sheet & Gasket 고무시트 가스켓

**Applications**

| Maximum Service temp. | Depending on elastomer used. |
|---|---|
| Maximum service Pressure | 10Kgf/Cm2 (150psi) |
| Material | NR,NBR,CE,EPDM, SBR, NBR, Viton, Silicon |
| Size | 0.8mm(1/32") , 1.5mm(1/16") , 3.0mm(1/8") |

* Other sizes can be available, if required

| TH Code | Material | Typical properties | Temperature Range | Haedness (shore A) |
|---|---|---|---|---|
| TH4032 | Silicon Rubber | Excellent in haet,cold & chemical resistance | Min. : -70°C<br>Max. : 250°C | 60±5 |
| TH4033 | Natural Rubber | Excellent mechanical properties | Min. : -40°C<br>Max. : 100°C | 60±5 |
| TH4034 | Neoprene-CR Rubber | Excellent weather, ozone, heat & flame resistance | Min. : -40°C<br>Max. : 120°C | 60±5 |
| TH4035 | NBR | Excellent oil resistance | Min. : -40°C<br>Max. : 120°C | 60±5 |
| TH4036 | EPDM | Excellent ageing zone resistance | Min. : -50°C<br>Max. : 150°C | 60±5 |
| TH4037 | SBR | Excellent ageing & abrasion resistance | Min. : -40°C<br>Max. : 120°C | 60±5 |
| TH4038 | Viton(FPM) | Superior in heat, oil & chemical resistance | Min. : -20°C<br>Max. : 200°C | 60±5 |
| TH4041 | Red Rubber | Special order specification | Min. : -40°C<br>Max. :120°C | 60±5 |
| TH4042 | EPDM Low stress | Water, Mild acids and caustics resistance | Min. : -40°C<br>Max. :150°C | 65±5 |

# TH4039

## Steel Rubber Gasket Type-A 강철고무 가스켓 A

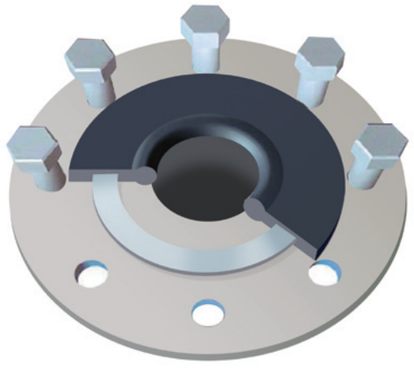
Steel Rubber Gasket consist of the metal core inside of Rubber gasket and the rubber rib of inner diameter part and it performs high sealing effect under high pressure & high bolt load condition.
This gasket is manufactured by molding of Metal Inserted Rubber and It has excellent solidity and dimension stability.
It is available in a customer selection material and not only standard sizes such as ASME, DIN, JIS, AWWA etc. but also special specification such as small & big size and customer's request.

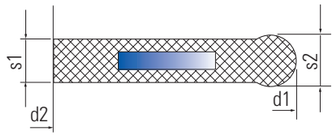
강철고무가스켓은 고무가스켓의 안쪽에 메탈코어와 내부직경부분의 고무립(골)으로 구성되고, 고압과 높은 볼트로드 상태에 높은 씰링효과를 보입니다. 이 가스켓은 고무가 들어간 금속의 성형에 의해 제작되고 우수한 내구성과 치수안정성을가지고있습니다. 고객 선택재질에 유용하고 ASME, DIN, JIS, AWWA 등의 표준규격뿐만 아니라 크고작은 사이즈와 고객요청등 특수한 사양으로도 이용가능합니다.

* Rubber Hardness: Shore "A" - #75

# TH4039

## Steel Rubber Gasket Type-B 강철고무 가스켓 B






### Characteristic

TH4039 Type B rubber-steel gasket consists of a carbon steel ring which is completely in rubber.
Thus the steel ring is protected against corrosion and media. As a result of the vulcanization high adhesion in guaranteed between the rubber and Steel ring.

### Typical applications

- Plastic and glass-fibre reinforced flange joints
- Sealing vacuum-operated pipeline systems in the chemical industry
- Gas and drinking water supplies
- Sealing torsionally soft flanges

### Design data

| Min. design seating stress | y | 200 psi |
|---|---|---|
| Gasket factor | m | 1.00 |

| | | | |
|---|---|---|---|
| A | B | C | |
| D | E | The shape can be changed accoraing to customer's requirement | |





# TH4040

## E-FLON Gasket

### Characteristic

The self centering gasket offers superior sealing for hazard media at low bolt torque. The totally bonded elastomer and Teflon construction is ideally suited for fiberglass, glass lined and steel flanges. These gaskets will virtually eliminate cracked flanges, reducing your installation cost, while maintaining a high performance seal.

### Applications

| Service temp. | -40°C ~ 150°C |
|---|---|
| Max. Pressure | 20Kgf/Cm² (300psi) |
| Material | EPDM , PTFE |
| Applied size | ASME / JIS / KS / DIN |

# TH4050 Series

## Insulation Kit

## TH 4050 IGFR

### Applications

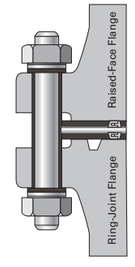
| | |
|---|---|
| Compressive Strength | 50,000 PSI |
| Dielectric Strength | 750~800 VPM |
| Max. Continuous Operating Temp | 150°C (302°F) |
| Min. Continuous Operating Temp | (minus)-180°C |
| Water Absorption | 0.1% |
| Flexural Strength | 65,000 PSI |
| Tensile Strength | 45,000 PSI |
| Bond Strength | 2,600 LB |
| Shear Strength | 22,000 LB |

### Characteristic

- H²S Service • High pressure glanges
- Critical service applications • High pH Service
- Locations where one prefers an integral seal element
- Amore convenient spiral-wound type gasket replacement

### Two primary cross-section of TAEHWA IGFR

1) 1/2" thru 72" = 0.245"(0.250" nominal)
   for all flange types include RTJ
2) API 10,000 PSI = 0.250"




### Component of IGFR

- Core material : SS316/SS316L
- Reinforced Laminate : GRE
- Sealing material : PTFE with Spring Energized

| Gasket Type | Pheonolic RTJ | Comp. Sheet (PTFE) | Rubber Faced Phenolic | Spring Energized Steel Core |
|---|---|---|---|---|
| Thermal Cycling | × | × | ★ | ★ |
| Resist Creep | × | × | ★ | ★ |
| Temp. | × | ★ | × | ★ |
| High Pressure | × | × | × | ★ |
| Active Sealing | × | × | × | ★ |
| Extreme Service | × | × | × | ★ |

# TH4050 Series

## Insulation Kit

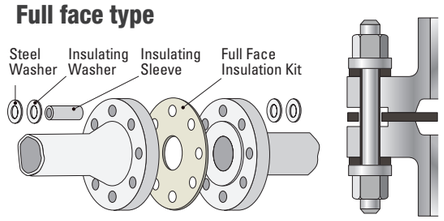
**TH 4050E Full face type**
**TH 4050F Raised face type**
**TH 4050D RTJ type**

### Characteristic

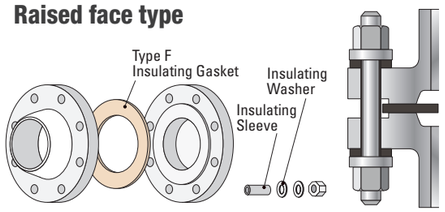
Our flange insulation gaskets and Insulation kits are used throughout the world in numerous industry specific applications. These products have proven highly effective and reliable for controlling and maintaining the integrity of piping systems even under the most demanding conditions.

Flange insulation materials are usually sold in kits, which include gasket materials available in Phenolic
Neoprene-faced Phenolic, PTFE, glass reinforced Epoxy.
Gaskets can be made from special materials upon request, Based on sufficient quantities and lead times.

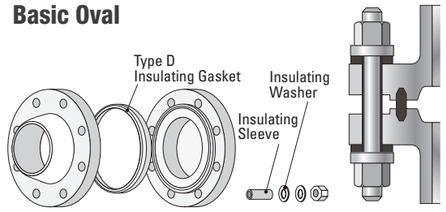
### Full face type




### Raised face type




### Basic Oval




### Insulation Material

| Items | Material | Max. Temp. (°C) | Thick. |
|---|---|---|---|
| Insulation Gasket | PTFE | 180 | 3.0T~3.2T |
| | Rubber | 130 | |
| | Mica | 900 | |
| | Neoprene faced phenolic | 130 | |
| | Glass reinforced Epoxy with rubber seals | 180 | |
| Insulation Sleeve | Phenolic glass | 130 | 0.8T~1.0T |
| | Epoxy glass | 180 | |
| | PTFE | 180 | |
| Insulation Washer | Phenolic glass | 130 | 3.0T |
| | PTFE | 180 | |
| | Epoxy glass | 180 | |

### Insulation Resistance(Ω)

| Test Method | Material | Insulation Resistance |
|---|---|---|
| ASTM D257-07 | Glass Reinforced(G10) | Over 2.0X1013 |
| | Phenolic | 2.2X108 |
| | PTFE | Over 2.0X1013 |
| | Mica | 9.9X1010 |

* Steel washer , Nut , Bolt
Special materials can be available as customer requirements.



# Semi-Metallic & Metallic Gasket

# TH4060 Series

## Spiral Wound Gasket 스파이럴형 가스켓

### Characteristic

A spiral-type gasket is an ideal type among other semi-metal gaskets. The V-shaped metal plate and non-metal fillers are overlapped, and they are wrapped into the spiral pattern and the two ridges are soldered together. As it is consisted of flexible metal and smooth filler, it has the following excellent gasket functions:

- To be used for high pressure and high temperature
- Automatically adjusts to the changes of the pressure, temperature and vibration.
- It has excellent sealing capability compared to the size.
- It has an excellent sealing capability on the irregular flange surface.
- Any shape of size is available with reasonable price.
- Hoop and filler materials can be selected according to the special operation conditions.

스파이럴형 가스켓은 세미메탈 가스켓 중 가장 이상적인 타입으로서 V자형의 금속재의 얇은 판과 비금속 재료인 Filler를 겹쳐나선형으로 감아 양골을 용접하여 제작한 가스켓이다. 탄력있는 금속과 유연한 Filler로 이루어진 독특한 구조로 아래와 같은 우수한 가스켓 기능을 가지고 있다.

* 고온 및 고압에 사용가능
* 압력,온도,진동등 운전조건의 변화에 자동적으로 적응하는 능력이 우수
* 치수에 비해 우수한 씰성을 발휘
* 불균일한 플랜지면에서도 뛰어난 씰성

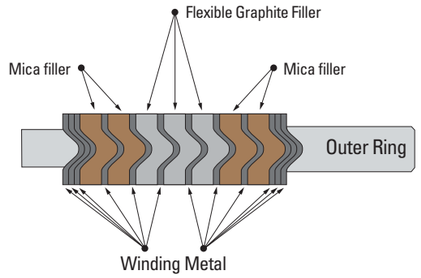
| Cross section | Type | Standard |
|---|---|---|
|  | **TH4060** \| Basic Type<br>Suitable for tongue and groove, male<br>And female or grooved to flat face flange assemblies | JIS B2404<br>JPI 7S-41 |
|  | **TH4061** \| With Inner Ring Type<br>Suitable for male and female pipe flange | JIS B2404<br>JPI 7S-41 |
|  | **TH4062** \| With Outer Ring Type<br>It is very easy to install the gasket to flange face because the end of outer ring will touch at bolts. Suitable use with flat face and raised face flanges. | JIS B2404<br>JPI 7S-41<br>ASME B16.20<br>EN-1514-2 |
|  | **TH4063** \| With Inner & Outer Ring Type<br>A inner ring and outer ring type gasket will give an additional compression limiting stopper for gasket inner and outer side. | JIS B2404<br>JPI 7S-41<br>ASME B16.20<br>EN-1514-2 |

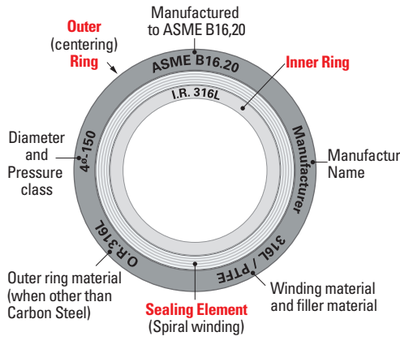




# TH4064

## FSG Gasket 고온용 스파이럴형 가스켓




### Characteristic

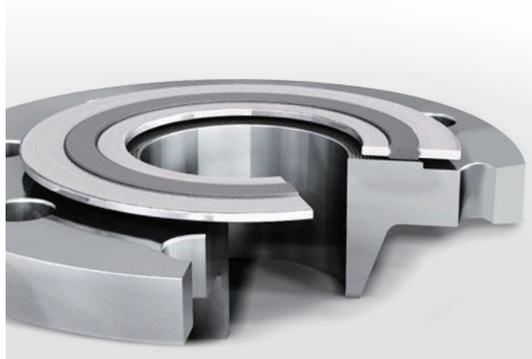
TH4064-FSG Spiral wound gasket for heat shield in outstanding fire resistance . Combination of graphite filler and mica layers give superior fire safety. Layers of pure mica protect graphite filler and resist oxidation, It is a good choice for plant steam drums, hydrocarbon, hydrogen unit, and exhaust manifoldsoperation conditions.

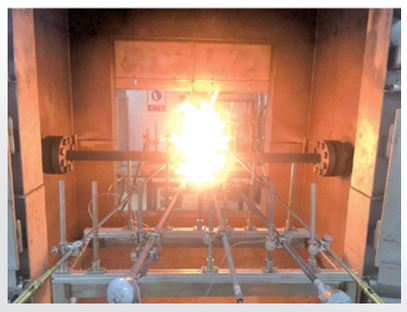
| | |
|---|---|
| Temperature Max | 700°C |
| Flange class | 150lb to 600lb |

| Part | Material | Thick |
|---|---|---|
| Inner Ring | 304SS,316LSS,347SS Others | 2.95mm-3.2mm |
| Hoop | 304SS,316LSS,347SS Others | 0.15mm-0.2mm |
| Filler | Graphite, Non-Asbestos , Mica | 0.38mm-0.6mm |
| Outer Ring | 304SS,316LSS,347SS Others | 2.95mm-3.2mm |

### Standard sizes

| Min. design seating stress Kgf/mm² | Y | 7.03 |
|---|---|---|
| Gasket factor | m | 3.00 |



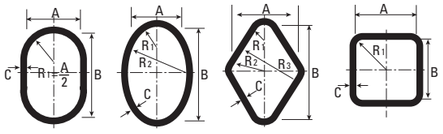


Fire Test / API 607

After Fire Test

# TH4065

## Manhole Type Gasket 특수형 가스켓



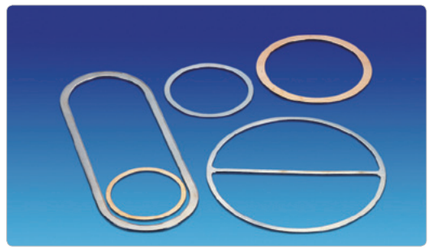

TRACK TYPE OVAL TYPE DIAMOND TYPE SQUARE TYPE

TH4065 Gaskets are designed and manufactured to have the shapes and dimensions for 150LBS~2500LBS to be used for boiler manhole, hand hole, and valve bonnet cover.

TH4065 가스켓은 보일러 맨홀 및 핸드홀, 밸브 본네트 덮개용으로 150LBS ~2500LBS 압력하에 요구된 형상 및 치수로 제작 설계된다.

# TH4070

## Double Jacketed Gasket 금속피복형 가스켓



Various shapes of heat exchanger gaskets

It is a product containing a non-metallic filling material in a thin metal material, and is mainly used for heat exchangers.
The operating temperature is determined according to the type and specification of metallic materials and non-metallic filling materials.

얇은 금속 재료에 비금속 충진 재료를 넣은 제품으로 열교 환기에 주로 사용된다. 금속재료, 비금속 충진 재료 종류 및 사양에 따라 사용온도가 결정된다.

| | |
|---|---|
| Temperature Max | 530°C |
| Pressure Max | 60kgf/cm² |

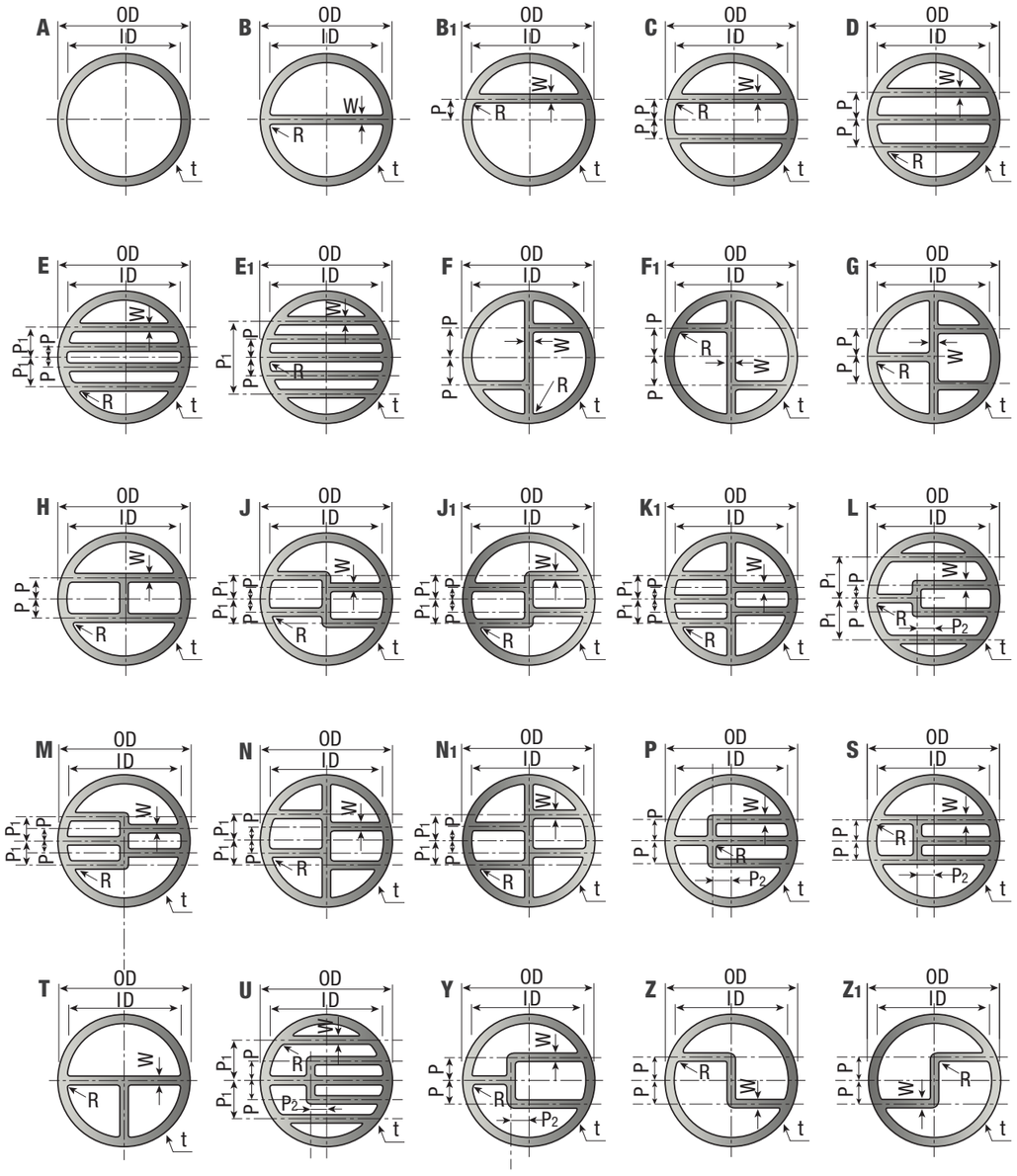
### Various shapes of heat exchanger gaskets

| Type | Cross Section | Materials | | | |
|---|---|---|---|---|---|
| Double Jacketed Gasket | | Non-asbestos | Graphite | PTFE | Ceramics |
| Double Shell Gasket | | Non-asbestos | Graphite | PTFE | Ceramics |
| Corrugated Gasket | | Non-asbestos | Graphite | PTFE | Ceramics |
| French Type Gasket | | Non-asbestos | Graphite | PTFE | Ceramics |
| Double Jacketed Gasket with Graphite Tape | | Non-asbestos | Graphite | PTFE | Ceramics |



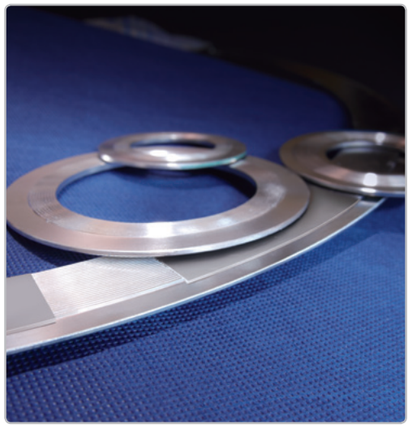


## Type of Double Jacketed Gasket 금속피복형 가스켓 형상



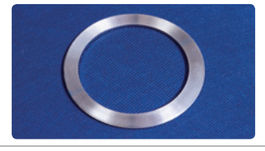
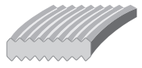
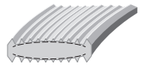
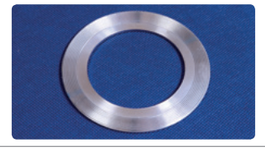
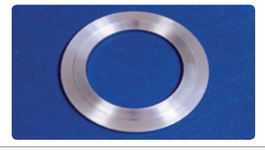
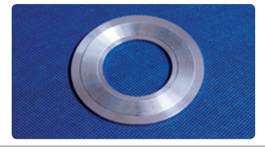
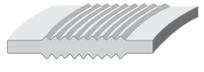
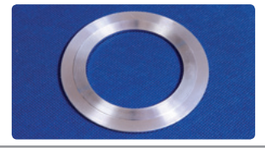
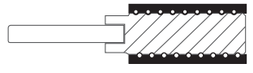
# TH4072~TH4076

## Kammprofile Gasket 톱니형 금속 가스켓



Serrated Metal Gasket is normally called Kammprofile Gasket and widely used on High pressure & high temperature plumbing flanges and is ideal for the pressure vessels, heat exchangers and Valve bonnet. Serrated Metal Gasket has smaller contact area and has excellent sealing effect with lower torque than Flat Metal gasket, however, it may occur flange damages it the hardness of Flange & Gasket is same or the difference of the hardness between Flange & Gasket is very little. In this reason, Soft Graphite, PTFE, or Non-asbestos layer can be attached on the surface of serrated matal gasket and it prevent Flange damages & enlarges sealing efficiency.

톱니모양 금속 가스켓은  일반적으로 캠프로파일 가스켓으로 불리며, 고압과 고온 배관 플랜지에 넓게 사용되고, 압력용기, 열교환기와 밸브 보닛에 이상적이다. 톱니모양 금속가스켓은 비교적 작은 접촉면을 가지고 판모양 금속가스켓 보다 낮은 토르크로 우수한 씰링 효과를 나타내는 제품이다. 하지만 플랜지와 가스켓의 경도가 같거나 비슷한 겨우 플랜지의 손상을 일으킬 수 있다. 이런 이유로 소프트 그라파이트, 테프론 또는 비석면 계열 제품 등이 톱니모양 금속가스켓의 표면에 첨가되어져서 플랜지 손실을 막고, 씰링효과를 극대화 시킬 수 있다.

| TH Code | | Parallel Type | Convex Type | |
|---|---|---|---|---|
| TH4072 |  |  |  | Without Collar **C** |
| TH4073 |  |  |  | Inner Collar **CI** |
| TH4074 |  |  |  | Outer Collar **OC** |
| TH4075 |  |  |  | In & Outer Collar **OCI** |
| TH4076 |  |  | | Loose Outer Ring |





# Properties of Kammprofile Gasket 톱니형 금속 가스켓의 특성

### Kammprofile Gasket Factor

| Cross-Section | Material of Layer | m | Unit(psi) |
|---|---|---|---|
| C<br>OC<br>CI<br>OCI | PTFE | 2.25 | 2,900 |
| | Graphite | 2.25 | 2,900 |
| | Non-Asbestos | 2.25 | 5,800 |
| | Mica | 2.25 | 5,800 |

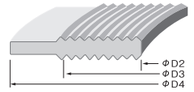
### Applicable Max. Temperature of Metal Core

| Material | Max. Temperature(℃) |
|---|---|
| Soft iron | 500 |
| 5Cr-0.5Mo | 650 |
| SS 304 | 550 |
| SS 316 | 550 |
| SS 316L | 550 |
| SS 321 | 550 |
| SS 347 | 550 |
| Aluminum | 300 |
| Copper | 300 |
| Monel | 600 |
| Nickel | 600 |
| Titanium | 1,090 |
| Inconel 600 | 600 |
| Incoloy 800 | 850 |
| Hastelloy | 1,090 |
| Brass | 350 |

### Applicable Max. Temperature & Pressure of Metal Core

| Cross-Section | Material of Layer | Unit(psi) |
|---|---|---|
| Graphite | 650 | 250 |
| PTFE | 250 | 100 |
| Non-Asbestos | 200 | 100 |
| Mica | 1,000 | 40 |

### Kammprofile Gasket Dimension

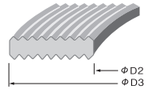



Standard Sizes
Kammprofile Gasket with Outer Collar for ASME B16.5 Pipe Flanges.

Dimensions in mm

| NPS | ØD2 | ØD3 | ØD4 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 150# | 300# | 600# | 900# | 1500# | 2500# |
| 1/2″ | 23 | 33 | 48 | 54 | 54 | 63 | 64 | 70 |
| 3/4″ | 29 | 40 | 57 | 67 | 67 | 69 | 70 | 76 |
| 1 | 37 | 48 | 67 | 73 | 73 | 79 | 80 | 86 |
| 1 1/4″ | 44 | 60 | 76 | 83 | 83 | 88 | 89 | 105 |
| 1 1/2″ | 52 | 70 | 86 | 95 | 95 | 98 | 99 | 118 |
| 2″ | 70 | 89 | 105 | 111 | 111 | 142 | 143 | 146 |
| 2 1/2″ | 83 | 102 | 124 | 130 | 130 | 165 | 165 | 168 |
| 3″ | 98 | 124 | 137 | 149 | 149 | 168 | 175 | 197 |
| 4″ | 124 | 154 | 175 | 181 | 194 | 207 | 210 | 235 |
| 5″ | 151 | 183 | 197 | 216 | 241 | 248 | 254 | 279 |
| 6″ | 178 | 213 | 222 | 251 | 267 | 289 | 283 | 318 |
| 8″ | 229 | 267 | 279 | 308 | 321 | 359 | 353 | 387 |
| 10″ | 283 | 321 | 340 | 362 | 400 | 435 | 435 | 476 |
| 12″ | 340 | 378 | 410 | 422 | 457 | 499 | 521 | 549 |
| 14″ | 372 | 410 | 451 | 486 | 492 | 521 | 578 | - |
| 16″ | 422 | 467 | 514 | 540 | 565 | 575 | 641 | - |
| 18″ | 479 | 530 | 549 | 597 | 613 | 638 | 705 | - |
| 20″ | 530 | 581 | 607 | 654 | 683 | 699 | 756 | - |
| 24″ | 632 | 683 | 718 | 775 | 791 | 838 | 902 | - |

Metal Core : 3.0t, Layer : 0.5t




Standard Sizes
Kammprofile Gasket basic type for ASME B16.5 Pipe Flanges.

Dimensions in mm

| NPS | Large Male & Female | | | | Large Tongue & Groove | | Small Tongue & Groove | |
|---|---|---|---|---|---|---|---|---|
| | Class 150~1500 | | Class 2500 | | Class 150~1500 | | Class 2500 | |
| | ØD2 | ØD3 | ØD2 | ØD3 | ØD2 | ØD3 | ØD2 | ØD3 |
| 1/2 | 25.4 | 35.1 | 20.6 | 35.1 | 25.4 | 35.1 | 25.4 | 35.1 |
| 3/4 | 33.3 | 42.9 | 27.0 | 42.9 | 33.3 | 42.9 | 33.3 | 42.9 |
| 1 | 38.1 | 50.8 | 31.8 | 50.8 | 38.1 | 50.8 | 38.1 | 47.8 |
| 1 1/4 | 47.6 | 63.5 | 41.3 | 63.5 | 47.8 | 63.5 | 47.8 | 57.2 |
| 1 1/2 | 54.0 | 73.2 | 47.6 | 73.2 | 53.8 | 73.2 | 53.8 | 63.5 |
| 2 | 73.0 | 91.9 | 60.3 | 91.9 | 73.2 | 91.9 | 73.2 | 82.6 |
| 2 1/2 | 85.7 | 104.6 | 76.2 | 104.6 | 85.9 | 104.6 | 85.9 | 95.3 |
| 3 | 108.0 | 127.0 | 95.3 | 127.0 | 108.0 | 127.0 | 108.0 | 117.3 |
| 3 1/2 | 120.7 | 139.7 | - | - | 120.7 | 139.7 | 120.7 | 130.0 |
| 4 | 131.8 | 157.2 | 120.7 | 157.2 | 131.8 | 157.2 | 131.8 | 144.5 |
| 5 | 160.3 | 185.7 | 146.1 | 185.7 | 160.3 | 185.7 | 160.3 | 173.0 |
| 6 | 190.5 | 215.9 | 171.5 | 215.9 | 190.5 | 215.9 | 190.5 | 203.2 |
| 8 | 238.1 | 269.7 | 222.3 | 269.7 | 238.3 | 269.7 | 238.3 | 254.0 |
| 10 | 285.8 | 323.9 | 273.1 | 323.9 | 285.8 | 323.9 | 285.8 | 304.8 |
| 12 | 342.9 | 381.0 | 330.2 | 381.0 | 342.9 | 381.0 | 342.9 | 362.0 |
| 14 | 374.7 | 412.8 | - | - | 374.7 | 412.8 | 374.7 | 393.7 |
| 16 | 425.5 | 469.9 | - | - | 425.5 | 469.9 | 425.5 | 447.5 |
| 18 | 489.0 | 533.4 | - | - | 489.0 | 533.4 | 489.0 | 511.0 |
| 20 | 533.4 | 584.2 | - | - | 533.4 | 584.2 | 533.4 | 558.8 |
| 24 | 641.4 | 692.2 | - | - | -641.4 | 692.2 | 641.4 | 666.8 |

Metal Core : 3.0t, Layer : 0.5t

# TH4080~TH4086 Ring Type Joint Gasket 링타입 조인트 금속가스켓

## Characteristic

The RTJ standard size gaskets are manufactured in accordance to ASME B16.20 specifications. Total control of manufacturing processes ensures correct gasket surface and hardness to give a good seal without damaging flange connections. The hardness of the ring should always be less than the hardness of the flanges to prevent flanges deformation. The sealing shrfaces on the ring joint grooves must be smoothly finished to 63 micro inches.

R octagonal | Type R oval | Type RX | Type BX

**TH4080R Octagonal**

Octagonal and Oval configuration are interchangeable on flat-bottomed groove flanges that have a 23º angle groove wall.

**TH4080 Oval**

An oval ring joint flange that was designed for a flange that is now out of producting. This flange had a rounded bottom ring groove. Oval and octagonal configurations are interchangeable on flat-bottomed groove flanges that have a 23º angle groove wall.

**TH4081 RX**

RX is a gasket designed for pressures up to appros. 700bar.
This is a self-sealing gasket that used a pressure-engrgised effect, which improves the efficiency of the seal as the pressure rises. The RX series is interchangeable with the R series.

**TH4082 BX**

BX is a gasket esigned for very high pressures up to approx. 1,500bar. These rings may only be used is connection with API type BX flanges and grooves. The BX ring has a through horizontal hole that acts as a pressure equaliser.

**TH4083 BRIDGEMAN**

These are very unique full-pressure type gaskets. These are designed by the principle of non-supported are of Bridgeman. Gasket are designed to close by pressure on the flat head.

**TH4084 DELTA**

These gaskets are manufactured by the special design by the customers.
There is no standard design is being used.

**TH4085 LENS RING**

These types are full-pressure type gasket. These ate used for the flange that has the cross-section simiar with a conves lens and 20ºcorn. Thses gasket are used for round cross-sections.

**TH4086 SOLID METAL**

Flat ring punched or lathed form comparatively soft metal such as alumium, coppre, etc. Relatively inexpensive to make.





# Properties of Ring Type Joint Gasket 링 타입 조인트 금속가스켓의 특성

## Hardness for material

| Material | Ident. Code | Brinell | Rockwell scale-B | UNS Code |
|---|---|---|---|---|
| Soft Iron | D | 90 | 56 | - |
| Low Carbon Steel | S | 120 | 68 | - |
| Copper | CU | 60 | - | - |
| 304SS | 304 | 160 | 83 | S30400 |
| 304LSS | 304L | 150 | 81 | S30403 |
| 316SS | 316 | 160 | 83 | S31600 |
| 316LSS | 316L | 150 | 81 | S31603 |
| 321SS | 321 | 160 | 83 | S32100 |
| 347SS | 347 | 160 | 83 | S34700 |
| 410SS | 410 | 170 | 87 | S41000 |
| 430SS | 430 | 170 | 87 | S43000 |
| 5Cr-0.5Mo | F5 | 130 | 72 | K42544 |
| Monel 400 | M400 | 140 | 77 | N04400 |
| Titanium | TI | 160 | 83 | - |
| Aluminium | AL | 40 | - | - |
| Nickel200 | NI | 120 | 67 | N02200 |

## RTJ type R, selection table

| ASME-ANSI | ISO | 150# PN20 | 300/600# PN50/ PN100 | 900# PN150 | 1500# PN250 | 2500# PN420 |
|---|---|---|---|---|---|---|
| 1/2″ | 15 | | R 11 | R 12 | R 12 | R 13 |
| 3/4″ | 20 | | R 13 | R 14 | R 14 | R 16 |
| 1″ | 25 | R 15 | R 16 | R 16 | R 16 | R 181 |
| 1 1/4″ | 32 | R 17 | R 18 | R 18 | R 18 | R 21 |
| 1 1/2″ | 40 | R 19 | R 20 | R 20 | R 20 | R 23 |
| 2″ | 50 | R 22 | R 23 | R 24 | R 24 | R 26 |
| 2 1/2″ | 65 | R 25 | R 26 | R 27 | R 27 | R 28 |
| 3″ | 80 | R 29 | R 31 | R 31 | R 35 | R 32 |
| 3 1/2″ | 90 | R 33 | R 34 | | | |
| 4″ | 100 | R 36 | R 37 | R 37 | R 39 | R 38 |
| 5″ | 125 | R 40 | R 41 | R 41 | R 44 | R 42 |
| 6″ | 150 | R 43 | R 45 | R 45 | R 46 | R 47 |
| 8″ | 200 | R 48 | R 49 | R 49 | R 50 | R 51 |
| 10″ | 250 | R 52 | R 53 | R 53 | R 54 | R 55 |
| 12″ | 300 | R 56 | R 57 | R 57 | R 58 | R 60 |
| 14″ | 350 | R 59 | R 61 | R 62 | R 63 | |
| 16″ | 400 | R 64 | R 65 | R 66 | R 67 | |
| 18″ | 450 | R 68 | R 69 | R 70 | R 71 | |
| 20″ | 500 | R 72 | R 73 | R 74 | R 75 | |
| 22″ | 550 | R 80 | R 81 | | | |
| 24″ | 600 | R 76 | R 77 | R 78 | R 79 | |
| 26″ | 650 | | R 93 | R 100 | | |
| 28″ | 700 | | R 94 | R 101 | | |
| 32″ | 800 | | R 96 | R 103 | | |
| 30″ | 750 | | R 95 | R 102 | | |
| 34″ | | | R 97 | R 104 | | |
| 36″ | | | R 98 | R 105 | | |

## RTJ type BX, selection table

| Nom Dia | 2000 | 3000 | 5000 | 10000 | 15000 | 20000 |
|---|---|---|---|---|---|---|
| 1 11/16″ | | | | BX 150 | BX 150 | |
| 1 13/16″ | | | | BX 151 | BX 151 | BX 151 |
| 2 1/16″ | | | | BX 152 | BX 152 | BX 152 |
| 2 9/16″ | | | | BX 153 | BX 153 | BX 153 |
| 3 1/16″ | | | | BX 154 | BX 154 | BX 154 |
| 4 1/16″ | | | | BX 155 | BX 155 | BX 155 |
| 5 1/8″ | | | | BX 169 | | |
| 6 15/8″ | | | | BX 170 | BX 170 | |
| 7 1/16″ | | | | BX 156 | BX 156 | BX 156 |
| 8 9/16″ | | | | BX 171 | BX 171 | |
| 9″ | | | | BX 157 | BX 157 | BX 157 |
| 11″ | | | | BX 158 | BX 158 | BX 158 |
| 11 5/32″ | | | | BX 172 | BX 172 | |
| 13 5/8″ | | | BX 160 | BX 159 | BX 159 | BX 159 |
| 16 3/4″ | | | BX 161/162 | BX 162 | BX 162 | |
| 18 3/4″ | | | BX 163 | BX 164 | BX 164 | |
| 21 1/4″ | | | BX 165 | BX 166 | | |
| 26 3/4″ | BX 167 | BX 168 | | | | |
| 30″ | BX 303 | BX 303 | | | | |

# TH4087

## Corrugated Gasket 파형 금속가스켓

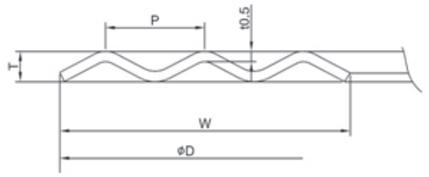
### Characteristic

The TH4087 corrugated metal gasket is provided by machining pitch grooves in various metal materials. In addition, compressible sealing elements such as graphite, PTFE, and mica can be laminated on the metal core.

TH4087 파형 금속개스킷은 다양한 금속재료에 피치 홈을 가공하여 제공한다. 게다가 금속코어에 흑연, PTFE, 운모와 같은 압축성 밀봉요소를 적층 할 수 있다.

### Design data

| | |
|---|---|
| Min. Design Seating Stress “y”(psi) | 3700 |
| Gasket factor “m” | 2.75 |




| Nominal Diameter | Pitch(P) | Thickness (T) |
|---|---|---|
| Ø165 or less | 3 | 1.0-1.3 |
| Ø165 to Ø600 | 4 | 1.0-1.3 |
| Over Ø600 | 6 | 1.0-1.3 |

### Typical Physical Properties

| | |
|---|---|
| Short-term peak Pressure | 100kg/cm² Max. |
| Short-term peak Temp. | -165~520˚C Max. |
| PH range | 0-14 |

### Technical data

| Description | Unit | Value |
|---|---|---|
| Compressibility | % | 20-40 |
| Recovery | % | 20-35 |
| Gas Permeability | cc/min | ≤0.01 |



# Gland Packing & Insulation Product

# TH5001~TH5004 Non-Asbestos Gland Packing 비석면 그랜드 패킹

## TH5001

### PTFE Fiber Packing 테프론 섬유패킹

Pure PTFE Fiber yarns of excellent chemical resistance and durability into square cross sections. This product is nonlubricated.

내약품성과 내구성이 우수한 PTFE섬유로 첨단의 편조기로 제작한 유연하면서도 치밀한 조직을 가진 우수한 패킹으로 내산성밸브 및 내화학성을 요구하는 밸브에 사용된다.

## TH5002

### Lubricated PTFE Fiber Packing 윤활유입 테프론 섬유 패킹

Pure PTFE fiber yarns, impregnated with PTFE Dispersion and a special heat-resistant lubricating oil are braided into square cross sections. It has execllent abrasion resistance and extraordinary mechanical strength and is suitable for high speed pumps of almost all chemicals.

PTFE섬유에 PTFE분산액과 내열성 특수 윤활제를 함침시켜 편조한 제품으로 내마모성과 기계적 강도가 우수한 제품이며 최첨단 편조기로 제작한 패킹으로 모든 화학품의 펌프와 오염을 피하는 부위에 사용된다.

## TH5003

### Graphite PTFE Fiber Packing 흑연입 테프론 섬유 패킹

Graphite filled PTFE fiber an advanced material that disperses very small and good quality graphite is braided with PTFE. This packing combines the heat-resistance and low frictions of highly purified of graphite with the chemical resistance of PTFE so as not to cause damage to the revolving shaft.

PTFE에 고순도 흑연, 특수윤활제를 분산시켜 제조된 섬유로 편조된 패킹으로 열전도성이 좋아 수명이 길며 SLEEVE마모가 없어 매우 경제적이고 내약품성과 저마찰성의 특수한 성능을 나타내는 첨단의 패킹이다.

## TH5004

### Aramid Fiber impregnated with PTFE Packing
### 테프론 함침 아라미드 섬유 패킹

Aramid fibers impregnated with PTFE dispersion and treated with a special heat-resistant lubricating oil, are braided into square cross sectins. It's outstanding tensile strength and malleability contribute to its long life.

아라미드섬유에 PTFE 분산액과 특수윤활유를 처리한 패킹으로 강철보다 고인장이므로 이송하는 유체내의 슬러지가 많아 패킹 조직이 쉽게 파괴되어 자주 교환해야하는 부위에 사용하면 좋은 효과를 나타낼 수 있는 패킹이다.





# TH5005~TH5009-1 Non-Asbestos Gland Packing 비석면 그랜드 패킹

## TH5005

### Carbonized Fiber Packing impregnated with PTFE
### 테프론 함침 탄화섬유 패킹

This packing is made by saturating strong carbonized fibers with PTFE Dispersion solvent and them elaborately with fretwork which is thermally and chemically stable. It maintains its excellent life through the dispersion of frictional heat inside a stuffing box. The high durability of carbonized fiber increases the mechanical strength of the packng and maintains the stable efficiency of the valve.

탄화섬유를 격자편으로 편조하여 PTFE 분산액을 장시간 함침시켜 소성시킨 제품으로 내열성과 내약품성이 우수하며 열전도성이 뛰어나 수명이 길고 석면을 대체할 수 있는 제품으로 주로 밸브용으로 사용된다.

## TH5006

### Carbonized Fiber Packing impregnated with Lubrication Oil
### 윤활유입 테프론 함침 탄화섬유 패킹

This product is made by saturating(TH5005) with a special lubricant which is thermally and chemically stable in pump use. Its excellent self-lubrication and minimal damage to packing due to the frictional heat contribute to its long life.

TH5005 제품에 특수윤활제를 골고루 함침시켜 만든 제품이며 펌프용으로 사용시 내열, 내약품성이 우수하며, 자기윤활성이 뛰어나 마찰열에 의한 패킹의 손상이 적어 수명이 연장된다.

## TH5009

### Graphite Fiber Packing 그라파이트 섬유 패킹

Braided from low-sulphur expanded graphite yarns, which are reinforced by glass or cotton fiber. It has a vary low friction, does not damage shafts or stems. It shows good thermal and chemical resistance and high elasticity.

Expanded graphite yarns을 사용하여 각형으로 편조한 패킹으로, 유연성 및 신축성을 가지고 있으며, Graphite 특유의 윤활성과 열방산성이 우수하여 고온, 고압용 밸브 및 펌프류에 적합한 패킹이다.

## TH5009-I

### Graphite Fiber Packing Reinforced with wire
### 선입 그라파이트 섬유 패킹

Braided from low-sulphur expanded graphite yarns, which are reinforced with wire. It retains all the inherent benefits of TH 5009 pure graphite packing, good thermal and chemical resistance, very low strength, normal for valve with haigh pressure. Other metal materials nickel,stainless steel etc, on request.

TH 5009 제품에 금속 wire를 보강하여 물리적 특성을 향상 시킨 제품으로 고압, 고온의 밸브에 적용된다.

# TH5010~5012

## Non-Asbestos Gland Packing 비석면 그랜드 패킹

### TH5010
Carbon Fiber Packing impregnated with Graphite and Oil
윤활유입 흑연 함침 카본섬유 패킹

Braided from strong carbon comtinuous yarns after softening impregnated with proprietary lubricants and graphite particles, which fill voids, act as a break-in lubricant, and block leakage.

강인한 탄소섬유를 특수 윤활액으로 함침 처리하여 격자편으로 치밀하게 직조한 패킹으로 내열성과 강인한 내구성이 패킹의 기계적 강도를 높여 밸브 및 펌프에 안정된 성능을 지속시켜 주는 제품이다.

### TH5010-I
Carbon Fiber Packing Reinforced with wire
선입 흑연 함침 카본섬유 패킹

The wire reinforcement provides increased mechanical strength, usually for static.

TH5010 제품에 금속 Wire를 보강하여 고온,고압 밸브에 적합한 패킹 제품이다.

### TH5011
Hatch cover Packing
해치커버 패킹

PTFE Fiber which is excellent in durability against medicine, is braided to a special rubber which is excellent in elasticity. It has excellent sealing capacity even at low clamping pressure and is not easily deformed by repeated use. This packing is used exclusively for hatch cover. This a made to order packing.

탄력성이 우수한 특수고무에 내약품성이 좋은 특수섬유를 치밀하게 편조한 후 PTFE섬유로 편조하며, 각 조직별로 약품이나 해수의 침투가 되지 않게 처리하여 만든 제품으로 낮은 체부압에서도 우수한 seal성을 발휘하여 반복 사용하여도 변형이 거의 없는 HATCH COVER 전용의 패킹이다.

### TH 5012
Graphite mold ring packing
그라파이트 몰드 링패킹

Die molds seals are manufactured from pure graohite using slecial moulded tools, they are produced applications where tight dimensional tolerances are critical. The molding process creates a high-density ring providing resilience regardless of thermal excursion.

**Properties**

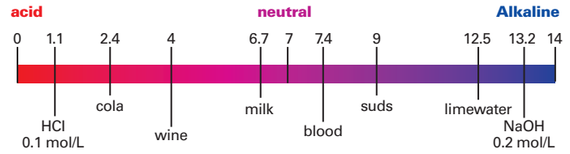
| | |
|---|---|
| Operating Temp. | -240ºC ~ 450ºC |
| Max Steam Temp. | 650ºC |
| pH | 0-14 |
| Max. Static Pressure | 350 Bar |





## Properties of Non-Asbestos Gland Packing 비석면 그랜드 패킹의 특성

| No. | Material Classification | Shaft speed | ph | Temp. | Pressure (Max) | Valve | Pistons | Centrifugal Pump | Chemicals |
|---|---|---|---|---|---|---|---|---|---|
| TH 5001 | PTFE Fiber | - | 0-14 | To 260°C | 100Kg/cm² | ○ | ○ | - | ○ |
| TH 5002 | PTFE Fiber | 10m/s | 0-14 | To 260°C | 20Kg/cm² | - | ○ | ○ | ○ |
| TH 5003 | PTFE Fiber & Graphite Fiber | 16m/s | 0-14 | To 260°C | 20Kg/cm² | ○ | ○ | ○ | ○ |
| TH 5004 | Aramid Fiber | 10m/s | 3-11 | To 260°C | 20Kg/cm² | - | ○ | ○ | - |
| TH 5005 | Carbonized Fiber | | 2-12 | To 240°C | 100Kg/cm² | ○ | - | - | - |
| TH 5006 | Carbonized Fiber | 16m/s | 2-12 | To 240°C | 15Kg/cm² | - | ○ | ○ | - |
| TH 5009 | Expended Graphite yarn | Pistons:2m/s Pump:15m/s | 0-14 | To 550°C | 250Kg/cm² | ○ 250Kg/cm² | ○ 100Kg/cm² | ○ 20Kg/cm² | ○ |
| TH 5009-I | Expended Graphite yarn & wire | | 0-14 | To 600°C | 320Kg/cm² | ○ | - | - | ○ |
| TH 5010 | Carbon Fiber | 15m/s | 2-12 | To 400°C | 20Kg/cm² | ○ | ○ | ○ | - |
| TH 5010-I | Carbon Fiber & wire | | 2-12 | To 450°C | 150Kg/cm² | ○ | - | - | - |
| TH 5011 | PTFE yarn | | 0-14 | To 100°C | | - | - | - | ○ |




# TH5300~5330 Insulation Products 단열 제품

## TH5300
### Glass Fiber Cloth
### 유리섬유 포

Textile product manufactured by spinning and braiding inorganic fibers. Excellent incombustibility and chemical resistance. Widely used in construction and industrial fields.

무기질 섬유를 방사 및 합사 공정을 통해 제작된 방직 제품이다.

불연성 및 내화학성이 뛰어나 건설 및 산업분야에 다양하게 사용된다.

## TH5310
### Glass Fiber Tape
### 유리섬유 테이프

Made in the same way as Glass Fiber Cloth. It is a product for special purposes or Made in a tape shape for easy use in a relatively narrow range.

Glass Fiber Cloth와 동일한 방식으로 제작되었으며, 특수 목적 또는 상대적으로 좁은 범위에 사용하기 편하도록 Tape 형상으로 제작된 제품이다.

## TH5320
### Ceramic Fiber Cloth
### 세라믹섬유 포

Textile product manufactured by spinning and braiding ceramic fibers. Basic heat resistance temperature is around 1000˚C, maximum use temperature is determined by the heat resistance temperature of the reinforcing material to improve the tensile strength.

세라믹 섬유를 방사와 합사 공정을 통해 제작된 방직 제품이다.

기본 내열온도는 1000℃ 내외이지만, 인장강도 향상을 위한 보강재료의 내열온도에 의해 최고 사용온도가 결정된다.

## TH5330
### Ceramic Fiber Tape
### 세라믹섬유 테이프

Made in the same way as Ceramic Fiber Cloth. It is a product for special purposes or Made in a tape shape for easy use in a relatively narrow range.

Ceramic Fiber Cloth와 동일한 방식으로 제작되었으며, 특수 목적 또는 상대적으로 좁은 범위에 사용하기 편하도록 Tape 형상으로 제작된 제품이다.





# TH5340~5370 Insulation Products 단열 제품

## TH5340
### Ceramic Paper 세라믹 페이퍼

Paper made with ceramic raw materials, magnesium hydroxide, calcium carbonate, etc. are used as raw materials, and ceramic is the main material rather than pulp. Due to its high heat resistance, Widely used in industry, construction, and packaging.

세라믹 원료를 함유시켜 제조한 종이로 수산화마그네슘, 탄산칼슘 등이 원료로 쓰이며, 펄프보다는 세라믹이 주재료가 된다. 내열도가 높아 산업, 건축, 포장재로 주로 사용된다.

## TH5350
### Ceramic Blanket 세라믹 블랑킷

Product manufactured in the form of a blanket by the needling punching method of ceramic fiber and has excellent fire resistance and insulation performance. It is not affected by most chemicals (except hydrofluoric acid, phosphoric acid and concentrated basics), and maintains heat resistance and physical properties even when contaminated with oil and water. Mainly used as insulation and filler throughout the industry.

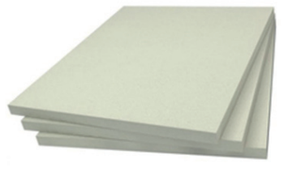
세라믹 섬유를 Needling Punching 공법으로 담요형태로 제조한 제품으로

탁월한 내화, 단열 성능을 지니고 있다. 대부분의 화학물질(불산, 인산계열 및 농축 염기물 제외)에 영향을 받지 않으며, 오일, 물 등의 오염에도 내열성 및 물성을 유지한다. 산업전반에 주로 단열재 및 충전재로 사용된다.

## TH5360
### Ceramic Rope 세라믹 로프

Product made from a ceramic fiber in the form of a square or circular rope through spinning and braiding. Widely used as packing and filling material for various fireproof equipment.

세라믹 섬유를 방사와 합사 공정을 통해 각형 또는 원형의 로프 형태로 만든 제품이다. 각종 내화설비의 패킹 및 충전재로 널리 사용된다



## TH5370
### Insulation Board 단열 보드

Product made by adding various reinforcing materials and fillers to inorganic raw materials according to the purpose. It has excellent mechanical and electrical properties and has high insulation properties. Mainly used as an insulation material in industrial and construction fields.

무기원료에 다양한 보강재 및 충전재를 용도에 따라 첨가하여 만든 제품으로 기계적, 전기적 성질이 우수하고 단열성이 높아 주로 산업 및 건설 분야에 단열재로 사용된다.

* 이외 다른 단열제품은 당사로 문의 바랍니다.

## Chemical Resistance of TaeHwa Compressd sheet and Gasket. Chart _내약품성 및 가스켓의 선정

| MEDIUM | MOLECULAR FORMULA | TH3000 | TH3000W | TH3200 | TH3200W | TH3600W | TH4027 | TH 4000 Series |
|---|---|---|---|---|---|---|---|---|
| ACETIC ACID | $CH_3COOH$ | B | B | B | B | B | A | A |
| ACETIC ACID, GLACIAL | | B | B | B | B | B | A | A |
| ACTONE | $CH_3COOH_3$ | B | B | B | B | B | A | A |
| ACETIC ANHYDRIDE | $(CH_3CO)_2O$ | A | A | A | A | A | A | A |
| ACETYLENE | $C_2H_2$ | A | A | A | A | A | A | A |
| ALUM | $KAl(SO_4)_2$ | A | A | A | A | A | A | A |
| AMMONIA | $NH_3$ | A | A | A | A | A | A | A |
| AMMONIA ANHYDROUS | | A | B | B | B | B | A | A |
| AMMONIUM HYDROXIDE | $NH_4OH$ | B | B | B | B | B | A | A |
| ANILINE | $C_6H_5NH_2$ | C | C | C | C | C | A | A |
| ASPHAL (TAR) | | B | B | B | B | B | A | A |
| ASTM OIL NO 1 | | A | A | A | A | A | A | A |
| ASTM OIL NO 3 | | A | A | A | A | A | A | A |
| BARIUM CHLORIDE | $BaCl_2$ | A | A | A | A | A | A | A |
| BENZENE | $C_6H_6$ | B | B | B | B | B | A | A |
| BENZOIC ACID | $C_7H_6O_2$ | B | B | B | B | B | A | A |
| BOILER FEED WATER | | A | A | A | A | A | A | A |
| BORAX | $NaB_4O_710H_2O$ | A | A | A | A | A | A | A |
| BUTANE | $C_4H_{10}$ | A | A | A | A | A | A | A |
| BUTYL ACETATE | $CH_3COOC_4H_9$ | B | B | B | B | B | A | A |
| BUTYL ALCOHOL | $CH_3(CH_2)_3OH$ | A | A | A | A | A | A | A |
| BUTYRIC ACID | | A | A | A | A | A | A | A |
| CALCIUM CHLORIDE | $CaCl_2$ | A | B | B | B | B | A | A |
| CALCIUM HYDROXIDE | $Ca(OH)_2$ | A | A | A | A | A | A | A |
| CALCIUM SULPHATE | $CaSO_4$ | A | A | A | A | A | A | A |
| CARBON TETRACHLORIDE | $CCl_4$ | B | B | B | B | B | A | A |
| CARBORIC ACID 100% | $C_6H_5OH$ | C | C | C | C | C | A | A |
| CARBON DIOXIDE | | A | A | A | A | A | A | A |
| CARBON DISULFIDE | $CS_2$ | C | C | C | C | C | A | A |
| CAUSTIC SODA | NAOH | C | C | C | C | C | A | A |
| CHLORINE (DRY) | Cl | B | B | B | B | B | A | B |
| CHLORINE (WET) | Cl | C | C | C | C | C | A | B |

The symbols used as folows : A: Suitable for application B: Suitability depends on operating conditions C: Not suitable



Technical information

Chemical Resistance of TaeHwa Compressd sheet and Gasket. Chart _내약품성 및 가스켓의 선정

| MEDIUM | MOLECULAR FORMULA | TH3000 | TH3000W | TH3200 | TH3200W | TH3600W | TH4027 | TH 4000 Series |
|---|---|---|---|---|---|---|---|---|
| CHROMIC ACID | $H_2CrO_4$ | C | C | C | C | C | A | C |
| CHLOROFORM | $CHCL_3$ | B | B | B | B | B | A | A |
| CORN OIL | | A | A | A | A | A | A | A |
| COPPER SULPHATE | $CuSO_4$ | A | A | A | A | A | A | A |
| CRESOL | $C_6H_4(OH)CH_3$ | B | B | B | B | B | A | A |
| CRUDE OIL | | A | A | A | A | A | A | A |
| CREOSOTE | | C | C | C | C | C | A | A |
| CYCLO HEXANE | $C_6H_{12}$ | A | B | B | B | B | A | A |
| CUPRIC ACETATE | $(CH_3COO)_2CU$ | A | A | A | A | A | A | A |
| DETERGENT SOLUTIONS | | A | A | A | A | A | A | A |
| DI-BENZYL ETHER | $(C_6H_5CH_2)_2O$ | C | C | C | C | C | A | A |
| DIESEL OIL | | A | A | A | A | A | A | A |
| DIMETHYL FORMAMIDE | $HCON(CH_3)_2$ | C | C | C | C | C | A | A |
| DIOXANE | | C | C | C | C | C | A | |
| ETHANE | $C_2H_6$ | A | A | A | A | A | A | A |
| ETHYL ALCOHOL (ETHANOL) | $C_2H_2OH$ | A | A | A | A | A | A | A |
| ETHYL ACETATE | $CH_3COOC_2H_5$ | B | B | B | B | B | A | A |
| ETHYL CHLORIDE | $C_2H5Cl$ | B | B | B | B | B | A | A |
| ETHYL ETHER | $C_2H_5OC_2H_5$ | A | A | A | A | A | A | A |
| ETHYLENE CHLORIDE | $(CH_2Cl)_2$ | C | C | C | C | C | A | A |
| ETHYLENE GLYCOL | $(CH_2CH)_2$ | A | A | A | A | A | A | A |
| FERRIC CHLORIDE | | A | A | A | A | A | A | A |
| FOMALDEHYDE | HCHO | A | A | A | A | A | A | A |
| FORMIC ACID 85% | HCOOH | C | C | C | C | C | A | A |
| FREON 12 FRIGEN 12 | $12CCl_2F_2$ | A | A | A | A | A | A | A |
| FUEL A | | A | A | A | A | A | A | A |
| FUEL B | | A | A | A | A | A | A | A |
| FUEL C | | A | A | A | A | A | A | A |
| GASOLINE | | A | A | A | A | A | A | A |
| GLYCERINE | $(CH_2OH_2)CHOH$ | A | A | A | A | A | A | A |
| GREEN SULFATA LIQUOR | | B | B | B | B | B | A | A |
| HEPTANE | $C_7H_{16}$ | A | A | A | A | A | A | A |

The symbols used as folows : A: Suitable for application B: Suitability depends on operating conditions C: Not suitable

## Chemical Resistance of TaeHwa Compressd sheet and Gasket. Chart _내약품성 및 가스켓의 선정

| MEDIUM | MOLECULAR FORMULA | TH3000 | TH3000W | TH3200 | TH3200W | TH3600W | TH4027 | TH 4000 Series |
|---|---|---|---|---|---|---|---|---|
| HYDROCHLORIC ACID 20% | HCL | C | C | C | C | C | A | A |
| HYDROCHLORIC ACID 37% | HCL | C | C | C | C | C | A | A |
| HYDROGEN PEROXIDE 3% | $H_2O_2$ | B | C | C | C | C | A | A |
| HYDROGEN PEROXIDE 35% | $H_2O_2$ | C | C | C | C | C | A | A |
| ISOAMYL ACETATE | $CH_3COOCH_2CH(CH3)_2$ | C | C | C | C | C | A | A |
| ISOOCTANE | $(CH3)_3(CH_2CCH_3)_2$ | A | A | A | A | A | A | A |
| ISOPROPYLENE ALCOHOL | $(CH_3)_3CHOH_2$ | A | A | A | A | A | A | A |
| LACTIC ACID 50% | $CH_3COOCH$ COOH | B | B | B | B | B | A | A |
| LIME WATER | $Ca(OH)_2$ | A | A | A | A | A | A | A |
| LIN SEED OIL | | A | A | A | A | A | A | A |
| LUBRICATING OIL | | A | A | A | A | A | A | A |
| MAGNESIUM SULPHATE | $MgSO_4$ | A | A | A | A | A | A | A |
| METHYL ACETATE 97% | $CH_3COOCH_3$ | C | C | C | C | C | A | A |
| METHYL ACETATE 60% | $CH_3COOCH_3$ | C | C | C | C | C | A | A |
| METHYL ALCOHOL (METHANOL) | $CH_3OH$ | A | A | A | A | A | A | A |
| MINERAL OIL | | A | A | A | A | A | A | A |
| MURIATIC ACID | | C | C | C | C | C | A | A |
| NAPTHA | | A | A | A | A | A | A | A |
| NITRIC ACID 20% | $HNO_3$ | C | C | C | C | C | A | B |
| NITRIC ACID 40% | $HNO_3$ | C | C | C | C | C | A | B |
| NITRIC ACID 96% | $HNO_3$ | C | C | C | C | C | A | C |
| NITROBENZENE | $C_6H_5NO_2$ | C | C | C | C | C | A | A |
| OCTANE | $C_8H_{18}$ | A | A | A | A | A | A | A |
| OLEIC ACID | $C_{17}H_{33}COOH$ | B | B | B | B | B | A | A |
| OLEUM | | C | C | C | C | C | A | C |
| PALMITIC ACID | $C_{15}H_{31}COOH$ | A | A | A | A | A | A | A |
| PERCHLOROETHYLENE | $C_2Cl_4$ | B | B | B | B | B | A | A |
| PETROLEUM ETHER | | A | A | A | A | A | A | A |
| PHENOL | $C_6H_5OH$ | C | C | C | C | C | A | A |
| PHOSPHORIC ACID | $H_3PO_4$ | C | C | C | C | C | A | A |
| POTASSIUM CARBONATE | $K_2COD_3$ | A | A | A | A | A | A | A |
| POTASSIUM CHLORIDE | KCl | A | A | A | A | A | A | A |

The symbols used as folows : A: Suitable for application B: Suitability depends on operating conditions C: Not suitable



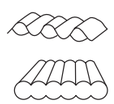


## Chemical Resistance of TaeHwa Compressd sheet and Gasket. Chart _내약품성 및 가스켓의 선정

| MEDIUM | MOLECULAR FORMULA | TH3000 | TH3000W | TH3200 | TH3200W | TH3600W | TH4027 | TH 4000 Series |
|---|---|---|---|---|---|---|---|---|
| POTASSIUM CHLORATE | $KClO_3$ | B | B | B | B | B | A | A |
| POTASSIUM HYDROXIDE | KOH | B | B | B | B | B | A | A |
| POTASSIUM IODIDE | KI | A | A | A | A | A | A | A |
| POTASSIUM NITRATE | $KNO_3$ | A | A | A | A | A | A | A |
| PROPANE | $C_3H_8$ | A | A | A | A | A | A | A |
| PROPYLENE GLYCOL | $CH_3CH(OH)CH_2OH$ | B | B | B | B | B | A | A |
| PYRIDINE | $C_5H_5N$ | C | C | C | C | C | A | A |
| SEA WATER | | A | A | A | A | A | A | A |
| SOAP | | A | A | A | A | A | A | A |
| SODIUM CARBONATE (SODA) | $Na_2CO_3$ | C | C | C | C | C | A | A |
| SODIUM ALUMINATE | $Na_3AlO_3$ | A | A | A | A | A | A | A |
| SODIUM BISULPHITE | $NaHSO_3$ | A | B | A | A | A | A | A |
| SODIUM HYDROXIDE | NaOH | C | C | C | C | C | A | A |
| SODIUM SILICATE | (WATER GLASS) | A | A | A | A | A | A | A |
| SODIUM SULPHATE | $Na_2SO_4$ | A | A | A | A | A | A | A |
| SODIUM SULPHIDE | $Na_2S$ | A | A | A | A | A | A | A |
| STARCH | $(C_6H_{10})_5)X$ | A | A | A | A | A | A | A |
| STEAM | $H_2O$ | B | B | B | B | B | A | A |
| SULPHUR DIOXIDE | $SO_2$ | C | C | C | C | C | A | A |
| SULPHURIC ACID (50%) | $H_2SO_4$ | C | C | C | C | C | A | B |
| SULPHUROUS ACID | $H_2SO_3$ | C | C | C | C | C | A | A |
| TANNIC ACID | $C_{76}H_{52}O_{46}$ | A | B | B | B | B | A | A |
| TAR (ASPHALT) | | B | B | B | B | B | A | A |
| TARTARIC ACID | $(CHOH\ COOH)_2$ | A | A | A | A | A | A | A |
| TETRACHLORETHANE | $C_2H_2Cl_4$ | C | C | C | C | C | A | A |
| TOLUENE | $C_6H_5CH_3$ | B | B | B | B | B | A | A |
| TRANSFORMER OIL | | A | A | A | A | A | A | A |
| VINYL ACETATE | $CH_3COOC_2H_3$ | A | A | A | A | A | A | A |
| WATER | $H_2O$ | A | A | A | A | A | A | A |
| XYLENE | $C_6H_4(CH_3)_2$ | B | B | B | B | B | A | B |

The symbols used as folows : A: Suitable for application B: Suitability depends on operating conditions C: Not suitable

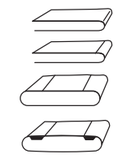
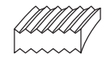
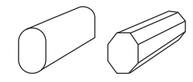
## Gasket Factors *m* for Operating Conditions and Minimum Design Seating Stress *y*

| Gasket Material | Gasket Factor *m* | Min. Design Seating Stress *y*, psi (MPa) | Sketches | Facing Sketch and Column in Table 2-5.2 |
|---|---|---|---|---|
| **Self-energizing types (0 rings, metallic, elastomer, other gasket types considered as self-sealing)** | 0 | 0 (0) | . . . | . . . |
| **Elastomers without fabric or high percent of mineral fiber:** | | | | |
| Below 75A Shore Durometer | 0.50 | 0 (0) |  | (1a),(1b),(1c),(1d), (4),(5); Column II |
| 75A or higher Shore Durometer | 1.00 | 200 (1.4) | | |
| **Mineral with suitable binder for operating conditions:** | | | | |
| 1/8 in. (3.2 mm) thick | 2.00 | 1,600 (11) |  | (1a),(1b),(1c),(1d), (4),(5); Column II |
| 1/16 in. (1.6 mm) thick | 2.75 | 3,700 (26) | | |
| 1/32 in. (0.8 mm) thick | 3.50 | 6,500 (45) | | |
| **Elastomers with cotton fabric insertion** | 1.25 | 400 (2.8) |  | (1a),(1b),(1c),(1d), (4),(5); Column II |
| **Elastomers with mineral fabric insertion (with or without wire reinforcement):** | | | | |
| 3-ply | 2.25 | 2,200 (15) |  | |
| 2-ply | 2.50 | 2,900 (20) |  | (1a),(1b),(1c),(1d), (4),(5); Column II |
| 1-ply | 2.75 | 3,700 (26) |  | |
| **Vegetable fiber** | 1.75 | 1,100 (7.6) |  | (1a),(1b),(1c),(1d), (4)(5); Column II |
| **Spiral-wound metal, mineral filled:** | | | | |
| Carbon | 2.50 | 10,000 (69) |  | (1a),(1b); Column II |
| Stainless, Monel, and nickel-base alloys | 3.00 | 10,000 (69) | | |
| **Corrugated metal, mineral inserted, or corrugated metal, jacketed mineral filled:** | | | | |
| Soft aluminum | 2.50 | 2,900 (20) |  | (1a),(1b); Column II |
| Soft copper or brass | 2.75 | 3,700 (26) | | |
| Iron or soft steel | 3.00 | 4,500 (31) | | |
| Monel or 4%–6% chrome | 3.25 | 5,500 (38) | | |
| Stainless steels and nickel-base alloys | 3.50 | 6,500 (45) | | |





## Gasket Factors *m* for Operating Conditions and Minimum Design Seating Stress *y*

| Gasket Material | Gasket Factor *m* | Min. Design Seating Stress *y*, psi (MPa) | Sketches | Facing Sketch and Column in Table 2-5.2 |
|---|---|---|---|---|
| **Corrugated metal:** | | | | |
| Soft aluminum | 2.75 | 3,700 (26) |  | (1a),(1b),(1c),(1d); Column II |
| Soft copper or brass | 3.00 | 4,500 (31) | | |
| Iron or soft steel | 3.25 | 5,500 (38) | | |
| Monel or 4%–6% chrome | 3.50 | 6,500 (45) | | |
| Stainless steels and nickel-base alloys | 3.75 | 7,600 (52) | | |
| **Flat metal, jacketed asbestos filled:** | | | | |
| Soft aluminum | 3.25 | 5,500 (38) |  | (1a),(1b),(1c),[2] (1d)[2];(2)[2]; Column II |
| Soft copper or brass | 3.50 | 6,500 (45) | | |
| Iron or soft steel | 3.75 | 7,600 (52) | | |
| Monel | 3.50 | 8,000 (55) | | |
| 4%–6% chrome | 3.75 | 9,000 (62) | | |
| Stainless steels and nickel-base alloys | 3.75 | 9,000 (62) | | |
| **Grooved metal:** | | | | |
| Soft aluminum | 3.25 | 5,500 (38) | | |
| Soft copper or brass | 3.50 | 6,500 (45) |  | (1a),(1b),(1c),(1d), (2),(3); Column II |
| Iron or soft metal | 3.75 | 7,600 (52) | | |
| Monel or 4%–6% chrome | 3.75 | 9,000 (62) | | |
| Stainless steels and nickel-base alloys | 4.25 | 10,100 (70) | | |
| **Solid flat metal:** | | | | |
| Soft aluminum | 4.00 | 8,800 (61) |  | (1a),(1b),(1c),(1d), (2),(3),(4),(5); Column I |
| Soft copper or brass | 4.75 | 13,000 (90) | | |
| Iron or soft steel | 5.50 | 18,000 (124) | | |
| Monel or 4%–6% chrome | 6.00 | 21,800 (150) | | |
| Stainless steels and nickel-base alloys | 6.50 | 26,000 (180) | | |
| **Ring joint:** | | | | |
| Iron or soft steel | 5.50 | 18,000 (124) |  | (6); Column I |
| Monel or 4%–6% chrome | 6.00 | 21,800 (150) | | |
| Stainless steels and nickel-base alloys | 6.50 | 26,000 (180) | | |

NOTES:
(1) This Table gives a list of many commonly used gasket materials and contact facings with suggested design values of m and y that have generally proved satisfactory in actualservice when using effective gasket seating width b given in Table 2-5.2. The design values and other details given in this Table are suggested only and are not mandatory.
(2) The surface of a gasket having a lap should not be against the nubbin.

## Guide for Using TaeHwa Compressd sheet and Gasket _비석면 압축판 사용상의 주의사항

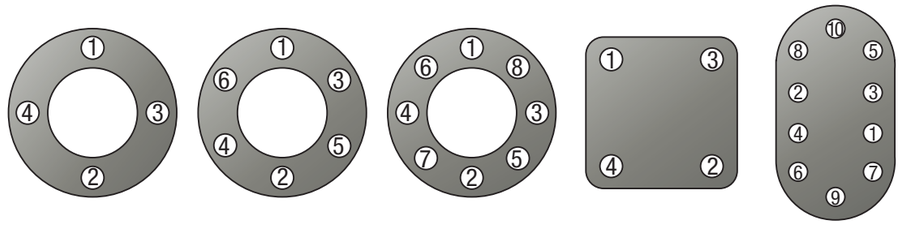
### Selection of optimum sheet _재질의 선정

Considering working conditions (temperature, corrosiveness, test & working pressure, flange type, gasket width), optimum gasket material should be selected.

사용조건(내부 유체의 온도, 부식성, TEST 압력과 사용압력, 플랜지의 형상, 가스켓의 폭)에 적합한 재질을 선정한다.

### Precautions in Mounting _가스켓 장착시의 주의사항

- The roughness of flange surfaces should be above 25S
- Flange surfaces should be neither confaminate nor damaged.
- Flange surfaces should be parallel without deformation and the center should not be deroumed.
- Keep flange surfaces clean and then mount the gaskets in correct position.
- Tighten the fiange bolls in order illusted below.
- 플랜지 면의 조도는 25S 이상으로 한다.
- 플랜지 면에 이물질이 부착되어 있거나 플랜지면이 훼손되어서는 안된다.
- 플랜지 면에 비틀림이 없어야 하며 평행하고 중심이 틀어지지 않아야 한다.
- 가스켓은 플랜지면을 깨끗이 한 후에 정확한 위치에 장착시켜야 한다.
- 볼트는 아래와 같이 순서적으로 실시해야 한다.




- When spreading gasket paste for applications of anti-stick or gas leakage protection, the paste should be spread thinly and uniformly.
- Be sure to retighen the flange bolts before operation.
- When handing fabric sheets, do not bring them in contact with sea water or touch them with sweaty hands.
- 소부방지 및 GAS누설방지 목적으로 가스켓에 페이스트를 도포할 때는 가능한 얇고, 고르게 도포한다.
- 운전하기전 반드시 재 조임을 실시한다.
- 방식형 시트를 사용할 때는 젖은 손으로 시트를 만지거나 소금기가 있는 물에 시트가 닿지 않도록 해야한다.

### Storage _보 관

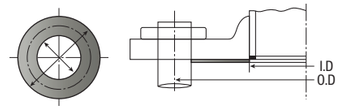
- Avoid exposing the gasket sheets to direct sunlight, oxygen, or ozone : store them in a cool, dark and clean place.
- Store gasket sheets on a level base in a flat condition without folding, hanging or rolling. If necessary. rollup gasket sheets in diameter as large as possible and place them standing vertically without horizontally.
- Put the remained gasket sheets in PE packing paper and store them.
- First-in & fist-out : Pile up old sheets on new sheets and ship out sheets in advance.
- 직사광선과 산소, 오존 등이 닿지 않고 습기와 먼지가 없는 서늘한 장소에 보관한다.
- 보관시에는 가스켓, 시트를 접거나 매달거나 말지를 말고 평행하게 가로로 적재한다.
- 부득이 말은 제품은 눕히지 말고 세워서 보관하며 권취경은 가능한한 크게 한다.
- 일부분을 사용하고 남은 제품은 폴리에틸렌으로 만든 포장지에넣어 밀봉한다.
- 선입선출: 새로 들어온 것은 아랫쪽에 적재하고, 오래된 것은 위쪽에 적재하여 오래된 것을 먼저 사용토록 한다.





# NON-ASBESTOS GASKET DIMENSIONS

## KS or JIS Flange(RF) _연질 GASKET 치수표(RF)

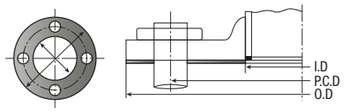



* KS B 1519 및 JIS B 2404에 의한
Flat Ring (R.F) Type Soft Gasket의 치수표

| NPS(호칭경) | | I.D (내경) | O.D (외경) 온면자리, 대평면자리, 소평면자리 플렌지 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NDS | 호칭경 | | 5K | 10K | 16K | 20K | 30K | 40K | 63K |
| 10 A | 1/4 | 18 | 45 | 53 | 53 | 53 | 59 | 59 | 64 |
| 15 A | 1/2 | 22 | 50 | 58 | 58 | 58 | 64 | 64 | 69 |
| 20 A | 3/4 | 28 | 55 | 63 | 63 | 63 | 69 | 69 | 75 |
| 25 A | 1 | 35 | 65 | 74 | 74 | 74 | 79 | 79 | 80 |
| 32 A | 1-1/4 | 43 | 78 | 84 | 84 | 84 | 89 | 89 | 90 |
| 40 A | 1-1/2 | 49 | 83 | 89 | 89 | 89 | 100 | 100 | 108 |
| 50 A | 2 | 61 | 93 | 104 | 104 | 104 | 114 | 114 | 125 |
| 65 A | 2-1/2 | 84 (KS 77) | 118 | 124 | 124 | 124 | 140 | 140 | 153 |
| 80 A | 3 | 90 | 129 | 134 | 140 | 140 | 150 | 150 | 163 |
| 90 A | 3-1/2 | 102 | 139 | 144 | 150 | 150 | 163 | 163 | 181 |
| 100 A | 4 | 115 | 149 | 159 | 165 | 165 | 173 | 183 | 196 |
| 125 A | 5 | 141 | 184 | 190 | 203 | 203 | 208 | 226 | 235 |
| 150 A | 6 | 167 | 214 | 220 | 238 | 238 | 251 | 265 | 275 |
| 175 A | 7 | 192 | 240 | 245 | - | - | - | - | - |
| 200 A | 8 | 218 | 260 | 270 | 283 | 283 | 296 | 315 | 330 |
| 225 A | 9 | 244 | 285 | 290 | - | - | - | - | - |
| 250 A | 10 | 270 | 325 | 333 | 356 | 356 | 360 | 380 | 394 |
| 300 A | 12 | 321 | 370 | 378 | 406 | 406 | 420 | 434 | 449 |
| 350 A | 14 | 359 | 413 | 423 | 450 | 450 | 465 | 479 | 488 |
| 400 A | 16 | 410 | 473 | 486 | 510 | 510 | 524 | 534 | 548 |
| 450 A | 18 | 460 | 533 | 541 | 575 | 575 | - | - | - |
| 500 A | 20 | 513 | 583 | 596 | 630 | 630 | - | - | - |
| 550 A | 22 | 564 | 641 | 650 | 684 | 684 | - | - | - |
| 600 A | 24 | 615 | 691 | 700 | 734 | 734 | - | - | - |
| 650 A | 26 | 667 | 746 | 750 | 784 | 805 | - | - | - |
| 700 A | 28 | 718 | 796 | 810 | 836 | 855 | - | - | - |
| 750 A | 30 | 770 | 850 | 870 | 896 | 918 | - | - | - |
| 800 A | 32 | 820 | 900 | 920 | 945 | 978 | - | - | - |
| 850 A | 34 | 872 | 950 | 970 | 995 | 1038 | - | - | - |
| 900 A | 36 | 923 | 1000 | 1020 | 1045 | 1088 | - | - | - |
| 1000 A | 40 | 1025 | 1100 | 1124 | 1158 | - | - | - | - |
| 1100 A | 44 | 1130 | 1210 | 1234 | 1258 | - | - | - | - |
| 1200 A | 48 | 1230 | 1320 | 1344 | 1368 | - | - | - | - |
| 1300 A | 52 | 1335 | - | - | 1474 | - | - | - | - |
| 1350 A | 54 | 1385 | 1475 | 1498 | 1534 | - | - | - | - |
| 1400 A | 56 | 1435 | - | - | 1584 | - | - | - | - |
| 1500 A | 60 | 1540 | 1630 | 1658 | 1694 | - | - | - | - |

# NON-ASBESTOS GASKET DIMENSIONS

## KS or JIS Flange(FF) _연질 GASKET 치수표(FF)




* KS B 1519 및 JIS B 2404에 의한
  Full Face (F.F) Type Soft Gasket의 치수표

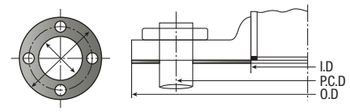
| NPS(호칭경) | | I.D 내경 | 5K | | | | 10K | | | | 16K | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | O.D(외경) | P.C.D | h(홀경) | n(홀수) | O.D(외경) | P.C.D | h(홀경) | n(홀수) | O.D(외경) | P.C.D | h(홀경) | n(홀수) |
| 10 A | 1/4 | 18 | 75 | 55 | 12 | 4 | 90 | 65 | 15 | 4 | 90 | 65 | 15 | 4 |
| 15 A | 1/2 | 22 | 80 | 60 | 12 | 4 | 95 | 70 | 15 | 4 | 95 | 70 | 15 | 4 |
| 20 A | 3/4 | 28 | 85 | 65 | 12 | 4 | 100 | 75 | 15 | 4 | 100 | 75 | 15 | 4 |
| 25 A | 1 | 35 | 95 | 75 | 12 | 4 | 125 | 90 | 19 | 4 | 125 | 90 | 19 | 4 |
| 32 A | 1-1/4 | 43 | 115 | 90 | 15 | 4 | 135 | 100 | 19 | 4 | 135 | 100 | 19 | 4 |
| 40 A | 1-1/2 | 49 | 120 | 95 | 15 | 4 | 140 | 105 | 19 | 4 | 140 | 105 | 19 | 4 |
| 50 A | 2 | 61 | 130 | 105 | 15 | 4 | 155 | 120 | 19 | 4 | 155 | 120 | 19 | 8 |
| 65 A | 2-1/2 | 84 | 155 | 130 | 15 | 4 | 175 | 140 | 19 | 4 | 175 | 140 | 19 | 8 |
| 80 A | 3 | 90 | 180 | 145 | 19 | 4 | 185 | 150 | 19 | 8 | 200 | 160 | 23 | 8 |
| 90 A | 3-1/2 | 102 | 190 | 155 | 19 | 4 | 195 | 160 | 19 | 8 | 210 | 170 | 23 | 8 |
| 100 A | 4 | 115 | 200 | 165 | 19 | 8 | 210 | 175 | 19 | 8 | 225 | 185 | 23 | 8 |
| 125 A | 5 | 141 | 235 | 200 | 19 | 8 | 250 | 210 | 23 | 8 | 270 | 225 | 25 | 8 |
| 150 A | 6 | 167 | 265 | 230 | 19 | 8 | 280 | 240 | 23 | 8 | 305 | 260 | 25 | 12 |
| 175 A | 7 | 192 | 300 | 260 | 23 | 8 | 305 | 265 | 23 | 12 | - | - | - | - |
| 200 A | 8 | 218 | 320 | 280 | 23 | 8 | 330 | 290 | 23 | 12 | 350 | 305 | 25 | 12 |
| 225 A | 9 | 244 | 345 | 305 | 23 | 12 | 350 | 310 | 23 | 12 | - | - | - | - |
| 250 A | 10 | 270 | 385 | 345 | 23 | 12 | 400 | 355 | 25 | 12 | 430 | 380 | 27 | 12 |
| 300 A | 12 | 321 | 430 | 390 | 23 | 12 | 445 | 400 | 25 | 16 | 480 | 430 | 27 | 16 |
| 350 A | 14 | 359 | 480 | 435 | 25 | 12 | 490 | 445 | 25 | 16 | 540 | 480 | 33 | 16 |
| 400 A | 16 | 410 | 540 | 495 | 25 | 16 | 560 | 510 | 27 | 16 | 605 | 540 | 33 | 16 |
| 450 A | 18 | 460 | 605 | 555 | 25 | 16 | 620 | 565 | 27 | 20 | 675 | 605 | 33 | 20 |
| 500 A | 20 | 513 | 655 | 605 | 25 | 20 | 675 | 620 | 27 | 20 | 730 | 660 | 33 | 20 |
| 550 A | 22 | 564 | 720 | 665 | 27 | 20 | 745 | 680 | 33 | 20 | 795 | 720 | 39 | 20 |
| 600 A | 24 | 615 | 770 | 715 | 27 | 20 | 795 | 730 | 33 | 24 | 845 | 770 | 39 | 24 |
| 650 A | 26 | 667 | 825 | 770 | 27 | 24 | 845 | 780 | 33 | 24 | - | - | - | - |
| 700 A | 28 | 718 | 875 | 820 | 27 | 24 | 905 | 840 | 33 | 24 | - | - | - | - |
| 750 A | 30 | 770 | 945 | 880 | 33 | 24 | 970 | 900 | 33 | 24 | - | - | - | - |
| 800 A | 32 | 820 | 995 | 930 | 33 | 24 | 1020 | 950 | 33 | 28 | - | - | - | - |
| 850 A | 34 | 872 | 1045 | 980 | 33 | 24 | 1070 | 1000 | 33 | 28 | - | - | - | - |
| 900 A | 36 | 923 | 1095 | 1030 | 33 | 24 | 1120 | 1050 | 33 | 28 | - | - | - | - |
| 1000 A | 40 | 1025 | 1195 | 1130 | 33 | 28 | 1235 | 1160 | 39 | 28 | - | - | - | - |
| 1100 A | 44 | 1130 | 1305 | 1240 | 33 | 28 | 1345 | 1270 | 39 | 28 | - | - | - | - |
| 1200 A | 48 | 1230 | 1420 | 1350 | 33 | 32 | 1465 | 1380 | 39 | 32 | - | - | - | - |
| 1350 A | 54 | 1385 | 1575 | 1505 | 33 | 32 | 1630 | 1540 | 45 | 36 | - | - | - | - |
| 1500 A | 60 | 1540 | 1730 | 1660 | 33 | 36 | 1795 | 1700 | 45 | 40 | - | - | - | - |





# NON-ASBESTOS GASKET DIMENSIONS

## KS or JIS Flange(FF) _연질 GASKET 치수표(FF)

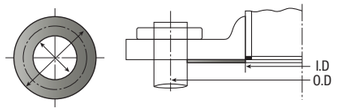



* KS B 1519 및 JIS B 2404에 의한
  Full Face (F.F) Type Soft Gasket의 치수표

| NPS(호칭경) | | I.D(내경) | 20K | | | | 30K | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | O.D(외경) | P.C.D | h(홀경) | n(홀수) | O.D(외경) | P.C.D | h(홀경) | n(홀수) |
| 10 A | 1/4 | 18 | 90 | 65 | 15 | 4 | 110 | 75 | 19 | 4 |
| 15 A | 1/2 | 22 | 95 | 70 | 15 | 4 | 115 | 80 | 19 | 4 |
| 20 A | 3/4 | 28 | 100 | 75 | 15 | 4 | 120 | 85 | 19 | 4 |
| 25 A | 1 | 34 | 125 | 90 | 19 | 4 | 130 | 95 | 19 | 4 |
| 32 A | 1-1/4 | 43 | 135 | 100 | 19 | 4 | 140 | 105 | 19 | 4 |
| 40 A | 1-1/2 | 49 | 140 | 105 | 19 | 4 | 160 | 120 | 23 | 4 |
| 50 A | 2 | 61 | 155 | 120 | 19 | 8 | 165 | 130 | 19 | 8 |
| 65 A | 2-1/2 | 84 | 175 | 140 | 19 | 8 | 200 | 160 | 23 | 8 |
| 80 A | 3 | 90 | 200 | 160 | 23 | 8 | 210 | 170 | 23 | 8 |
| 90 A | 3-1/2 | 102 | 210 | 170 | 23 | 8 | 230 | 185 | 25 | 8 |
| 100 A | 4 | 115 | 225 | 185 | 23 | 8 | 240 | 195 | 25 | 8 |
| 125 A | 5 | 140 | 270 | 225 | 25 | 8 | 275 | 230 | 25 | 8 |
| 150 A | 6 | 166 | 305 | 260 | 25 | 12 | 325 | 275 | 27 | 12 |
| 200 A | 8 | 217 | 350 | 305 | 25 | 12 | 370 | 320 | 27 | 12 |
| 250 A | 10 | 268 | 430 | 380 | 27 | 12 | 450 | 390 | 33 | 12 |
| 300 A | 12 | 319 | 480 | 430 | 27 | 16 | 515 | 450 | 33 | 16 |
| 350 A | 14 | 356 | 540 | 480 | 33 | 16 | 550 | 495 | 33 | 16 |
| 400 A | 16 | 407 | 605 | 540 | 33 | 16 | 630 | 560 | 39 | 16 |
| 450 A | 18 | 458 | 675 | 605 | 33 | 20 | - | - | - | - |
| 500 A | 20 | 509 | 730 | 660 | 33 | 20 | - | - | - | - |
| 550 A | 22 | 559 | 795 | 720 | 39 | 20 | - | - | - | - |
| 600 A | 24 | 610 | 845 | 770 | 39 | 24 | - | - | - | - |
| 650 A | 26 | 661 | 945 | 850 | 48 | 24 | - | - | - | - |
| 700 A | 28 | 712 | 995 | 900 | 48 | 24 | - | - | - | - |
| 750 A | 30 | 763 | 1080 | 970 | 56 | 24 | - | - | - | - |
| 800 A | 32 | 813 | 1140 | 1030 | 56 | 24 | - | - | - | - |
| 850 A | 34 | 864 | 1200 | 1090 | 56 | 24 | - | - | - | - |
| 900 A | 36 | 915 | 1250 | 1140 | 56 | 28 | - | - | - | - |

# NON-ASBESTOS GASKET DIMENSIONS

## ASME Flange(RF) _연질 GASKET 치수표(RF)




* ASME B16.21

| NPS(호칭경) | | GASKET(내경) | GASKET O.D(외경) | | | | |
|---|---|---|---|---|---|---|---|
| | | | CLASS 150 | CLASS 300 | CLASS 400 | CLASS 600 | CLASS 900 |
| 1/2 | 15 A | 21 | 48 | 54 | 54 | 54 | 64 |
| 3/4 | 20 A | 27 | 57 | 67 | 67 | 67 | 70 |
| 1 | 25 A | 33 | 67 | 73 | 73 | 73 | 79 |
| 1-1/4 | 32 A | 42 | 76 | 83 | 83 | 83 | 89 |
| 1-1/2 | 40 A | 48 | 86 | 95 | 95 | 95 | 98 |
| 2 | 50 A | 60 | 105 | 111 | 111 | 111 | 143 |
| 2-1/2 | 65 A | 73 | 124 | 130 | 130 | 130 | 165 |
| 3 | 80 A | 89 | 137 | 149 | 149 | 149 | 168 |
| 3-1/2 | 90 A | 102 | 162 | 165 | 162 | 162 | - |
| 4 | 100 A | 114 | 175 | 181 | 178 | 194 | 206 |
| 5 | 125 A | 141 | 197 | 216 | 213 | 241 | 248 |
| 6 | 150 A | 168 | 222 | 251 | 248 | 267 | 289 |
| 8 | 200 A | 219 | 279 | 308 | 305 | 321 | 359 |
| 10 | 250 A | 273 | 340 | 362 | 359 | 400 | 435 |
| 12 | 300 A | 324 | 410 | 422 | 419 | 457 | 498 |
| 14 | 350 A | 356 | 451 | 486 | 483 | 492 | 521 |
| 16 | 400 A | 406 | 514 | 540 | 537 | 565 | 575 |
| 18 | 450 A | 457 | 549 | 597 | 594 | 613 | 638 |
| 20 | 500 A | 508 | 606 | 654 | 648 | 683 | 699 |
| 22 | 550 A | 559 | 660 | 705 | 702 | 733 | |
| 24 | 600 A | 610 | 718 | 775 | 768 | 791 | 838 |

* ASME B16.47-A

| NPS(호칭경) | | GASKET(내경) | GASKET O.D(외경) | | | | |
|---|---|---|---|---|---|---|---|
| | | | CLASS 150 | CLASS 300 | CLASS 400 | CLASS 600 | CLASS 900 |
| 26 | 650 A | 660 | 775 | 835 | 832 | 867 | - |
| 28 | 700 A | 711 | 832 | 899 | 892 | 914 | - |
| 30 | 750 A | 762 | 883 | 953 | 946 | 972 | - |
| 32 | 800 A | 813 | 940 | 1006 | 1003 | 1022 | - |
| 34 | 850 A | 864 | 991 | 1057 | 1054 | 1073 | - |
| 36 | 900 A | 914 | 1048 | 1118 | 1118 | 1130 | - |
| 38 | 950 A | 965 | 1111 | 1054 | 1073 | 1105 | - |
| 40 | 1000 A | 1016 | 1162 | 1114 | 1127 | 1156 | - |
| 42 | 1050 A | 1067 | 1219 | 1165 | 1178 | 1219 | - |
| 44 | 1100 A | 1118 | 1276 | 1219 | 1232 | 1270 | - |
| 46 | 1150 A | 1168 | 1327 | 1273 | 1289 | 1327 | - |
| 48 | 1200 A | 1219 | 1384 | 1324 | 1346 | 1391 | - |
| 50 | 1250 A | 1270 | 1435 | 1378 | 1403 | 1448 | - |
| 52 | 1300 A | 1321 | 1492 | 1429 | 1454 | 1499 | - |
| 54 | 1350 A | 1372 | 1549 | 1492 | 1518 | 1556 | - |
| 56 | 1400 A | 1422 | 1607 | 1543 | 1568 | 1613 | - |
| 58 | 1450 A | 1473 | 1664 | 1594 | 1619 | 1664 | - |
| 60 | 1500 A | 1524 | 1715 | 1645 | 1683 | 1721 | |



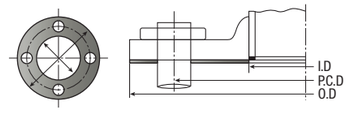


# NON-ASBESTOS GASKET DIMENSIONS

## ASME Flange(FF) _연질 GASKET 치수표(FF)

* ASME B16.47-B

| NPS(호칭경) | | GASKET(내경) | GASKET O.D(외경) | | | | |
|---|---|---|---|---|---|---|---|
| | | | CLASS 150 | CLASS 300 | CLASS 400 | CLASS 600 | CLASS 900 |
| 26 | 650 A | 660 | 725 | 772 | 746 | 765 | - |
| 28 | 700 A | 711 | 776 | 826 | 800 | 819 | - |
| 30 | 750 A | 762 | 827 | 886 | 857 | 879 | - |
| 32 | 800 A | 813 | 881 | 940 | 911 | 933 | - |
| 34 | 850 A | 864 | 935 | 994 | 962 | 997 | - |
| 36 | 900 A | 914 | 987 | 1048 | 1022 | 1048 | - |
| 38 | 950 A | 965 | 1045 | 1099 | - | - | - |
| 40 | 1000 A | 1016 | 1095 | 1149 | - | - | - |
| 42 | 1050 A | 1067 | 1146 | 1200 | - | - | - |
| 44 | 1100 A | 1118 | 1197 | 1251 | - | - | - |
| 46 | 1150 A | 1168 | 1256 | 1318 | - | - | - |
| 48 | 1200 A | 1219 | 1307 | 1368 | - | - | - |
| 50 | 1250 A | 1270 | 1357 | 1419 | - | - | - |
| 52 | 1300 A | 1321 | 1408 | 1470 | - | - | - |
| 54 | 1350 A | 1372 | 1464 | 1530 | - | - | - |
| 56 | 1400 A | 1422 | 1514 | 1594 | - | - | - |
| 58 | 1450 A | 1473 | 1580 | 1656 | - | - | - |
| 60 | 1500 A | 1524 | 1630 | 1705 | - | - | - |

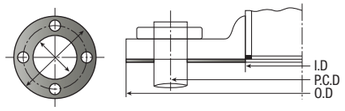



* ASME B16.21

| NPS(호칭경) | | CLASS 150 | | | | |
|---|---|---|---|---|---|---|
| | | I.D(내경) | O.D(외경) | P.C.D | h(홀경) | n(홀수) |
| 1/2 | 15 A | 21 | 89 | 60.3 | 15.7 | 4 |
| 3/4 | 20 A | 27 | 98 | 69.9 | 15.7 | 4 |
| 1 | 25 A | 33 | 108 | 79.4 | 15.7 | 4 |
| 1-1/4 | 32 A | 42 | 117 | 88.9 | 15.7 | 4 |
| 1-1/2 | 40 A | 48 | 127 | 98.4 | 15.7 | 4 |
| 2 | 50 A | 60 | 152 | 120.7 | 19.1 | 4 |
| 2-1/2 | 65 A | 73 | 178 | 139.7 | 19.1 | 4 |
| 3 | 80 A | 89 | 191 | 152.4 | 19.1 | 4 |
| 3-1/2 | 90 A | 102 | 216 | 177.8 | 19.1 | 8 |
| 4 | 100 A | 114 | 229 | 190.5 | 19.1 | 8 |
| 5 | 125 A | 141 | 254 | 215.9 | 22.4 | 8 |
| 6 | 150 A | 168 | 279 | 241.3 | 22.4 | 8 |
| 8 | 200 A | 219 | 343 | 298.5 | 22.4 | 8 |
| 10 | 250 A | 273 | 406 | 362 | 25.4 | 12 |
| 12 | 300 A | 324 | 483 | 431.8 | 25.4 | 12 |
| 14 | 350 A | 356 | 533 | 476.3 | 28.4 | 12 |
| 16 | 400 A | 406 | 597 | 539.8 | 28.4 | 16 |
| 18 | 450 A | 457 | 635 | 577.9 | 31.8 | 16 |
| 20 | 500 A | 508 | 699 | 635 | 31.8 | 20 |
| 24 | 600 A | 610 | 813 | 749.3 | 35.1 | 20 |

# NON-ASBESTOS GASKET DIMENSIONS

## DIN Flange(FF) _연질 GASKET 치수표(FF)




* DIN 86071

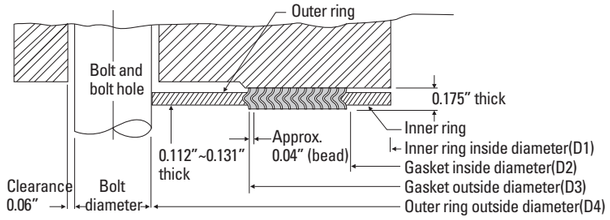
| Nominal Size DIN | Inside Diameter | PN6 | | | | PN10 | | | | PN16 | | | | PN25 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OD | BCD | H.NO | H.D | OD | BCD | H.NO | H.D | OD | BCD | H.NO | H.D | OD | BCD | H.NO | H.D |
| 20 A | 29 | 90 | 65 | 4 | 11 | 105 | 75 | 4 | 14 | 105 | 75 | 4 | 14 | 105 | 75 | 4 | 14 |
| 25 A | 36 | 100 | 75 | 4 | 11 | 115 | 85 | 4 | 14 | 115 | 85 | 4 | 14 | 115 | 85 | 4 | 14 |
| 32 A | 47 | 120 | 90 | 4 | 14 | 140 | 100 | 4 | 18 | 140 | 100 | 4 | 18 | 140 | 100 | 4 | 18 |
| 40 A | 53 | 130 | 100 | 4 | 14 | 150 | 110 | 4 | 18 | 150 | 110 | 4 | 18 | 150 | 110 | 4 | 18 |
| 50 A | 65 | 140 | 110 | 4 | 14 | 165 | 125 | 4 | 18 | 165 | 125 | 4 | 18 | 165 | 125 | 4 | 18 |
| 65 A | 81 | 160 | 130 | 4 | 14 | 185 | 145 | 4 | 18 | 185 | 145 | 4 | 18 | 185 | 145 | 8 | 18 |
| 80 A | 93 | 190 | 150 | 4 | 18 | 200 | 160 | 8 | 18 | 200 | 160 | 8 | 18 | 200 | 160 | 8 | 18 |
| 100 A | 120 | 210 | 170 | 4 | 18 | 220 | 180 | 8 | 18 | 220 | 180 | 8 | 18 | 235 | 190 | 8 | 22 |
| 125 A | 146 | 240 | 200 | 8 | 18 | 250 | 210 | 8 | 18 | 250 | 210 | 8 | 18 | 270 | 220 | 8 | 26 |
| 150 A | 172 | 265 | 225 | 8 | 18 | 285 | 240 | 8 | 22 | 285 | 240 | 8 | 22 | 300 | 250 | 8 | 26 |
| 175 A | 200 | 295 | 255 | 8 | 18 | 315 | 270 | 8 | 22 | 315 | 270 | 8 | 22 | 330 | 280 | 12 | 26 |
| 200 A | 225 | 320 | 280 | 8 | 18 | 340 | 295 | 8 | 22 | 340 | 295 | 12 | 22 | 360 | 310 | 12 | 26 |
| 250 A | 282 | 375 | 335 | 12 | 18 | 395 | 350 | 12 | 22 | 405 | 355 | 12 | 26 | 425 | 370 | 12 | 30 |
| 300 A | 332 | 440 | 395 | 12 | 22 | 445 | 400 | 12 | 22 | 460 | 410 | 12 | 26 | 485 | 430 | 16 | 30 |
| 350 A | 363 | 490 | 445 | 12 | 22 | 505 | 460 | 16 | 22 | 520 | 470 | 16 | 26 | 555 | 490 | 16 | 33 |
| 400 A | 415 | 540 | 495 | 16 | 22 | 565 | 515 | 16 | 26 | 580 | 525 | 16 | 30 | 620 | 550 | 16 | 36 |
| 450 A | 467 | 595 | 550 | 16 | 22 | 615 | 565 | 20 | 26 | 640 | 585 | 20 | 30 | - | - | - | - |
| 500 A | 520 | 645 | 600 | 20 | 22 | 670 | 620 | 20 | 26 | 715 | 650 | 20 | 33 | 730 | 660 | 20 | 36 |
| 600 A | 620 | 755 | 705 | 20 | 26 | 780 | 725 | 20 | 30 | 840 | 770 | 20 | 36 | 845 | 770 | 20 | 39 |
| 700 A | 723 | 860 | 810 | 24 | 26 | 895 | 840 | 24 | 30 | 910 | 840 | 24 | 36 | 960 | 875 | 24 | 42 |
| 800 A | 825 | 975 | 920 | 24 | 30 | 1,015 | 950 | 24 | 33 | 1,025 | 950 | 24 | 39 | 1,085 | 990 | 24 | 48 |
| 900 A | 928 | - | - | - | - | 1,115 | 1,050 | 28 | 33 | 1,125 | 1,050 | 28 | 39 | 1,185 | 1,090 | 28 | 48 |
| 1000 A | 1,032 | - | - | - | - | 1,230 | 1,160 | 28 | 36 | 1,255 | 1,170 | 28 | 42 | 1,320 | 1,210 | 28 | 56 |
| 1200 A | 1,220 | - | - | - | - | 1,455 | 1,380 | 32 | 39 | 1,485 | 1,380 | 32 | 48 | - | - | - | - |
| 1400 A | 1,420 | - | - | - | - | 1,675 | 1,590 | 36 | 42 | 1,685 | 1,590 | 36 | 48 | - | - | - | - |
| 1600 A | 1,620 | - | - | - | - | 1,915 | 1,820 | 40 | 48 | 1,930 | 1,820 | 40 | 56 | - | - | - | - |
| 1800 A | 1,820 | - | - | - | - | 2,116 | 2,020 | 44 | 48 | 2,130 | 2,020 | 44 | 56 | - | - | - | - |
| 2000 A | 2,020 | - | - | - | - | 2,325 | 2,230 | 48 | 48 | 2,345 | 2,230 | 48 | 62 | - | - | - | - |





# SPIRAL WOUND GASKET DIMENSIONS

## ASME B16.20




NOTES :

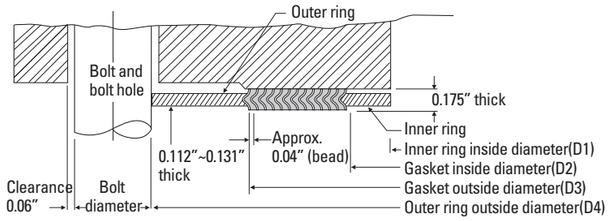
- Inner rings are required for Class 900 gaskets, NPS 24; class 1500 gaskets, NPS 12 through NPS 24; and class 2500 gaskets, NPS 4 through NPS 12.
- There are no Class 400 flanges in NPS through 3 (use Class 600). Class 900 flanges in NPS through NPS 2 (use Class 1500), or Class 2500 flanges NPS 14 and larger.

| FLANGE SIZE (NPS) | 150 # | | | | 300 # | | | | 400 # | | | | 600 # | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 |
| 1/2" | 14.2 | 19.1 | 31.8 | 47.8 | 14.2 | 19.1 | 31.8 | 54.1 | 14.2 | 19.1 | 31.8 | 54.1 | 14.2 | 19.1 | 31.8 | 54.1 |
| 3/4" | 20.6 | 25.4 | 39.6 | 57.2 | 20.6 | 25.4 | 39.6 | 66.8 | 20.6 | 25.4 | 39.6 | 66.8 | 20.6 | 25.4 | 39.6 | 66.8 |
| 1" | 26.9 | 31.8 | 47.8 | 66.8 | 26.9 | 31.8 | 47.8 | 73.2 | 26.9 | 31.8 | 47.8 | 73.2 | 26.9 | 31.8 | 47.8 | 73.2 |
| 1-1/4" | 38.1 | 47.8 | 60.5 | 76.2 | 38.1 | 47.8 | 60.5 | 82.6 | 38.1 | 47.8 | 60.5 | 82.6 | 38.1 | 47.8 | 60.5 | 82.6 |
| 1-1/2" | 44.5 | 54.1 | 69.9 | 85.9 | 44.5 | 54.1 | 69.9 | 95.3 | 44.5 | 54.1 | 69.9 | 95.3 | 44.5 | 54.1 | 69.9 | 95.3 |
| 2" | 55.6 | 69.9 | 85.9 | 104.9 | 55.6 | 69.9 | 85.9 | 111.3 | 55.6 | 69.9 | 85.9 | 111.3 | 55.6 | 69.9 | 85.9 | 111.3 |
| 2-1/2" | 66.5 | 82.6 | 98.6 | 124 | 66.5 | 82.6 | 98.6 | 130.3 | 66.5 | 82.6 | 98.6 | 130.3 | 66.5 | 82.6 | 98.6 | 130.3 |
| 3" | 81 | 101.6 | 120.7 | 136.7 | 81 | 101.6 | 120.7 | 149.4 | 81 | 101.6 | 120.7 | 149.4 | 81 | 101.6 | 120.7 | 149.4 |
| 3-1/2" | 101.1 | 114.3 | 133.4 | 161.9 | 101.1 | 114.3 | 133.4 | 165.1 | 91.4 | 104.8 | 133.4 | 161.9 | 91.4 | 104.8 | 133.4 | 161.9 |
| 4" | 106.4 | 127 | 149.4 | 174.8 | 106.4 | 127 | 149.4 | 181.1 | 102.6 | 120.7 | 149.4 | 177.8 | 102.6 | 120.7 | 149.4 | 193.8 |
| 5" | 131.8 | 155.7 | 177.8 | 196.9 | 131.8 | 155.7 | 177.8 | 215.9 | 128.3 | 147.6 | 177.8 | 212.9 | 128.3 | 147.6 | 177.8 | 241.3 |
| 6" | 157.2 | 182.6 | 209.6 | 222.3 | 157.2 | 182.6 | 209.6 | 251 | 154.9 | 174.8 | 209.6 | 247.7 | 154.9 | 174.8 | 209.6 | 266.7 |
| 8" | 215.9 | 233.4 | 263.7 | 279.4 | 215.9 | 233.4 | 263.7 | 308.1 | 205.7 | 225.6 | 263.7 | 304.8 | 205.7 | 225.6 | 263.7 | 320.8 |
| 10" | 268.2 | 287.3 | 317.5 | 339.9 | 268.2 | 287.3 | 317.5 | 362 | 255.3 | 274.6 | 317.5 | 358.9 | 255.3 | 274.6 | 317.5 | 400.1 |
| 12" | 317.5 | 339.9 | 374.7 | 409.7 | 317.5 | 339.9 | 374.7 | 422.4 | 307.3 | 327.2 | 374.7 | 419.1 | 307.3 | 327.2 | 374.7 | 457.2 |
| 14" | 349.3 | 371.6 | 406.4 | 450.9 | 349.3 | 371.6 | 406.4 | 485.9 | 342.9 | 362 | 406.4 | 482.6 | 342.9 | 362 | 406.4 | 492.3 |
| 16" | 400.1 | 422.4 | 463.6 | 514.4 | 400.1 | 422.4 | 463.6 | 539.8 | 389.9 | 412.8 | 463.6 | 536.7 | 389.9 | 412.8 | 463.6 | 565.2 |
| 18" | 449.3 | 474.7 | 527.1 | 549.4 | 449.3 | 474.7 | 527.1 | 596.9 | 438.2 | 469.9 | 527.1 | 593.9 | 438.2 | 469.9 | 527.1 | 612.9 |
| 20" | 500.1 | 525.5 | 577.9 | 606.6 | 500.1 | 525.5 | 577.9 | 654.1 | 489 | 520.7 | 577.9 | 647.7 | 489 | 520.7 | 577.9 | 682.8 |
| 24" | 603.3 | 628.7 | 685.8 | 717.6 | 603.3 | 628.7 | 685.8 | 774.7 | 590.6 | 628.7 | 685.8 | 768.4 | 590.6 | 628.7 | 685.8 | 790.7 |

| FLANGE SIZE (NPS) | 900 # | | | | 1500 # | | | | 2500 # | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 |
| 1/2" | 14.2 | 19.1 | 31.8 | 63.5 | 14.2 | 19.1 | 31.8 | 63.5 | 14.2 | 19.1 | 31.8 | 69.9 |
| 3/4" | 20.6 | 25.4 | 39.6 | 69.9 | 20.6 | 25.4 | 39.6 | 69.9 | 20.6 | 25.4 | 39.6 | 76.2 |
| 1" | 26.9 | 31.8 | 47.8 | 79.5 | 26.9 | 31.8 | 47.8 | 79.5 | 26.9 | 31.8 | 47.8 | 85.9 |
| 1-1/4" | 33.3 | 39.6 | 60.5 | 88.9 | 33.3 | 39.6 | 60.5 | 88.9 | 33.3 | 39.6 | 60.5 | 104.9 |
| 1-1/2" | 41.4 | 47.8 | 69.9 | 98.6 | 41.4 | 47.8 | 69.9 | 98.6 | 41.4 | 47.8 | 69.9 | 117.6 |
| 2" | 52.3 | 58.7 | 85.9 | 143 | 52.3 | 58.7 | 85.9 | 143 | 52.3 | 58.7 | 85.9 | 146.1 |
| 2-1/2" | 63.5 | 69.9 | 98.6 | 165.1 | 63.5 | 69.9 | 98.6 | 165.1 | 63.5 | 69.9 | 98.6 | 168.4 |
| 3" | 78.7 | 95.3 | 120.7 | 168.4 | 78.7 | 92.2 | 120.7 | 174.8 | 78.7 | 92.2 | 120.7 | 196.9 |
| 4" | 102.6 | 120.7 | 149.4 | 206.5 | 97.8 | 117.6 | 149.4 | 209.6 | 97.8 | 117.6 | 149.4 | 235 |
| 5" | 128.3 | 147.6 | 177.8 | 247.7 | 124.5 | 143 | 177.8 | 254 | 124.5 | 143 | 177.8 | 279.4 |
| 6" | 154.9 | 174.8 | 209.6 | 289.1 | 147.3 | 171.5 | 209.6 | 282.7 | 147.3 | 171.5 | 209.6 | 317.5 |
| 8" | 196.9 | 222.3 | 257.3 | 358.9 | 196.9 | 215.9 | 257.3 | 352.6 | 196.9 | 215.9 | 257.3 | 387.4 |
| 10" | 246.1 | 276.4 | 311.2 | 435.1 | 246.1 | 266.7 | 311.2 | 435.1 | 246.1 | 270 | 311.2 | 476.3 |
| 12" | 292.1 | 323.9 | 368.3 | 498.6 | 292.1 | 323.9 | 368.3 | 520.7 | 292.1 | 317.5 | 368.3 | 549.4 |
| 14" | 320.8 | 355.6 | 400.1 | 520.7 | 320.8 | 362 | 400.1 | 577.9 | - | - | - | - |
| 16" | 374.7 | 412.8 | 457.2 | 574.8 | 368.3 | 406.4 | 457.2 | 641.4 | - | - | - | - |
| 18" | 425.5 | 463.6 | 520.7 | 638.3 | 425.5 | 463.6 | 520.7 | 704.9 | - | - | - | - |
| 20" | 482.6 | 520.7 | 571.5 | 698.5 | 476.3 | 514.4 | 571.5 | 755.7 | - | - | - | - |
| 24" | 590.6 | 628.7 | 679.5 | 838.2 | 577.9 | 616 | 679.5 | 901.7 | - | - | - | - |

# SPIRAL WOUND GASKET DIMENSIONS

## ASME B16.47-A




NOTES :
- Inner rings are required for Class 900 gaskets, NPS 26 through NPS 48
- There are no Class 900 flanges NPS 50 and larger.

| FLANGE SIZE (NPS) | 150 # | | | | 300 # | | | | 400 # | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 |
| 26" | 654.1 | 673.1 | 704.9 | 774.7 | 654.1 | 685.8 | 736.6 | 835.2 | 660.4 | 685.8 | 736.6 | 831.9 |
| 28" | 704.9 | 723.9 | 755.7 | 831.9 | 704.9 | 736.6 | 787.4 | 898.7 | 711.2 | 736.6 | 787.4 | 892.3 |
| 30" | 755.7 | 774.7 | 806.5 | 882.7 | 755.7 | 793.8 | 844.6 | 952.5 | 755.7 | 793.8 | 844.6 | 946.2 |
| 32" | 806.5 | 825.5 | 860.6 | 939.8 | 806.5 | 850.9 | 901.7 | 1006.6 | 812.8 | 850.9 | 901.7 | 1003.3 |
| 34" | 857.3 | 876.3 | 911.4 | 990.6 | 857.3 | 901.7 | 952.5 | 1057.4 | 863.6 | 901.7 | 952.5 | 1054.1 |
| 36" | 908.1 | 927.1 | 968.5 | 1047.8 | 908.1 | 955.8 | 1006.6 | 1117.6 | 917.7 | 955.8 | 1006.6 | 1117.6 |
| 38" | 958.9 | 977.9 | 1019.3 | 1111.3 | 952.5 | 977.9 | 1016 | 1054.1 | 952.5 | 971.6 | 1022.4 | 1073.2 |
| 40" | 1009.7 | 1028.7 | 1070.1 | 1162.1 | 1003.3 | 1022.4 | 1070.1 | 1114.6 | 1000.3 | 1025.7 | 1076.5 | 1127.3 |
| 42" | 1060.5 | 1079.5 | 1124 | 1219.2 | 1054.1 | 1073.2 | 1120.9 | 1165.4 | 1051.1 | 1076.5 | 1127.3 | 1178.1 |
| 44" | 1111.3 | 1130.3 | 1178.1 | 1276.4 | 1104.9 | 1130.3 | 1181.1 | 1219.2 | 1104.9 | 1130.3 | 1181.1 | 1231.9 |
| 46" | 1162.1 | 1181.1 | 1228.9 | 1327.2 | 1152.7 | 1178.1 | 1228.9 | 1273.3 | 1168.4 | 1193.8 | 1244.6 | 1289.1 |
| 48" | 1212.9 | 1231.9 | 1279.7 | 1384.3 | 1209.8 | 1235.2 | 1286 | 1324.1 | 1206.5 | 1244.6 | 1295.4 | 1346.2 |
| 50" | 1263.7 | 1282.7 | 1333.5 | 1435.1 | 1244.6 | 1295.4 | 1346.2 | 1378 | 1257.3 | 1295.4 | 1346.2 | 1403.4 |
| 52" | 1314.5 | 1333.5 | 1384.3 | 1492.3 | 1320.8 | 1346.2 | 1397 | 1428.8 | 1308.1 | 1346.2 | 1397 | 1454.2 |
| 54" | 1358.9 | 1384.3 | 1435.1 | 1549.4 | 1352.6 | 1403.4 | 1454.2 | 1492.3 | 1352.6 | 1403.4 | 1454.2 | 1517.7 |
| 56" | 1409.7 | 1435.1 | 1485.9 | 1606.6 | 1403.4 | 1454.2 | 1505 | 1543.1 | 1403.4 | 1454.2 | 1505 | 1568.5 |
| 58" | 1460.5 | 1485.9 | 1536.7 | 1663.7 | 1447.8 | 1511.3 | 1562.1 | 1593.9 | 1454.2 | 1505 | 1555.8 | 1619.3 |
| 60" | 1511.3 | 1536.7 | 1587.5 | 1714.5 | 1524 | 1562.1 | 1612.9 | 1644.7 | 1517.7 | 1568.5 | 1619.3 | 1682.8 |

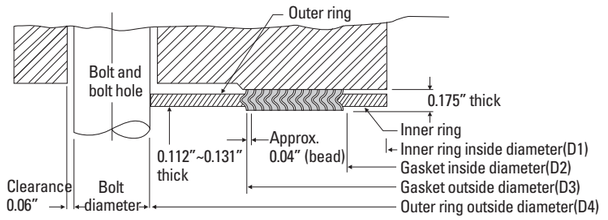
| FLANGE SIZE (NPS) | 600 # | | | | 900 # | | | |
|---|---|---|---|---|---|---|---|---|
| | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 |
| 26" | 647.7 | 685.8 | 736.6 | 866.9 | 660.4 | 685.8 | 736.6 | 882.7 |
| 28" | 698.5 | 736.6 | 787.4 | 914.4 | 711.2 | 736.6 | 787.4 | 946.2 |
| 30" | 755.7 | 793.8 | 844.6 | 971.6 | 768.4 | 793.8 | 844.6 | 1009.7 |
| 32" | 812.8 | 850.9 | 901.7 | 1022.4 | 812.8 | 850.9 | 901.7 | 1073.2 |
| 34" | 81 | 901.7 | 952.5 | 1073.2 | 863.6 | 901.7 | 952.5 | 1136.7 |
| 36" | 917.7 | 955.8 | 1006.6 | 1130.3 | 920.8 | 958.9 | 1009.7 | 1200.2 |
| 38" | 952.5 | 990.6 | 1041.4 | 1104.9 | 1009.7 | 1035.1 | 1085.9 | 1200.2 |
| 40" | 1009.7 | 1047.8 | 1098.6 | 1155.7 | 1060.5 | 1098.6 | 1149.4 | 1251 |
| 42" | 1066.8 | 1104.9 | 1155.7 | 1219.2 | 1111.3 | 1149.4 | 1200.2 | 1301.8 |
| 44" | 1111.3 | 1162.1 | 1212.9 | 1270 | 1155.7 | 1206.5 | 1257.3 | 1368.6 |
| 46" | 1162.1 | 1212.9 | 1263.7 | 1327.2 | 1219.2 | 1270 | 1320.8 | 1435.1 |
| 48" | 1219.2 | 1270 | 1320.8 | 1390.7 | 1270 | 1320.8 | 1371.6 | 1485.9 |
| 50" | 1270 | 1320.8 | 1371.6 | 1447.8 | - | - | - | - |
| 52" | 1320.8 | 1371.6 | 1422.4 | 1498.6 | - | - | - | - |
| 54" | 1378 | 1428.8 | 1479.6 | 1555.8 | - | - | - | - |
| 56" | 1428.8 | 1479.6 | 1530.4 | 1612.9 | - | - | - | - |
| 58" | 1473.2 | 1536.7 | 1587.5 | 1663.7 | - | - | - | - |
| 60" | 1530.4 | 1593.9 | 1644.7 | 1733.6 | - | - | - | - |





# SPIRAL WOUND GASKET DIMENSIONS

## ASME B16.47-B



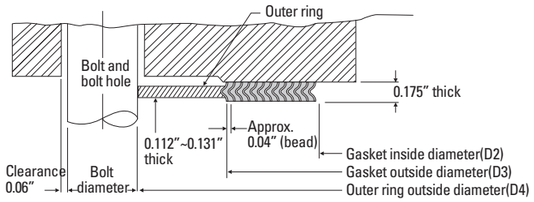

NOTES :
- Inner rings are required for Class 900 gaskets, NPS 26 through NPS 48
- There are no Class 900 flanges NPS 50 and larger.

| FLANGE SIZE (NPS) | 150 # | | | | 300 # | | | | 400 # | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 |
| 26" | 654.1 | 673.1 | 698.5 | 725.4 | 654.1 | 673.1 | 711.2 | 771.7 | 654.1 | 666.8 | 698.5 | 746.3 |
| 28" | 704.9 | 723.9 | 749.3 | 776.2 | 704.9 | 723.9 | 762 | 825.5 | 701.8 | 714.5 | 749.3 | 800.1 |
| 30" | 755.7 | 774.7 | 800.1 | 827 | 755.7 | 774.7 | 812.8 | 886 | 752.6 | 765.3 | 806.5 | 857.3 |
| 32" | 806.5 | 825.5 | 850.9 | 881.1 | 806.5 | 825.5 | 863.6 | 939.8 | 800.1 | 812.8 | 860.6 | 911.4 |
| 34" | 857.3 | 876.3 | 908.1 | 935 | 857.3 | 876.3 | 914.4 | 993.9 | 850.9 | 866.9 | 911.4 | 962.2 |
| 36" | 908.1 | 927.1 | 958.9 | 987.6 | 908.1 | 927.1 | 965.2 | 1047.8 | 898.7 | 917.7 | 965.2 | 1022.4 |
| 38" | 958.9 | 974.6 | 1009.7 | 1044.7 | 971.6 | 1009.7 | 1047.8 | 1098.6 | 952.5 | 971.6 | 1022.4 | 1073.2 |
| 40" | 1009.7 | 1022.4 | 1063.8 | 1095.5 | 1022.4 | 1060.5 | 1098.6 | 1149.4 | 1000.3 | 1025.7 | 1076.5 | 1127.3 |
| 42" | 1060.5 | 1079.5 | 1114.6 | 1146.3 | 1085.9 | 1111.3 | 1149.4 | 1200.2 | 1051.1 | 1076.5 | 1127.3 | 1178.1 |
| 44" | 1111.3 | 1124 | 1165.4 | 1197.1 | 1124 | 1162.1 | 1200.2 | 1251 | 1104.9 | 1130.3 | 1181.1 | 1231.9 |
| 46" | 1162.1 | 1181.1 | 1224 | 1255.8 | 1178.1 | 1216.2 | 1254.3 | 1317.8 | 1168.4 | 1193.8 | 1244.6 | 1289.1 |
| 48" | 1212.9 | 1231.9 | 1270 | 1306.6 | 1231.9 | 1263.7 | 1311.4 | 1368.6 | 1206.5 | 1244.6 | 1295.4 | 1346.2 |
| 50" | 1263.7 | 1282.7 | 1325.6 | 1357.4 | 1267 | 1317.8 | 1355.9 | 1419.4 | 1257.3 | 1295.4 | 1346.2 | 1403.4 |
| 52" | 1314.5 | 1333.5 | 1376.4 | 1408.2 | 1317.8 | 1368.6 | 1406.7 | 1470.2 | 1308.1 | 1346.2 | 1397 | 1454.2 |
| 54" | 1365.3 | 1384.3 | 1422.4 | 1463.8 | 1365.3 | 1403.4 | 1454.2 | 1530.4 | 1352.6 | 1403.4 | 1454.2 | 1517.7 |
| 56" | 1422.4 | 1444.8 | 1478 | 1514.6 | 1428.8 | 1479.6 | 1524 | 1593.9 | 1403.4 | 1454.2 | 1505 | 1568.5 |
| 58" | 1478 | 1500.1 | 1528.8 | 1579.6 | 1484.4 | 1535.2 | 1573.3 | 1655.8 | 1454.2 | 1505 | 1555.8 | 1619.3 |
| 60" | 1535.2 | 1557.3 | 1586 | 1630.4 | 1557.3 | 1589 | 1630.4 | 1706.6 | 1517.7 | 1568.5 | 1619.3 | 1682.8 |

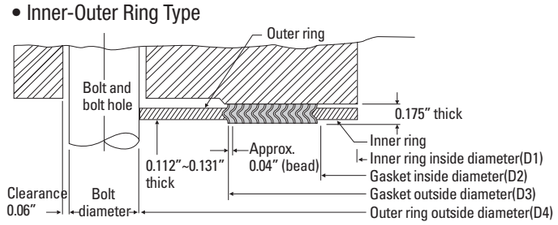
| FLANGE SIZE (NPS) | 600 # | | | | 900 # | | | |
|---|---|---|---|---|---|---|---|---|
| | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 |
| 26" | 644.7 | 663.7 | 714.5 | 765.3 | 666.8 | 692.2 | 749.3 | 838.2 |
| 28" | 685.8 | 704.9 | 755.7 | 819.2 | 717.6 | 743 | 800.1 | 901.7 |
| 30" | 752.6 | 778 | 828.8 | 879.6 | 781.1 | 806.5 | 857.3 | 958.9 |
| 32" | 793.8 | 831.9 | 882.7 | 933.5 | 838.2 | 863.6 | 914.4 | 1016 |
| 34" | 850.9 | 889 | 939.8 | 997 | 895.4 | 920.8 | 971.6 | 1073.2 |
| 36" | 901.7 | 939.8 | 990.6 | 1047.8 | 920.8 | 946.2 | 997 | 1124 |
| 38" | 952.5 | 990.6 | 1041.4 | 1104.9 | 1009.7 | 1035.1 | 1085.9 | 1200.2 |
| 40" | 1009.7 | 1047.8 | 1098.6 | 1155.7 | 1060.5 | 1098.6 | 1149.4 | 1251 |
| 42" | 1066.8 | 1104.9 | 1155.7 | 1219.2 | 1111.3 | 1149.4 | 1200.2 | 1301.8 |
| 44" | 1111.3 | 1162.1 | 1212.9 | 1270 | 1155.7 | 1206.5 | 1257.3 | 1368.6 |
| 46" | 1162.1 | 1212.9 | 1263.7 | 1327.2 | 1219.2 | 1270 | 1320.8 | 1435.1 |
| 48" | 1219.2 | 1270 | 1320.8 | 1390.7 | 1270 | 1320.8 | 1371.6 | 1485.9 |
| 50" | 1270 | 1320.8 | 1371.6 | 1447.8 | - | - | - | - |
| 52" | 1320.8 | 1371.6 | 1422.4 | 1498.6 | - | - | - | - |
| 54" | 1378 | 1428.8 | 1479.6 | 1555.8 | - | - | - | - |
| 56" | 1428.8 | 1479.6 | 1530.4 | 1612.9 | - | - | - | - |
| 58" | 1473.2 | 1536.7 | 1587.5 | 1663.7 | - | - | - | - |
| 60" | 1530.4 | 1593.9 | 1644.7 | 1733.6 | - | - | - | - |

# SPIRAL WOUND GASKET DIMENSIONS

## JIS B2404




• Inner-Outer Ring Type




### Outer Ring Type

| 호칭경 | 10kgf/㎠ | | | 16,20kgf/㎠ | | | 30kgf/㎠ | | | 40kgf/㎠ | | | 63kgf/㎠ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D2 | D3 | D4 | D2 | D3 | D4 | D2 | D3 | D4 | D2 | D3 | D4 | D2 | D3 | D4 |
| 10 | 24 | 37 | 52 | 24 | 37 | 52 | 24 | 37 | 59 | 21 | 34 | 59 | 21 | 34 | 64 |
| 15 | 28 | 41 | 57 | 28 | 41 | 57 | 28 | 41 | 64 | 24 | 37 | 64 | 24 | 37 | 69 |
| 20 | 34 | 47 | 62 | 34 | 47 | 62 | 34 | 47 | 69 | 29 | 42 | 69 | 29 | 42 | 75 |
| 25 | 40 | 53 | 74 | 40 | 53 | 74 | 40 | 53 | 79 | 35 | 48 | 79 | 35 | 48 | 80 |
| 32 | 51 | 67 | 84 | 51 | 67 | 84 | 51 | 67 | 89 | 44 | 60 | 89 | 44 | 60 | 90 |
| 40 | 57 | 73 | 89 | 57 | 73 | 89 | 57 | 73 | 100 | 51 | 67 | 100 | 51 | 67 | 107 |
| 50 | 69 | 89 | 104 | 69 | 89 | 104 | 69 | 89 | 114 | 63 | 79 | 114 | 63 | 79 | 125 |
| 65 | 87 | 107 | 124 | 87 | 107 | 124 | 78 | 98 | 140 | 78 | 98 | 140 | 78 | 98 | 152 |
| 80 | 98 | 118 | 134 | 99 | 119 | 140 | 90 | 110 | 150 | 90 | 110 | 150 | 90 | 110 | 162 |
| 90 | 110 | 130 | 144 | 114 | 139 | 150 | 102 | 127 | 162 | 102 | 127 | 162 | 102 | 127 | 179 |
| 100 | 123 | 143 | 159 | 127 | 152 | 165 | 116 | 141 | 172 | 116 | 141 | 182 | 116 | 141 | 194 |
| 125 | 148 | 173 | 190 | 152 | 177 | 202 | 140 | 165 | 207 | 140 | 165 | 224 | 140 | 165 | 235 |
| 150 | 174 | 199 | 220 | 182 | 214 | 237 | 165 | 197 | 249 | 165 | 197 | 265 | 165 | 197 | 275 |
| 175 | 201 | 226 | 245 | - | - | - | - | - | - | - | - | - | - | - | - |
| 200 | 227 | 252 | 270 | 233 | 265 | 282 | 218 | 250 | 294 | 218 | 250 | 315 | 218 | 250 | 328 |
| 225 | 252 | 277 | 290 | - | - | - | - | - | - | - | - | - | - | - | - |
| 250 | 278 | 310 | 332 | 288 | 328 | 354 | 271 | 311 | 360 | 271 | 311 | 378 | 271 | 311 | 394 |
| 300 | 329 | 361 | 377 | 339 | 379 | 404 | 320 | 360 | 418 | 320 | 360 | 434 | 320 | 360 | 446 |
| 350 | 366 | 406 | 422 | 376 | 416 | 450 | 356 | 396 | 463 | 356 | 396 | 479 | 356 | 396 | 488 |
| 400 | 417 | 457 | 484 | 432 | 482 | 508 | 403 | 453 | 524 | 403 | 453 | 531 | 403 | 453 | 545 |
| 450 | 468 | 518 | 539 | 483 | 533 | 573 | - | - | - | - | - | - | - | - | - |
| 500 | 518 | 568 | 594 | 533 | 583 | 628 | - | - | - | - | - | - | - | - | - |
| 550 | 569 | 619 | 650 | 584 | 634 | 684 | - | - | - | - | - | - | - | - | - |
| 600 | 620 | 670 | 700 | 635 | 685 | 734 | - | - | - | - | - | - | - | - | - |

### Inner-Outer Ring Type

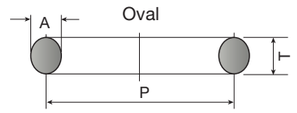
| 호칭경 | 16,20kgf/㎠ | | | | 30kgf/㎠ | | | | 40kgf/㎠ | | | | 63kgf/㎠ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 | D1 | D2 | D3 | D4 |
| 10 | 18 | 24 | 37 | 52 | 18 | 24 | 37 | 59 | 15 | 21 | 34 | 59 | 15 | 21 | 34 | 64 |
| 15 | 22 | 28 | 41 | 57 | 22 | 28 | 41 | 64 | 18 | 24 | 37 | 64 | 18 | 24 | 37 | 69 |
| 20 | 28 | 34 | 47 | 62 | 28 | 34 | 47 | 69 | 23 | 29 | 42 | 69 | 23 | 29 | 42 | 75 |
| 25 | 34 | 40 | 53 | 74 | 34 | 40 | 53 | 79 | 29 | 35 | 48 | 79 | 29 | 35 | 48 | 80 |
| 32 | 43 | 51 | 67 | 84 | 43 | 51 | 67 | 89 | 38 | 44 | 60 | 89 | 38 | 44 | 60 | 90 |
| 40 | 49 | 57 | 73 | 89 | 49 | 57 | 73 | 100 | 43 | 51 | 67 | 100 | 43 | 51 | 67 | 107 |
| 50 | 61 | 69 | 89 | 104 | 61 | 69 | 89 | 114 | 55 | 63 | 79 | 114 | 55 | 63 | 79 | 125 |
| 65 | 77 | 87 | 107 | 124 | 68 | 78 | 98 | 140 | 68 | 78 | 98 | 140 | 68 | 78 | 98 | 152 |
| 80 | 89 | 99 | 119 | 140 | 80 | 90 | 110 | 150 | 80 | 90 | 110 | 150 | 80 | 90 | 110 | 162 |
| 90 | 102 | 114 | 139 | 150 | 92 | 102 | 127 | 162 | 92 | 102 | 127 | 162 | 92 | 102 | 127 | 179 |
| 100 | 115 | 127 | 152 | 165 | 104 | 116 | 141 | 172 | 104 | 116 | 141 | 182 | 104 | 116 | 141 | 194 |
| 125 | 140 | 152 | 177 | 202 | 128 | 140 | 165 | 207 | 128 | 140 | 165 | 224 | 128 | 140 | 165 | 235 |
| 150 | 166 | 182 | 214 | 237 | 153 | 165 | 197 | 249 | 153 | 165 | 197 | 265 | 153 | 165 | 197 | 275 |
| 200 | 217 | 233 | 265 | 282 | 202 | 218 | 250 | 294 | 202 | 218 | 250 | 315 | 202 | 218 | 250 | 328 |
| 250 | 268 | 288 | 328 | 354 | 251 | 271 | 311 | 360 | 251 | 271 | 311 | 378 | 251 | 271 | 311 | 394 |
| 300 | 319 | 339 | 379 | 404 | 300 | 320 | 360 | 418 | 300 | 320 | 360 | 434 | 300 | 320 | 360 | 446 |
| 350 | 356 | 376 | 416 | 450 | 336 | 356 | 396 | 463 | 336 | 356 | 396 | 479 | 336 | 356 | 396 | 488 |
| 400 | 407 | 432 | 482 | 508 | 383 | 403 | 453 | 524 | 383 | 403 | 453 | 531 | 383 | 403 | 453 | 545 |
| 450 | 458 | 483 | 533 | 573 | - | - | - | - | - | - | - | - | - | - | - | - |
| 500 | 508 | 533 | 583 | 628 | - | - | - | - | - | - | - | - | - | - | - | - |
| 550 | 559 | 584 | 634 | 684 | - | - | - | - | - | - | - | - | - | - | - | - |
| 600 | 610 | 635 | 685 | 734 | - | - | - | - | - | - | - | - | - | - | - | - |

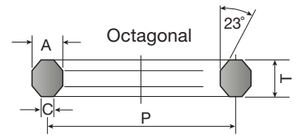




## Ring Type Joint(RTJ) Dimension Table

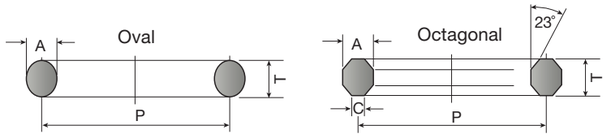
## RTJ 가스켓 치수표




| Noninal flange class/rating | | | | | RingNo. | P(±0.18) | Gasket dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Class150 | Class300-600 | Class900 | Class1500 | Class2500 | | | A(±0.20) | T (+1.3, -0.5) | | C(±0.20) |
| | | | | | | | | Oval | Octagonal | |
| | 1/2 | | | | R11 | 34.14 | 6.35 | 11.2 | 9.7 | 4.32 |
| | | 1/2 | 1/2 | | R12 | 39.70 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 3/4 | | | 1/2 | R13 | 42.88 | 7.95 | 14.2 | 12.7 | 5.23 |
| | | 3/4 | 3/4 | | R14 | 44.45 | 7.95 | 14.2 | 12.7 | 5.23 |
| 1 | | | | | R15 | 47.63 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 1 | 1 | 1 | 3/4 | R16 | 50.80 | 7.95 | 14.2 | 12.7 | 5.23 |
| 1-1/4 | | | | | R17 | 57.15 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 1-1/4 | 1-1/4 | 1-1/4 | 1 | R18 | 60.33 | 7.95 | 14.2 | 12.7 | 5.23 |
| 1-1/2 | | | | | R19 | 65.10 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 1-1/2 | 1-1/2 | 1-1/2 | | R20 | 68.28 | 7.95 | 14.2 | 12.7 | 5.23 |
| | | | | 1-1/4 | R21 | 72.24 | 11.13 | 17.5 | 16.0 | 7.75 |
| 2 | | | | | R22 | 82.55 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 2 | | | 1-1/2 | R23 | 82.55 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | 2 | 2 | | R24 | 95.25 | 11.13 | 17.5 | 16.0 | 7.75 |
| 2-1/2 | | | | | R25 | 101.60 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 2-1/2 | | | 2 | R26 | 101.60 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | 2-1/2 | 2-1/2 | | R27 | 107.95 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | | 2-1/2 | R28 | 111.13 | 12.70 | 19.1 | 17.5 | 8.66 |
| 3 | | | | | R29 | 114.30 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 3 | | | | R30 | 117.48 | 11.13 | 17.5 | 16.0 | 7.75 |
| | 3 | 3 | | | R31 | 123.93 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | | 3 | R32 | 127.00 | 12.7 | 19.1 | 17.5 | 8.66 |
| 3-1/2 | | | | | R33 | 131.78 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 3-1/2 | | | | R34 | 131.78 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | 3 | | R35 | 136.53 | 11.13 | 17.5 | 16.0 | 7.75 |
| 4 | | | | | R36 | 149.23 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 4 | 4 | | | R37 | 149.23 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | | 4 | R38 | 157.18 | 15.88 | 22.4 | 20.6 | 10.49 |
| | | | 4 | | R39 | 161.93 | 11.13 | 17.5 | 16.0 | 7.75 |
| 5 | | | | | R40 | 171.45 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 5 | 5 | | | R41 | 180.98 | 11.13 | 17.5 | 16.0 | 7.75 |

## Ring Type Joint(RTJ) Dimension Table
## RTJ 가스켓 치수표

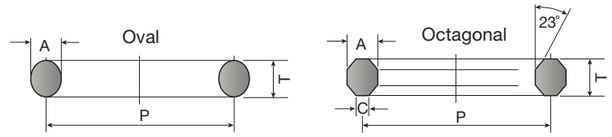



| Noninal flange class/rating | | | | | RingNo. | P(±0.18) | Gasket dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Class150 | Class300-600 | Class900 | Class1500 | Class2500 | | | A(±0.20) | T (+1.3, -0.5) | | C(±0.20) |
| | | | | | | | | Oval | Octagonal | |
| | | | | 5 | R42 | 190.50 | 19.05 | 25.4 | 23.9 | 12.32 |
| 6 | | | | | R43 | 193.68 | 7.95 | 14.2 | 12.7 | 5.23 |
| | | | 5 | | R44 | 193.68 | 11.13 | 17.5 | 16.0 | 7.75 |
| | 6 | 6 | | | R45 | 211.15 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | 6 | | R46 | 211.15 | 12.70 | 19.1 | 17.5 | 8.66 |
| | | | | 6 | R47 | 228.60 | 19.05 | 25.4 | 23.9 | 12.32 |
| 8 | | | | | R48 | 247.65 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 8 | 8 | | | R49 | 269.88 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | 8 | | R50 | 269.88 | 15.88 | 22.4 | 20.6 | 10.49 |
| | | | | 8 | R51 | 279.40 | 22.23 | 28.7 | 26.9 | 14.81 |
| 10 | | | | | R52 | 304.80 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 10 | 10 | | | R53 | 323.85 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | 10 | | R54 | 323.85 | 15.88 | 22.4 | 20.6 | 10.49 |
| | | | | 10 | R55 | 342.90 | 28.58 | 36.6 | 35.1 | 19.81 |
| 12 | | | | | R56 | 381.00 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 12 | 12 | | | R57 | 381.00 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | | 12 | | R58 | 381.00 | 22.23 | 28.7 | 26.9 | 14.81 |
| 14 | | | | | R59 | 396.88 | 7.95 | 14.2 | 12.7 | 5.23 |
| | | | | 12 | R60 | 406.40 | 31.75 | 39.6 | 38.1 | 22.33 |
| | 14 | | | | R61 | 419.10 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | 14 | | | R62 | 419.10 | 15.88 | 22.4 | 20.6 | 10.49 |
| | | | 14 | | R63 | 419.10 | 25.40 | 33.3 | 31.8 | 17.30 |
| 16 | | | | | R64 | 454.03 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 16 | | | | R65 | 469.90 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | 16 | | | R66 | 469.90 | 15.88 | 22.4 | 20.6 | 10.49 |
| | | | 16 | | R67 | 469.90 | 28.58 | 36.6 | 35.1 | 19.81 |
| 18 | | | | | R68 | 517.53 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 18 | | | | R69 | 533.40 | 11.13 | 17.5 | 16.0 | 7.75 |
| | | 18 | | | R70 | 533.40 | 19.05 | 25.4 | 23.9 | 12.32 |
| | | | 18 | | R71 | 533.40 | 28.58 | 36.6 | 35.1 | 19.81 |
| 20 | | | | | R72 | 558.80 | 7.95 | 14.2 | 12.7 | 5.23 |





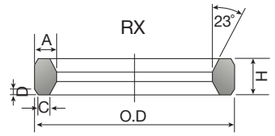
## Ring Type Joint(RTJ) Dimension Table
## RTJ 가스켓 치수표




| Noninal flange class/rating | | | | | RingNo. | P(±0.18) | Gasket dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Class150 | Class300-600 | Class900 | Class1500 | Class2500 | | | A(±0.20) | T (+1.3, -0.5) | | C(±0.20) |
| | | | | | | | | Oval | Octagonal | |
| | 20 | | | | R73 | 584.20 | 12.70 | 19.1 | 17.5 | 8.66 |
| | | 20 | | | R74 | 584.20 | 19.05 | 25.4 | 23.9 | 12.32 |
| | | | 20 | | R75 | 584.20 | 31.75 | 39.6 | 38.1 | 22.33 |
| | | | | | R76 | 673.10 | 7.95 | 14.2 | 12.7 | 5.23 |
| | 24 | | | | R77 | 692.15 | 15.88 | 22.4 | 20.6 | 10.49 |
| | | 24 | | | R78 | 692.15 | 25.40 | 33.3 | 31.8 | 17.30 |
| | | | 24 | | R79 | 692.15 | 34.93 | 44.5 | 41.4 | 24.82 |
| | | | | | R80 | 615.95 | 7.95 | - | 12.7 | 5.23 |
| | | | | | R81 | 635.00 | 14.30 | - | 19.1 | 9.58 |
| | | | | | R82 | 57.15 | 11.13 | - | 16.0 | 7.75 |
| | | | | | R84 | 63.50 | 11.13 | - | 16.0 | 7.75 |
| | | | | | R85 | 79.38 | 12.70 | - | 17.5 | 8.66 |
| | | | | | R86 | 90.50 | 15.88 | - | 20.6 | 10.49 |
| | | | | | R87 | 100.03 | 15.88 | - | 20.6 | 10.49 |
| | | | | | R88 | 123.83 | 19.05 | - | 23.9 | 12.32 |
| | | | | | R89 | 114.30 | 19.05 | - | 23.9 | 12.32 |
| | | | | | R90 | 155.58 | 22.23 | - | 26.9 | 14.81 |
| | | | | | R91 | 260.35 | 31.75 | - | 38.1 | 22.33 |
| | | | | | R92 | 228.60 | 11.13 | 17.5 | 16.0 | 7.75 |
| | 26 | | | | R93 | 749.30 | 19.05 | - | 23.9 | 12.32 |
| | 28 | | | | R94 | 800.10 | 19.05 | - | 23.9 | 12.32 |
| | 30 | | | | R95 | 857.25 | 19.05 | - | 23.9 | 12.32 |
| | 32 | | | | R96 | 914.40 | 22.23 | - | 26.9 | 14.81 |
| | 34 | | | | R97 | 965.20 | 22.23 | - | 26.9 | 14.81 |
| | 36 | | | | R98 | 1022.35 | 22.23 | - | 26.9 | 14.81 |
| | | | | | R99 | 234.95 | 11.13 | - | 16.0 | 7.75 |
| | | 26 | | | R100 | 749.30 | 28.58 | - | 35.1 | 19.81 |
| | | 28 | | | R101 | 800.10 | 31.75 | - | 38.1 | 22.33 |
| | | 30 | | | R102 | 857.25 | 31.75 | - | 38.1 | 22.33 |
| | | 32 | | | R103 | 914.40 | 31.75 | - | 38.1 | 22.33 |
| | | 34 | | | R104 | 965.20 | 34.93 | - | 41.4 | 24.82 |
| | | 36 | | | R105 | 1022.35 | 34.93 | - | 41.4 | 24.82 |

## Ring Type Joint(RX) Dimension Table

## RX 가스켓 치수표



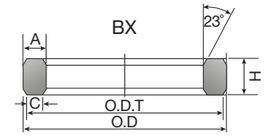

| Nominal flange class/rating | | | | | | Ring No. | O.D(+0.51, -0) | A(+0.20, -0) | C(+0.15, -0) | D(+0, -0.76) | H(+0.20, -0) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 720 | 960 | 2000 | 2900 | 3000 | 5000 | | | | | | |
| 1-1/2 | 1-1/2 | 1-1/2 | | 1-1/2 | 1-1/2 | RX-20 | 76.20 | 8.74 | 4.62 | 3.18 | 19.05 |
| 2 | 2 | 2 | | | | RX-23 | 93.27 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | 2 | 2 | RX-24 | 105.97 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 3-1/8 | RX-25 | 109.55 | 8.74 | 4.62 | 3.18 | 19.05 |
| 2-1/2 | 2-1/2 | 2-1/2 | | | | RX-26 | 111.91 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | 2-1/2 | 2-1/2 | RX-27 | 118.26 | 11.91 | 6.45 | 4.24 | 25.40 |
| 3 | 3 | 3 | | 3 | | RX-31 | 134.54 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 3 | RX-35 | 147.24 | 11.91 | 6.45 | 4.24 | 25.40 |
| 4 | 4 | 4 | | 4 | | RX-37 | 159.94 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 4 | RX-39 | 172.64 | 11.91 | 6.45 | 4.24 | 25.40 |
| 5 | 5 | 5 | | 5 | | RX-41 | 191.69 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 5 | RX-44 | 204.39 | 11.91 | 6.45 | 4.24 | 25.40 |
| 6 | 6 | 6 | | 6 | | RX-45 | 221.84 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 6 | RX-46 | 222.25 | 13.49 | 6.68 | 4.78 | 28.58 |
| | | | | | 8 | RX-47 | 245.26 | 19.84 | 10.34 | 6.88 | 41.28 |
| 8 | 8 | 8 | | 8 | | RX-49 | 280.59 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 8 | RX-50 | 283.36 | 16.66 | 8.51 | 5.28 | 31.75 |
| 10 | 10 | 10 | | 10 | | RX-53 | 334.57 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 10 | RX-54 | 337.34 | 16.66 | 8.51 | 5.28 | 31.75 |
| 12 | 12 | 12 | | 12 | | RX-57 | 391.72 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 14 | RX-63 | 441.73 | 27.00 | 14.78 | 8.46 | 50.8 |
| 16 | 16 | 16 | | | | RX-65 | 480.62 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | 16 | | RX-66 | 483.39 | 16.66 | 8.51 | 5.28 | 31.75 |
| 18 | 18 | 18 | | | | RX-69 | 544.12 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | 18 | | RX-70 | 550.06 | 19.84 | 10.34 | 6.88 | 41.28 |
| 20 | 20 | 20 | | | | RX-73 | 596.11 | 13.49 | 6.68 | 5.28 | 31.75 |
| | | | | 20 | | RX-74 | 600.86 | 19.84 | 10.34 | 6.88 | 41.28 |
| | | | 1 | | | RX-82 | 67.87 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | 1-1/2 | | | RX-84 | 74.22 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | 2 | | | RX-85 | 90.09 | 13.49 | 6.68 | 4.24 | 25.40 |
| | | | 2-1/2 | | | RX-86 | 103.58 | 15.09 | 8.51 | 4.78 | 28.58 |
| | | | 3 | | | RX-87 | 113.11 | 15.09 | 8.51 | 4.78 | 28.58 |
| | | | 4 | | | RX-88 | 139.29 | 17.48 | 10.34 | 5.28 | 31.75 |
| | | | 3-1/2 | | | RX-89 | 129.77 | 18.26 | 10.34 | 5.28 | 31.75 |
| | | | 5 | | | RX-90 | 174.63 | 19.84 | 12.17 | 7.42 | 44.45 |
| | | | 10 | | | RX-91 | 286.94 | 30.18 | 19.81 | 7.54 | 45.24 |
| 8 | 8 | 8 | | 8 | | RX-99 | 245.67 | 11.91 | 6.45 | 4.24 | 25.40 |
| | | | | | 1-3/8 | RX-201 | 51.46 | 5.74 | 3.20 | 1.45 | 11.30 |
| | | | | | 1-13/16 | RX-205 | 62.31 | 5.56 | 3.05 | 1.83 | 11.10 |
| | | | | | 2-9/16 | RX-210 | 97.64 | 9.53 | 5.41 | 3.18 | 19.05 |
| | | | | | 4-1/16 | RX-215 | 140.89 | 11.91 | 5.33 | 4.24 | 25.40 |





## Ring Type Joint(BX) Dimension Table

## BX 가스켓 치수표




| Nominal flange class/rating | | | | | | Ring No. | NominalSize | O.D(+0, -0.15) | H(+0.20, -0) | A(+0.20, -0) | O.D.T(±0.05) | C(+0.15, -0) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2000 | 3000 | 5000 | 10000 | 15000 | 20000 | | | | | | | |
| | | | 1-11/16 | 1-11/16 | | BX-150 | 43 | 72.19 | 9.30 | 9.30 | 70.87 | 7.98 |
| | | | 1-13/16 | 1-13/16 | 1-13/16 | BX-151 | 46 | 76.40 | 9.63 | 9.63 | 75.03 | 8.26 |
| | | | 2-1/16 | 2-1/16 | 2-1/16 | BX-152 | 52 | 84.68 | 10.24 | 10.24 | 83.24 | 8.79 |
| | | | 2-9/16 | 2-9/16 | 2-9/16 | BX-153 | 65 | 100.94 | 11.38 | 11.38 | 99.31 | 9.78 |
| | | | 3-1/16 | 3-1/16 | 3-1/16 | BX-154 | 78 | 116.84 | 12.4 | 12.40 | 115.09 | 10.64 |
| | | | 4-1/16 | 4-1/16 | 4-1/16 | BX-155 | 103 | 147.96 | 14.22 | 14.22 | 145.95 | 12.22 |
| | | | 7-1/16 | 7-1/16 | 7-1/16 | BX-156 | 179 | 237.92 | 18.62 | 18.62 | 235.28 | 15.98 |
| | | | 9 | 9 | 9 | BX-157 | 229 | 294.46 | 20.98 | 20.98 | 291.49 | 18.01 |
| | | | 11 | 11 | 11 | BX-158 | 279 | 352.05 | 23.14 | 23.14 | 348.77 | 19.86 |
| | | | 13-5/8 | 13-5/8 | 13-5/8 | BX-159 | 346 | 426.72 | 25.70 | 25.70 | 423.09 | 22.07 |
| | | 13-5/8 | | | | BX-160 | 346 | 402.59 | 23.83 | 13.74 | 399.21 | 10.36 |
| | | 16-3/4 | | | | BX-161 | 422 | 491.41 | 28.07 | 16.21 | 487.45 | 12.24 |
| | | 16-3/4 | 16-3/4 | 16-3/4 | | BX-162 | 422 | 475.49 | 14.22 | 14.22 | 473.48 | 12.22 |
| | | 18-3/4 | | | | BX-163 | 476 | 556.16 | 30.1 | 17.39 | 551.89 | 13.11 |
| | | | 18-3/4 | 18-3/4 | | BX-164 | 476 | 570.56 | 30.1 | 24.59 | 566.29 | 20.32 |
| | | 21-1/4 | | | | BX-165 | 540 | 624.71 | 32.03 | 18.49 | 620.19 | 13.97 |
| | | | 21-1/4 | | | BX-166 | 540 | 640.03 | 32.03 | 26.14 | 635.51 | 21.62 |
| 26-3/4 | | | | | | BX-167 | 680 | 759.36 | 35.86 | 13.11 | 754.28 | 8.03 |
| | 26-3/4 | | | | | BX-168 | 680 | 765.25 | 35.86 | 16.05 | 760.17 | 10.97 |
| | | | 5-1/8 | | | BX-169 | 130 | 173.51 | 15.85 | 12.93 | 171.27 | 10.69 |
| | | | 6-5/8 | 6-5/8 | | BX-170 | 168 | 218.3 | 14.22 | 14.22 | 216.03 | 12.22 |
| | | | 8-9/16 | 8-9/16 | | BX-171 | 218 | 267.44 | 14.22 | 14.22 | 265.43 | 12.22 |
| | | | 11-5/32 | 11-5/32 | | BX-172 | 283 | 333.07 | 14.22 | 14.22 | 331.06 | 12.22 |
| 30 | 30 | | | | | BX-303 | 762 | 852.75 | 37.95 | 16.97 | 847.37 | 11.61 |

[주]태화칼파씰
TaeHwa Kalpa Seal Co., Ltd.

**본사_Head Office**

부산광역시 강서구 녹산산단 262로 49번길 24
24, Noksansandan 262-ro, 49beon-gil, Gangseo-gu, Busan, Korea
Tel : +82-51-831-9944  Fax : +82-51-714-3234
E-Mail : taehwa1@taehwa1.com / taehwaenp@taehwa1.com
http://www.taehwa1.com

**공장_Factory**

부산광역시 강서구 녹산산단 290로 11
11, Noksansandan 290-ro, Gangseo-gu, Busan, Korea
Tel : +82-51-831-9945  Fax : +82-51-831-9946


Rev. 202510