



API 6A-0382



ISO 9001:2008



PED 2014/68/EU



ISO 14001:2004

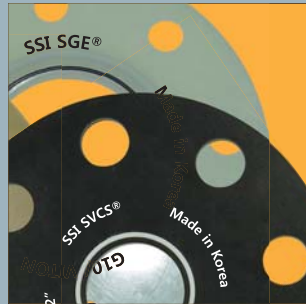
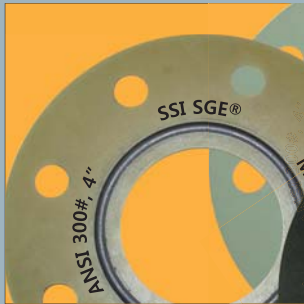


OHSAS 18001:2007



가속친화우수기업

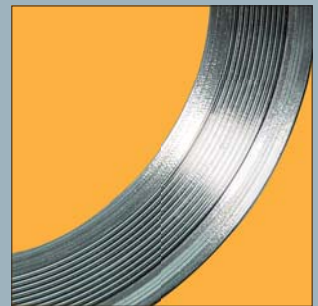
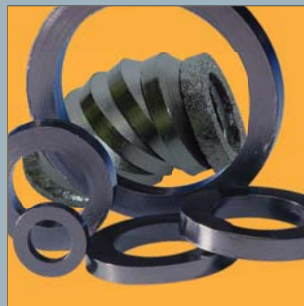
Since 1985



GASKET & PACKING



- Ring Joint Gaskets
- Kammprofile Gaskets
- Spiral Wound Gaskets
- Metal Jacketed Gaskets
- Metal O-Ring Gaskets
- Compressed Non-Asbestos Sheet Gaskets
- Heat Insulating Materials
- PTFE Gaskets
- Rubber Sheets & Gaskets
- Insulation Kit
- Gland Packing
- Mold & Anti-VOC Packing
- GORE® Gasket & Gland Packing



SSI SAMSUNG INDUSTRY CO.,LTD.

(주)삼성인더스트리



Vision of Company

The Products of Samsung Industry are fast growth recognition from both domestic and foreign industrial divisions. They are being manufactured under the basis of "quality guaranty system" which is realized on all the process.

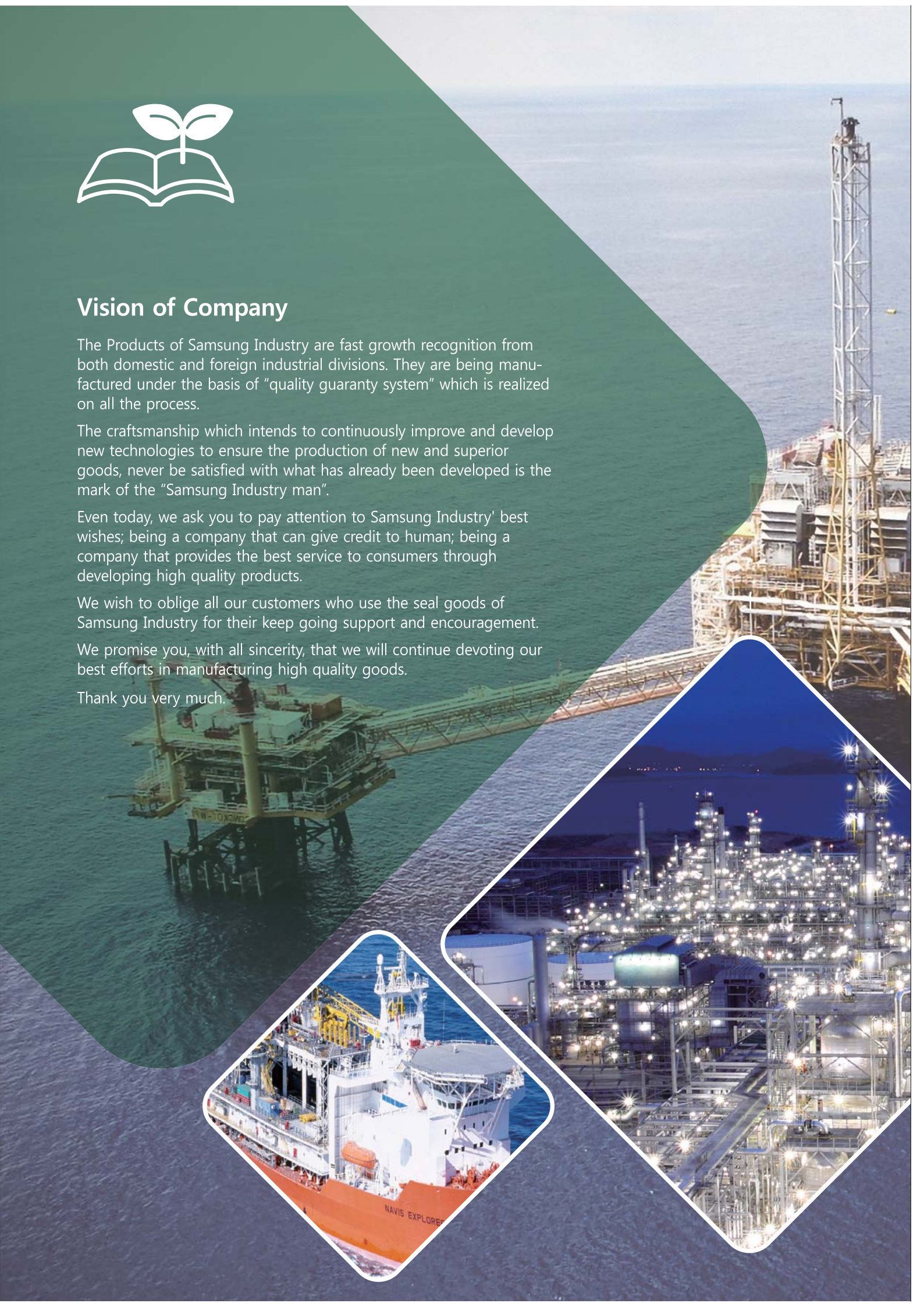
The craftsmanship which intends to continuously improve and develop new technologies to ensure the production of new and superior goods, never be satisfied with what has already been developed is the mark of the "Samsung Industry man".

Even today, we ask you to pay attention to Samsung Industry' best wishes; being a company that can give credit to human; being a company that provides the best service to consumers through developing high quality products.

We wish to oblige all our customers who use the seal goods of Samsung Industry for their keep going support and encouragement.

We promise you, with all sincerity, that we will continue devoting our best efforts in manufacturing high quality goods.

Thank you very much.





Certification & Patent



ISO 9001:2008



OHSAS 18001:2007



API 6A Ring Joint Gaskets



ISO 14001:2004



PED MM



Family Friendly



Enterprise Research Institute



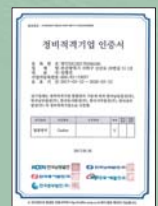
INNO-BIZ



DSME Quality Certificate



Patent (No. 0192011)



정비적격기업인증서

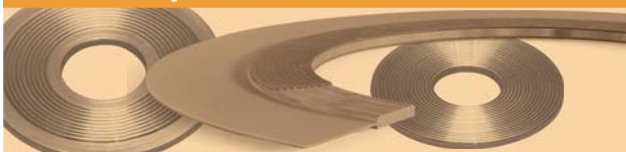
INDEX

1. Ring Joint Gaskets



SSI 811R & 812R	08
SSI 813 RX	10
SSI 814 BX	11
SSI 815 Bridgeman	12
SSI 815 Bridgeman Specific Designs	12
SSI 816 Delta	13
SSI 817 Lens	13
SSI 818 Round Ring	07
SSI 819 Weld Ring	07
SSI 810 IX Seal Ring	14

2. Kammprofile Gaskets



SSI 820 Covered Serrated Metal Gasket	15
SSI 824 Flat Metal Gaskets (Plug Gasket)	21

3. Spiral Wound Gaskets



SSI 934 Basic Type	27
SSI 934R Inner Ring Type	28
SSI 964 Outer Ring Type	28
SSI 964R Inner-Outer Ring Type	29

4. Metal Jacketed Gaskets



SSI 840 Double Jacket Type	35
SSI 841 Corrugated Double Jacket Type	35
SSI 842 Double Shell Type	35
SSI 843 Corrugated Double Jacket Type	35
SSI 844 Single Corrugated Type	35
SSI 845~847 Others Metal Jacket GasketType	35

5. Metal O-Ring Gaskets



SSI 850 Basic Type Metal O-Ring	41
SSI 851 Balanced Type Metal O-Ring	42

6. Non-Metal Gaskets



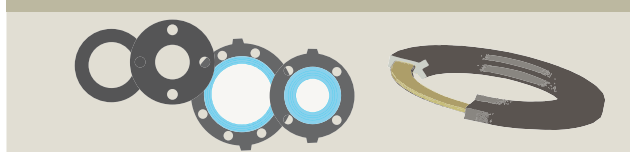
Compressed Non-Asbestos Joint Gasket	45
Non-Metallic Gasket Dimension	49

7. Heat Insulating Materials & PTFE Gaskets



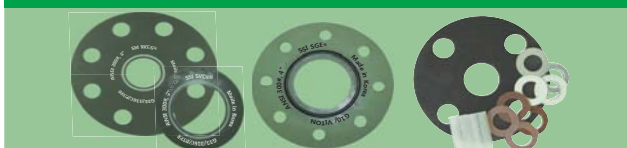
SSI 104 Fiber Tape	56
SSI 105 Fiber Cloth	53
SSI 110 Heat Insulating Materials	55
SSI 106G Glass Fiber Cloth Manhole Gasket	58
SSI 107G Wire Reinforced Glass Cloth Manhole Gasket	58
SSI 303 Solid PTFE Gasket	59
SSI 304 PTFE Cushion Gasket	58
SSI 305 PTFE Gasket	60
SSI 108 Mount Rope Edge Seal	57
SSI 599 Pipe & Flange Protect Cap (PTC)	57
SSI 109 Wool Felt	57

8. Rubber Sheets & Gaskets



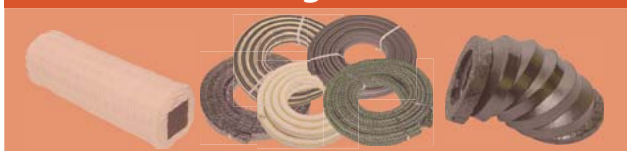
SSI 5000 Rubber Sheet Gasket	61
SSI 5010 EPDM+PTFE	61
SSI 5020 Steel Rubber Gasket	62

9. Insulation Kit



SSI 885 Neoprene Faced GRP Gasket	64
SSI 8200 OR GRE Gasket with O-ring seal SGE®	64
SSI 8200 DR GRE Gasket with D-ring seal SGE®	64
SSI 8200 PT GRE Gasket with PTFE Energized seal SGE®	64
SSI 8300 GRE Gasket with Metal Core SVCS®	64

10. Gland Packing



[SSI 200 , 700 Series]	
SSI 201 Grease Impregnated Cotton Braided Packing	75
SSI 204 Lubricated PTFE Impregnated Hemp Flax Packing	75
SSI 206 Lubricated PTFE Impregnated Synthetic Fiber Packing	76
SSI 701 Talent 1. (Aramid + PTFE)	76
SSI 703 Talent 3. (PTFE + Aramid)	76
SSI 704 Talent 4. (GP PTFE + Aramid)	76
SSI 784G Talent 10. (Lenzin + GP PTFE)	76

[SSI 750 Series]	
SSI 751 PTFE Fiber Braided Packing	77
SSI 752 Lubricated PTFE Fiber Braided Packing	77
SSI 753 Lubricated Graphite Filled PTFE Fiber Braided Packing	77
SSI 753 G2 Gore™ G2 Fiber High Pressure Packing	77
SSI 753 GFO Gore™ GFO Fiber Packing	78
SSI 754 Aramid Fiber Braided Packing	78
SSI 754S Spun Aramid Fiber Braided Packing	78
SSI 754W Special Spun Aramid Fiber Braided Packing	78

[SSI 770 Series]	
SSI 771 PTFE Impregnated Carbonized Fiber Braided Packing	79
SSI 772 Lubricated PTFE Impregnated Carbonized Fiber Braided Packing	79
SSI 773 PTFE Impregnated Carbon Fiber Braided Packing	79
SSI 773P Piston Pump Packing	79
SSI 774 Lubricated PTFE Impregnated Carbon Fiber Braided Packing	80
SSI 775 Lubricated Graphite Fiber Packing	80
SSI 777 Lubricated Carbon Fiber Packing	80

[SSI 710 Series]	
SSI 710 Hatch Cover Packing (PTFE)	80
SSI 713 Chemical Gasket & Tape (PTFE)	80

[SSI 400 Series]	
SSI 400 Graphite Sheet	81
SSI 401 Graphite Tape	82
SSI 402 Graphite Mold Packing	82
SSI 75500 UHMW Teflon Braided Packing	82
SSI 402 Anti-VOC	83
SSI 402MM Graphite Seal Gasket	84
SSI 403 Graphite Gasket	84
SSI 4000 Super Pure Graphite Packing	84
SSI 4001 Expanded Graphite Braided Packing Reinforced With Inconel Wire	85
SSI 4002 Expanded Graphite Braided Packing Reinforced With Outside-Braided Inconel Wire	85
SSI 4003 Expanded Graphite Braided Packing wrapped with Teflon	85

11. GORE® Gasket & Gland Packing



GORE® Universal Pipe Gasket	87
GORE® GR Sheet Gasket	87
GORE® Joint Sealant	88
GORE® Series 500 Gasket Tape	88
GORE® Series 600 Gasket Tape	89
GORE® Gasket Tape	89
GORE® GFO Packing	90
GORE® Valve Stem Packing	90

APPENDIX

Project List	91
--------------------	----

RING JOINT GASKET

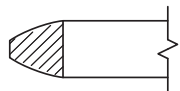

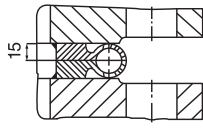
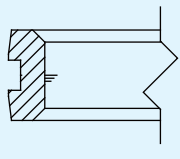
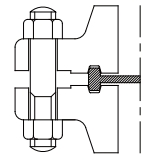
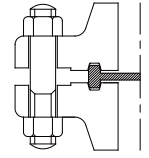


Characteristic

Ring joint gaskets are high temperature, high pressure gaskets largely used in offshore and onshore petrochemical applications. They are precision-engineered components designed to be used in conjunction with precision machined flanges. All our Ring joints are manufactured according to ASME B16.20 and API 6A.

Ring joint gasket은 해양 및 육상 석유 화학 분야에 주로 사용되는 고온·고압용 가스켓. 정밀 가공 플랜지와 함께 사용하도록 설계된 정밀 엔지니어링 부품으로서 ASME B16.20 및 API 6A에 따라 제조.

SSI-No.	Description	Shape	Explanation
811R	OVAL RING JOINT		These rings are manufactured in accordance with JIP-7S-23, ANSI B16.20 and API 6A used on the ring type joint flanges specified in JPI-7S-15, ASME B16.5, API spec 6A and MSS sp-44.
812R	OCTAGONAL RING JOINT		
813RX	API TYPE RX PRESSURE ENERGIZED RING JOINT		RX type ring joint gasket is manufactured in accordance with API Spec 6A and ASME B16.20. being used on 6B flanges of API Spec 6A.
814BX	API TYPE BX PRESSURE ENERGIZED RING JOINT		BX type ring joint gasket is manufactured in accordance with API Spec 6A and used on 6BX flanges of API Spec 6A.
815	MODIFIED BRIDGEMAN RING JOINT		They are of unique pressure-energized type gaskets. Bridgeman's "Principle of Unsupported Area" is made used of for the design of these type The gaskets are designed to seal by utilizing pressure loaded on flating head.
816	DELTA RING JOINT		hese gaskets are manufactured in accordance with customers' specific designs. No standard size is avasiable

SSI No.	Description	Shape	Explanation
817	LENS RING JOINT		These styles are of pressure-energized type gaskets. They have a similar cross section to convex lens and used on flanges having 20 degree cone.
818	ROUND RING JOINT		These gaskets are finished to a round cross section and intended to be used on comparatively small sized joints.
819	WELD RING GASKET(LIP SEAL GASKET)		It is recommended to use weld-ring gaskets for any application where it is absolutely necessary to have a leak proof joint, and also a limited opportunity for disassembling is required. Underlying reasons for this requirement may be containment of hazardous materials or the need for a shutdown free operation.
810	IX SEAL RING		The IX Seal-rings are designed and used where the NORSOK CFC(Compact Flange Connections) are in use. The rings come in three different kinds of steel and are coated with PTFE in varying colours in order to distinguish between them. Standard identification NORSOK STANDARD L-005 (NCF5).
Special	BLIND RING JOINT		Blind ring joint gasket is used to block fluid flow in flange or pipe lines. They are made of integral metallic connection type according to the standard of ring joint gasket.
	ORIFICE RING JOINT SEAL		The orifice seals are used primarily for simple and effective differential pressure measurement and fluid flow measurement. It is made of an integral ring of gaskets in the shape of an oval ring joint (811R) or octagonal ring joint (812R) for mounting between ring joint flanges.

Maximum Hardness for Ring Gaskets

Ring Gasket Material	Maximum Hardness	
	Brinell	Rockwell "B" Scale
Soft iron [Note (1)]	90	56
Low-carbon steel	120	68
4-6 chrome ½Mo	130	72
Type 410	170	86
Type 304	160	83
Type 316	160	83
Type 347	160	83

ASME B16.20-2012

NOTES :

- (1) May be low-carbon steel, not to exceed maximum hardness of 90 Brinell-56 Rockwell "B".
- (2) Other CRAs
- (2-1) Ring gaskets material shall conform to the manufacturer's written specification.
- (2-2) Hardness shall meet manufacturer's written specification.

Materials

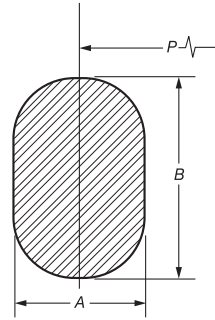
General. Ring-joint gasket materials, some of which are listed in Table 1, shall be selected by the user based on suitability for the service conditions. It is recommended that ring-joint gaskets be of a lesser hardness than that of the mating flanges.

Hardness. Ring-joint gaskets of materials listed in Table 1 shall have a hardness equal to or less than that shown in Table 1.

SSI 811R & 812R

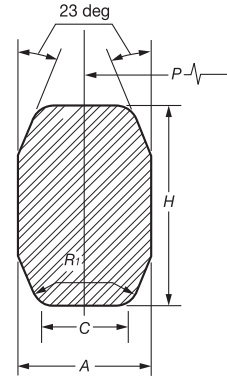


SSI 811R



OVAL

SSI 812R



OCTAGONAL

Type R Ring Gasket Dimensions and Tolerances (CONT'D)

Ring No.	Pressure Classes												Average Pitch Diameter of Ring, P	Width of Ring, A	Height of Ring		Width of Flat on Octagonal Ring, C	Radius in Octagonal Ring, R ₁
	ASME B16.5					API 6B				ASME B16.47 Series A					Oval, B	Octagonal H		
	150	300-600	900	1500	2500	720-960(1)	2000	3000	5000	150	300-600	900						
R-11		½											34.14	6.35	11.2	9.7	4.32	1.5
R-12			½	½									39.70	7.95	14.2	12.7	5.23	1.5
R-13		¾			½								42.88	7.95	14.2	12.7	5.23	1.5
R-14			¾	¾									44.45	7.95	14.2	12.7	5.23	1.5
R-15	1												47.63	7.95	14.2	12.7	5.23	1.5
R-16		1	1	1	¾	1	1	1	1				50.80	7.95	14.2	12.7	5.23	1.5
R-17	1¼												57.15	7.95	14.2	12.7	5.23	1.5
R-18		1¼	1¼	1¼	1	1¼	1¼	1¼	1¼				60.33	7.95	14.2	12.7	5.23	1.5
R-19	1½												65.10	7.95	14.2	12.7	5.23	1.5
R-20		1½	1½	1½		1½	1½	1½	1½				68.28	7.95	14.2	12.7	5.23	1.5
R-21					1¼								72.24	11.13	17.5	16.0	7.75	1.5
R-22	2												82.55	7.95	14.2	12.7	5.23	1.5
R-23		2			1½	2	2						82.55	11.13	17.5	16.0	7.75	1.5
R-24			2	2				2	2				95.25	11.13	17.5	16.0	7.75	1.5
R-25	2½												101.60	7.95	14.2	12.7	5.23	1.5
R-26		2½			2	2½	2½						101.60	11.13	17.5	16.0	7.75	1.5
R-27			2½	2½				2½	2½				107.95	11.13	17.5	16.0	7.75	1.5
R-28					2½								111.13	12.70	19.1	17.5	8.66	1.5
R-29	3												114.30	7.95	14.2	12.7	5.23	1.5
R-30(2)		3											117.48	11.13	17.5	16.0	7.75	1.5
R-31		3	3			3	3	3					123.83	11.13	17.5	16.0	7.75	1.5
R-32					3								127.00	12.70	19.1	17.5	8.66	1.5
R-33	3½												131.78	7.95	14.2	12.7	5.23	1.5
R-34		3½											131.78	11.13	17.5	16.0	7.75	1.5
R-35				3						3			136.53	11.13	17.5	16.0	7.75	1.5
R-36	4												149.23	7.95	14.2	12.7	5.23	1.5
R-37		4	4			4	4	4	3½				149.23	11.13	17.5	16.0	7.75	1.5
R-38					4								157.18	15.88	22.4	20.6	10.49	1.5
R-39				4						4			161.93	11.13	17.5	16.0	7.75	1.5
R-40	5												171.45	7.95	14.2	12.7	5.23	1.5
R-41		5	5			5	5	5					180.98	11.13	17.5	16.0	7.75	1.5
R-42					5								190.50	19.05	25.4	23.9	12.32	1.5
R-43	6												193.68	7.95	14.2	12.7	5.23	1.5
R-44				5						5			193.68	11.13	17.5	16.0	7.75	1.5
R-45		6	6			6	6	6					211.15	11.13	17.5	16.0	7.75	1.5
R-46				6						6			211.15	12.70	19.1	17.5	8.66	1.5
R-47					6								228.60	19.05	25.4	23.9	12.32	1.5
R-48	8												247.65	7.95	14.2	12.7	5.23	1.5
R-49		8	8			8	8	8					269.88	11.13	17.5	16.0	7.75	1.5
R-50				8						8			269.88	15.88	22.4	20.6	10.49	1.5
R-51					8								279.40	22.23	28.7	26.9	14.81	1.5
R-52	10												304.80	7.95	14.2	12.7	5.23	1.5
R-53		10	10			10	10	10					323.85	11.13	17.5	16.0	7.75	1.5

Ring No.	Pressure Classes												Average Pitch Diameter of Ring, P	Width of Ring, A	Height of Ring		Width of Flat on Octagonal Ring, C	Radius in Octagonal Ring, R ₁
	ASME B16.5					API 6B			ASME B16.47 Series A			Oval, B			Octagonal H			
	150	300-600	900	1500	2500	720-960(1)	2000	3000	5000	150	300-600					900		
R-54				10					10				323.85	15.88	22.4	20.6	10.49	1.5
R-55					10								342.90	28.58	36.6	35.1	19.81	2.3
R-56	12												381.00	7.95	14.2	12.7	5.23	1.5
R-57		12	12			12	12	12					381.00	11.13	17.5	16.0	7.75	1.5
R-58				12									381.00	22.23	28.7	26.9	14.81	1.5
R-59	14												396.88	7.95	14.2	12.7	5.23	1.5
R-60					12								406.40	31.75	39.6	38.1	22.33	2.3
R-61		14				14	14	14					419.10	11.13	17.5	16.0	7.75	1.5
R-62			14										419.10	15.88	22.4	20.6	10.49	1.5
R-63				14									419.10	25.40	33.3	31.8	17.30	2.3
R-64	16												454.03	7.95	14.2	12.7	5.23	1.5
R-65		16				16	16						469.90	11.13	17.5	16.0	7.75	1.5
R-66			16					16					469.90	15.88	22.4	20.6	10.49	1.5
R-67				16									469.90	28.58	36.6	35.1	19.81	2.3
R-68	18												517.53	7.95	14.2	12.7	5.23	1.5
R-69		18				18	18						533.40	11.13	17.5	16.0	7.75	1.5
R-70			18					18					533.40	19.05	25.4	23.9	12.32	1.5
R-71				18									533.40	28.58	36.6	35.1	19.81	2.3
R-72	20												558.80	7.95	14.2	12.7	5.23	1.5
R-73		20				20	20						584.20	12.70	19.1	17.5	8.66	1.5
R-74			20					20					584.20	19.05	25.4	23.9	12.32	1.5
R-75				20									584.20	31.75	39.6	38.1	22.33	2.3
R-76	24												673.10	7.95	14.2	12.7	5.23	1.5
R-77		24											692.15	15.88	22.4	20.6	10.49	1.5
R-78			24										692.15	25.40	33.3	31.8	17.30	2.3
R-79				24									692.15	34.93	44.5	41.4	24.82	2.3
R-80													615.95	7.95		12.7	5.23	1.5
R-81													635.00	14.30		19.1	9.58	1.5
R-82									1				57.15	11.13		16.0	7.75	1.5
R-84									1½				63.50	11.13		16.0	7.75	1.5
R-85									2				79.38	12.70		17.5	8.66	1.5
R-86									2½				90.50	15.88		20.6	10.49	1.5
R-87									3				100.03	15.88		20.6	10.49	1.5
R-88									4				123.83	19.05		23.9	12.32	1.5
R-89									3½				114.30	19.05		23.9	12.32	1.5
R-90									5				155.58	22.23		26.9	14.81	1.5
R-91									10				260.35	31.75		38.1	22.33	2.3
R-92													228.60	11.13	17.5	16.0	7.75	1.5
R-93													749.30	19.05		23.9	12.32	1.5
R-94													800.10	19.05		23.9	12.32	1.5
R-95													857.25	19.05		23.9	12.32	1.5
R-96													914.40	22.23		26.9	14.81	1.5
R-97													965.20	22.23		26.9	14.81	1.5
R-98													1022.35	22.23		26.9	14.81	1.5
R-99													234.95	11.13		16.0	7.75	1.5
R-100													749.30	28.58		35.1	19.81	2.3
R-101							8	8					800.10	31.75		38.1	22.33	2.3
R-102													857.25	31.75		38.1	22.33	2.3
R-103													914.40	31.75		38.1	22.33	2.3
R-104													965.20	34.93		41.4	24.82	2.3
R-105													1022.35	34.93		41.4	24.82	2.3

ASME B16.20

GENERAL NOTES :

(a) All dimensions are in millimeters.

(b) Tolerances :

P = average pitch diameter of ring, ±0.18

A = width of ring, ±0.2

B, H = height of ring, +1.3, -0.5

Variation in height throughout the entire circumference of any given ring shall not exceed 0.5 within these tolerances.

C = width of flat on octagonal ring, ±0.2

R1 = radius in ring, ±0.5

23 deg = angle, ±0 deg 30 min

(c) End flanges to API 6D and API 600 use gaskets for equivalent pipe size under ASME B16.5 or ASME B16.47 series A.

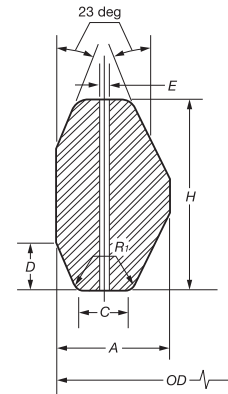
(1) Class 720, 960, and 10000 flanges to API 6B are obsolete. Data are for information only.

(2) R-30 is for lapped joint only.

SSI 813RX



SSI 813RX



Type RX Ring Gasket Dimensions and Tolerances

unit : mm

Ring No.	Pressure Classes, API 6B				Outside Diameter of Ring, OD	Width of Ring, A	Width of Flat, C	Height of Outside Bevel, D	Height of Ring, H	Radius in Octagonal Ring, R ₁	Hole Size, E[Note(1)]
	720-960 and 2000[Note(1)]	2900[Note(1)]	3000	5000							
RX-20	1½		1½	1½	76.20	8.74	4.62	3.18	19.05	1.5	
RX-23	2				93.27	11.91	6.45	4.24	25.40	1.5	
RX-24			2	2	105.97	11.91	6.45	4.24	25.40	1.5	
RX-25				3¾	109.55	8.74	4.62	3.18	19.05	1.5	
RX-26	2½				111.91	11.91	6.45	4.24	25.40	1.5	
RX-27			2½	2½	118.26	11.91	6.45	4.24	25.40	1.5	
RX-31	3		3		134.54	11.91	6.45	4.24	25.40	1.5	
RX-35				3	147.24	11.91	6.45	4.24	25.40	1.5	
RX-37	4		4		159.94	11.91	6.45	4.24	25.40	1.5	
RX-39				4	172.64	11.91	6.45	4.24	25.40	1.5	
RX-41	5		5		191.69	11.91	6.45	4.24	25.40	1.5	
RX-44				5	204.39	11.91	6.45	4.24	25.40	1.5	
RX-45	6		6		221.84	11.91	6.45	4.24	25.40	1.5	
RX-46				6	222.25	13.49	6.68	4.78	28.58	1.5	
RX-47				8(2)	245.26	19.84	10.34	6.88	41.28	2.3	
RX-49	8		8		280.59	11.91	6.45	4.24	25.40	1.5	
RX-50				8	283.36	16.66	8.51	5.28	31.75	1.5	
RX-53	10		10		334.57	11.91	6.45	4.24	25.40	1.5	
RX-54				10	337.34	16.66	8.51	5.28	31.75	1.5	
RX-57	12		12		391.72	11.91	6.45	4.24	25.40	1.5	
RX-63				14	441.73	27.00	14.78	8.46	50.80	2.3	
RX-65	16				480.62	11.91	6.45	4.24	25.40	1.5	
RX-66			16		483.39	16.66	8.51	5.28	31.75	1.5	
RX-69	18				544.12	11.91	6.45	4.24	25.40	1.5	
RX-70			18		550.06	19.84	10.34	6.88	41.28	2.3	
RX-73	20				596.11	13.49	6.68	5.28	31.75	1.5	
RX-74			20		600.86	19.84	10.34	6.88	41.28	2.3	
RX-82		1			67.87	11.91	6.45	4.24	25.40	1.5	1.5
RX-84		1½			74.22	11.91	6.45	4.24	25.40	1.5	1.5
RX-85		2			90.09	13.49	6.68	4.24	25.40	1.5	1.5
RX-86		2½			103.59	15.09	8.51	4.78	28.58	1.5	2.3
RX-87		3			113.11	15.09	8.51	4.78	28.58	1.5	2.3
RX-88		4			139.29	17.48	10.34	5.28	31.75	1.5	3.0
RX-89		3½			129.77	18.26	10.34	5.28	31.75	1.5	3.0
RX-90		5			174.63	19.84	12.17	7.42	44.45	2.3	3.0
RX-91		10			286.94	30.18	19.81	7.54	45.24	2.3	3.0
RX-99	8(2)		8(2)		245.67	11.91	6.45	4.24	25.40	1.5	
RX-201				1¾	51.46	5.74	3.20	1.45	11.30	0.5(3)	
RX-205				1¾/16	62.31	5.56	3.05	1.83(2)	11.10	0.5(3)	
RX-210				2¾/16	97.64	9.53	5.41	3.18(2)	19.05	0.8(3)	
RX-215				4¾/16	140.89	11.91	5.33	4.24(2)	25.40	1.5(3)	

ASME B16.20

GENERAL NOTES :

(a) All dimensions are in millimeters.

(b) Tolerances :

OD = outside diameter of ring, +0.51, -0.00

A = width of ring, +0.20, -0.00

Variation in width throughout the entire circumference of any ring shall not exceed 0.10 within these tolerances.

C = width of flat, +0.15, -0.00

D = height of outside bevel, +0.0, -0.76

H = height of ring, +0.20, -0.00

Variation in height throughout the entire circumference of any ring shall not exceed

0.10 within these tolerances.

R1 = radius of ring, ±0.5

23 deg = angle, ±0 deg 30 min

E = hole size, ±0.5

NOTES :

(1) Rings RX-82 through RX-91 only require one pressure passage hole as illustrated. The centerline of the hole shall be located at the midpoint of dimension C.

(2) Tolerance on these dimensions is +0.00, -0.38.

(3) Tolerance on these dimensions is +0.5, -0.0.

(4) Class 720, 960, and 2900 flanges to API 6B are obsolete.

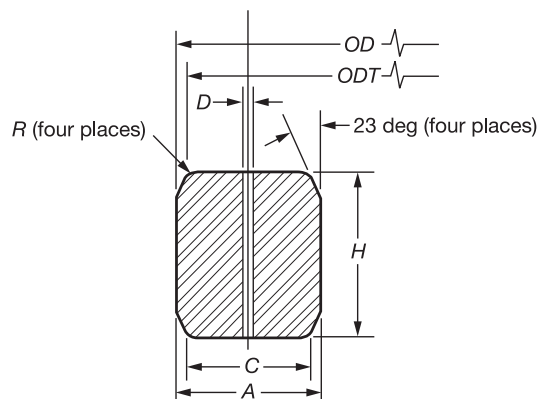
Data are for information only.

(5) Crossover flange connection.

SSI 814BX



SSI 814BX



Type BX Ring Gasket Dimensions and Tolerances

unit : mm

Ring No.	Pressure Classes, API 6B						Nominal Size	Outside Diameter of Ring, OD	Height of Ring, H	Width of Ring, A	Outside Diameter of Flat, ODT	Width of Flat, C	Hole Size, D [Note(1)]
	2000	3000	5000	10000	15000	20000							
RX-150				1 ¹¹ / ₁₆	1 ¹¹ / ₁₆		43	72.19	9.30	9.30	70.87	7.98	1.5
RX-151				1 ¹³ / ₁₆	1 ¹³ / ₁₆	1 ¹³ / ₁₆	46	76.40	9.63	9.63	75.03	8.26	1.5
RX-152				2 ¹ / ₁₆	2 ¹ / ₁₆	2 ¹ / ₁₆	52	84.68	10.24	10.24	83.24	8.79	1.5
RX-153				2 ⁹ / ₁₆	2 ⁹ / ₁₆	2 ⁹ / ₁₆	65	100.94	11.38	11.38	99.31	9.78	1.5
RX-154				3 ¹ / ₁₆	3 ¹ / ₁₆	3 ¹ / ₁₆	78	116.84	12.40	12.40	115.09	10.64	1.5
RX-155				4 ¹ / ₁₆	4 ¹ / ₁₆	4 ¹ / ₁₆	103	147.96	14.22	14.22	145.95	12.22	1.5
RX-156				7 ¹ / ₁₆	7 ¹ / ₁₆	7 ¹ / ₁₆	179	237.92	18.62	18.62	235.28	15.98	3.0
RX-157				9	9	9	229	294.46	20.98	20.98	291.49	18.01	3.0
RX-158				11	11	11	279	352.04	23.14	23.14	348.77	19.86	3.0
RX-159				13 ⁵ / ₈	13 ⁵ / ₈	13 ⁵ / ₈	346	426.72	25.70	25.70	423.09	22.07	3.0
RX-160			13 ³ / ₈				346	402.59	23.83	13.74	399.21	10.36	3.0
RX-161			16 ³ / ₄				422	491.41	28.07	16.21	487.45	12.24	3.0
RX-162			16 ³ / ₄	16 ³ / ₄	16 ³ / ₄		422	475.49	14.22	14.22	473.48	12.22	1.5
RX-163			18 ³ / ₄				476	556.16	30.10	17.37	551.89	13.11	3.0
RX-164				18 ³ / ₄	18 ³ / ₄		476	570.56	30.10	24.59	566.29	20.32	3.0
RX-165			21 ¹ / ₄				540	624.71	32.03	18.49	620.19	13.97	3.0
RX-166				21 ¹ / ₄			540	640.03	32.03	26.14	635.51	21.62	3.0
RX-167	26 ³ / ₄	26 ³ / ₄					680	759.36	35.86	13.11	754.28	8.03	1.5
RX-168							680	765.25	35.86	16.05	760.17	10.97	1.5
RX-169				5 ⁷ / ₈			130	173.51	15.85	12.93	171.27	10.69	1.5
RX-170				6 ⁵ / ₈	6 ⁵ / ₈		168	218.03	14.22	14.22	216.03	12.22	1.5
RX-171				8 ⁹ / ₁₆	8 ⁹ / ₁₆		218	267.44	14.22	14.22	265.43	12.22	1.5
RX-172				11 ⁵ / ₃₂	11 ⁵ / ₃₂		283	333.07	14.22	14.22	331.06	12.22	1.5
RX-303	30	30					762	852.75	37.95	16.97	847.37	11.61	1.5

ASME B16.20

GENERAL NOTES :

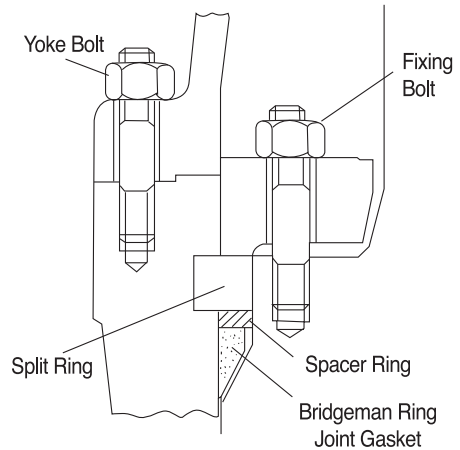
- (a) All dimensions are in millimeters.
- (b) Radius, R, shall be 8% to 12% of the gasket height, H.
- (c) Tolerances :

- OD = outside diameter of ring, +0.00, -0.15
- H = height of ring, +0.20, -0.00
- Variation in height throughout the entire circumference of any ring shall not exceed 0.10 within these tolerances.
- A = width of ring, +0.20, -0.00
- Variation in width throughout the entire circumference of any ring shall not exceed 0.10 within these tolerances.
- ODT = outside diameter of flat, ±0.05
- C = width of flat, +0.15, -0.00
- D = hole size, ±0.5
- R = radius of ring [see General Note (b)]
- 23 deg = angle, ±0 deg 15 min

NOTE :

- (1) One pressure passage hole is required per gasket as illustrated. The centerline of the hole shall be located at the midpoint of dimension C.

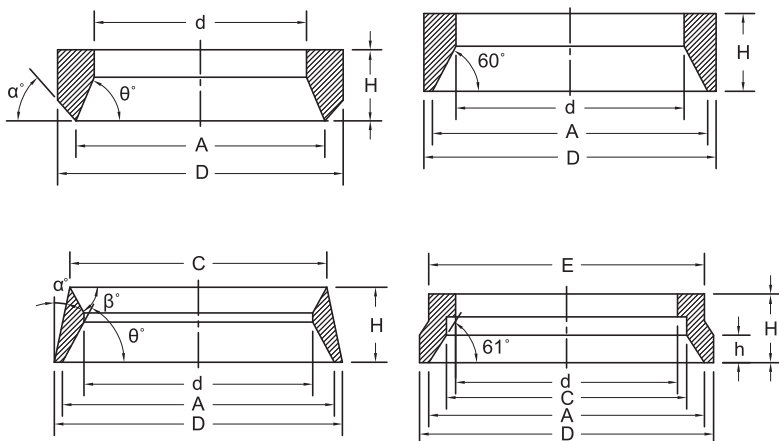
SSI 815 Bridgeman Ring Joint Gasket



They are of unique pressure-energized type gaskets. Bridgeman's "Principle of Unsupported Area" is made-used of for the design of these types. The gaskets are designed to seal by utilizing pressure loaded on flating head.

이것은 고유한 압력-에너지 타입 가스켓입니다. Bridgeman의 "Principle of Unsupported Area"는 이러한 유형의 설계에 사용됩니다. 가스켓의 flating head에 가해지는 압력을 이용하여 밀봉되도록 설계되었습니다.

SSI 815 Bridgeman Ring Joint Gaskets' Specific Designs



SAM SUNG INDUSTRY

Can supply the best quality products that manufactured in accordance with customers' designs if customers require specific designs about bridgeman ring joint gaskets.

SAMSUNG INDUSTRY는 고객이 Bridgeman Ring Joint Gasket에 대한 특정 디자인을 요구할 경우 고객의 설계에 따라 제조된 최고 품질의 제품을 공급할 수 있습니다.

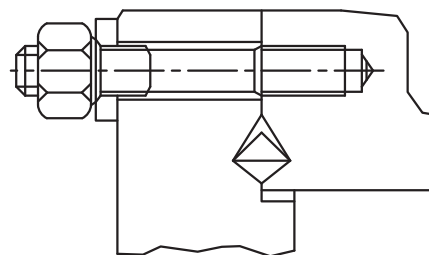
SSI 816 Delta Ring Joint Gasket



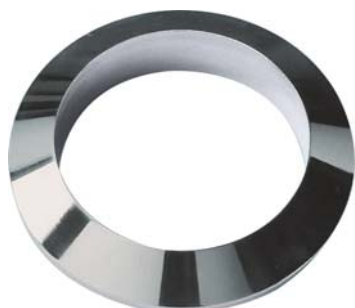
Delta Ring Joint Gasket proven is gasket for high pressure vessels.

We can make this gasket for your specification from all suitable materials.

입증된 Delta Ring Joint Gasket은 고압용기용 가스켓입니다. 우리는 모든 적합한 재료로 귀하의 사양에 맞게 가스켓을 제조할 수 있습니다.



SSI 817 Lens Ring Joint Gasket



Lens Gaskets are reliable gaskets for high-pressure applications. They are re-usable as the sealing effect is through about almost entirely by elastic deformation of the gasket surface.

Dimension Tables for 2.3

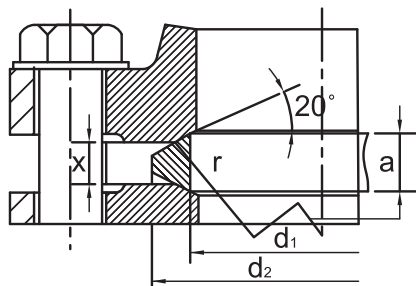
Lens gaskets for flange connections

PN 64 to PN 400

To DIN 2696

Example order for a lens gasket with $d_1=94\text{mm}$ (inner diameter) and $d_2=143\text{mm}$ (outer diameter, of...)

Lens gasket 94×143 DIN 2696/1.7335



Lens Gasket은 고압 어플리케이션을 위한 신뢰할 수 있는 가스켓입니다. Sealing 효과는 가스켓 표면의 탄성 변형에 의해 사라지므로 재사용이 가능합니다.

DN	Dimensions in mm						
	d_1^2 min	a^*	d_1 max	a^*	d_2	r	x
PN 64 to 400							
10	10	8	14	7	21	25	5.7
15	14	10	18	9	28	32	6
25	22	11.5	29	9.5	43	50	6
40	34	15	43	12.5	62	70	8
50	46	16.5	55	13.5	78	88	9
65	62	21	70	18.5	102	112	13
80	72	21.5	82	18.5	116	129	13
100	94	26	108	22	143	170	15
125	116	35.5	135	29.5	180	218	22
150	139	41	158	35	210	250	26
PN 64 to 100							
175	176	42.5	183	40.5	243	296	28
200	198	42.5	206	40	276	329	27
250	246	43	257	39.5	332	406	25
300	295	43.5	305	40.5	385	473	26
350	330	45.5	348	39.5	425	538	23
400	385	45.5	395	42	475	160	24
PN 160 to 400							
175	162	40	177	35.5	243	296	21
200	183	45.5	200	40	276	329	25
250	230	48	246	43	332	406	25
300	278	53	285	51	385	473	30

NOTES :

- 1) Please state the required material in your order.
- 2) When there are no other instructions the lenses are delivered with the minimum diameters. The final dimension of the inner diameter is to machine in accordance with the inner diameter of the used flanges.

★ The dimension "a" represents the content of the works standard 108.

SSI 810 IX Seal Ring



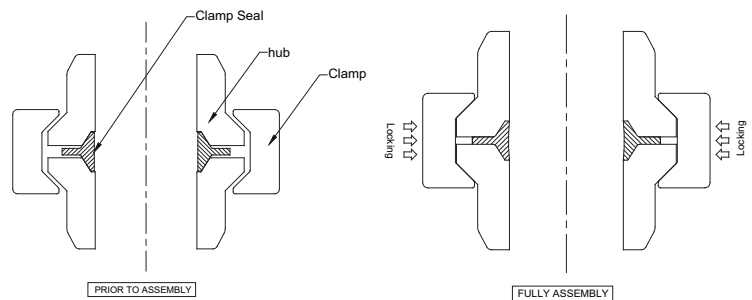
Characteristic

Flange Material	Service Temperature	Seal Ring Material	Colour
Carbon Steel	-50°C ~ 250°C	Carbon steel CS360LT or low alloy steels, e.g. AISI 4140	Blue
Stainless Steel	-50°C ~ 250°C	22Cr Duplex	Yellow
Stainless Steel	-50°C ~ 250°C	17/4-PH	Orange
Stainless Steel	-101°C ~ 250°C	Nickel alloys such as Alloy 625 or similar	Black

Dimension

DN	NPS	IX Dimensions	DN	NPS	IX Dimensions
15	1/2"	IX15	450	18"	IX450
20	3/4"	IX20	500	20"	IX500
25	1	IX25	550	22"	IX550
40	1 1/2"	IX40	600	24"	IX600
50	2"	IX50	650	26"	IX650
65	2 1/2"	IX65	700	28"	IX700
80	3"	IX80	750	30"	IX750
100	4"	IX100	800	32"	IX800
125	5"	IX125	850	34"	IX850
150	6"	IX150	900	36"	IX900
200	8"	IX200	950	38"	IX950
250	10"	IX250	1000	40"	IX1000
300	12"	IX300	1050	42"	IX1050
350	14"	IX350	1100	44"	IX1100
400	16"	IX400	1150	46"	IX1150
			1200	48"	IX1200

Clamp Seal (Seal ring for clamp connector)



This Clamp Seal is a special type of ring gasket used for clamp connector or clamp lock. It is dimensioned to fit the specification of the customer and it is coated with each color of PTFE like IX seal.

이 Seal ring은 Clamp connector 또는 clamp lock에 사용하는 특수한 형태의 Ring Gasket이다. 주문자의 사양에 딱 맞게 치수 제작되며 IX seal과 동일하게 PTFE의 각각의 Color로 코팅되어 진다.

KAMMPROFILE GASKETS

SSI 820 Covered Serrated Metal Gaskets



Characteristic

Kammprofile gasket (Serrated metal gasket) is made of cold rolled metal plate, but it has concentric grooves and effective sealing area is minimized so as to increase sealing effect.

Flat metal gasket is the most simple and economical type of all metal Gaskets which is made of cold rolled metal plate.

Both of these gaskets are extensively used on pipe flanges.

Valve Bonnets, covers of pressure vessels at high pressure and temperature.

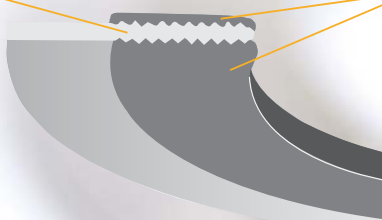
Kammprofile gasket (Serrated metal gasket)은 cold rolled metal plate로 만들어 졌으며, 동심 홈을 가지며 효과적인 실링 영역이 최소화되어 실링 효과를 증가시킵니다.

Flat한 금속 가스켓은 cold rolled metal plate로 만들어진 모든 금속 가스켓 중 가장 심플하고 경제적인 유형입니다. 이 가스켓은 모든 pipe flange에 광범위하게 사용되며, Valve Bonnets, 고온 및 고압 압력 용기 커버에 사용됩니다.

Superior Performance

Serrated solid metal core

- Serrations concentrate bolt load on small area for tight seals at lower stress
- Solid metal core resists cold flow, overcompression and blowout
- Right core provides exceptional stability, even in large sizes, and facilitates handling and installation



Soft, deformable sealing material

- Under compression, fills seating surface imperfections to form a tight, metal-to-metal connection
- Seals under low stress-ideal for weskter flanges
- Withstands extreme fluctuations in temperatures and pressures

Performance and technical integrity of the gaskets 신뢰성 검증

Type Acceptance Test

The Type Acceptance Test(TAT) is installed to verify the design, performance and technical integrity of the gaskets and manufacturing plant.

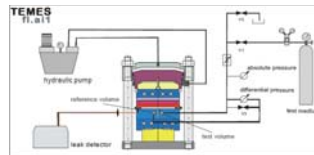
Test Specimens

The dimensions of the test specimens for the different tests were EN 12560-6, Class300, 4" The dimensions of the flanges in contact with gasket is OD = 154.0mm and ID = 123.8mm. The thickness of the Spiral Wound Gasket is 4.0mm. The thickness of the outer ring was 3.0mm.

Test Name	Time [h]	Temp.	Pressure
ROTT _ Leakage Test	48	RT	40bar
ROTT _ Compression Test	10	RT	
ROTT _ Compression Test	15	400°C	
ROTT _ Creep Relaxation Test	6	RT	
ROTT _ Creep Relaxation Test	10	400°C	
Fugitive Emission	30	RT	51bar
Fugitive Emission	120	400°C	34.7bar
Fire Safe (According to API 6FB)	24	760°C	40bar
HOTT	48	400°C	34.7bar
Gasket Adhesion			

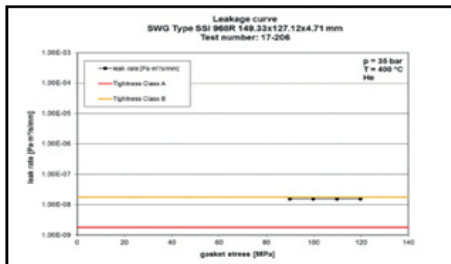
Test Equipment

The gasket tests were carried out on the following testing equipment: Below Multifunctional test rigs are TEMES and Fire Safe testing Device.

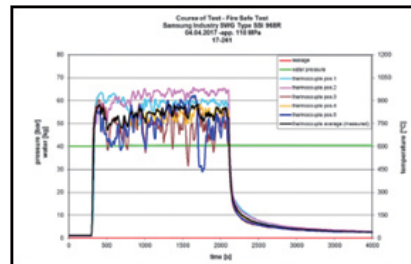


Test Results

The Kamprofile Gasket passed all test according to Shell Specification MESC SPE 85/300



Fugitive Emissions Test



Fire Test-thermocouples



TAT Test Certification

Hydraulic Test (수압테스트)

The Hydraulic Test is to verify the design, performance and technical integrity of the gaskets and manufacturing plant according to ASME B16.5

Test System

The test system is specified in B16.5 clause 2.6 as follows.

2.6 System Hydrostatic Testing

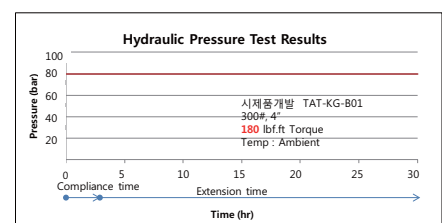
Flanged joints and flanged fittings may be subjected to system hydrostatic tests at a pressure of 1.5 times the 38°C (100°F) rating rounded off to the next higher 1 bar (25 psi) increment. Testing at any higher pressure is ASME B16.5-2009 the responsibility of the user, taking into account the requirements of the applicable code or regulation.

Test Specimens

The dimensions of the test specimens for the different tests were ASME B16.20 , 4" Class 300. The dimensions of the flanges in contact with gasket is OD = 154.0mm and ID = 123.8mm. The thickness of the Spiral Wound Gasket is 4.5mm.

Test Results

The Kamprofile Gasket passed the hydraulic test according to ASME B16.5



Style Selection Guide

	Type		Cross Section	Flange			
				Flat Face	Raised Face	Male & Female	Tongue & Groove
SSI 820	P	Parallel type without outer collar				√	√
	PR1	Parallel type with integral outer collar		√	√		
	PR2	Parallel type with floating centering ring		√	√		
	C	Convex type without outer collar				√	√
	CR1	Convex type with integral outer collar		√	√		
	CR2	Convex type with floating centering ring		√	√		

Metal Core Materials

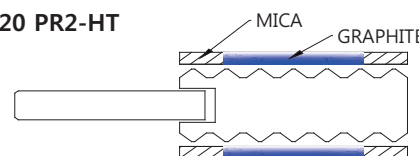
Material	UNS No.	Hardness [HB] Max	Max Temperature Max (°C)	Popularity		Available Size
				Flat metal gasket	Serrated metal gasket	
Low carbon steel	-	120	540	○	○	From ASME B16.5 ½" Flange To ASME B16.47 SERIES A 60" O.D 1730mm
Soft iron	-	90	450	○	◎	
SUS 304	S30400	160	450	◎	◎	
SUS 304L	S30403	160	760	○	○	
SUS 316	S30600	160	760	○	○	
SUS 316L	S30603	160	760	○	○	
SUS 321	S32100	160	870	○	△	
SUS 347	S34700	160	870	○	△	
SUS 410	S41000	170	580	○	△	
SUS 430	S43000	170	620	○	△	
5 Cr-0.5 Mo	K42544	130	620	◎	◎	All size of others JIS, KS DIN etc Specification available to manufacture over 1730mm
Monel 400	N04400	140	820	◎	◎	
Hastelloy C276	N20276	180	1100	○	△	
Inconel 600	N06600	200	1100	◎	◎	
Inconel 625	N06625	200	1100	◎	◎	
Inconel 800	N08800	200	1100	◎	◎	
Inconel 825	N08825	160	1100	◎	◎	
Titanium	-	215	1100	○	◎	
Aluminum	-	40	460	◎	◎	
Copper	-	80	315	◎	◎	

Covered Layer Materials

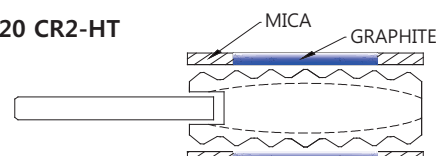
Material	Max. Temp' [°C]	Max. Pressure bar (psi)
SIGRAFLEX® E-Graphite	600	250(3700)
GORE®	315	220(3300)
PTFE	260	100(1450)
Non-Asbestos	200	100(1450)
Mica	1,000	40(580)
Soft metals	Per Material	Per Material
HT (E-Graphite+Mica)	850	250(3700)

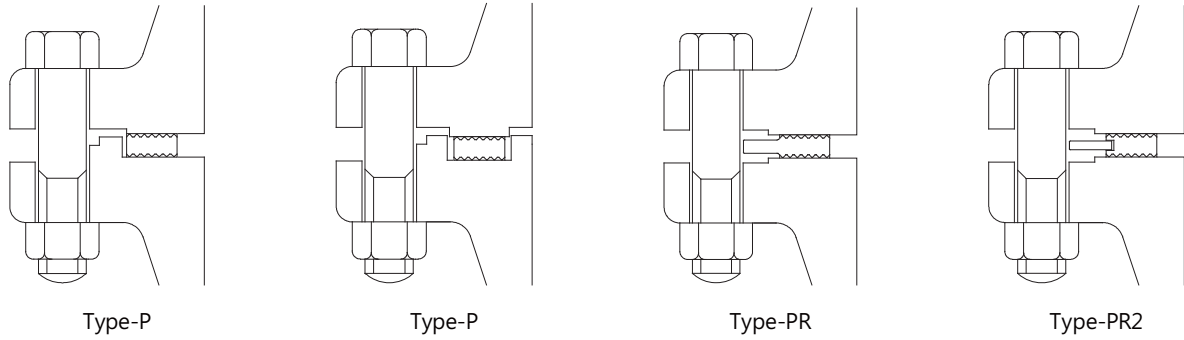
High Operating Temperature (HT) Type

SSI 820 PR2-HT



SSI 820 CR2-HT





The Kammprofile gasket is a seal that can withstand the best loads. P and C types are used for Male & Female and Tongue & Groove type flanges with no centering ring (collar) type. PR, PR1, CR and CR1 types are used for flat face and raised face type flange.

Sealing core has uniform sealing on both sealing surfaces and is covered with flexible graphite, PTFE or HT (E-Graphite + Mica) on the surface of serum. This results in high sealing with low seating stress.

Samsung Industries' Kammprofile is made from reliable materials and precision machining.

캠프로파일 가스켓은 최상의 Load를 견디는 특성을 지닌 Seal입니다. P와 C type은 centering ring(collar)가 없는 type으로 Male & Female과 Tongue & Groove type의 flange에 사용되며 PR, PR1, CR, CR1 type은 flat face와 raised face type의 flange에 사용됩니다.

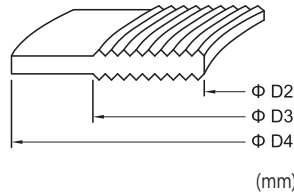
Sealing core는 양쪽 Sealing면에 균일한 Serration이 주어져서 Serration표면 위에 Flexible Graphite, PTFE 또는 HT (E-Graphite+Mica) 등으로 덮여져 있습니다. 이것은 낮은 Seating Stress로 높은 sealing성을 가져다 줍니다.

삼성인더스트리의 캠프로파일은 신뢰성있는 재료와 정밀한 가공을 통해서 제작되어 집니다.

Sizes: Standard sizes are prepared to fit ASME and JIS pipe flanges. Other gasket sizes are also available with EN 12560-6 and EN 1514-6 standard dimensions.

Standard Sizes

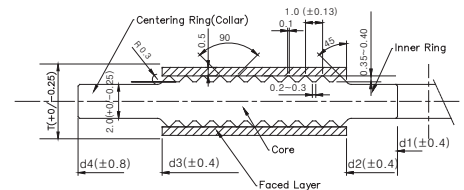
Kammprofile gasket's dimension according to ASME B16.20 to suit ASME B16.5 flange



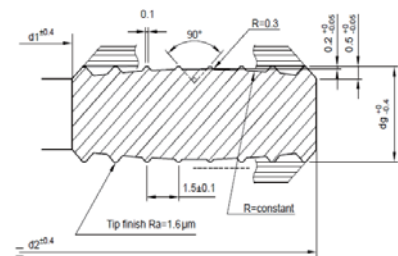
NPS	D2	D3	D4						
			150#	300#	400#	600#	900#	1500#	2500#
1/2	23.1	33.3	47.8	54.1	54.1	54.1	63.5	63.5	69.9
3/4	28.7	39.6	57.2	66.8	66.8	66.8	69.9	69.9	76.2
1	36.6	47.5	66.8	73.2	73.2	73.2	79.5	79.5	85.9
1 1/4	44.5	60.2	76.2	82.6	82.6	82.6	88.9	88.9	104.9
1 1/2	52.3	69.9	85.9	95.3	95.3	95.3	98.6	98.6	117.6
2	69.9	88.9	104.9	111.3	111.3	111.3	143.0	143.0	146.1
2 1/2	82.6	101.6	124.0	130.3	130.3	130.3	165.1	165.1	168.4
3	98.3	123.7	136.7	149.4	149.4	149.4	168.4	174.8	196.9
4	123.7	153.9	174.8	181.1	177.8	193.8	206.5	209.6	235
5	150.9	182.6	196.9	215.9	212.9	241.3	247.7	254.0	279.4
6	177.8	212.6	222.3	251.0	247.7	266.7	289.1	282.7	317.5
8	228.6	266.7	279.4	308.1	304.8	320.8	358.9	352.6	387.4
10	282.7	320.8	339.9	362.0	358.9	400.1	435.1	435.1	476.3
12	339.6	377.7	409.7	422.4	419.1	457.2	498.6	520.7	549.4
14	371.6	409.7	450.9	485.9	482.6	492.3	520.7	577.9	-
16	422.4	466.6	514.4	539.8	536.7	565.2	574.8	641.4	-
18	479.3	530.1	549.4	596.9	593.9	612.9	638.3	704.9	-
20	530.1	580.9	606.6	654.1	647.7	682.8	698.5	755.7	-
24	631.7	682.5	717.6	774.7	768.4	790.7	838.2	901.7	-

* Metal core : 3t * Covering layer : 0.5t * Centering ring: Integral type : 2.0t , Floating type : 1.0t

Standard profiles



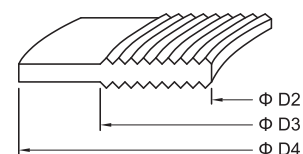
Parallel type profile



Convex type profile

Standard Sizes

Kammprofile gasket's dimension according to ASME B16.20 to suit ASME B16.47 SERIES A (MSS SP-44) Flange



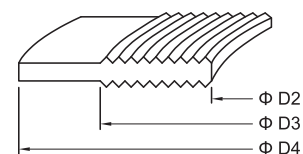
(mm)

NPS	D2					D3					D4				
	150#	300#	400#	600#	900#	150#	300#	400#	600#	900#	150#	300#	400#	600#	900#
26	673.1	685.8	685.8	685.8	685.8	704.9	736.6	736.6	736.6	736.6	774.7	835.2	831.9	866.9	882.7
28	723.9	736.6	736.6	736.6	736.6	755.7	787.4	787.4	787.4	787.4	831.9	898.7	892.3	914.4	946.2
30	774.7	793.8	793.8	793.8	793.8	806.5	844.6	844.6	844.6	844.6	882.7	952.5	946.2	971.6	1009.7
32	825.5	850.9	850.9	850.9	850.9	860.6	901.7	901.7	901.7	901.7	939.8	1006.6	1003.3	1022.4	1073.2
34	876.3	901.7	901.7	901.7	901.7	911.4	952.5	952.5	952.5	952.5	990.6	1057.4	1054.1	1073.2	1136.7
36	927.1	955.8	955.8	955.8	958.9	968.5	1006.6	1006.6	1006.6	1009.7	1047.8	1117.6	1117.6	1130.3	1200.2
38	977.9	977.9	971.6	990.6	1035.1	1019.3	1016.0	1022.4	1041.4	1085.9	1111.3	1054.1	1073.2	1104.9	1200.2
40	1028.7	1022.4	1025.7	1047.8	1098.6	1070.1	1070.1	1076.5	1098.6	1149.4	1162.1	1114.6	1127.3	1155.7	1251.0
42	1079.5	1073.2	1076.5	1104.9	1149.4	1124	1120.9	1127.3	1155.7	1200.2	1219.2	1165.4	1178.1	1219.2	1301.8
44	1130.3	1130.3	1130.3	1162.1	1206.5	1178.1	1181.1	1181.1	1212.9	1257.3	1276.4	1219.2	1231.9	1270.0	1368.6
46	1181.1	1178.1	1193.8	1212.9	1270	1228.9	1228.9	1244.6	1263.7	1320.8	1327.2	1273.3	1289.1	1327.2	1435.1
48	1231.9	1235.2	1244.6	1270.0	1320.8	1279.7	1286.0	1295.4	1320.8	1371.6	1384.3	1324.1	1346.2	1390.7	1485.9
50	1282.7	1285.4	1295.4	1320.8	-	1333.5	1346.2	1346.2	1371.6	-	1435.1	1378.0	1403.4	1447.8	-
52	1333.5	1346.2	1346.2	1371.6	-	1384.3	1397.0	1397.0	1422.4	-	1492.3	1428.8	1454.2	1498.6	-
54	1384.3	1403.4	1403.4	1428.8	-	1435.1	1454.2	1454.2	1479.6	-	1549.4	1492.3	1517.7	1555.8	-
56	1435.1	1454.2	1454.2	1479.6	-	1485.9	1505.0	1505.0	1530.4	-	1606.6	1543.1	1568.5	1612.9	-
58	1485.9	1511.3	1505.0	1536.7	-	1536.7	1562.1	1555.8	1587.5	-	1663.7	1593.9	1619.3	1663.7	-
60	1536.7	1562.1	1568.5	1593.9	-	1587.5	1612.9	1619.3	1644.7	-	1714.5	1644.7	1682.8	1733.6	-

* Metal core : 3t * Covering layer : 0.5t * Centering ring: Integral type : 2.0t, Floating type : 1.0t

Standard Sizes

Kammprofile gasket's dimension according to ASME B16.20 to suit ASME B16.47 SERIES B (API 605) Flange



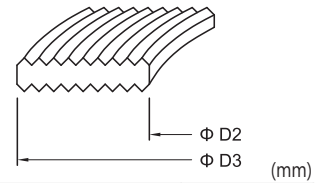
(mm)

NPS	D2					D3					D4				
	150#	300#	400#	600#	900#	150#	300#	400#	600#	900#	150#	300#	400#	600#	900#
26	673.1	673.1	666.8	663.7	692.2	698.5	711.2	698.5	714.5	749.3	725.4	771.7	746.3	765.3	838.2
28	723.9	723.9	714.5	704.9	743.0	749.3	762.0	749.3	755.7	800.1	776.2	825.5	800.1	819.2	901.7
30	774.7	774.7	765.3	778.0	806.5	800.1	812.8	806.5	828.8	857.3	827.0	886.0	857.3	879.6	958.9
32	825.5	825.5	812.8	831.9	863.6	850.9	863.6	860.6	882.7	914.4	881.1	939.8	911.4	933.5	1016.0
34	876.3	876.3	866.9	889.0	920.8	908.1	914.4	911.4	939.8	971.6	935.0	993.9	962.2	997.0	1073.2
36	927.1	927.1	917.7	939.8	946.2	958.9	965.2	965.2	990.6	997.0	987.6	1047.8	1022.4	1047.8	1124.0
38	974.9	1009.7	971.6	990.6	1035.1	1009.7	1047.8	1022.4	1041.4	1085.9	1044.7	1098.6	1073.2	1104.9	1200.2
40	1022.4	1060.5	1025.7	1047.8	1098.6	1063.8	1098.6	1076.5	1098.6	1149.4	1095.5	1149.4	1127.3	1155.7	1251.0
42	1079.5	1111.3	1076.5	1104.9	1149.4	1114.6	1149.4	1127.3	1155.7	1200.2	1146.3	1200.2	1178.1	1219.2	1301.8
44	1124.0	1162.1	1130.3	1162.1	1206.5	1165.4	1200.2	1181.1	1212.9	1257.3	1197.1	1251.0	1231.9	1270.0	1368.6
46	1181.1	1216.2	1193.8	1212.9	1270.0	1224.0	1254.3	1244.6	1263.7	1320.8	1255.8	1317.8	1289.1	1327.2	1435.1
48	1231.9	1263.7	1244.6	1270.0	1320.8	1270.0	1311.4	1295.4	1320.8	1371.6	1306.6	1368.6	1346.2	1390.7	1485.9
50	1282.7	1317.8	1295.4	1320.8	-	1325.6	1355.9	1346.2	1371.6	-	1357.4	1419.4	1403.4	1447.8	-
52	1333.5	1368.6	1346.2	1371.6	-	1376.4	1406.7	1397.0	1422.4	-	1408.2	1470.2	1454.2	1498.6	-
54	1384.3	1403.4	1403.4	1428.8	-	1422.4	1454.2	1454.2	1479.6	-	1463.8	1530.4	1517.7	1555.8	-
56	1444.8	1479.6	1454.2	1479.6	-	1478.0	1524.0	1505.0	1530.4	-	1514.6	1593.9	1568.5	1612.9	-
58	1500.6	1535.2	1505.0	1536.7	-	1528.8	1573.3	1555.8	1587.5	-	1579.6	1655.8	1619.3	1663.7	-
60	1557.3	1589.0	1568.5	1593.9	-	1586.0	1630.4	1619.3	1644.7	-	1630.4	1706.6	1682.8	1733.6	-

* Metal core : 3t * Covering layer : 0.5t * Centering ring: Integral type : 2.0t, Floating type : 1.0t

Standard Sizes

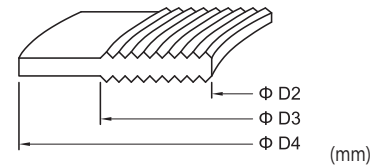
Kammprofile gasket's dimension to suit Tongue & Groove, Male & Female Flange



NPS	Large Male & Female				Large Tongue & Groove		Small Tongue & Groove		NPS
	Class 150~1500		Class 2500		Class 150~2500		Class 150~2500		
	D2	D3	D2	D3	D2	D3	D2	D3	
1/2"	25.4	35.1	20.6	35.1	25.4	35.1	25.4	35.1	1/2"
3/4"	33.3	42.9	27.0	42.9	33.3	42.9	33.3	42.9	3/4"
1"	38.1	50.8	31.8	50.8	38.1	50.8	38.1	47.8	1"
1 1/4"	47.6	63.5	41.3	63.5	47.8	63.5	47.8	57.2	1 1/4"
1 1/2"	54.0	73.2	47.6	73.2	53.8	73.2	53.8	63.5	1 1/2"
2"	73.0	91.9	60.3	91.9	73.2	91.9	73.2	82.6	2"
2 1/2"	85.7	104.6	76.2	104.6	85.9	104.6	85.9	95.3	2 1/2"
3"	108.0	127.0	95.3	127.0	108.0	127.0	108.0	117.3	3"
3 1/2"	120.7	139.7	-	-	120.7	139.7	120.7	130.0	3 1/2"
4"	131.8	157.2	120.7	157.2	131.8	157.2	131.8	144.5	4"
5"	160.3	185.7	146.1	185.7	160.3	185.7	160.3	173.0	5"
6"	190.5	215.9	171.5	215.9	190.5	215.9	190.5	203.2	6"
8"	238.1	269.7	222.3	269.7	238.3	269.7	238.3	254.0	8"
10"	285.8	323.9	273.1	323.9	285.8	323.9	285.8	304.8	10"
12"	342.9	381.0	330.2	381.0	342.9	381.0	342.9	362.0	12"
14"	374.7	412.8	-	-	374.7	412.8	374.7	393.7	14"
16"	425.5	469.9	-	-	425.5	469.9	425.5	447.5	16"
18"	489.0	533.4	-	-	489.0	533.4	489.0	511.0	18"
20"	533.4	584.2	-	-	533.4	584.2	533.4	558.8	20"
24"	641.4	692.2	-	-	641.4	692.2	641.4	666.8	24"

*Metal Core : 3t, *Convering Layer : 0.5t

Kammprofile gasket's dimension according to EN 12560-6 to suit ASME B16.5 Flange



NPS	D2	D3	D4						
			150#	300#	400#	600#	900#	1500#	2500#
1/2	23.0	33.3	44.4	50.8	50.8	50.8	60.3	60.3	66.7
3/4	28.6	39.7	53.9	63.5	63.5	63.5	66.7	66.7	73.0
1	36.5	47.6	63.5	69.8	69.8	69.8	76.2	76.2	82.5
1 1/4	44.4	60.3	73.0	79.4	79.4	79.4	85.7	85.7	101.6
1 1/2	52.4	69.8	82.5	92.1	92.1	92.1	95.2	95.2	114.3
2	69.8	88.9	101.6	108.0	108.0	108.0	139.7	139.7	142.8
2 1/2	82.5	101.6	120.6	127.0	127.0	127.0	161.9	161.9	165.1
3	98.4	123.8	133.4	146.1	146.1	146.1	165.1	171.5	193.7
3 1/2	111.1	136.5	158.8	161.9	158.7	158.7	-	-	-
4	123.8	154.0	171.5	177.8	174.6	190.5	203.2	206.4	231.7
5	150.8	182.6	193.7	212.7	209.5	238.1	244.5	250.8	276.2
6	177.8	212.7	219.1	247.7	244.5	263.5	285.8	279.4	314.3
8	228.6	266.7	276.2	304.8	301.6	317.5	355.6	349.3	384.1
10	282.6	320.7	336.5	358.8	355.6	396.9	431.8	431.8	473.0
12	339.7	377.8	406.4	419.1	415.9	454.0	495.3	517.5	546.1
14	371.5	409.6	447.7	482.6	479.4	488.9	517.5	574.7	-
16	422.3	466.7	511.2	536.6	533.4	561.9	571.5	638.1	-
18	479.4	530.2	546.1	593.7	590.5	609.6	635.0	701.7	-
20	530.2	581.0	603.2	650.9	644.5	679.5	695.3	752.4	-
22	581.0	631.8	657.2	701.7	698.5	730.3	-	-	-
24	631.8	682.6	714.4	771.5	765.2	787.4	835.0	898.5	-

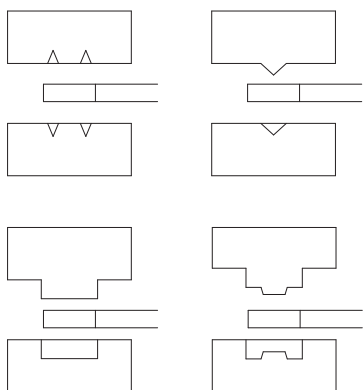
METAL CORE : 4t, LAYER : 0.5t * Centering ring: Integral type : 2.0t , Floating type : 1.5t

Standard sizes Serrated metal gasket with outer collar for JIS pipe flanges

Unit : mm

Nominal Diameter	10kgf/cm2 large raised face					16kgf/cm2, 20kgf/cm2 large raised face					40kgf/cm2 large raised face					63kgf/cm2 large raised face				
	Serrated portion			Collar		Serrated portion			Collar		Serrated portion			Collar		Serrated portion			Collar	
	D ₂	D ₃	t	D ₄	t	D ₂	D ₃	t	D ₄	t	D ₂	D ₃	t	D ₄	t	D ₂	D ₃	t	D ₄	t
10	38	48	3	52	2	38	48	3	52	2	25	35	3	59	2	25	35	3	64	2
15	42	52	3	57	2	42	52	3	57	2	32	42	3	64	2	32	42	3	69	2
20	48	58	3	62	2	48	58	3	62	2	40	50	3	69	2	40	50	3	76	2
25	57	70	3	74	2	57	70	3	74	2	47	60	3	79	2	47	60	3	81	2
32	64	80	3	84	2	64	80	3	84	2	52	68	3	89	2	52	68	3	90	2
40	66	85	3	89	2	66	85	3	89	2	56	75	4.5	100	3	56	75	4.5	107	3
50	81	100	4.5	104	3	81	100	4.5	104	3	71	90	4.5	114	3	71	90	4.5	125	3
65	101	120	4.5	124	3	101	120	4.5	124	3	86	105	4.5	140	3	86	105	4.5	152	3
80	111	130	4.5	134	3	116	135	4.5	140	3	101	120	4.5	150	3	101	120	4.5	162	3
90	114	140	4.5	144	3	119	145	4.5	150	3	104	130	4.5	162	3	104	130	4.5	179	3
100	129	155	4.5	159	3	134	160	4.5	165	3	119	145	4.5	182	3	119	145	4.5	194	3
125	159	185	4.5	190	3	169	195	4.5	202	3	144	170	4.5	224	3	144	170	4.5	236	3
150	189	215	4.5	220	3	204	230	4.5	237	3	179	205	6	266	3	179	205	6	276	4.5
175	208	240	4.5	245	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200	233	265	6	270	4.5	243	275	6	282	4.5	228	260	6	316	4.5	228	260	6	327	4.5
225	253	285	6	290	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	287	325	6	332	4.5	307	345	6	354	4.5	277	315	6	377	4.5	277	315	6	394	4.5
300	332	370	6	377	4.5	357	395	6	404	4.5	337	375	6	434	4.5	337	375	6	446	4.5
350	377	415	6	422	4.5	402	440	6	451	4.5	377	415	6	479	4.5	377	415	6	488	4.5
400	431	475	6	484	4.5	451	495	6	510	4.5	421	465	6	531	4.5	421	465	6	545	4.5
450	486	530	6	539	4.5	516	560	6	573	4.5										
500	535	585	6	594	4.5	565	615	6	627	4.5										
550	590	640	8	650	6	620	670	6	684	6										
600	640	690	8	700	6	670	720	6	734	6										

SSI 824 Flat Metal Gasket



Characteristic

These gaskets are produced from cold rolled metal plate. The effective sealing face of the gasket is machined and polished to perform a satisfactory function as gasket. These gaskets work better when they are installed on the flanges and joints that are finished with v-groove or groove having nubbins on the gasket sealing face.

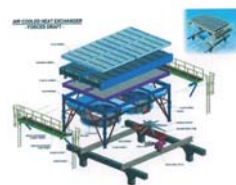
냉각 압연 금속판으로 제작되며, 가스켓의 효과적인 sealing면은 기계 가공되고 연마됩니다. Sealing면에 nubbin이 있는 홈 또는 v-홈으로 마감된 플랜지 및 조인트에 설치하면 더 효과적입니다.

Size

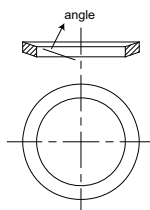
Upon request.

Application

On pipe flanges to high pressure and high temperature steam process line, joints of heat exchanger, autoclave and valve bonnets.



Plug Gasket (Flat type)



Plug Gasket (Bending type)

Application:
Air cooled Heat Exchangers

The Bending plug gasket can obtain better sealing at lower torque than flat type gasket and minimize surface damage by seating stress when unplugged plug. We recommend the Kammprofile gasket, SSI 820, with an expanded graphite sheet attached to the serration metal core to achieve perfect sealing at a torque as low as half that of the flat type plug gasket. Depending on the customer's order, it can be supplied with plug and gasket.

Bending plug gasket은 flat type gasket 보다 낮은 torque 에서 보다 나은 씰링을 얻을 수 있으며 plug를 풀었을 때 seating stress에 의한 표면손상을 최소화 할 수 있습니다. Flat type plug gasket 보다 절반 정도의 낮은 torque에 완벽한 씰링을 얻기 위해서는 Serration metal Core에 expanded graphite sheet를 부착한 kammprofile gasket (SSI 820)를 추천합니다. 고객의 요청에 따라 Plug와 Gasket은 일체형으로 공급할 수도 있습니다.

SPIRAL WOUND GASKETS

Spiral Wound Gaskets Description

[How to Handle and use big sized Semi Metallic Gaskets]

1. Carrying

Specified workers required when carrying big size gasket to prevent deformation and it shall be moved in even interval for safety protection.

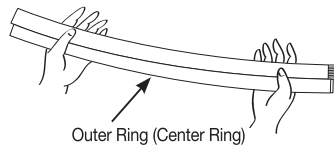
변형을 방지하기 위해 큰 크기의 가스켓을 운반 할 때, 작업자는 안전보호를 위해 균등한 간격으로 움직임이 요구됩니다.

Diameter	1500mm Under	2000mm Under	2500mm Under	3000mm Under	3500mm Under	3500mm Over
Min. Worker	2	3	4	6	7	8

2. Grid Method

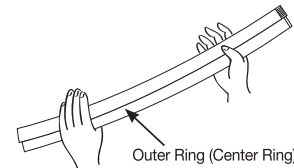
a. Horizontally

Keeping your palm horizontal, place the gasket on the palms and then firmly but softly hold it with your thumbs.



b. Vertically

Keep your palms vertically and hold the gasket with thumbs and remaining firmly so as not to drop it.



* Treating : Gasket must not be thrown and fallen

a. 수평

손바닥을 수평으로 유지하고 가스켓을 손바닥에 놓고 엄지손가락 부터 부드럽게 잡습니다.

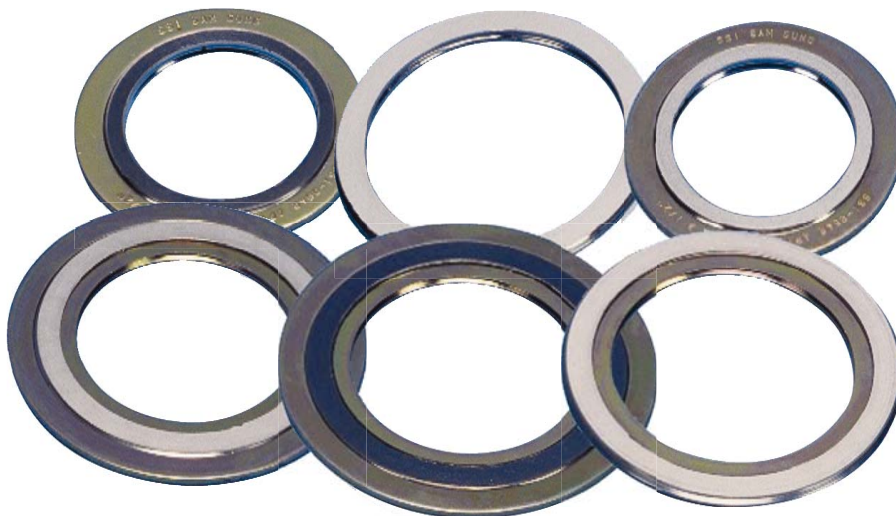
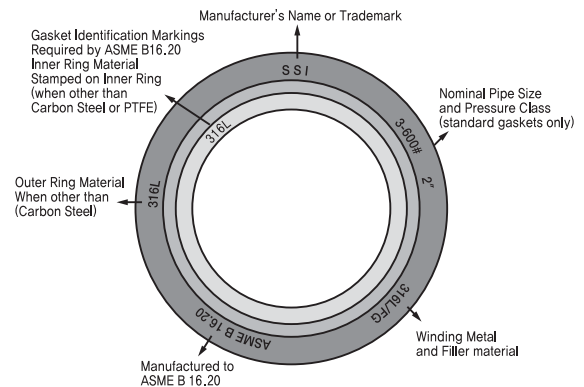
b. 수직

손바닥을 수직으로 유지하고 엄지손가락으로 잡고 단단히 고정합니다.

3. Storage and Precautions

- Please do not put any of heavy things on top of the gasket.
- Please do not storage in unstable and vibration conditions.
- Please avoid direct sunlight and keep in cool place, caring of humid and dust.
- Please observe first & first out process.
- Please pile up old gasket on top and using firstly, new one storages in bottom.

- 가스켓 위에 무거운 물건을 올리지 마십시오.
- 불안정하고 진동이 심한 환경에서 스트레스를 가하지 마십시오.
- 직사광선을 피하고 서늘한 곳에 보관하고 습기 및 먼지를 관리하십시오.
- First & first out 공정을 관찰하십시오.
- 상단에 오래된 가스켓을 쌓아 먼저 사용하고, 새로운 것은 아래에 보관하십시오.



Performance and technical integrity of the gaskets 신뢰성 검증

Type Acceptance Test

The Type Acceptance Test(TAT) is installed to verify the design, performance and technical integrity of the gaskets and manufacturing plant.

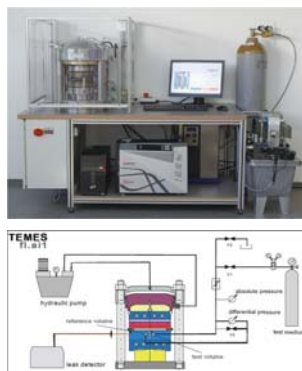
Test Specimens

The dimensions of the test specimens for the different tests were ASME B16.20, 4" Class 300. The dimensions of the flanges in contact with gasket is OD = 149.4mm and ID = 127mm. The thickness of the Spiral Wound Gasket is 4.5mm. The thickness of the outer ring was 3.0mm.

Test Name	Time [h]	Temp.	Pressure
ROTT _ Leakage Test	48	RT	40bar
ROTT _ Compression Test	10	RT	
ROTT _ Compression Test	15	400°C	
ROTT _ Creep Relaxation Test	6	RT	
ROTT _ Creep Relaxation Test	10	400°C	
Fugitive Emission	30	RT	51bar
Fugitive Emission	120	400°C	34.7bar
Fire Safe	24	760°C	40bar
HOTT	48	400°C	34.7bar
Gasket Adhesion			

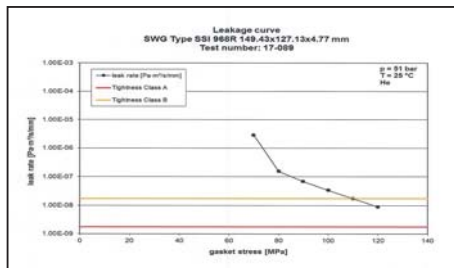
Test Equipment

The gasket tests were carried out on the following testing equipment: Below Multifunctional test rigs are TEMES and Fire Safe testing Device.

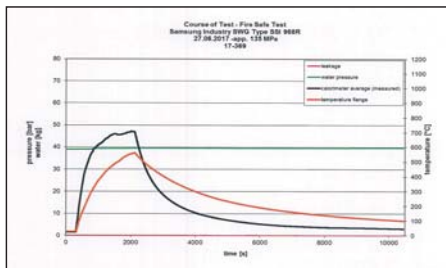


Test Results

The Spiral Wound Gasket passed all test according to Shell Specification MESC SPE 85/300.



Fugitive Emissions Test



Fire Test



TAT Test Certification

Hydraulic Test (수압테스트)

The Hydraulic Test is to verify the design, performance and technical integrity of the gaskets and manufacturing plant according to ASME B16.5

Test System

The test system is specified in B16.5 clause 2.6 as follows.

2.6 System Hydrostatic Testing

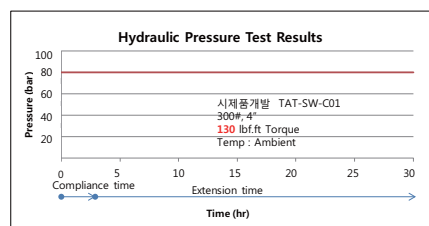
Flanged joints and flanged fittings may be subjected to system hydrostatic tests at a pressure of 1.5 times the 38°C (100°F) rating rounded off to the next higher 1 bar (25 psi) increment. Testing at any higher pressure is ASME B16.5-2009 the responsibility of the user, taking into account the requirements of the applicable code or regulation.

Test Specimens


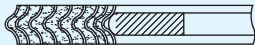


The dimensions of the test specimens for the different tests were ASME B16.20, 4" Class 300. The dimensions of the flanges in contact with gasket is OD = 149.4mm and ID = 127mm. The thickness of the Spiral Wound Gasket is 4.5mm.

Test Results

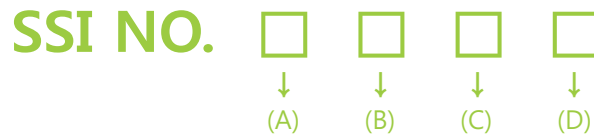
The Spiral Wound Gasket passed the hydraulic test according to ASME B16.5



Types

Name	Cross Section	SSI No.
Basic type spiral wound gasket		934
Spiral wound gasket with inner ring.		934R
Spiral wound gasket with outer ring.		964
Spiral wound gasket with inner and outer ring.		964R

How to Order



(A)	(B)	(C)	(D)
Inner Ring Material	Hoop Material	Filler Material	Outer Ring Material
SPCC (S)	SUS 304 (E)	Non-Asbestos Paper (1)	SPCC (S)
SUS 304 (E)	SUS 316L (H)	Flexible Graphite (2)	SUS 304 (E)
SUS 316L (H)	SUS 321 (J)	PTFE (3)	SUS 316L (H)
SUS 321 (J)	SUS 347 (K)	Others (4)	SUS 321 (J)
SUS 430 (U)	MONEL (M)		SUS 430 (U)
Other (O)	INCONEL (I)		Others (O)
	Others (O)		

EX) SSI 964R HH2H means Spiral wound gasket with Inner and Outer ring.
 = Inner Ring : SUS 316L, Hoop : SUS 316L, Filler : Flexible Graphite, Outer Ring : SUS 316L

Availability

Nominal Thickness	Inside Diameter		Range of inside diameter	Maximum width
	Minimum	Maximum		
6.4	800	3,000	800~1,600 1,601~3,000	30 25
4.5	16	3,000	16~630 631~1,600 1,601~3,000	35 30 25
3.2	16	1,500	16~630 631~1,500	25 20
1.6	10	200	10~200	8

Inner and Outer Rings

Unit : mm

ID range of inner and outer rings	Width of inner ring		Width of outer ring
	Recommendable	Minimum	Minimum
~ 40	3	3	4
41 ~ 63	4	3	4
64 ~ 100	5	4	5
101 ~ 160	6.5	4	5
161 ~ 250	8	4	5
251 ~ 400	10	6	6
401 ~ 630	12.5	7	8
631 ~ 1,000	15	9	8
1,001 ~ 1,200	20	12	10
1,201 ~ 1,600	20	15	10
1,601 ~ 2,000	25	20	12
2,001 ~	30	20	15

NOTES :

1. The thickness of carbon steel is 3.2mm and the thickness of other metals such as stainless steel, titanium, monel, etc is 3.0mm
2. Please consult with SAM SUNG INDUSTRY CO., LTD. engineering staff for other sizes than those standard range.

Flange Surfaces

Very fine or polished surfaces should be avoided since the gasket sealing element may slide over them and thus have a detrimental effect on performance. A gramophone or concentric serrated finish is preferable.

UNDER NO CIRCUMSTANCES should flange faces have any radial scores or scratch marks across the seating area. To obtain their maximum service potential, we recommend spiral wound gaskets should be loaded to the following gasket compressed thickness.

매우 세밀하거나 연마된 표면은 가스켓 sealing 요소가 미끄러져 성능에 악영향을 줄 수 있으므로 피해야 합니다. Gramophone 또는 concentric serrated 마감이 선호되며 어떠한 상황에서도 플랜지면에는 seating area를 교차하는 scratch mark 또는 radical score가 있을 수 있습니다. 최대한의 서비스 가능성을 얻기 위해 다음 가스켓 압축 두께에 spiral wound gasket을 장착하는 것이 좋습니다.

Technical Features

Because of their "in-built" resilience spiral wound gaskets are capable of giving an excellent seal over a wide range of flange face surface finishes.

But as a general guide we offer the following.

내장형 탄성으로 인해 나선형으로 권취 된 가스켓은 넓은 범위의 플랜지 표면 마감 처리에 탁월한 sealing 효과를 부여할 수 있습니다. 그러나 일반적인 가이드로서 우리는 다음을 제공합니다.

Unit : mm

Service	Surface Finish	
	Micro Meter	Micro Inch
General duties	3.2 to 5.1	125 to 200
Critical duties	3.2	125
Vaccum	2.0	80

Gasket Compression Thickness

Recommendable compression thickness of spiral wound gasket is as listed in the following table.

나선형 가스켓의 권장 압축 두께는 다음 표와 같습니다.

Unit : mm

Nominal gasket thickness	Compressed thickness
1.6	1.25 ± 0.05
3.2	2.4 ± 0.1
4.5	3.3 ± 0.1
6.4	4.8 ± 0.2

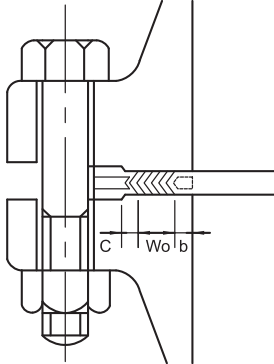
NOTES :

Controlled compression type flanged joint is more advantageous than uncontrolled type in order to maintain proper compression thickness of the gasket if the process line is expectedly attacked by abnormally high end-pressure, bending stress, thermal stress and it is difficult to give additional bolt tightening.

제어 압축 방식의 플랜지 조인트는 프로세스 라인이 비정상적으로 높은 end-pressure, bending stress, thermal stress에 의해 제어되지 않은 유형보다 유리합니다. 따라서 추가적인 볼트 조임을 부여하기 어렵습니다.

Space and clearance for gasket

The width of spiral wound gasket, when it is compressed, tends to expand and a space for the expansion is to be taken into account in design of flanges or joints.



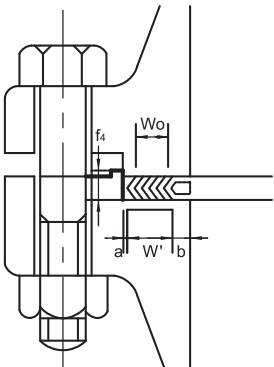
- (1) Flat or raised face is widely employed for pipe flanges and machinery joints as a gasket seating face. Spiral wound gasket with outer ring or with outer/inner rings is normally used on such flanges or joints. The following space is ideal for the gasket and it is desired to be taken into account when designing new machinery and equipments.

나선 형상으로 권취 된 가스켓의 폭은 압축 될 때 팽창하는 경향이 있으며, 팽창을 위한 공간은 플랜지 또는 조인트의 설계시 고려되어야 합니다.

- (1) 평평한 또는 돌출된 면은 가스켓 안착면으로서 파이프 플랜지 및 기계 조인트에 널리 사용됩니다. Outer ring 또는 outer/inner rings이 있는 spiral wound gasket은 일반적으로 플랜지나 조인트에 사용됩니다. 다음 공간은 가스켓에 이상적이며 기계 및 장비를 설계 할 때 고려해야 합니다.

Unit : mm

I.D or O.D of spiral wound sealing element	Minimum Space	
	b	c
~ 50	2	2
51 ~ 100	3	2
101 ~ 250	4	3
251 ~ 630	5	3
631 ~ 1,600	7.5	5
1,601 ~	10	5

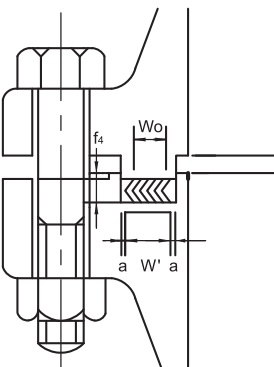


- (2) Tongue-and-groove or male-and-female flange is sometimes employed in pressure vessels and valve bonnets. Basic type spiral wound gasket (without ring) is normally used for the former case and spiral wound gasket with inner ring for the latter case. It is desired to have the following clearance for the said gaskets.

- (2) Tongue-and-groove 또는 male-and-female 플랜지는 때로 압력 용기와 밸브 본넷에 사용된다. 후자의 경우 inner ring이 있는 spiral wound gasket, 전자의 경우 일반적으로 사용되는 기본형 나선형 가스켓 (out ring이 없는)입니다. 위 가스켓에 대해 다음과 같은 clearance를 갖는 것이 바람직합니다.

Unit : mm

I.D or O.D of spiral wound sealing element	Standard clearance	Standard clearance
	a	b
~ 250	0.5	4
251 ~ 630	0.8	5
631 ~ 1,600	1.0	7.5
1,601 ~	1.3	10



The value of W is normally regarded as the width of gasket sealing element. The gasket contact area W_o can be obtained in the following way.

- * in case of nominal gasket thickness 6.4mm
 $W_o = W - 2.0\text{mm}$
- * in case of nominal gasket thickness 4.5mm
 $W_o = W - 1.5\text{mm}$
- * in case of nominal gasket thickness 3.2mm
 $W_o = W - 1.0\text{mm}$

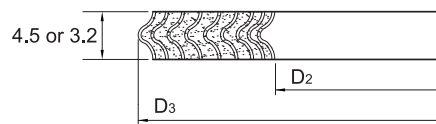
The depth (f_4) of tongue-and-groove or male-and-female flange must have the size more than 5mm if nominal gasket thickness is 4.5mm.

W '의 값은 일반적으로 가스켓 sealing 요소의 폭으로 간주됩니다. 가스켓 접촉 면적 (W_o)은 다음과 같은 방식으로 얻어 질 수 있습니다.

- * 공칭 가스켓 두께 6.4mm의 경우
 $W_o = W - 2.0\text{mm}$
- * 공칭 가스켓 두께가 4.5mm인 경우
 $W_o = W - 1.5\text{mm}$
- * 공칭 가스켓 두께 3.2mm의 경우
 $W_o = W - 1.0\text{mm}$

tongue-and-groove 또는 male-and-female 플랜지의 깊이 (f_4)는 공칭 가스켓 두께가 4.5mm인 경우 5mm 이상이어야 합니다.

SSI 934 [Basic Type]



ASME

Unit : mm

Nomial diameter (inch)	150~2500 psi large tongue and groove		150~2500 psi small tongue and groove	
	D ₂	D ₃	D ₂	D ₃
½	25.5	35	25.5	35
¾	33	43	33	43
1	38	51	38	47.5
1¼	47.5	63.5	47.5	57
1½	54	73	54	63.5
2	73	92	73	82.5
2½	85.5	105	85.5	95
3	108	127	108	117.5
3½	120.5	139.5	120.5	130
4	132	157	132	144.5
5	160.5	185.5	160.5	173
6	190.5	216	190.5	203
8	238	270	238	254
10	286	324	286	305
12	343	381	343	362
14	374.5	413	374.5	393.5
16	425.5	470	425.5	447.5
18	489	533.5	489	511
20	533.5	584	533.5	559
24	641.5	692	641.5	666.5

JIS-KS

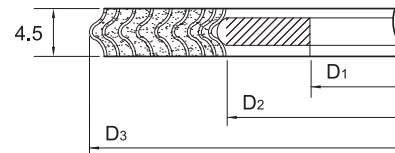
Unit : mm

Nomial diameter (inch)	16kgf/cm ² ~63kgf/cm ² tongue and groove		16kgf/cm ² ~63kgf/cm ² male and female	
	D ₂	D ₃	D ₂	D ₃
10	28	38	25	38
15	32	42	29	42
20	38	50	37	50
25	45	60	44	60
32	55	70	54	70
40	60	75	59	75
50	70	90	70	90
65	90	110	90	110
80	100	120	100	120
90	110	130	110	130
100	125	145	125	145
125	150	175	150	175
150	190	215	187	215
200	230	259	231	259
250	296	324	288	324
300	341	374	338	374
350	381	414	376	414
400	441	474	434	474

NOTES :

The above gasket dimensions are designed to fit the flanges specified in ASME B16.5.

SSI 934R [Inner Ring Type]



ASME

Unit : mm

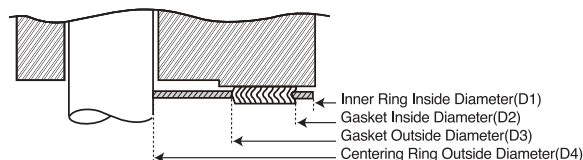
Nomial diameter (inch)	150~2500 psi large male and female		
	D ₁	D ₂	D ₃
½	17	23	35
¾	25	31	43
1	31	38	51
1¼	40	47.5	63.5
1½	45	54	73
2	63	73	92
2½	75	85.5	105
3	96	108	127
3½	107	120.5	139.5
4	118	132	157
5	146	160.5	185.5
6	174	190.5	216
8	222	238	270
10	268	286	324
12	323	343	381
14	353	374.5	413
16	404	425.5	470
18	465	489	533.5
20	507	533.5	584
24	616	641.5	692

JIS-KS

Unit : mm

Nomial diameter (inch)	16kgf/cm ² ~63kgf/cm ² male and female		
	D ₁	D ₂	D ₃
10	19	25	38
15	23	29	42
20	31	37	50
25	38	44	60
32	46	54	70
40	51	59	75
50	62	70	90
65	80	90	110
80	90	100	120
90	100	110	130
100	113	125	145
125	138	150	175
150	171	187	215
200	215	231	259
250	268	288	324
300	318	338	374
350	356	376	414
400	409	434	474

SSI 964R [Inner-Outer Ring Type]



ASME B16.5 Pipes Flanges

Unit : mm

Size (NPS)	Class 150				Class 300				Class 400				Class 600			
	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄
½	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
¾	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
1¼	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
1½	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
2½	66.5	82.6	98.6	124.0	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	81.0	101.6	120.7	136.7	81.0	101.6	120.7	149.4	81.0	101.6	120.7	149.4	81.0	101.6	120.7	149.4
4	106.4	127.0	149.4	174.8	106.4	127.0	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	251.0	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	362.0	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	362.0	406.4	482.6	342.9	362.0	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	489.0	520.7	577.9	647.7	489.0	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

Unit : mm

Size (NPS)	Class 900				Class 1500				Class 2500			
	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄
½	14.2	19.1	31.8	63.5	14.2	19.1	31.8	63.5	14.2	19.1	31.8	69.9
¾	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
1¼	33.3	39.6	60.5	88.9	33.3	39.6	60.5	88.9	33.3	39.6	60.5	104.9
1½	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	143.0	52.3	58.7	85.9	143.0	52.3	58.7	85.9	146.1
2½	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	235.0
5	128.3	147.6	177.8	247.7	124.5	143.0	177.8	254.0	124.5	143.0	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	270.0	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	362.0	400.1	577.9	-	-	-	-
16	374.7	412.8	457.2	574.8	368.3	406.4	457.2	641.1	-	-	-	-
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	616.0	679.5	901.7	-	-	-	-

ASME B16.47 Series "A" Large Diameter Steel Steel Flanges(MSS SP-44 Flanges)

Unit : mm

Size (NPS)	Class 150				Class 300				Class 400				Class 600				Class 900			
	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄
22	552.4	577.8	635.0	660.4	552.4	577.8	635.0	704.8	552.4	557.8	635.0	701.8	552.4	577.8	635.0	733.6	-	-	-	-
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	647.7	685.8	736.6	866.9	660.4	685.8	736.6	882.7
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	698.5	736.6	787.4	914.4	711.2	736.6	787.4	946.2
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	755.7	793.8	844.6	971.6	768.4	793.8	844.6	1009.7
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	812.8	850.9	901.7	1022.4	812.8	850.9	901.7	1073.2
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	863.6	901.7	952.5	1073.2	863.6	901.7	952.5	1136.7
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	917.7	955.8	1006.6	1130.3	920.8	958.9	1009.7	1200.2
38	958.9	977.9	1019.3	1111.3	952.5	977.9	1016.0	1054.1	952.5	971.6	1022.4	1073.2	952.5	990.6	1041.4	1104.9	1009.7	1035.1	1085.9	1200.2
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	1009.7	1047.8	1098.6	1155.7	1060.5	1098.6	1149.4	1251.0
42	1060.5	1079.5	1124.0	1219.2	1054.1	1073.2	1120.9	1165.4	1051.1	1076.5	1127.3	1178.1	1066.8	1104.9	1155.7	1219.2	1111.3	1149.4	1200.2	1301.8
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	1111.3	1162.1	1212.9	1270.0	1155.7	1206.5	1257.3	1368.6
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	1162.1	1212.9	1263.7	1327.2	1219.2	1270.0	1320.8	1435.1
48	1212.9	1231.9	1279.7	1384.3	1209.8	1235.2	1286.0	1324.1	1206.5	1244.6	1295.4	1346.2	1219.2	1270.0	1320.8	1390.7	1270.0	1320.8	1371.6	1485.9
50	1263.7	1282.7	1333.5	1435.1	1244.6	1295.4	1346.2	1378.0	1257.3	1295.4	1346.2	1403.4	1270.0	1320.8	1371.6	1447.8	-	-	-	-
52	1314.5	1333.5	1384.3	1492.3	1320.8	1346.2	1397.0	1428.8	1308.1	1346.2	1397.0	1454.2	1320.8	1371.6	1422.4	1498.6	-	-	-	-
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	1378.0	1428.8	1479.6	1555.8	-	-	-	-
56	1409.7	1435.1	1485.9	1606.6	1403.4	1454.2	1505.0	1543.1	1403.4	1454.2	1505.0	1568.5	1428.8	1479.6	1530.4	1612.9	-	-	-	-
58	1460.5	1485.9	1536.7	1663.7	1447.8	1511.3	1562.1	1593.9	1454.2	1505.0	1555.8	1619.3	1473.2	1536.7	1587.5	1663.7	-	-	-	-
60	1511.3	1536.7	1587.5	1714.5	1524.0	1562.1	1612.9	1644.7	1517.7	1568.5	1619.3	1682.8	1530.4	1593.9	1644.7	1733.6	-	-	-	-

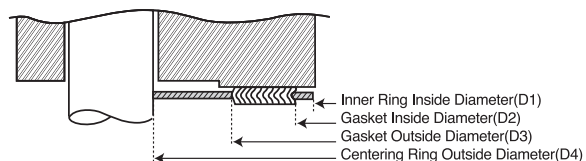
22": Facing Dimensions for JPI 7S-41, MSS SP-44.

ASME B16.47 Series "B" Large Diameter Steel Steel Flanges(API 605 Flanges)

Unit : mm

Size (NPS)	Class 150				Class 300				Class 400				Class 600				Class 900			
	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄
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	644.7	663.7	714.5	765.3	666.8	692.2	749.3	838.2
28	704.9	723.9	749.3	776.2	704.9	723.9	762.0	825.5	701.8	714.5	749.3	800.1	685.8	704.9	755.7	819.2	717.6	743.0	800.1	901.7
30	755.7	774.7	800.1	827.0	755.7	774.7	812.8	886.0	752.6	765.3	806.5	857.3	752.6	778.0	828.8	879.6	781.1	806.5	857.3	958.9
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	793.8	831.9	882.7	933.5	838.2	863.6	914.4	1016.0
34	857.3	876.3	908.1	935.0	857.3	876.3	914.4	993.9	850.9	866.9	911.4	962.2	850.9	889.0	939.8	997.0	895.4	920.8	971.6	1073.2
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	901.7	939.8	990.6	1047.8	920.8	946.2	997.0	1124.0
38	958.9	974.9	1009.7	1044.7	971.6	1009.7	1047.8	1098.6	952.5	971.6	1022.4	1073.2	952.5	990.6	1041.4	1104.9	1009.7	1035.1	1085.9	1200.2
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	1009.7	1047.8	1098.6	1155.7	1060.5	1098.6	1149.4	1251.0
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	1066.8	1104.9	1155.7	1219.2	1111.3	1149.4	1200.2	1301.8
44	1111.3	1124.0	1165.4	1197.1	1124.0	1162.1	1200.2	1251.0	1104.9	1130.3	1181.1	1231.9	1111.3	1162.1	1212.9	1270.0	1155.7	1206.5	1257.3	1368.6
46	1162.1	1181.1	1224.0	1255.8	1178.1	1216.2	1254.3	1317.8	1168.4	1193.8	1244.6	1289.1	1162.1	1212.9	1263.7	1327.2	1219.2	1270.0	1320.8	1435.1
48	1212.9	1231.9	1270.0	1306.6	1231.9	1263.7	1311.4	1368.6	1206.5	1244.6	1295.4	1346.2	1219.2	1270.0	1320.8	1390.7	1270.0	1320.8	1371.6	1485.9
50	1263.7	1282.7	1325.6	1357.4	1267.0	1317.8	1355.9	1419.4	1257.3	1295.4	1346.2	1403.4	1270.0	1320.8	1371.6	1447.8	-	-	-	-
52	1314.5	1333.5	1376.4	1408.2	1317.8	1368.6	1406.7	1470.2	1308.1	1346.2	1397.0	1454.2	1320.8	1371.6	1422.4	1498.6	-	-	-	-
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	1378.0	1428.8	1479.6	1555.8	-	-	-	-
56	1422.4	1444.8	1478.0	1514.6	1428.8	1479.6	1524.0	1593.9	1403.4	1454.2	1505.0	1568.5	1428.8	1479.6	1530.4	1612.9	-	-	-	-
58	1478.0	1500.1	1528.8	1579.6	1484.4	1535.2	1573.3	1655.8	1454.2	1505.0	1555.8	1619.3	1473.2	1536.7	1587.5	1663.7	-	-	-	-
60	1535.2	1557.3	1586.0	1630.4	1557.3	1589.0	1630.4	1706.6	1517.7	1568.5	1619.3	1682.8	1530.4	1593.9	1644.7	1733.6	-	-	-	-

KS B 1518(2007), JIS B 2404(2006) Gasket Type : Inner & Outer Ring type



KS B 1503, KS B 1511, JIS B 2220, JIS B 2238, JIS B 2239, JIS B 2240

Unit : mm

Size (A)	5kgf/cm ²				10kgf/cm ²				16kgf/cm ²				20kgf/cm ²			
	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄
10	18	24	33	45	18	24	37	52	18	24	37	52	18	24	37	52
15	22	28	38	50	22	28	41	57	22	28	41	57	22	28	41	57
20	28	34	44	55	28	34	47	62	28	34	47	62	28	34	47	62
25	34	40	53	65	34	40	53	74	34	40	53	74	34	40	53	74
32	43	51	64	78	43	51	67	84	43	51	67	84	43	51	67	84
40	49	57	69	83	49	57	73	89	49	57	73	89	49	57	73	89
50	61	69	79	93	61	69	89	104	61	69	89	104	61	69	89	104
65	77	87	102	118	77	87	107	124	77	87	107	124	77	87	107	124
80	89	98	113	129	89	98	118	134	89	99	119	140	89	99	119	140
90	102	110	123	139	102	110	130	144	102	114	139	150	102	114	139	150
100	115	123	133	149	115	123	143	159	115	127	152	165	115	127	152	165
125	140	148	168	184	140	148	173	190	140	152	177	202	140	152	177	202
150	166	174	198	214	166	174	199	220	166	182	214	237	166	182	214	237
175	-	-	-	-	192	201	226	245	-	-	-	-	-	-	-	-
200	217	227	243	260	217	227	252	270	217	233	265	282	217	233	265	282
225	-	-	-	-	243	252	277	290	-	-	-	-	-	-	-	-
250	268	278	305	325	268	278	310	332	268	288	328	354	268	288	328	354
300	319	329	350	370	319	329	361	377	319	339	379	404	319	339	379	404
350	356	366	390	413	356	366	406	422	356	376	416	450	356	376	416	450
400	407	417	450	473	407	417	457	484	407	432	482	508	407	432	482	508
450	458	468	510	533	458	468	518	539	458	483	533	573	458	483	533	573
500	508	518	550	583	508	518	568	594	508	533	583	628	508	533	583	628
550	559	569	610	641	559	569	619	650	559	584	634	684	559	584	634	684
600	610	620	660	681	610	620	670	700	610	635	685	734	610	635	685	734
650	660	685	716	776	672	692	724	750	684	704	754	784	704	724	774	805
700	714	739	765	795	715	731	767	810	734	754	804	836	754	774	824	855
750	762	784	810	850	785	807	839	870	792	814	864	896	812	834	884	918
800	813	838	860	900	818	841	881	920	818	841	891	945	872	894	944	978
850	864	889	910	950	881	903	939	970	892	914	964	995	932	954	1004	1038
900	914	939	965	1000	931	953	989	1020	942	964	1014	1045	982	1004	1054	1088
1000	1016	1040	1070	1100	1021	1058	1094	1124	1050	1074	1124	1158	-	-	-	-
1100	-	-	-	-	1144	1168	1204	1234	1150	1174	1224	1258	-	-	-	-
1200	-	-	-	-	1249	1273	1309	1344	1260	1284	1334	1368	-	-	-	-
1300	-	-	-	-	-	-	-	-	1354	1384	1434	1474	-	-	-	-
1350	-	-	-	-	1398	1428	1464	1498	1414	1444	1494	1534	-	-	-	-
1400	-	-	-	-	-	-	-	-	1464	1494	1544	1584	-	-	-	-
1500	-	-	-	-	1553	1583	1619	1658	1574	1604	1654	1684	-	-	-	-

22": Facing Dimensions for JPI 7S-41.

Size (NPS)	20K			
	D ₁	D ₂	D ₃	D ₄
10	24	30	42	52
15	28	34	46	57
20	33	39	51	62
25	44	50	63	74
32	52	59	73	84
40	56	63	78	89
50	69	77	93	104
65	80	92	112	124

Remark :

1. Class 10K with Inner & Outer Ring type Gasket dimension designed by SSI.
2. Over 650A Gasket Dimension designed by SSI.
3. Facing dimension for KS B 1503 and JIS B 2220 flange 20K facing flange should be Slip On Type. B type(NPS 10-65A) should be apply left dimension table.

KS B 1518(2007), JIS B 2404(2006) Gasket Type : Inner & Outer Ring type

KS B 1503, KS B 1511, JIS B 2220, JIS B 2238, JIS B 2239, JIS B 2240

Unit : mm

Size (A)	30kgf/cm ²				40kgf/cm ²				63kgf/cm ²			
	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄	D ₁	D ₂	D ₃	D ₄
10	18	24	37	59	15	21	34	59	15	21	34	64
15	22	28	41	64	18	24	37	64	18	24	37	69
20	28	34	47	69	23	29	42	69	23	29	42	75
25	34	40	53	79	29	35	48	79	29	35	48	80
32	43	51	67	89	38	44	60	89	38	44	60	90
40	49	57	73	100	43	51	67	100	43	51	67	107
50	61	69	89	114	55	63	79	114	55	63	79	125
65	68	78	98	140	68	78	98	140	68	78	98	152
80	80	90	110	150	80	90	110	150	80	90	110	162
90	92	102	127	162	92	102	127	162	92	102	127	179
100	104	116	141	172	104	116	141	182	104	116	141	194
125	128	140	165	207	128	140	165	224	128	140	165	235
150	153	165	197	249	153	165	197	265	153	165	197	275
175	-	-	-	-	-	-	-	-	-	-	-	-
200	202	218	250	294	202	218	250	315	202	218	250	328
225	-	-	-	-	-	-	-	-	-	-	-	-
250	251	271	311	360	251	271	311	378	251	271	311	394
300	300	320	360	418	300	320	360	434	300	320	360	446
350	336	356	396	463	336	356	396	479	336	356	396	488
400	383	403	453	524	383	403	453	531	383	403	453	545

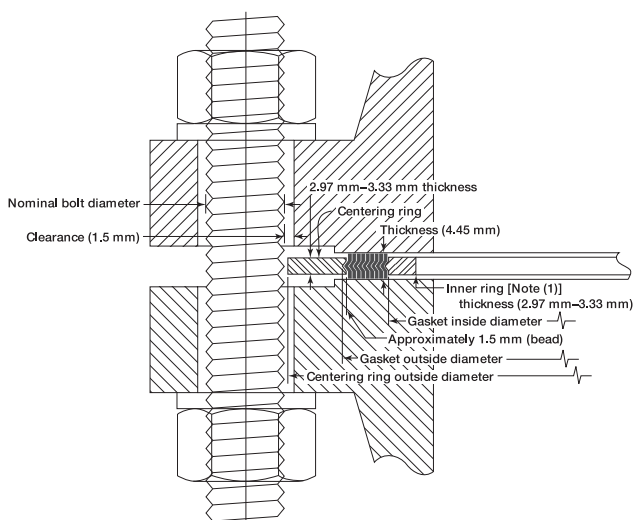
22": Facing Dimensions for JPI 7S-41.

Size (NPS)	30K			
	D ₁	D ₂	D ₃	D ₄
10	30	36	46	59
15	35	41	51	64
20	39	45	56	69
25	48	54	66	79
32	56	62	75	89
40	63	69	84	100
50	77	83	99	114
65	90	100	120	140

Remark :

1. NPS below 30K 50A applied by Raised Face Type Flange only
2. Dimension over 30K 65A and 40K, 63K facing gasket should be applied at KS B1503 and JIS B 2220 Welding Neck Type or C type (socket welding flange)
3. Facing dimension for KS B 1503 and JIS B 2220 class over 30K applied to slip on type or B type (NPS 10~65A) will be follow as left table.

Dimensions for Spiral-Wound Gaskets Used With ASME B16.5 Flanges



GENERAL NOTES :

- (a) All dimensions are in millimeters.
- (b) For reference, see Table illustration on previous page.
- (c) The gasket thickness tolerance is 0.13mm measured across the metallic portion of the gasket, not including the filler, which may protrude slightly beyond the metal.
- (d) For limitations on the maximum flange bore for use with these spiral-wound gaskets, see Table 15.

NOTES :

- (1) The gasket outside diameter tolerance for NPS 1/2 through NPS 8 is $\pm 0.8\text{mm}$; for NPS 10 through NPS 24, $+1.5\text{mm}$, -0.8mm .
- (2) Refer to ASME B16.20 para. 3.2.5 for required use of inner rings.
- (3) The gasket inside diameter tolerance for NPS 1/2 through NPS 8 is $\pm 0.4\text{mm}$; for NPS 10 through NPS 24, $\pm 0.8\text{mm}$.
- (4) The centering ring outside diameter tolerance is $\pm 0.8\text{mm}$.
- (5) There are no Class 400 flanges in NPS 1/2 through NPS 3 (use Class 600), Class 900 flanges in NPS 1/2 through NPS 21/2 (use Class 1500), or Class 2500 flanges NPS 14 and larger.

Maximum Bore of ASME B16.5 Flanges for use with Spiral Wound Gaskets

Flange Size (NPS)	Pressure Class								
	75	150	300	400	600	900(1)	1500(1)	2500(1)	
1/2	No flanges	WN flange only (2)		No flanges Use Class 600	WN flange only (2)	No flanges Use Class 1500		WN flange only (2)	
3/4					SO flange (3) WN flange (2)				SO flange (3) WN flange (2)
1					SO flange (3) WN flange, any bore				SO flange (3) WN flange, any bore
1 1/4		SO flange (3) WN flange, any bore			WN flange with Schedule 10S bore described in ASME B36.19M [includes nozzle (4) and SO flange] (5)	SO flange (3) WN flange, any bore			WN flange with SW bore [includes nozzle (4) but excludes SO flange]
1 1/2						SO flange (3) WN flange, any bore			
2						SO flange (3) WN flange, any bore			
2 1/2						SO flange (3) WN flange, any bore			
3						SO flange (3) WN flange, any bore			
4						SO flange (3) WN flange, any bore			
6		SO flange (3) WN flange, any bore			WN flange with Schedule 10S bore described in ASME B36.19M [excludes nozzle (4) and SO flange] (5)	WN flange with Schedule 80 bore [excludes nozzle (4) and SO flange] (5)		No flanges	
8									
10									
12									
14									
16									
18									
20									
24									

ASME B16-20

GENERAL NOTES :

- (a) This Table shows the maximum bore of flanges for which the spiral-wound gasket dimensions shown in Table 9 are recommended, considering the tolerances involved, possible eccentric installation, and the possibility that the gasket may extend into the assembled flange bore.
- (b) For maximum permissible flange bores for nonmandatory inner rings, see Table 15.
- (c) Abbreviations: SO=slip on and threaded, WN = welding neck, and SW = standard wall.

NOTES :

- (1) Refer to ASME B16.20 para. 3.2.5 for required use of inner rings. These inner rings may extend into the pipe bore a maximum of 1.5mm under the worst combination of maximum bore, eccentric installation, and additive tolerances.
- (2) In these sizes, the gasket is suitable for a selding neck flange with a standard wall bore, if the gasket and the flanges are assembled concentrically. This also applies to a nozzle. It is the user's responsibility to determine if the gasket is satisfactory for a flange of any larger bore.
- (3) Gaskets in these sizes are suitable for slip-on flanges only if the gaskets and flanges are assembled concentrically.
- (4) A nozzle is a long welding neck; the bore equals the flange NPS.
- (5) An NPS 24 gasket is suitable for nozzles.

Minimum Pipe Wall Thickness Suitable for Use of Spiral-Wound Gaskets With Inner Rings for ASME B16.5 Flanges

Flange Size (NPS)	Pressure Class						
	150	300	400	600	900	1500	2500
1/2 3/4 1	Schedule 80						
1 1/4 1 1/2 2 2 1/2 3 4 5 6	Schedule 40					Schedule 80	
8 10 12 14 16 18 20 24	Schedule 10S		Schedule 30		Schedule 80		

ASME B16-20

GENERAL NOTES :

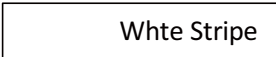



- (a) The pipe wall schedules identified represent the minimum recommended pipe wall thickness suitable for use with inner rings for ASME B16.5 flanges. (Reference ASME B36.10M and B36.19M.)
- (b) Gaskets with inner rings should be used only with socket welding, lapped, welding neck, and integral flanges.
- (c) Refer to para. 3.2.5 for required use of inner rings.

Double Color Coding for Spiral Wound gasket for ASME B16.20

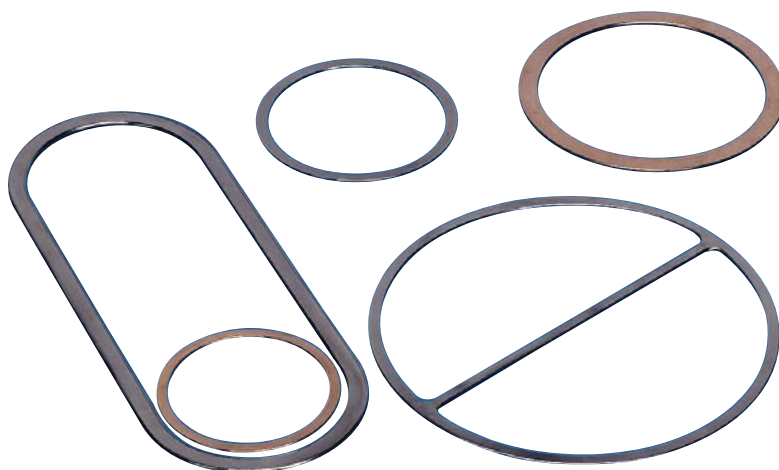
Metallic Windings

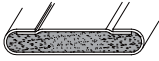
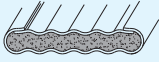
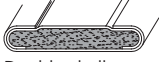
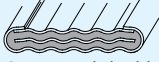

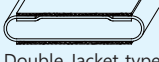



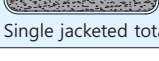
304 SS	 Yellow	Monel	 Orange	Alloy 20	 Black
316L SS	 Green	Inconel	 Gold	Carbon Steel	 Silver
317L SS	 Maroon	Nickel	 Red	Hastelloy "B"	 Brown
347 SS	 Blue	Incoloy	 White	Hastelloy "C"	 Beige
321 SS	 Turquoise	Titanium	 Purple		

Non-Metallic Fillers

PTFE	 White Stripe	Ceramic	 Light Green Stripe
Flexible Graphite	 Gray Stripe	Vermiculite	 Light Blue Stripe

METAL JACKETED GASKETS

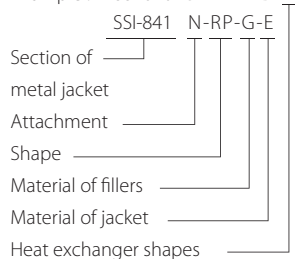


Section	SSI Product Code
 Double jacket type	840
 Corrugated double jacket type	841
 Double shell type	842
 Corrugated double Jacketed metal filler type	843
 Single corrugate type	844
 Double Jacket type graphite	840GP
 Double shell type graphite	842GP
 Round jacket type	845
 Semi jacket type	846
 Single jacketed totally enclosed type	847

ATTACHED	SHAPES	MATERIAL OF FILLERS	MATERIAL OF JACKET	HEAT EXCHANGER SHAPES
None N Expanded graphite tape P special P.T.F.E tape P	Round R Round with Centering plate RC Round with partition bar RP Cone C Oblong O Square S Pear P Diamond D	Soft asbestos millboard M Compressed Non asbestos fiber G Non asbestos millboard NM Cerabestos fiber C P.T.F.E sheet P Graphite sheet G/P Synthetic rubber R	Softiron D Low carbon steel S Copper C Aluminum A Bronze B SUS 304 E SUS 304L L SUS 316 G SUS 316L H SUS 321 J SUS 347 K SUS 410 R SUS 430 U 5CR-1/2 Mo F Monel M Titanium T Hastelloy H Inconel I Nickel N	ATTACHED DETAILS SEE PAGE 36

NOTES : 1. Customers may describe number of section, attachment, shape, material of filler, material of jacket and heat exchanger shapes by symbol mark as mentioned in.

Example : SSI-840 GP-R-M-D-2



2. Standard nominal thickness in 3.2mm and pitch size of corrugation is 3, 4, 5, 6.5mm

Double Jacket Corrugated Gasket Dimension Data

Unit : mm

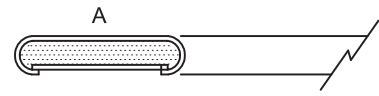
Pitch Gasket Width Gasket Out Dia	PITCH				T
	10~16	16~25	25~40	40~60	
100	3	3	3	-	3
100~160	3	4.5	4.5	4.5	
160~250	4.5	4.5	4.5	6.5	
250~400	4.5	4.5	6.5	6.5	
400~630	4.5	6.5	6.5	6.5	
630~1,000	4.5	6.5	6.5	6.5	
1,000~1,600	-	6.5	6.5	6.5	

NOTES :

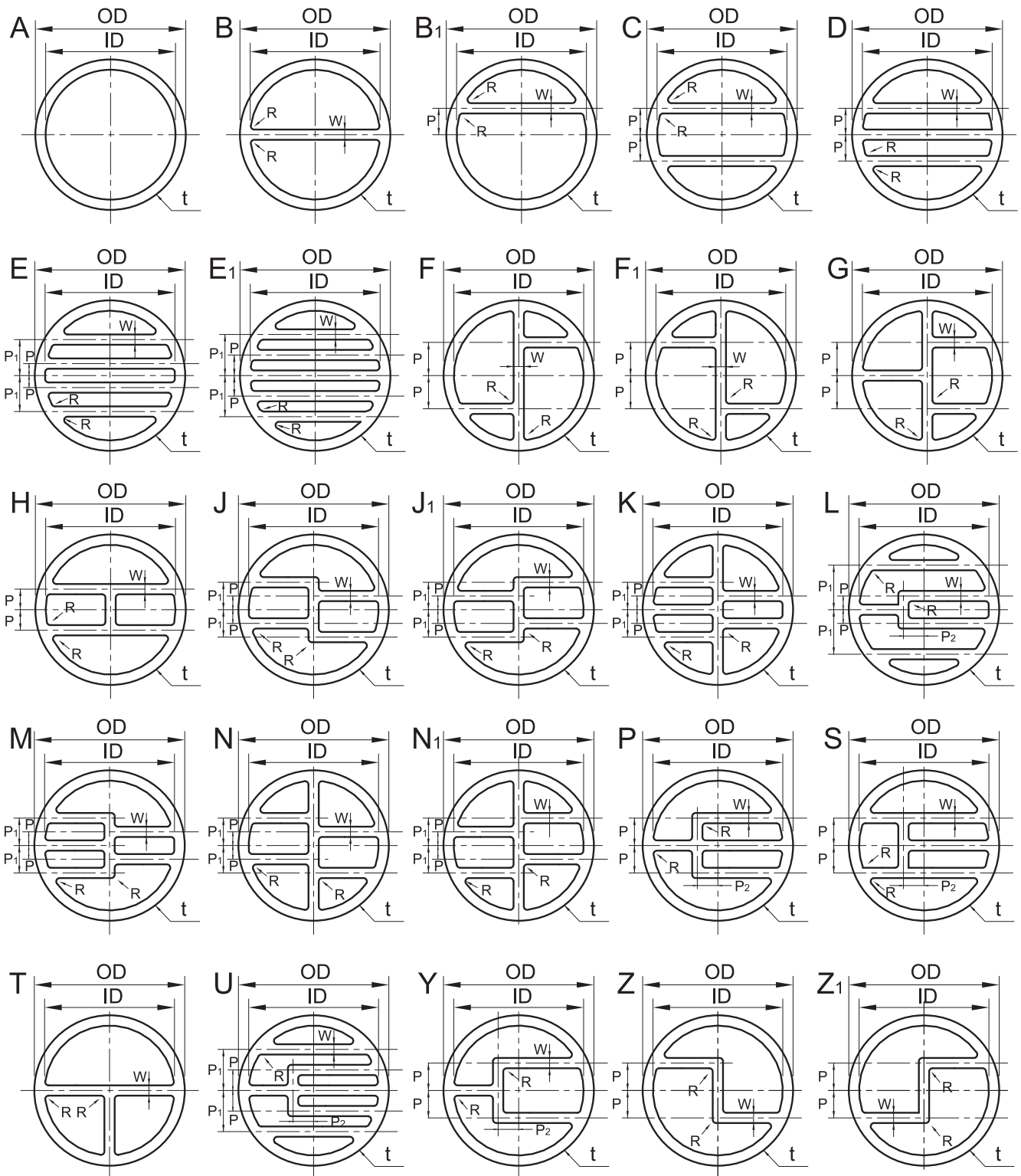
- Gasket minimum In-dia is 13mm.
- Related standard is ASME B16.5 & JIS B2238/2239.

Metal Jacketed Gasket Details

Shapes—Heat Exchanger gasket have complicated partition bar(s). The typical shapes of the gasket are as illustrated below.



All sketches are from the side "A"



Metal Jacketed Gasket Requisition

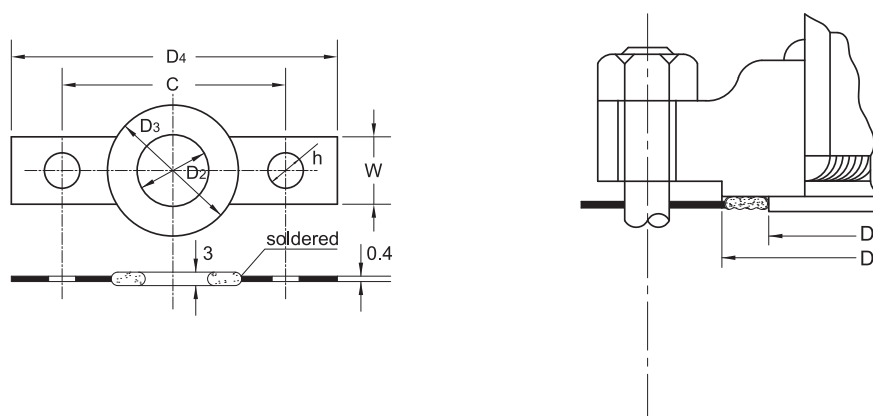
Dimensions

Gasket outside diameter, inside diameter and thickness are enough to design and manufacture round shape gasket without partition(s). However, the shapes and detailed dimensions of portion of partition bar must be furnished if the gasket is applied in multi-pass heat exchangers. The following dimensional list may be filled in ordering for correct fabrication.

“Dimensional list of heat Exchanger.”

Shape	Dimensions								SSI-NO and Material	Shape
	O.D	I.D	t	W	R	P	P ₁	P ₂		
Notes:										

Double Jacketed Graphite Filled Gasket for JIS Pipe Flanges



ASME B16.5 Pipes Flanges

Unit : mm

Size (NPS)	10kgf/cm ² large raised face						10kgf/cm ² -20kgf/cm ² large raised face						30kgf/cm ² large raised face						40kgf/cm ² large raised face					
	Sealing element		Centering plate				Sealing element		Centering plate				Sealing element		Centering plate				Sealing element		Centering plate			
	D ₂	D ₃	D ₄	C	h	W	D ₂	D ₃	D ₄	C	h	W	D ₂	D ₃	D ₄	C	h	W	D ₂	D ₃	D ₄	C	h	W
10	38	48	90	65	15	25	38	48	90	65	15	25	42	52	110	75	19	29	42	52	110	75	19	29
15	42	52	95	70	15	25	42	52	95	70	15	25	45	55	115	80	19	29	45	55	115	80	19	29
20	48	58	100	75	15	25	48	58	100	75	15	25	50	60	120	85	19	29	50	60	120	85	19	29
25	57	70	125	90	19	29	57	70	125	90	19	29	57	70	130	95	19	29	57	70	130	95	19	29
30	64	80	135	100	19	29	64	80	135	100	19	29	64	80	140	105	19	29	64	80	140	105	19	29
40	66	85	140	105	19	29	66	85	140	105	19	29	71	90	160	120	23	33	71	90	160	120	33	33
50	81	100	155	120	19	29	81	100	155	120	19	29	86	105	165	130	19	29	86	105	165	130	19	29
65	101	120	175	140	19	29	101	120	175	140	19	29	111	130	200	160	23	33	111	130	200	160	23	33
80	111	130	185	150	19	29	116	135	200	160	23	33	121	140	210	170	23	33	121	140	210	170	23	33
90	114	140	195	160	19	29	119	145	210	170	23	33	124	150	230	185	25	35	124	150	230	185	25	35
100	129	155	210	175	19	29	134	160	225	185	23	33	134	160	240	195	25	35	139	165	250	205	25	35
125	159	185	250	210	23	33	169	195	270	225	25	35	169	195	275	230	25	35	174	200	300	250	27	35
150	189	215	280	240	23	33	204	230	305	260	25	35	209	235	325	275	27	37	214	240	355	295	33	37
200	233	265	330	290	23	33	243	275	350	305	25	35	248	280	370	320	27	37	258	290	405	345	33	43
250	287	325	400	355	25	35	307	345	430	380	27	37	307	345	450	390	33	43	317	355	475	410	33	43
300	332	370	445	400	25	35	357	395	480	430	27	37	367	405	515	450	33	43	372	410	540	470	39	49
350	377	415	490	445	25	35	402	440	540	480	33	43	412	450	560	495	33	43	417	455	585	515	39	49
400	431	475	560	510	27	37	451	495	605	540	33	43	466	510	630	560	33	43	471	515	645	570	39	49
450	486	530	620	565	27	37	516	560	675	605	33	43	-	-	-	-	-	-	-	-	-	-	-	-
500	535	585	675	620	27	37	565	615	730	660	33	43	-	-	-	-	-	-	-	-	-	-	-	-
550	590	640	745	680	33	43	620	670	795	720	39	49	-	-	-	-	-	-	-	-	-	-	-	-
600	640	690	795	730	33	43	670	720	845	770	39	49	-	-	-	-	-	-	-	-	-	-	-	-

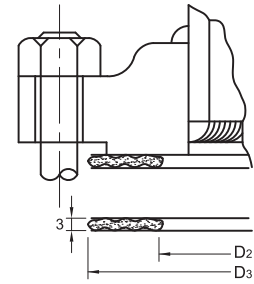


Fig. 1

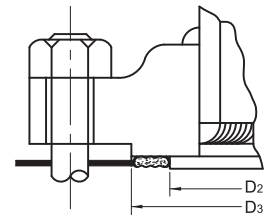
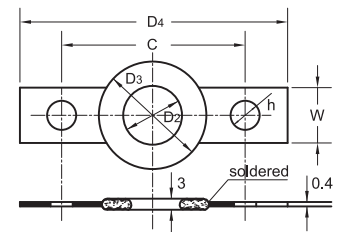


Fig. 2

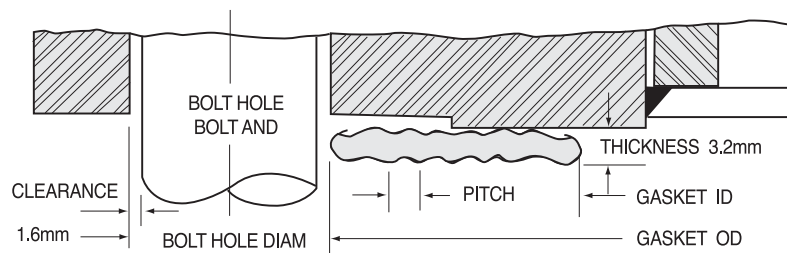


DOUBLE JACKETED GRAPHITE FILLED GASKET FOR ASME PIPE FLANGES

Unit : mm

Nominal diameter	Fig. 2				Fig. 2													
	D ₂	150psi raised face	300psi raised face	600psi raised face	Sealing element		Centering plate											
		D ₃	D ₃	D ₃	D ₂	D ₃	150 psi raised face			300 psi raised face			600 psi raised face					
						D ₄	C	h	W	D ₄	C	h	W	D ₄	C	h	W	
½	23	47	53	53	23	35	99	60.5	15	25	105	66.5	15	25	105	86.5	15	25
¾	29	56	66	66	29	43	108	70	15	25	127	82.5	19	29	127	82.5	19	29
1	38	66	72	72	38	51	118	79.5	15	25	134	89	19	29	134	89	19	29
1¼	48	75	82	82	48	64	127	89	15	25	143	98.5	19	29	143	98.5	19	29
1½	54	85	94	94	54	73	137	98.5	15	25	166	114.5	22	32	166	114.5	22	32
2	73	104	110	110	73	92	162	120.5	19	29	175	127	19	29	175	127	19	29
2½	86	123	129	129	86	105	188	139.5	19	29	200	149	22	32	200	149	22	32
3	108	135	148	148	108	127	200	152.5	19	29	220	168	22	32	220	168	22	32
3½	121	161	164	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	132	173	180	192	132	157	239	190.5	19	29	269	220	22	32	288	216	25	35
5	160	196	215	240	160	186	269	216	22	32	294	235	22	32	345	266.5	29	44
6	190	221	250	265	190	216	294	241.5	22	32	333	270	22	32	371	292	29	44
8	238	277	306	319	238	270	358	298.5	22	32	396	330	25	35	434	349	32	47
10	286	338	360	398	286	324	421	362	25	35	459	387.5	29	44	523	432	35	50
12	343	408	420	455	343	381	498	432	25	35	536	451	32	47	574	489	35	50
14	375	449	484	490	375	413	548	476	29	44	599	514.5	32	47	618	527	38	53
16	425	512	538	563	425	470	612	539.2	29	44	668	571.5	35	50	706	603	41	61
18	489	547	595	611	489	533	655	578	32	47	731	628.5	35	50	763	654	45	65
20	533	604	651	680	533	584	718	635	32	47	795	686	35	50	833	724	45	65
24	641	715	772	788	641	692	833	749.5	35	50	934	813	41	61	960	838	51	71

Double-Jacketed Gasket For ASME, API Pipe Flanges



FOR ASME B16.5 FLANGE

Unit : mm

Nominal size	Gasket ID	Gasket OD						
		ASME pressure rating						
		150	300	400	600	900	1500	2500
½	22.4	44.5	50.8	Note 3	50.8	Note 3	60.5	66.8
¾	28.7	54.1	63.5		63.5		66.8	73.2
1	38.1	63.5	69.9		69.9		76.2	82.6
1¼	47.8	73.2	79.5		79.5		85.9	101.6
1½	54.1	82.6	92.2		92.2		95.3	114.3
2	73.2	101.6	108	108	139.7	143		
2½	85.9	120.7	127	127	162.1	165.1		
3	108	133.4	146.1	146.1	165.1	171.5	193.8	
4	131.8	171.5	177.8	174.8	190.5	203.2	206.5	231.9
5	152.4	193.8	212.9	209.6	238.3	244.6	251	276.4
6	190.5	219.2	247.7	244.6	263.7	285.8	279.4	314.5
8	238.3	276.4	304.8	301.8	317.5	355.6	349.3	384.3
10	285.8	336.6	358.9	355.6	397	431.8	431.8	473.2
12	342.9	406.4	419.1	416.1	454.2	495.3	517.7	546.1
14	374.7	447.8	482.6	479.6	489	517.7	574.8	Note 3
16	425.5	511.3	536.7	533.4	562.1	571.5	638.3	
18	489	546.1	593.9	590.6	609.6	635	701.8	
20	533.4	603.3	651	644.7	679.5	695.5	752.6	
24	641.4	714.5	771.7	765.3	787.4	835.2	898.7	

FOR API 605 FLANGE

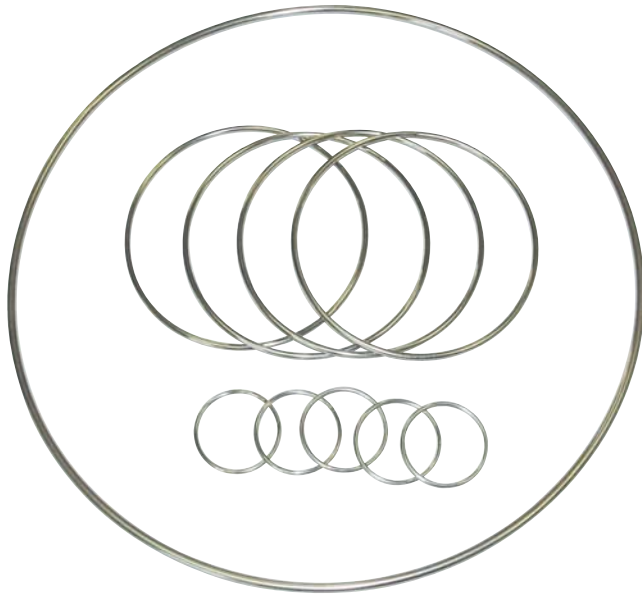
Unit : mm

Nominal size	Gasket OD ² (nominal)	ASME pressure rating		
		75lb	150lb	300lb
26	666.75	704.85	722.31	768.35
28	717.55	755.65	773.11	822.33
30	768.35	806.45	823.91	882.65
32	819.15	857.25	877.89	936.63
34	869.95	908.05	931.86	990.6
36	920.75	969.96	984.25	1044.58
42	1073.15	1122.36	1143	1196.98
48	1225.55	1279.53	1303.34	1365.25
54	1377.95	1435.1	1460.5	1527.18
60	1530.35	1593.85	1627.19	1703.39

NOTES :

1. Thickness tolerance equals +0.79mm, - 0.
2. Tolerances for gaskets of nominal size ½"inch through 24 inches : OD tolerance equals +1.5mm, - 0 : ID tolerance equals +1.5mm, - 0.
3. There are no 400 - pound flanges in size ½"inch to 3inches(use 600 pound), nor 900 pound flanges in size ½" inch to 2½ inches(use 1500 pound). Also, there are no 2500 pound flanges larger than 12 inches.
4. Tolerances for gaskets of nominal size 26 inches through 60 inches : OD tolerance equals +3.175mm, - 0 : ID tolerance equals +3.175mm, - 0.

METAL O-RING GASKETS



Characteristic

Metal O-ring is unique gasket made of meta tube which is formed and butt-welded into a round shape or other shapes. The gasket is equipped with various advantages and it can be sealed with low tightening force, can be formed into various shapes according to the shape of mating face and can be used for high temperature, high pressure and ultra-vacuum services. It is the most suitable gasket for sealing such machinery and equipments that space factor and compactness are accounted much of for their designs. Special surface coating is available according to necessity.

Metal O-ring은 메타 튜브로 만든 독특한 가스켓으로 둥근모양 또는 다른모양으로 만들어지고 접합된다. 다양한 장점을 가지고 있으며, 낮은 체결력으로 밀봉될 수 있고, 결합면의 모양에 따라 다양한 형태로 형성될 수 있으며 고온, 고압 및 초 진공서비스에 사용될 수 있다. 이러한 기계 및 장비를 밀봉하기 위한 최적의 가스켓으로 공간계수 및 소형화가 설계에 많이 반영된다. 필요에 따라 특수 표면 코팅이 가능하다.

Materials

	Types	Temperature resistance(°C)
Tube	SUS 304	-250 ~ 540
	SUS 321	-250 ~ 870
	Incoloy 800	-250 ~ 980
Surface coating	PTFE	-200 ~ 260
	Silver	-250 ~ 650
	Nickel	-250 ~ 760

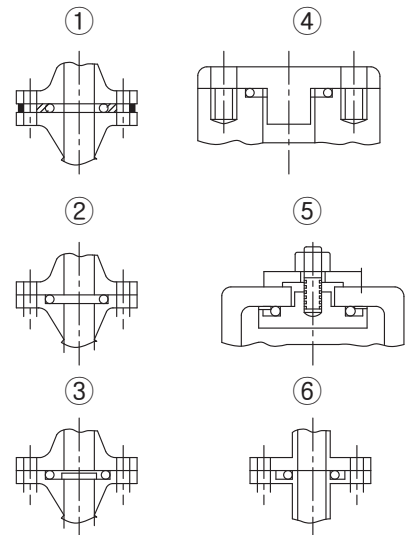
SSI-NO	Name	Section
850	Basic Type	
851	Balanced Type	

Note :

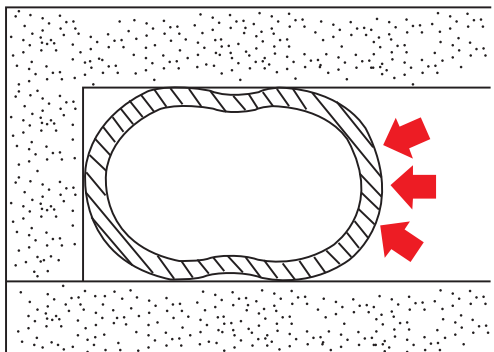
1. The temperature resistance of coated metal O-ring is governed by either tube or coating material.
2. PTFE coating is black in color.

Main applications

Pressure and direction pressure	Service requirement	Type of flange
Lower than 5kgf/cm ² or vacuum	In case that an easy exchange of gasket is required and grooving of flange surface is undesirable	①
Both internal and external pressure	The process lines where a sudden change of pressure and repeated pressure cycles are expected	②
	The process lines that handle highly viscous fluid or corrosive fluid, or fluid that contains slurries	③
	Male-and-female flange	④
Higher than 5kgf/cm ² external pressure	Male-and-female flange	⑤
	Flat face flange, or tongue-and groove flange.	⑥



SSI 850 Basic Type Metal O-Ring



Characteristic :

Basic type Metal O-Ring made of metal tube, which is formed and butt-welded into various shapes. It is suitable for medium pressure service ranging from 10^{-12} torr vacuum to 70kg/cm^2 [6.8 MPa]. It is necessary to use with a retainer ring when used on raised or flat face flange.

Basic type Metal O-Ring은 금속 튜브로 만들어지며 다양한 형태로 형성된다. 10^{-12} torr 진공에서 70kg/cm^2 [6.8MPa]까지의 중압 서비스에 적합하다. Raised 또는 flat face 플랜지에 사용되는 경우 리테이너 링과 함께 사용해야 한다.

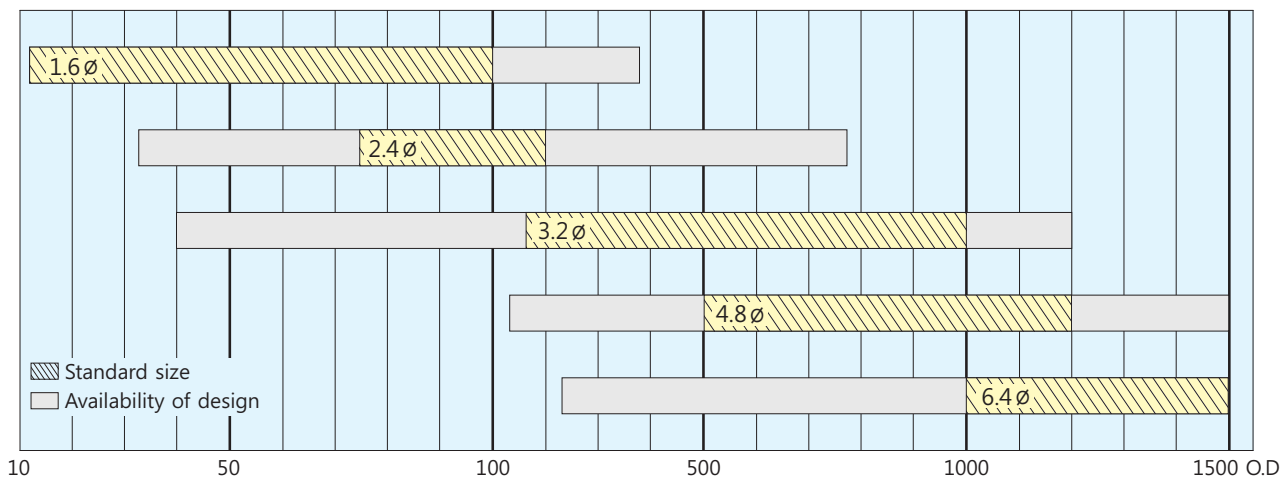
Applications :

Vacuum equipments, combustion engines, electronic apparatus, heavy electric machinery and apparatus. Hydraulic machinery and equipments, plastic forming machines, on joints in aircrafts, pile. etc.

Metal O-Ring Design criteria

Range of service pressure	Style No.	Name
Vacuum ~ 70kg/cm^2	SSI-850 SSI-851	Basic type Balanced type
Vacuum ~ Ultra high pressure	SSI-851	Balanced type

Diameter of tube ← Outside Diameter(Key to determine tube OD by OD of metal O-Ring)

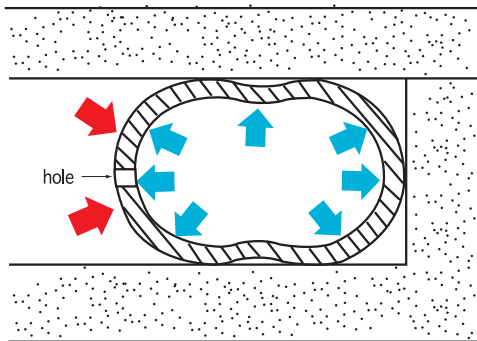


Surface treatment ← type of fluid, Surface finish of mating flange

Type of fluid	Pressure range	Wall thickness of tube (mm)	Surface roughness of mating flange		
			Without coating plating	With PTFE coating	With plating
Vacuum, general gases (volatile fluid)	Vacuum ~ 500kgf/cm^2 501kgf/cm^2 ~	0.50	*	3.2 S	1.6 S
Water, steam, water solution (low viscous fluid)	~ 500kgf/cm^2 501kgf/cm^2 ~	0.50	1.6 S	3.2 S	1.6 S
Spindle oil, operating oil, (medium viscous fluid)	~ 500kgf/cm^2	0.25 or 0.50	3.2 S	6.3 S	3.2 S
	501kgf/cm^2 ~	0.50			
Lubricating oil, tarr, plastics solution (high viscous fluid)	~ 500kgf/cm^2	0.25 or 0.50	3.2 S	6.3 S	6.3 S
	501kgf/cm^2 ~	0.50			

NOTES : *Use plated or PTFE coated metal O-ring in vacuum and general gases.

SSI 850 Balanced Type Metal O-Ring



Characteristic :

Balanced type Metal O-Ring made of metal tube which is formed and butt welded into various shapes having be holes at the inside against internal pressure or at the outside external pressure. It is mainly used for higher presser exceeding 70kg/cm², our experimental experience shows that it withstands 6,000 atu hydraulic pressure.

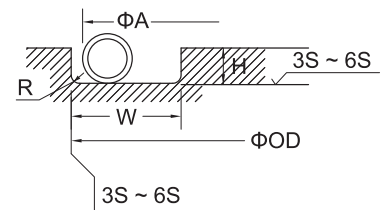
Balance type Metal O-Ring은 금속 튜브로 만들어지며 내부 압력 또는 외부 외부 압력에 대해 내부에 구멍이 있는 다양한 형태로 성형 및 접합된다. 주로 70kgf/cm²를 넘는 고압력 용으로 사용되었으므로 실험 결과 6,000atu의 수압에 견딜 수 있다.

Applications :

On joint in aircrafts, pile, vacuum equipments, combustion engines. electronic apparatus, heavy electric machinery and apparatus. Hydraulic machinery and equipment, plastics forming machines.

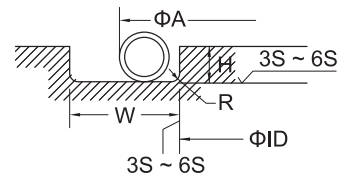
Material Service

Material Service	Temperature(°C)	Used
SUS 304	-250 ~ 540	Tube
SUS 321	-250 ~ 870	
Inconel X-750	-250 ~ 1,090	
Incoloy 800	-250 ~ 980	
PTFE coating	-250 ~ 260	Surface treatment
Silver plating	-250 ~ 650	
Nickel plating	-250 ~ 760	
Copper plating	-250 ~ 700	



Groove dimensions in case of vacuum condition, against pressure from inside, or pressure lower than 5kgf/cm² from outside

Nom. dia. of tube	Outside(A) dia. of metal O-ring	Radius(R) of groove	Depth of groove(H)	Without coating, plating Outside diameter of groove	Width of groove(W)	Depth of groove(H)	Without coating, plating Outside diameter of groove	Width of groove(W)
1.6	13~65	0.3	1.2 ±0.05	(D+0.13) ₀ ^{+0.13}	1.83	1.25 ±0.05	(D+0.23) ₀ ^{+0.13}	1.93
	70~100			(D+0.20) ₀ ^{+0.20}	1.86		(D+0.30) ₀ ^{+0.20}	1.96
2.4	75~200	0.5	1.95 ±0.05	(D+0.20) ₀ ^{+0.20}	2.74	2.00 ±0.05	(D+0.30) ₀ ^{+0.20}	2.84
	150~250			(D+0.20) ₀ ^{+0.20}	3.62		(D+0.30) ₀ ^{+0.20}	3.72
3.2	260~1,000	0.8	2.70 ±0.05	(D+0.30) ₀ ^{+0.30}	3.67	2.75 ±0.05	(D+0.40) ₀ ^{+0.30}	3.77



NOTES :

When using in the fluid at pressure higher than 500kgf/cm² please consult with SAM SUNG INDUSTRY CO., LTD engineering staff because it is necessary to limit the dimensional tolerance of metal O-ring to less than half of ordinary case.

Groove dimensions in case of pressure higher than 5kgf/cm² from outside ← Tube diameter, Outside diameter of metal O-ring

Nom. dia. of tube	Outside(A) dia. of metal O-ring	Radius(R) of groove	Depth of groove(H)	Without coating, plating Outside diameter of groove	Width of groove(W)	Depth of groove(H)	Without coating, plating Outside diameter of groove	Width of groove(W)
1.6	13~65	0.3	1.2 ±0.05	(D-3.2) _{-0.13} ⁰	1.83	1.25 ±0.05	(D-3.3) _{-0.13} ⁰	1.93
	70~100			(D-3.2) _{-0.20} ⁰	1.86		(D-3.3) _{-0.20} ⁰	1.96
2.4	75~200	0.5	1.95 ±0.05	(D-4.8) _{-0.20} ⁰	2.74	2.00 ±0.05	(D-4.9) _{-0.20} ⁰	2.84
	150~250			(D-6.4) _{-0.20} ⁰	3.62		(D-6.5) _{-0.20} ⁰	3.72
3.2	260~1,000	0.8	2.70 ±0.05	(D-6.4) _{-0.30} ⁰	3.67	2.75 ±0.05	(D-6.4) _{-0.30} ⁰	3.77

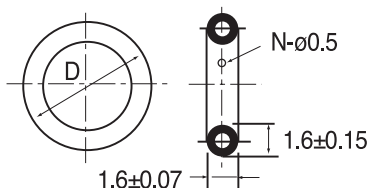
NOTES :

1. Please consult with SAM SUNG INDUSTRY CO., LTD engineering staff when using in the fluid at pressure higher than 50kgf/cm² because it is necessary to limit the dimensional tolerance of metal O-ring to less than half of ordinary case.
2. The depth of plating and PTFE coating is as described below.
Silver, nickel, copper plating 0.025~0.040mm.
PTFE coating 0.025~0.050mm.
3. The tolerance of metal O-ring is generally determined on the basis of its outside diameter. Please so specify if metal O-ring is intended for sealing fluid at pressure higher than 5kgf/cm² from outside.

Tube diameter 1.6mm

unit : mm

Identification	Tube diameter	Tube thickness
A	1.6	0.25
B		0.50



Standard sizes Metal O-Ring

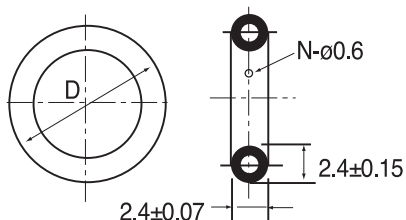
unit : mm

Dash No.	Actual dimension of metal O-ring(Without surface treatment)		Balanced type Number of hole	Dash No.	Actual dimension of metal O-ring(Without surface treatment)		Balanced type Number of hole
	D	Tolerance			D	Tolerance	
A 13	13.0	+0.13 0	1	B 13	13.0	+0.13 0	1
A 14	14.0			B 14	14.0		
A 16	16.0			B 16	16.0		
A 18	18.0			B 18	18.0		
A 20	20.0			B 20	20.0		
A 22	22.0			B 22	22.0		
A 25	25.0			B 25	25.0		
A 28	28.0			B 28	28.0		
A 30	30.0			B 30	30.0		
A 32	32.0			B 32	32.0		
A 35	35.0	+0.20 0	2	B 35	35.0	+0.20 0	2
A 38	38.0			B 38	38.0		
A 40	40.0			B 40	40.0		
A 42	42.0			B 42	42.0		
A 45	45.0			B 45	45.0		
A 48	48.0			B 48	48.0		
A 50	50.0			B 50	50.0		
A 55	55.0			B 55	55.0		
A 60	60.0			B 60	60.0		
A 65	65.0			B 65	65.0		
A 70	70.0	+0.20 0	4	B 70	70.0	+0.20 0	4
A 75	75.0			B 75	75.0		
A 80	80.0			B 80	80.0		
A 85	85.0			B 85	85.0		
A 90	90.0			B 90	90.0		
A 95	95.0			B 95	95.0		
A 100	100.0			B 100	100.0		

Tube diameter 2.4mm

unit : mm

Identification	Tube diameter	Tube thickness
C	2.4	0.25
D		0.50



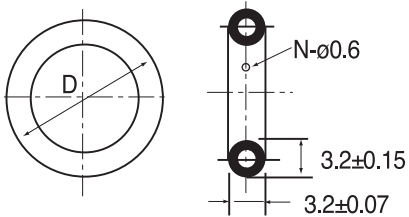
unit : mm

Dash No.	Actual dimension of metal O-ring(Without surface treatment)		Balanced type Number of hole	Dash No.	Actual dimension of metal O-ring(Without surface treatment)		Balanced type Number of hole
	D	Tolerance			D	Tolerance	
C 75	75.0	+0.20 0	4	D 75	75.0	+0.20 0	4
C 80	80.0			D 80	80.0		
C 85	85.0			D 85	85.0		
C 90	90.0			D 90	90.0		
C 95	95.0			D 95	95.0		
C 100	100.0			D 100	100.0		
C 105	105.0			D 105	105.0		
C 110	110.0			D 110	110.0		
C 115	115.0			D 115	115.0		
C 120	120.0			D 120	120.0		
C 125	125.0			D 125	125.0		
C 130	130.0			D 130	130.0		
C 135	135.0			D 135	135.0		
C 140	140.0			D 140	140.0		
C 145	145.0			D 145	145.0		
C 150	150.0			D 150	150.0		
C 160	160.0			D 160	160.0		
C 170	170.0			D 170	170.0		
C 180	180.0			D 180	180.0		
C 190	190.0			D 190	190.0		
C 200	200.0	D 200	200.0				

Tube diameter 3.2mm

unit : mm

Identification	Tube diameter	Tube thickness
E	3.2	0.25
F		0.50

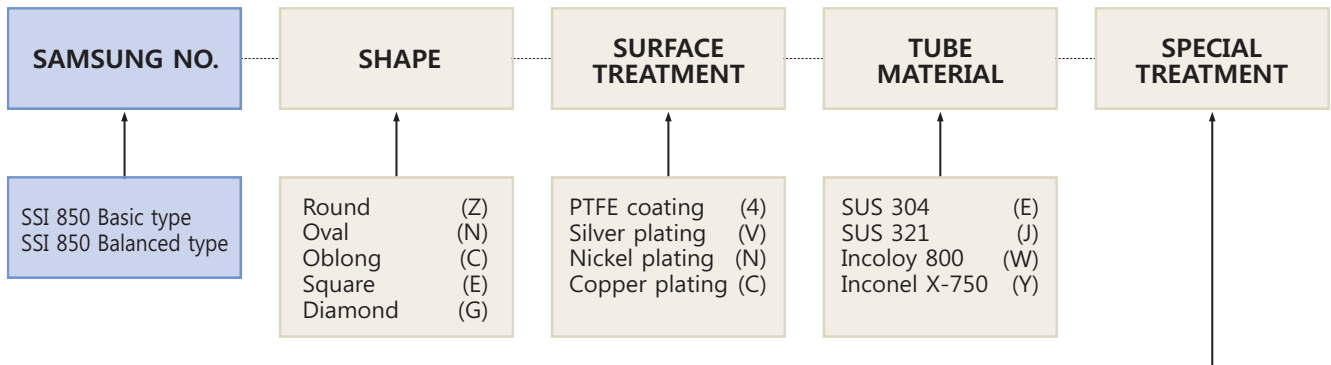


Standard sizes Metal O-Ring

unit : mm

Dash No.	Actual dimension of metal O-ring(Without surface treatment)		Balanced type	Dash No.	Actual dimension of metal O-ring(Without surface treatment)		Balanced type
	D	Tolerance			D	Tolerance	
E 150	150.0	+0.20 0	4	F 150	150.0	+0.20 0	4
E 160	160.0			F 160	160.0		
E 170	170.0			F 170	170.0		
E 180	180.0			F 180	180.0		
E 190	190.0			F 190	190.0		
E 200	200.0			F 200	200.0		
E 210	210.0			F 210	210.0		
E 220	220.0			F 220	220.0		
E 230	230.0			F 230	230.0		
E 240	240.0			F 240	240.0		
E 250	250.0	+0.30 0	4	F 250	250.0	+0.30 0	4
E 260	260.0			F 260	260.0		
E 270	270.0			F 270	270.0		
E 280	280.0			F 280	280.0		
E 290	290.0			F 290	290.0		
E 300	300.0			F 300	300.0		
E 320	320.0			F 320	320.0		
E 340	340.0			F 340	340.0		
E 360	360.0			F 360	360.0		
E 380	380.0			F 380	380.0		
E 400	400.0	+0.30 0	4	F 400	400.0	+0.30 0	4
E 450	450.0			F 450	450.0		
E 500	500.0			F 500	500.0		
E 550	550.0			F 550	550.0		
E 600	600.0			F 600	600.0		
E 650	650.0			F 650	650.0		
E 700	700.0			F 700	700.0		
E 750	750.0			F 750	750.0		
E 800	800.0			F 800	800.0		
E 850	850.0			F 850	850.0		
E 900	900.0	F 900	900.0				
E1000	1000.0	F1000	1000.0				

Standard sizes Metal O-Ring



NOTES :

- Customers may specify shape, surface treatment and tube material by symbol mark as mentioned in ()
Example : SSI-851-Z4E
- Consult us when ordering other special materials than those listed.
- Consult us when using balanced type with standard holes in services handling highly viscous fluid or slurry because the holes are cloggy in such fluids.

• Special treatment

The surface of metal O-ring should be degreased and cleaned if it is used in the system of light water type furnace, high speed feeding furnace and high temperature gas furnace.
Describe "AE" in ordering metal O-ring for such atomic energy application.

NON-METALLIC GASKETS

TH3000

Compressed Non-Asbestos Joint Sheet

압축 비석면시트



Characteristic

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

우수한 품질의 비석면 섬유와 내유성이 뛰어난 합성고무를 사용하여 기름에 특히 안정적이며 seal성이 우수한 제품입니다. (표면 Graphite 처리 가능)

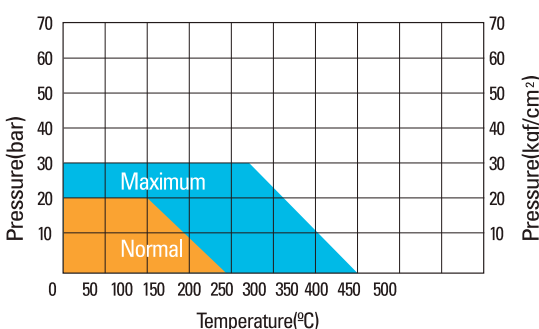
Typical Physical Properties

Color	Ultramarine
Fibers	Aramid Fiber
Binder	NBR
Pressure	30kgf/cm ² Max
Temperature	350°C Max
Good resistance to Hot Oil, Fuels, Water	
Water, Alkalis, Salt Solution	30kgf/cm ² , 200°C Max
Organic Solvent	20kgf/cm ² , 200°C Max
Hot oil, oil gas, freon gas	20kgf/cm ² , 200°C Max
PH Range	4~11

Standard Sizes

Sheet Size	1270mm x 1270mm, 1270mm x 3850mm 2540mm x 3850mm
Thickness	0.5mm, 0.8mm, 1.0mm 1.5mm, 2.0mm, 3.0mm
Tolerance	Thickness : <1.0mm ±0.1mm ≥0.1mm ±10%
	Length, Width : ±50mm

Pressure/Temperature Operating Guidelines



Technical Data

Description	Unit	Value	
Typical values (Thickness 1.5mm)			
Density	g/cm ³	1.5~1.7	
Tensile Strength	kgf/mm ²	1.4min	
Ignition Loss	%	38max	
Compressibility	%	7~17	
Recovery	%	40	
ASTM Oil #3	Thickness Increase	%	15
	Tensile Loss	%	40
ASTM Fuel B	Thickness Increase	%	15
	Weight Increase	%	15
Flexibility (F≤12)	-	No Break	

* All data are typical values ※ 상기 물성치는 규격치가 아닌 대표치임.

TH3000W

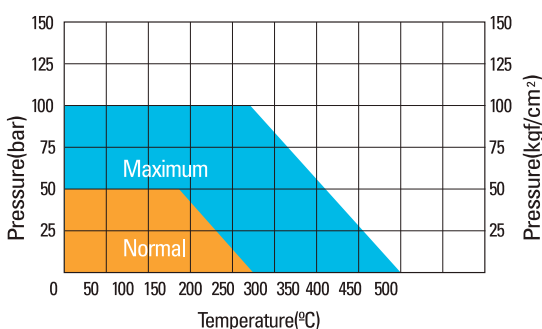
Wire Reinforced Compressed Non-Asbestos Joint Sheet 금망입 압축 비석면시트



Standard Sizes

Sheet Size	1500mm x 1000mm, 1500mm x 2000mm 1500mm x 4000mm
Thickness	1.0mm, 1.5mm, 2.0mm, 3.0mm
Tolerance	Thickness : <math>< 1.0\text{mm} \pm 0.1\text{mm}</math> >math>\ge 0.1\text{mm} \pm 10\%</math>
	Length, Width : $\pm 50\text{mm}$

Pressure/Temperature Operating Guidelines



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 제품입니다. (표면 Graphite처리 가능)

Typical Physical Properties

Color	Green
Fibers	Aramid Fiber
Binder	NBR
Pressure	100kgf/cm ² Max
Temperature	400°C Max

Suitable for Water, Hot Oil, Oil Gas, Alkali, Salt Solutions, Solvents, Etc.

Not be Use in steam, Strong Acid and Alkali, Soluble Chemicals

Technical Data

Description	Unit	Value	
Typical values (Thickness 1.5mm)			
Density	g/cm ³	1.7~2.0	
Tensile Strength	kgf/mm ²	-	
Ignition Loss	%	38max	
Compressibility	%	7~17	
Recovery	%	40	
ASTM Oil #3	Thickness Increase	%	15
	Tensile Loss	%	40
ASTM Fuel B	Thickness Increase	%	15
	Weight Increase	%	15
Fixibility (F≤12)	-	No Break	

* All data are typical values ※ 상기 물성치는 규격치가 아닌 대표치임.

TH3200

High-Performance Line Compressed Non-Asbestos Joint Sheet

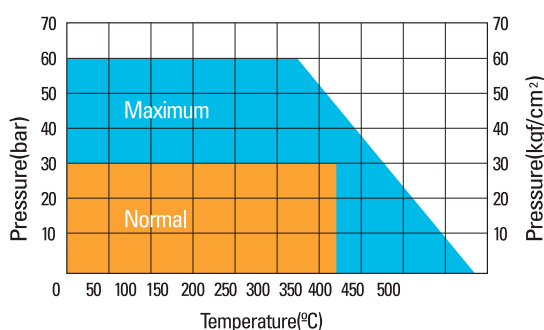
압축 비석면시트



Standard Sizes

Sheet Size	1500mm x 1000mm, 1500mm x 2000mm 1500mm x 4000mm
Thickness	0.5mm, 0.8mm, 1.0mm 1.5mm, 2.0mm, 3.0mm
Tolerance	Thickness : <1.0mm ±0.1mm ≥0.1mm ±10%
	Length, Width : ±50mm

Pressure/Temperature Operating Guidelines



Characteristic

High quality non-asbestos fibers and excellent heat/oil resistant rubber are compounded and calendered into a gasket sheet with superior chemical resistance. Especially it shows a good sealing performance under hot oil, oil gas, etc. Non sticking properties at flange surface after gasket use by Graphite surface treatment.

고품질의 비석면 섬유와 내유성 및 내열성이 뛰어난 고무를 사용했기 때문에 우수한 화학적 안정성을 가진 압축비석면판이다. 특히 고온의 열유, 유가스 등의 기름에서 우수한 밀봉성을 발휘하고 표면에 Graphite 처리를 함으로써 플랜지 면과의 고착성을 억제한 제품이다.

Typical Physical Properties

Color	Black
Fibers	Carbon Fiber + Aramid Fiber
Binder	NBR
Pressure	60kgf/cm ² Max
Temperature	480°C Max
Good resistance to oil, water, fuels, hot oils, steam, salt solution, mild acids and alkalis	
Water, Alkalis, Salt Solution	30kgf/cm ² , 320°C Max
Organic Solvent	25kgf/cm ² , 250°C Max
Hot oil, oil gas, freon gas	30kgf/cm ² , 300°C Max
PH Range	4~11

*When application of steam-line,
Please Consult to our Technical Team in Advance.

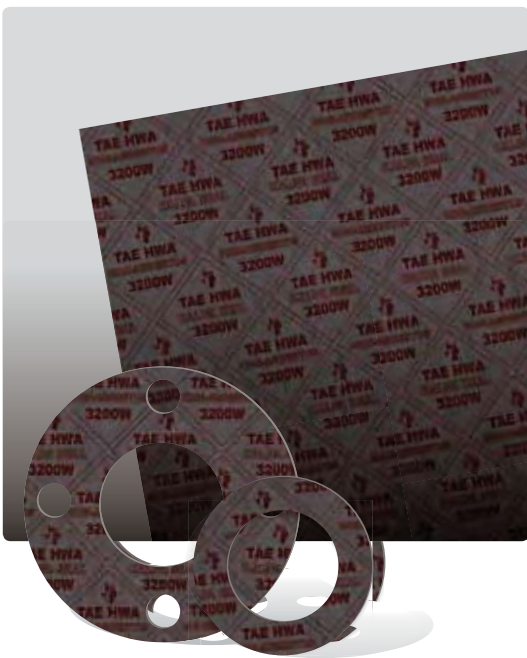
Technical Data

Description	Unit	Value	
Typical values (Thickness 1.5mm)			
Density	g/cm ³	1.5~1.7	
Tensile Strength	kgf/mm ²	1.4min	
Ignition Loss	%	38max	
Compressibility	%	7~17	
Recovery	%	45	
ASTM Oil #3	Thickness Increase	%	10
	Tensile Loss	%	30
ASTM Fuel B	Thickness Increase	%	10
	Weight Increase	%	30
Fixibility (F≤12)	-	No Break	

* All data are typical values ※ 상기 물성치는 규격치가 아닌 대표치임.

TH3200W

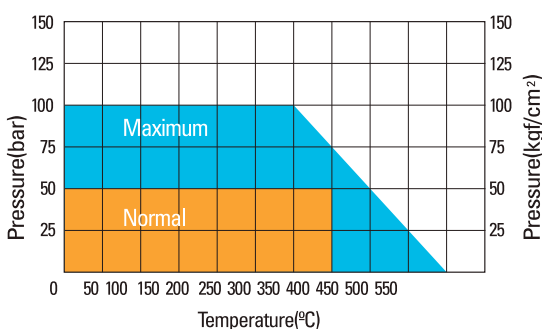
High-Performance Line Wire Reinforced Compressed Non-Asbestos Joint Sheet 금망입 압축 비석면시트



Standard Sizes

Sheet Size	1500mm x 1000mm, 1500mm x 2000mm 1500mm x 4000mm
Thickness	1.0mm, 1.5mm, 2.0mm, 3.0mm
Tolerance	Thickness : <math>< 1.0\text{mm} \pm 0.1\text{mm}</math> >math>\ge 0.1\text{mm} \pm 10\%</math>
	Length, Width : $\pm 50\text{mm}$

Pressure/Temperature Operating Guidelines



Characteristic

This is high 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 Oil and Heat-resistant Rubber.

고품질의 비석면 섬유와 내유성 및 내열성이 뛰어난 고무를 사용하여 시트내부에 스테인레스 금망을 넣어 만든 고온, 고압에 우수한 제품입니다.

Typical Physical Properties

Color	Black
Fibers	Carbon Fiber+Aramid Fiber
Binder	NBR
Pressure	100kgf/cm ² Max
Temperature	500°C Max

Suitable for Oil, Water, Fuels, Hot OilS, Steam, Salt Solutions, Mild acids and alkalis.

*When application of steam-line,
Please Consult to our Technical Team in Advance.

Technical Data

Description	Unit	Value	
Typical values (Thickness 1.5mm)			
Density	g/cm ³	1.7~2.0	
Tensile Strength	kgf/mm ²	-	
Ignition Loss	%	38max	
Compressibility	%	7~17	
Recovery	%	40	
ASTM Oil #3	Thickness Increase	%	15
	Tensile Loss	%	40
ASTM Fuel B	Thickness Increase	%	15
	Weight Increase	%	15
Flexibility (F≤12)	-	No Break	

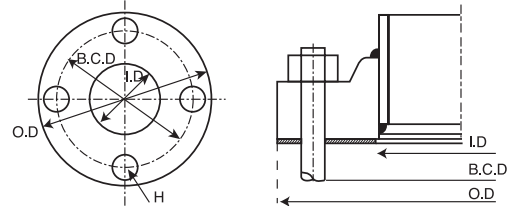
* All data are typical values ※ 상기 물성치는 규격치가 아닌 대표치임.

ASME B 16.21 FF(Full Face): ASME/ANSI B 16.5 Pipe Flanges

Unit : mm

Size (NPS)	Class 150				
	I.D	O.D	B.C.D	H	N
½	21	89	60.3	15.7	4
¾	27	98	69.9	15.7	4
1	33	108	79.4	15.7	4
1¼	42	117	88.9	15.7	4
1½	48	127	98.4	15.7	4
2	60	152	120.7	19.1	4
2½	73	178	139.7	19.1	4
3	89	191	152.4	19.1	4
3½	102	216	177.8	19.1	8
4	114	229	190.5	19.1	8
5	141	254	215.9	22.4	8
6	168	279	241.3	22.4	8
8	219	343	298.5	22.4	8
10	273	406	362.0	25.4	12
12	324	483	431.8	25.4	12
14	356	533	476.3	28.4	12
16	406	597	539.8	28.4	16
18	457	635	577.9	31.8	16
20	508	699	635.0	31.8	20
24	610	813	749.3	35.1	20

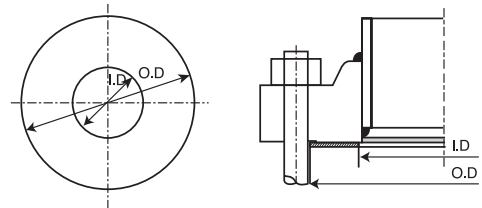
- 1) B.C.D : Bolt Circle Diameter
- 2) H : Bolt hole Diameter
- 3) N : Number of Bolt hole



ASME B 16.21 RF(Flat Ring): ASME/ANSI B 16.5 Pipe Flanges

Unit : mm

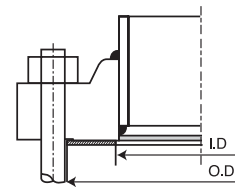
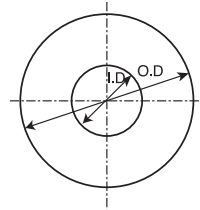
Size (NPS)	Gasket I.D	Gasket O.D				
		Class 150	Class 300	Class 400	Class 600	Class 900
½	21	48	54	54	54	64
¾	27	57	67	67	67	70
1	33	67	73	73	73	79
1¼	42	76	83	83	83	89
1½	48	86	95	95	95	98
2	60	105	111	111	111	143
2½	73	124	130	130	130	166
3	89	137	149	149	149	168
3½	102	162	165	162	162	-
4	114	175	181	178	194	206
5	141	197	216	213	241	248
6	168	222	251	248	267	289
8	219	279	308	305	321	359
10	273	340	362	359	400	435
12	324	410	422	419	457	498
14	356	451	486	483	492	521
16	406	514	540	537	565	575
18	457	549	597	594	613	638
20	508	606	654	648	683	699
24	610	718	775	768	791	838



ASME B 16.21
RF(Flat Ring): ASME B 16.47 Series "A"
Large Diameter Steel Flanges(MSS SP-44 Flanges)

Unit : mm

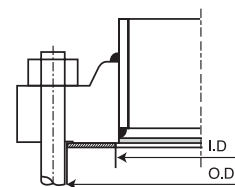
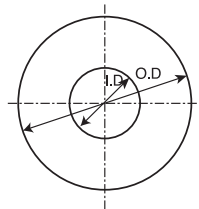
Size (NPS)	Gasket I.D	Gasket O.D			
		Class 150	Class 300	Class 400	Class 600
22	559	660	705	702	733
26	660	775	835	832	867
28	711	832	899	892	914
30	762	883	953	946	972
32	813	940	1006	1003	1022
34	864	991	1057	1054	1073
36	914	1048	1118	1118	1130
38	965	1111	1054	1073	1105
40	1016	1162	1114	1127	1156
42	1067	1219	1165	1178	1219
44	1118	1276	1219	1232	1270
46	1168	1327	1273	1289	1327
48	1219	1384	1324	1346	1391
50	1270	1435	1378	1403	1448
52	1321	1492	1429	1454	1499
54	1372	1549	1492	1518	1556
56	1422	1607	1543	1568	1613
58	1473	1664	1594	1619	1664
60	1524	1715	1645	1683	1721



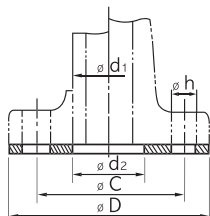
ASME B 16.21
RF(Flat Ring): ASME/ANSI B 16.47 Series "B"
Large Diameter Steel Flanges(API 605 Flanges)

Unit : mm

Size (NPS)	Gasket I.D	Gasket O.D				
		Class 75	Class 150	Class 300	Class 400	Class 600
26	660	708	725	772	746	765
28	711	759	776	826	800	819
30	762	810	827	886	857	879
32	813	860	881	940	911	933
34	864	911	935	994	962	997
36	914	973	987	1048	1022	1048
38	965	1024	1045	1099	-	-
40	1016	1075	1095	1149	-	-
42	1067	1126	1146	1200	-	-
44	1118	1181	1197	1251	-	-
46	1168	1232	1256	1318	-	-
48	1219	1283	1307	1368	-	-
50	1270	1334	1357	1419	-	-
52	1321	1387	1408	1470	-	-
54	1372	1438	1464	1530	-	-
56	1422	1495	1514	1594	-	-
58	1473	1546	1580	1656	-	-
60	1524	1597	1630	1705	-	-



KS B 1519 (2007), JIS B 2404 (2006) Gasket Type: FF (Full Face)



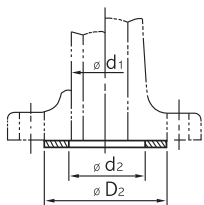
Full Face Type

Unit : mm

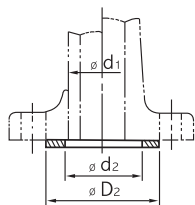
Size (NPS)	d ₂	2 K				5 K				10 K				16 K			
		D	C	h	n	D	C	h	n	D	C	h	n	D	C	h	n
10	18	-	-	-	-	75	55	12	4	90	65	15	4	90	65	15	4
15	22	-	-	-	-	80	60	12	4	95	70	15	4	95	70	15	4
20	28	-	-	-	-	85	65	12	4	100	75	15	4	100	75	15	4
25	35	-	-	-	-	95	75	12	4	125	90	19	4	125	90	19	4
32	43	-	-	-	-	115	90	15	4	135	100	19	4	135	100	19	4
40	49	-	-	-	-	120	95	15	4	140	105	19	4	140	105	19	4
50	61	-	-	-	-	130	105	15	4	155	120	19	4	155	120	19	8
65	77	-	-	-	-	155	130	15	4	175	140	19	4	175	140	19	8
80	90	-	-	-	-	180	145	19	4	185	150	19	8	200	160	23	8
90	102	-	-	-	-	190	155	19	4	195	160	19	8	210	170	23	8
100	115	-	-	-	-	200	165	19	8	210	175	19	8	225	185	23	8
125	141	-	-	-	-	235	200	19	8	250	210	23	8	270	225	25	8
150	167	-	-	-	-	265	230	19	8	280	240	23	8	305	260	25	12
175	192	-	-	-	-	300	260	23	8	305	265	23	12	-	-	-	-
200	218	-	-	-	-	320	280	23	8	330	290	23	12	350	305	25	12
225	244	-	-	-	-	345	305	23	12	350	310	23	12	-	-	-	-
250	270	-	-	-	-	385	345	23	12	400	355	25	12	430	380	27	12
300	321	-	-	-	-	430	390	23	12	445	400	25	16	480	430	27	16
350	359	-	-	-	-	480	435	25	12	490	445	25	16	540	480	33	16
400	410	-	-	-	-	540	495	25	16	560	510	27	16	605	540	33	16
450	460	605	555	23	16	605	555	25	16	620	565	27	20	675	605	33	20
500	513	655	605	23	20	655	605	25	20	675	620	27	20	730	660	33	20
550	564	720	665	25	20	720	665	27	20	745	680	33	20	795	720	39	20
600	615	770	715	25	20	770	715	27	20	795	730	33	24	845	770	39	24
650	667	825	770	25	24	825	770	27	24	845	780	33	24	-	-	-	-
700	718	875	820	25	24	875	820	27	24	905	840	33	24	-	-	-	-
750	770	945	880	27	24	945	880	33	24	970	900	33	24	-	-	-	-
800	820	995	930	27	24	995	930	33	24	1020	950	33	28	-	-	-	-
850	872	1045	980	27	24	1045	980	33	24	1070	1000	33	28	-	-	-	-
900	923	1095	1030	27	24	1095	1030	33	24	1120	1050	33	28	-	-	-	-
1000	1025	1195	1130	27	28	1195	1130	33	28	1235	1160	39	28	-	-	-	-
1100	1130	1305	1240	27	28	1305	1240	33	28	1345	1270	39	28	-	-	-	-
1200	1230	1420	1350	27	32	1420	1350	33	32	1465	1380	39	32	-	-	-	-
1350	1385	1575	1505	27	32	1575	1505	33	32	1630	1540	45	36	-	-	-	-
1500	1540	1730	1660	27	38	1730	1660	33	36	1795	1700	45	40	-	-	-	-

1) d₂ : Gasket Inside Diameter / 2) D : Gasket Outside Diameter / 3) C : Bolt Circle Diameter / 4) h : Bolt Hole Diameter / 5) n : Bolt Hole Number

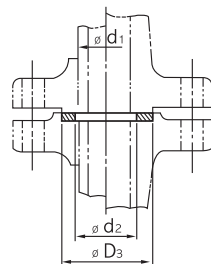
KS B 1519 (2007), JIS B 2404 (2006)
Gasket Type : RF (Flat Ring, Ring Type)



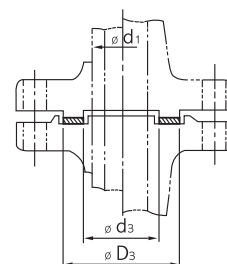
Full Face Type



Raised Face Type



Male & Female Type



Tongue & Groove Type

Unit : mm

Size (NPS)	d ₂	D ₂									Male & Female Type	Tongue & Groove Type		
		Full Face Type, Raised Face Type										D ₃	d ₃	D ₃
		2K	5K	10K	tongue 10K	16K	20K	30K	40K	50K				
10	18	-	45	53	55	53	53	59	59	64	38	28	38	
15	22	-	50	58	60	58	58	64	64	69	42	32	42	
20	28	-	55	63	65	63	63	69	69	75	50	38	50	
25	35	-	65	74	78	74	74	79	79	80	60	45	60	
32	43	-	78	84	88	84	84	89	89	90	70	55	70	
40	49	-	83	89	93	89	89	100	100	108	75	60	75	
50	61	-	93	104	108	104	104	114	114	125	90	70	90	
65	77	-	118	124	128	124	124	140	140	153	110	90	110	
80	90	-	129	134	138	140	140	150	150	163	120	100	120	
90	102	-	139	144	148	150	150	163	163	181	130	110	130	
100	115	-	149	159	163	165	165	173	183	196	145	125	145	
125	141	-	184	190	194	203	203	208	226	235	175	150	175	
150	167	-	214	220	224	238	238	251	265	275	215	190	215	
175	192	-	240	245	249	-	-	-	-	-	-	-	-	
200	218	-	260	270	274	283	283	296	315	330	260	230	260	
225	244	-	285	290	294	-	-	-	-	-	-	-	-	
250	270	-	325	333	335	356	356	360	380	394	325	295	325	
300	321	-	370	378	380	406	406	420	434	449	375	340	375	
350	359	-	413	423	425	450	450	465	479	488	415	380	415	
400	410	-	473	486	488	510	510	524	534	548	475	440	475	
450	460	535	533	541	-	575	575	-	-	-	523	483	523	
500	513	585	583	596	-	630	630	-	-	-	575	535	575	
550	564	643	641	650	-	684	684	-	-	-	625	585	625	
600	615	693	691	700	-	734	734	-	-	-	675	635	675	
650	667	748	746	750	-	784	805	-	-	-	727	682	727	
700	718	798	796	810	-	836	855	-	-	-	777	732	777	
750	770	856	850	870	-	896	918	-	-	-	832	787	832	
800	820	906	900	920	-	945	978	-	-	-	882	837	882	
850	872	956	950	970	-	995	1038	-	-	-	934	889	934	
900	923	1006	1000	1020	-	1045	1088	-	-	-	987	937	987	
1000	1025	1106	1100	1124	-	1158	-	-	-	-	1092	1042	1092	
1100	1130	1216	1210	1234	-	1258	-	-	-	-	1192	1142	1192	
1200	1230	1326	1320	1344	-	1368	-	-	-	-	1292	1237	1292	
1300	1335	-	-	-	-	1474	-	-	-	-	1392	1337	1392	
1350	1385	1481	1475	1498	-	1534	-	-	-	-	1442	1387	1442	
1400	1435	-	-	-	-	1584	-	-	-	-	1492	1437	1492	
1500	1540	1636	1630	1658	-	1694	-	-	-	-	1592	1537	1592	

HEAT INSULATING MATERIALS & PTFE GASKETS

SSI 105 Cloth | 포직

Silica Fiber Cloth | 실리카 섬유포



Characteristic

High purity silica fiber as a substitute for asbestos.
Chemical resistance, electric insulation, safe and harmless to human.

석면대용품으로서, 고순도 실리카 섬유.
내약품성, 전기절연성, 안전하고 인체에 무해.

Application

Used as heat insulation of ducts, piping, fireproof curtains and high temperature gas, metal melt filter and High temperature cushion for gasket, and ship engine, diesel automotive insulation, sound absorbing material.

Max Service Temp.(°C)	1600
Combustibility	Fire retardant
Size	Standard

Ceramics Fiber Cloth | 세라믹 섬유포



Characteristic

Contain a small amount of organic fiber into ceramic fiber.
Organic fibers disappear at low temperatures and discoloration and smoke are generated, but they have no effect on the performance as a ceramic fiber. In addition, reinforcements are inserted in the yarn to increase the strength.

세라믹 fiber에 소량의 유기섬유를 혼입.
유기섬유는 저온에서 소실되며 변색과 연기가 발생하지만 세라믹 fiber로서의 성능에는 전혀 영향이 없다. 또한, yarn에는 강도를 높이기 위해 보강선을 삽입한다.

Application

High temperature and strength material industry, Aerospace material industry.

Max Service Temp.(°C)	1300
Combustibility	Incombustible
Size	Standard

Carbon Fiber Cloth | 탄화 섬유포



Characteristic

It is special acrylic fiber that calcined carbonized and does not burn or melt in air. There is no dust problem like glass fiber, and there is no skin irritation like glass fiber. It is light and soft and has excellent weather resistance and durability.

특수아크릴 섬유를 소성탄화 시킨 것으로서 공기중에서는 타거나 녹지 않는다.
석면과 같은 분진문제나 유리섬유와 같은 피부자극이 없다.
가볍고 부드러우며 내후성 및 내구성이 뛰어나다.

Application

Industries, welding lid stoppers in steelworks, thermal protection covers, insulation

Max Service Temp.(°C)	1000
Combustibility	Incombustible
Size	Standard

Glass heat-treat Cloth | 유리 열처리 섬유포



Characteristic

It has been developed as a harmless alternative to asbestos which protects economic efficiency by glass fiber which has high thermo-toughening treatment of glass fiber and high air resistance in yarn and fabric structure and excellent heat resistance and chemical resistance.

유리섬유를 고도의 열로 텍스처리화하여 실과 직물구조 내의 공기함량 증가로 내열성, 내화학성이 뛰어난 유리섬유로 경제성을 보완한 인체에 무해한 석면 대체품으로 개발된 제품.

Application

Corrosion prevention material

Max Service Temp.(°C)	450
Combustibility	Incombustible
Size	Standard

HEAT INSULATING MATERIALS & PTFE GASKETS

Glass Cloth |그라스 포



Characteristic

It has excellent heat insulation due to special heat treatment and maintains flexibility at high temperature.

특수 내열처리로 보다 단열성이 우수하며, 고온에서도 유연성을 유지한다.

Application

Stainless steel pipes such as unclear power.

Max Service Temp.(°C)	550
Combustibility	Incombustible
Size	Standard

Glass Coating Cloth |그라스 코팅 포

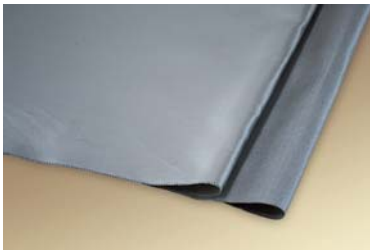
Feature

Products coated with various coating solvents in glass fibers.

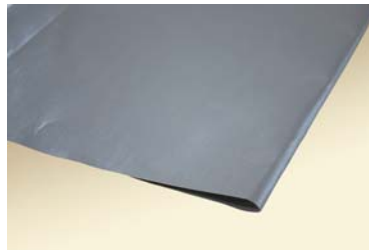
그라스 섬유에 각종 코팅 용제를 넣어 코팅처리한 제품.

Application

Cover for 4-R COVER, Insulation cover material, Heat-resistant curtain goods, etc.



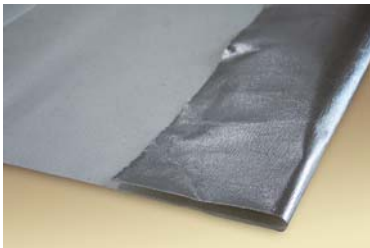
Silicon coating
Operating Temperature
: 200°C~350°C



P.T.F.E. coating
Operating Temperature
: 300°C~550°C



PVC coating
Operating Temperature
: 100°C~200°C



AL coating
Operating Temperature
: 200°C~500°C



Graphite coating
Operating Temperature
: 200°C~550°C



Vermiculite coating
Operating Temperature
: 300°C~800°C

SSI 110

Insulation Textiles & Heat Insulating Materials | 보온재

Super Wool | 슈퍼울



Characteristic

It is excellent in flexibility and workability in that it is a fibrous. And it has high insulation, sound absorbing effect, moisture resistance and weather resistance.

섬유질 재료이므로 유연성이 풍부하여 시공성이 우수하고 고온단열, 흡음효과, 내습성 및 내후성이 뛰어나다.

Application

Industrial and marine insulation equipment, Refractories of ships and power plants

Max Service Temp.(°C)	1000
Combustibility	Incombustible
Size	Standard

Glass Wool | 유리솜



Characteristic

The fiber thickness is thin and uniform. There is no non-fibrous material, and a large amount is finely gathered so that excellent heat-insulation. It is flexible and lightweight, good workability.

섬유 굵기가 가늘고 균일하여 비섬유질이 전혀 없고, 많은 양이 섬세하게 집면 되어 있으므로 단열효과가 우수하다. 유연하고 경량이므로 시공성이 좋다.

Application

Architectural & Industrial piping insulation, sound-absorbing finish.

Max Service Temp.(°C)	600
Combustibility	Incombustible
Size	Standard

Mineral Wool | 미네랄울



Characteristic

It is pure inorganic fiber made by high-speed centrifugal separation method by liquefaction of calcium silicate type ore with high heat.

Light weight, heat-insulation, sound-absorption and durability.

규산칼슘계의 광석을 고열로 용융 액화시켜 고속회전공법으로 만든 순수한 무기질 섬유이다. 경량성, 단열성, 흡음성, 내구성의 특징을 나타낸다.

Application

Insulation of building and plant equipment, Fireproof and refractory materials

Max Service Temp.(°C)	600
Combustibility	Incombustible
Size	Standard

Aerogel Blanket | 에어로젤



Characteristic

It is the nano-pore type solid, and it is the lightest and the lowest density among existing solid. Since the thermal conductivity is very low, the insulation is very excellent. It is excellent in sound insulation and impact shock absorption, structurally stable, and environmentally friendly.

나노 기공형태의 고체로서 현존하는 고체 중 가장 가볍고 낮은 밀도를 갖고 있다. 열전도율이 매우 낮으므로 단열성이 매우 우수하다. 방음성과 충격 완충성이 뛰어나며, 구조적으로 안정하고 친환경적이다.

Application

Insulation and sound-absorption for building, Insulation for pipelines.

Max Service Temp.(°C)	1200
Combustibility	Incombustible
Size	Standard

SSI 104 Tape | 테이프

Glass Fiber Tape | 유리 섬유 테이프



Characteristic

E Glass Yarn are bulky-processed and woven into a tape.

E Glass Yarn을 이용하여 제작한 유리 섬유 테이프.

Application

Heat insulation, Flame protector.

Max Service Temp.(°C)	550
Combustibility	Incombustible
Size	Standard

Ceramic Fiber Tape | 세라믹 섬유 테이프



Characteristic

Ceramic yarns are woven into a tape..

Ceramic yarn을 이용하여 제작한 세라믹 섬유 테이프.

Application

Heat insulation, Flame protector.

Max Service Temp.(°C)	1300
Combustibility	Incombustible
Size	Standard

Silica Fiber Tape | 실리카 섬유 테이프



Characteristic

Silica yarns are woven into a tape.

Silica Yarn을 이용하여 제작한 실리카 섬유 테이프.

Application

Heat insulation, Flame protector.

Max Service Temp.(°C)	1000
Combustibility	Incombustible
Size	Standard

Carbonized Fiber Tape | 탄화 섬유 테이프



Characteristic

Carbon yarns are woven into a tape.

Carbon Yarn을 이용하여 제작한 실리카 섬유 테이프.

Application

Heat insulation, Flame protector.

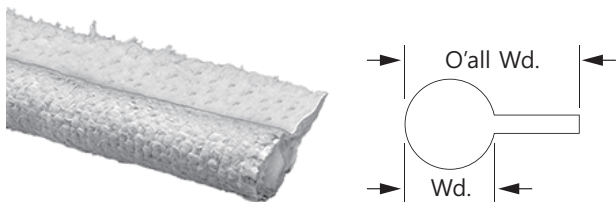
Max Service Temp.(°C)	250
Combustibility	Incombustible
Size	Standard

SSI 108

TADPOLE GASKET

Ultra High-Temperature Flange-Mount Rope Edge Seal

초고온용 도어 슬롯 커버



Characteristic

These seals have a strong Inconel core covered with woven silica yarn that's been treated to withstand extremely high heat. They resist most refrigerants, salts, and grease. The flange on these seals slides into a slot that is commonly found on oven, furnace, and boiler doors; It can be positioned to cover large gaps.

극 고온에 견딜 수 있도록 처리 된 실리카 안으로 인코넬 코어가 포함 되어 있다. 대부분의 냉매, 소금 및 그리스에 저항성이 있다. Seal이 장착된 플랜지는 오븐, 보일러 및 보일러 문에서 흔히 볼 수 있는 슬롯 안으로 넣으며, 큰 간격을 커버할 수 있다.

Application

Max Service Temp.(°C)	1260
Combustibility	Incombustible
Size	Order made

SSI 599

Pipe & Flange Protect Cap(PTC)

플랜지 보호 캡



Characteristic

Prevents foreign matter from entering the valve and flange, and grit from entering during blasting. Order made products.

Valve 및 Flange에 이물질이 들어가지 못하게 하며, 블라스팅 작업시에 GRIT이 들어가는 것을 방지한다. ANSI, JIS 및 비규격도 제작 가능하다.

Application



SSI 109

Wool Felt | 압축양모펠트

Characteristic

Compression wool felt is made by mixing with high quality wool fibers and synthetic fibers such as rayon, mechanically pressed using heat, moisture and pressure.

This process is made according to manufacturing standards that determine the content, density and other characteristics of wool.

This product is excellent in vibration absorption, oil trapping, and is less affected by sunlight and stress for a long time.

압축양모펠트는 열습기와 압력을 사용하여 기계적으로 가압하여 고품질 양모섬유와 레이온과 같은 합성섬유로 혼합하여 만들어집니다. 이 과정은 양모의 함유량, 밀도 및 기타 특성을 결정하는 제조표준에 따라서 만들어집니다. 이 제품은 진동흡수성, 오일포집성이 뛰어나며 장시간 햇빛과 스트레스에서도 영향을 적게 받습니다.

Advantages of Woolen Felt are composed of keratin

- Air trap – Excellent thermal Insulation
- Extremely wear resistance
- Capillary action – Excellent absorption
- Resilient bonding – Excellent to absorb vibrations, and shocks

Application

- Emulsion & oil dispenser
유체의 균일한 도포용
- Absorption removal of contaminants
오염물질을 흡착제거용
- Insulation, shock absorption
보온, 충격방지용
- Oil seal for small motor
- Filtration
- Shining & Wiping



MSHB/ 일반	Material	Wool 60%
	Thickness	1~25T
	Size	1800mm *10M 1800mm *5M

M36B/ 중강	Material	Wool 80%
	Thickness	1~25T
	Size	1600mm *10M 1600mm *5M

M1W/ 특강	Material	Wool 100%
	Thickness	1~40T
	Size	1500mm *1.5M

The products are cut and packed to the size requested by the customer.

주문사이에 맞게 절단 포장됩니다.



SSI 106G | 유리섬유포 맨홀 가스켓

GLASS FIBER CLOTH MANHOLE GASKET

유리섬유포에 내열고무 콤파운드를 도포 적층하고 각종 맨홀형으로 가공한 가스켓이다. 사용용도에 따라 표면처리는 부가적으로 가능함. (흑연, 운모 등)
 • 표준치수 : 주문제작

This is coated glass cloth by heat-proof rubber, compound. It can be formed by several type gasket and surface can be treated for several purpose.

SERVICE			
P(Bar)	-	-	-
T(°C)	300		
pH	-		
V(m/s)	-	-	-

SSI 107G | 금선입 유리섬유포 맨홀 가스켓

WIRE REINFORCED GLASS CLOTH MANHOLE GASKET

SSI-106G와 동일하게 제작되는 제품으로 금선입 유리섬유포를 사용하여 보다 더 고온, 고압용으로 사용가능한 제품이다.
 • 표준치수 : 주문제작

This is reinforced SSI-106G by metal wire and usable for higher temperature and pressure.

SERVICE			
P(Bar)	-	-	-
T(°C)	500		
pH	-		
V(m/s)	-	-	-



SSI 304 | TEFLON CUSHION GASKET

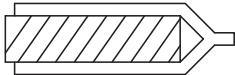
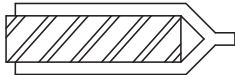
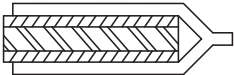
P.T.F.E ENVELOPED GASKET

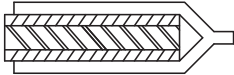
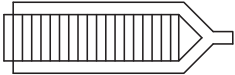
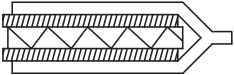
SSI 304 is good quality product filled with filler that have excellent compressibility and recovery inside, is coated with teflon that have excellent chemical-resistance and stress-relaxation is small in high load, have excellent sealability.

General applications : Strong acids and alkalis, Oxygen chlorine gas, Flange parts for organic solvent, Gaskets for electric insulation flange.

P(bar)	20
T (°C)	260
pH	0~14

Style No.	SSI 304 A	SSI 304 B	SSI 304 C
Construction			
Description	A type is the quality product the shape of cross section of teflon is attached. Filled with cushion materials inside. A type is used in JIS 5K, 10K, ANSI 150LB, 300LB in general pipe.	B type is used in large diameter product, butt-welded over a part and the product filled with cushion materials inside.	C type is the quality product filled with double cushion materials. Processed the inside of teflon with rectangular, makes thickness of gasket correspond with it. internal fluid flows smoothly without resistance.

Style No.			SSI-304 AB	SSI-304 ANA	SSI-304 AM
Construction					
Description			Compressed NA joint sheet	Compressed NA sheet	Compressed NA joint sheet with millboard
Application (m, y)	Gas	m	3.5	3.5	3.5
		y	150 kgf/cm ²	200 kgf/cm ²	150 kgf/cm ²
	Liquid	m	3.0	3.0	3.0
		y	100 kgf/cm ²	150 kgf/cm ²	100 kgf/cm ²
Temp	°C		200°C	200°C	200°C
ATM	kgf/cm ²		20 kgf/cm ²	20 kgf/cm ²	20 kgf/cm ²

Style No.			SSI-304 ANAM	SSI-304 AEP	SSI-304 ACT
Construction					
Description			Non asbestos joint sheet with non millboard	Wool felt, EPDM, rubber wire inserted joint sheet	Corrugated metal core with Compressed NA joint sheet
Application (m, y)	Gas	m	3.5	3.5	3.5
		y	150 kgf/cm ²	200 kgf/cm ²	200 kgf/cm ²
	Liquid	m	3.0	3.0	3.0
		y	100 kgf/cm ²	100 kgf/cm ²	200 kgf/cm ²
Temp	°C		200°C	200°C	200°C
ATM	kgf/cm ²		20 kgf/cm ²	20 kgf/cm ²	30 kgf/cm ²

SSI 303 | PTFE 솔리드 가스켓

SOLID PTFE GASKET

PTFE를 정밀 가공하여 여러가지 필요한 형상으로 가공한 것이다. 강산, 강알칼리, 염소가스, 유기용제 등의 내약품성 오염을 피하는 유체에 사용한다.

PTFE is precision processed or cut and then processed into various required shapes. It is used as anti-contaminant of chemically resistant fluids such as strong acid, strong alkali, chlorine gas and organic solvent.

P(Bar)	20
T(°C)	260
pH	0-14



SSI 305 | PTFE 가스켓

PTFE GASKET

PTFE가 갖고 있는 내화학성을 장점으로 이용해 높은 압력에도 안정적으로 사용할 수 있도록 주문에 의해 금형으로 타발하여 후렌지의 밀봉재로서 사용된다.

This PTFE Gasket is used to seal the flange punched through a made to order metal mold. It can be used safely even under high pressure due to its tolerance to chemicals.

P(Bar)	20
T(°C)	260
pH	0-14



Spring Loaded PTFE Seal

Characteristic

Energized spring is applied to materials that can withstand extreme conditions such as Teflon, Peak, Ultra Polymer, etc., to maximize the sealing ability by the load of the spring

P(Bar)	High vacuum ~ 660bar
T(°C)	-268 ~ 288
Chemical resistance	Excellent chemical resistance However, it reacts with alkali solution and fluorine gas

Application

- Gas turbine engine, rotary joint
- Pneumo-hydraulic system, fuel control device
- Valve, Pump
- Medical equipment, vacuum equipment
- Extreme temperature equipment and gasket



Elastomeric Seal

- Meet a international standard: ASTM, JIS, DIN etc
- Compliant with FDA, NSF, KIWA, 3A Standard
- Available Material : FKM, Dupont Viton, Silicon, EPDM, NBR, ACM, Polyurethane
- Wide Range of application
- Characteristic : as per material
low compression seat stress, oil & Chemical resistance



RUBBER SHEET & GASKETS

SSI 5000 Rubber Sheet Gasket

Characteristic

Elastomeric gaskets provide excellent compressibility & recovery and have relatively soft compression characteristics and can show good sealing performance even under low stress load.

Recommend varying types of elastomers to be suitable for required diverse operating chemicals and temperature.

탄력있는 고무재질로 압축, 복원성, 작업성이 좋고 낮은 체부압에서도 안정적인 Sealing 성능을 유지하는 고무시트 가스켓

각종 기관의 Flange기구 등의 가스켓으로 유체의 종류에 맞는 재질을 선정하여야 한다.

[Application]

Maximum Service Temp.	Depending on elastomers used.
Maximum Service Pressure	10 bar
Materials	NR, NBR, CR, EPDM, SL, SBR, VITON, BUTYL
Size	1/32"(0.8mm), 1/16"(1.5mm), 1/8"(3.0mm), 3/16"(5.0mm)

*Other Sizes can be available, if required

SSI 5010 EPDM+PTFE

Characteristic

The composition of SSI 5000 is integrated EPDM with pressurized and heated Fluoroplastic film and characteristic of rubber elasticity and PTFE heat and chemical resistance perform excellent sealing ability. Industrial fields requiring high cleanliness and purification in electronics, food, pharmaceutical etc.

EPDM고무를 중심으로 해서 불소 수지 필름을 가압 가열 성형하고, 일체형으로 밀착시킨 가스켓으로 고무의 탄성과 PTFE의 내열성, 내약품성을 겸하여 갖추고 있으며, Sealing이 우수한 가스켓, 전자, 식품, 의약 제품과 같이 높은 청결성이 요구되는 산업 분야.

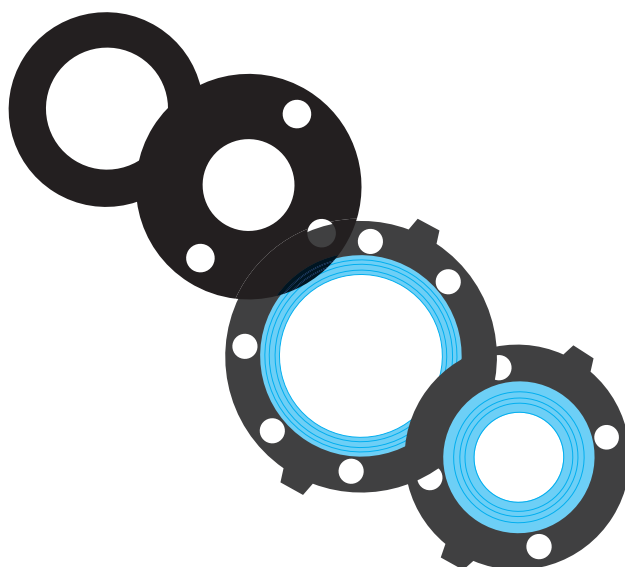
[Application]

Maximum Service Temp.	-30~150°C
Maximum Service Pressure	20 bar
Materials	EPDM
Size	1/32"(0.8mm), 1/16"(1.5mm), 1/8"(3.0mm), 3/16"(5.0mm)

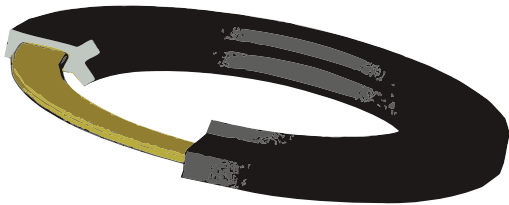
*Other Sizes can be available, if required

[Typical Physical Properties]

Code	Typical Properties	Temp.range(°C)
NR	Natural Rubber (Excellent mechanical properties)	-20 ~ 100
NBR	Acrylonitrile Butadiene Rubber (Excellent oil resistance)	-30 ~ 120
CR (NEOPRENE)	(Excellent weather, ozone, heat & flame resistance)	-30 ~ 120
EPDM	Ethylene Propylene Diene Monomer (Excellent ageing & ozone resistance)	-40 ~ 150
SL (SILICONE)	Silicone Rubber (Excellent in heat, cold & chemical resistance)	-60 ~ 200
SBR	Styrene Butadiene Rubber (Excellent in ageing & abrasion resistance)	-20 ~ 100
FKM (VITON)	Fluoroelastomer (Superior in heat, oil & chemical resistance)	-20 ~ 200
IIR (BUTYL)	Isobutylene Isoprene Rubber (Excellent ozone, weather, electricity resistance)	-40 ~ 120



SSI 5020



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/ANSI, DIN, JIS, AWWA etc. but also special specification such as small & big size and customer's request.

STEEL RUBBER GASKET TYPE

Cross-Section	Type No.
	SSI 5020A
	SSI 5020B
	SSI 5020C
	SSI 5020D
	SSI 5020E
	SSI 5020F
	SSI 5020G

STEEL RUBBER GASKET TYPE

Gasket Type	m	y[psi]
SSI A/B/C/F/G	1.00	290
SSI D	1.00	1,750

Rubber Hardness : Shore "A"-#75

INSULATION KIT



Samsung industry's Insulation Gasket kits have been providing in the petrochemical industry and refinery facilities where safety, pipeline integrity and reliability are strongly demanded. Our insulation gasket kits have been widely using by experienced engineers and technicians in their continued efforts to control corrosion, one of natural destructive elements. Samsung Industries Flange insulation products are manufactured with advanced engineering materials. Isolation products include various options for isolating / sealing gaskets with various sleeves and washers. You can order parts separately or you can order the entire flange insulation kit. Flange insulation kits are designed to work with insulating gaskets to provide complete electrical insulation of flange assemblies. The insulation kit consists of one insulation sleeve, two insulation washers and two steel washers for each bolt of the flange assembly. The purpose of the insulation sleeve is to electrically isolate the bolts from each side of the flange, and the insulation washer provides electrical insulation for each nut attached to the bolt. This isolation method provides the user with a highly reliable solution that completes the electrical insulation of the flanged joint.

삼성인더스트리 절연가스켓 KIT는 안전과 파이프라인의 완전무결과 신뢰성이 강하게 요구되어지는 석유화학공업과 정유시설에 공급되고 있습니다. 삼성인더스트리에서 만든 플랜지 절연 가스켓은 경험 많은 엔지니어와 기술자에 의해서 자연 파괴 요소 중 하나 인 부식 방지의 지속적인 노력에 널리 사용되고 있습니다.

삼성인더스트리 플랜지 절연 제품은 고급 엔지니어링 자재로 제작됩니다. 절연 제품에는 다양한 슬리브 및 와셔와 함께 가스켓을 격리 / 밀봉하는 다양한 선택 사양이 포함됩니다. 부품을 별도로 주문하거나 플랜지 절연 키트 전체를 주문할 수 있습니다.

플랜지 절연 키트는 절연 가스켓과 함께 작동하여 플랜지 어셈블리의 완벽한 전기 절연을 수행하도록 설계되었습니다. 절연 키트는 플랜지 어셈블리의 각 볼트에 대해 하나의 절연 슬리브, 2 개의 절연 와셔 및 2 개의 스틸 와셔로 구성됩니다. 절연 슬리브의 목적은 플랜지의 각 측면에서 볼트를 전기적으로 분리하는 것이고, 절연 와셔는 볼트에 부착된 각각의 너트에 대해 전기 절연을 제공합니다. 이 분리 방법은 플랜지 조인트의 전기적 절연을 완성하는 고 신뢰성 솔루션을 사용자에게 제공합니다.



Gasket Type

Product Code	Products Description/E.Q	Seal Material	Pressure Class (ASME #)	Seal Element Max Temp (°C)	Seal Element Insulation Resistance (Ω)
SSI 305	PTFE solid gasket	-	150	-156~200	PTFE over 10E13
SSI 305GR	Glass reinforced PTFE gasket	-	300	-156~260	over 10E11
SSI 820	Covered serrated metal Gasket Covered material : PTFE / GORE®/ MICA	PTFE	900	-156~200	PTFE over 10E13
		GORE®	2500	-268~315	e-PTFE over 10E13
		MICA	150	1000	MICA over 10E7
SSI 820	Neoprene faced glass reinforced phenolic gasket	Neoprene (CR)	150	-30~120	Neoprene over 10E7
Klinger C-4400	Klinger CNAF Gasket , Aramid fiber with NBR binder	-	300	-196 ~ 175 (400)	over 10E12
Klinger C-4430	Klinger CNAF Gasket , Glass fiber with NBR binder	-	300	-196 ~ 175 (400)	over 10E13
SSI 8200OR SGE®	Glass reinforced epoxy plate gasket with rubber O-ring seal Retainer : G10/G11 E.Q : PIKOTEK PGE type	Nitrile(NBR)	600	-30~120	NBR over 10E10
		Viton(FKM)	600	-26~200	VITON over 10E9
		EPDM	600	-40~150	EPDM over 10E13
SSI 8200DR SGE®	Glass reinforced epoxy plate gasket with rubber D-ring seal Retainer : G10/G11	Nitrile(NBR)	600	-30~120	NBR over 10E13
		Viton(FKM)	600	-26~200	VITON over 10E9
		EPDM	600	-40~150	EPDM over 10E13
SSI 8200PT SGE®	Glass reinforced epoxy plate gasket with PTFE seal used PTFE spring-Energized Face Seal Retainer : G10/G11	PTFE (Spring-Energized)	900	-156~232	PTFE over 10E13
SSI 8300 SVCS®	Glass reinforced epoxy faced metal plate with PTFE seal used helical wound spring E.Q : PIKOTEK VCS type	PTFE (Spring-Energized)	2500 API 10000 classes	-156~232	PTFE over 10E13
APS TROJAN I TROJAN II	Maker : APS in the U.S.A Glass reinforced epoxy plate gasket with Elastomer Sealing Element E.Q : PIKOTEK PGE type	Nitrile(NBR)	900	-51~116	NBR over 10E10
		Viton(FKM)	900	-59~204	VITON over 10E9
		EPDM	900	-40~121	EPDM over 10E13
		EPDM	900	-73~232	PTFE over 10E13

Gasket Type

Product Code	Products Description/E.Q	Seal Material	Pressure Class (ASME #)	Seal Element Max Temp (°C)	Seal Element Insulation Resistance (Ω)
APS I INTEGRA II SSA / INTEGRA II SSAFS	Maker : APS in the U.S.A INTEGRA II SSA is glass reinforced epoxy faced metal plate with PTFE seal used PTFE spring-Energized Face Seal E.Q : PIKOTEK VCS type	Standard : PTFE spring-Energized Face seal	2500 API 10000 classes	-156~177*	PTFE over 10E13
	INTEGRA II SSAFS is fire-safe Isolation Gaskets with PTFE Spring-Energized Face Seal and High Temperature Secondary Seal, passed API 6FB, 3rd Edition Fire Test. E.Q : PIKOTEK VCFS type	Optional: Viton	2500 API 10000 classes	-26~177*	VITON over 10E9
GPT PGE	Maker : GPT (PIKOTEK) in the U.S.A Glass reinforced epoxy plate gasket with rubber o-ring seal Retainer : G10/G11	Nitrile(NBR)	600	-129~116	NBR over 10E10
		Viton(FKM)	600	-26~200	VITON over 10E9
		EPDM	600	-40~150	EPDM over 10E13
		Silicone	600	-48~204	EPDM over 10E10
		PTFE spring-Energized Face seal	600	-156~260	PTFE over 10E13
GPT VCS/VCSF	Maker : GPT (PIKOTEK) in the U.S.A VCS is Glass reinforced epoxy faced metal plate with PTFE seal used PTFE spring-Energized Face Seal VCSF is Glass reinforced epoxy faced metal plate with PTFE seal used PTFE spring-Energized Face Seal, passed API 6FB, 3rd Edition Fire Test.	Standard: PTFE spring-Energized Face seal	2500 API 10000 classes	Cryogenic ~232	PTFE over 10E13
		Optional: Viton	2500 API 10000 classes	-29~177*	VITON over 10E9
GPT VCS-ID	Maker : GPT (PIKOTEK) in the U.S.A VCS-ID is a metal cored* GRE laminated gasket manufactured with a machined PTFE inside diameter seal that ensures the tightest seal at the pipe bore. This concave seal is accompanied by a second PTFE spring energized seal, or an elastomeric O-ring	PTFE spring-Energized Face seal and PTFE prssure energized seal	2500 API 10000 classes	Cryogenic ~150* (at using G-10)	PTFE over 10E13
GPT VCXT	Maker : GPT (PIKOTEK) in the U.S.A High temperature insulation gasket covering surface with THERMO-PUR™ passed through API 607 and API 6FB fire test on serrated metal core.	THERMO-PUR™	Full Vacuum to 1500	-200~410	THERMO-PUR™ over 10E10

SSI 305
PTFE solid gasket



SSI 820
Insulation Sheet Covered
Kammprofile Gasket



SSI 885
Neoprene faced glass
reinforced phenolic gasket



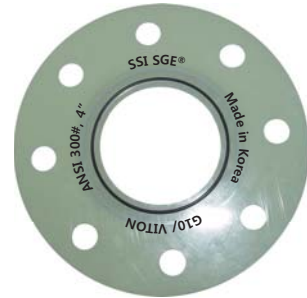
Klinger C-4400
Aramid fiber with
NBR binder



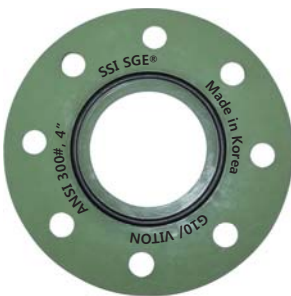
Klinger C-4430
Glass fiber with
NBR binder



SGE® SSI 8200OR
E.Q : PIKOTEK PGE type



SGE® SSI 8200DR



SGE® SSI 8200PT



SVCS® SSI 8300
E.Q : PIKOTEK VCS type



APS TROJAN I
E.Q : PIKOTEK PGE type



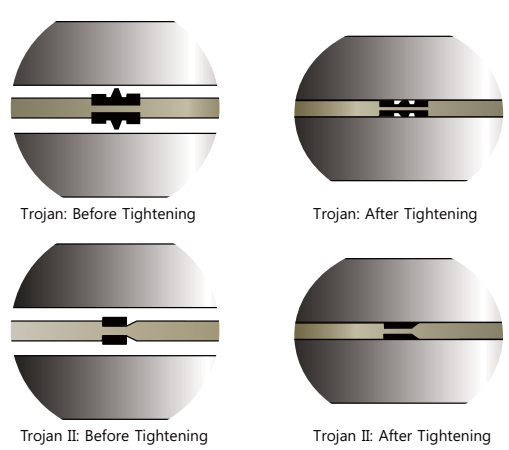
APS INTEGRA II SSA
E.Q : PIKOTEK VCS type



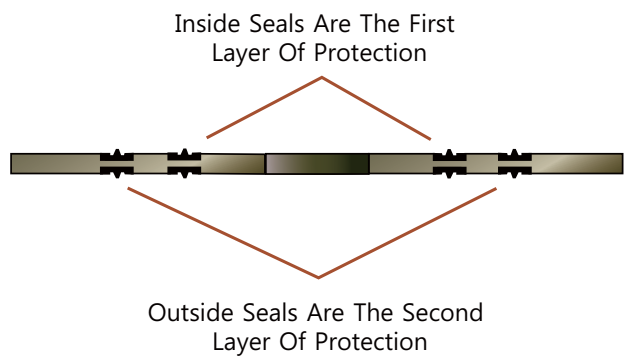
APS INTEGRA II SSAFS
E.Q : PIKOTEK VCSF type



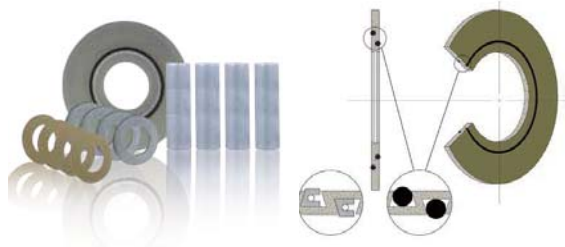
APS TROJAN I/ TROJAN II



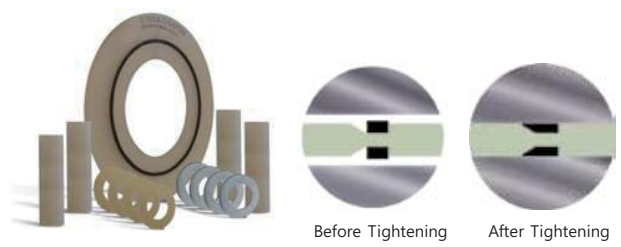
APS TROJAN I DUPLEX SEAL TYPE



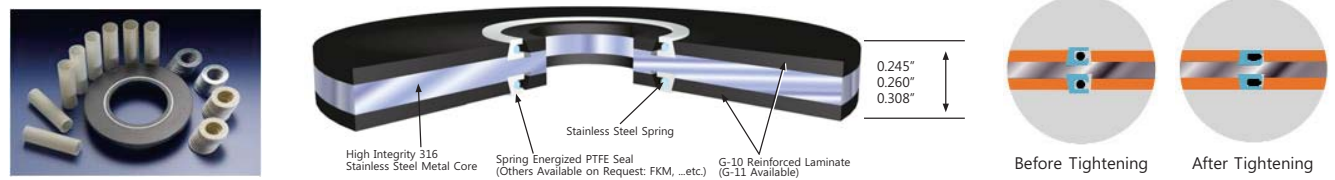
GPT PGE



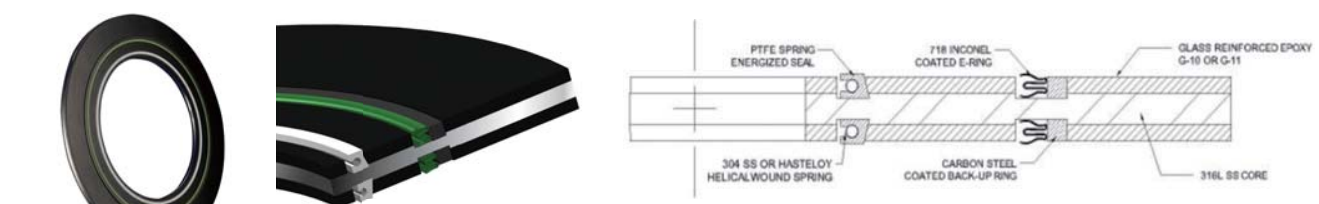
GPT LineBacker®



GPT VCS



GPT VCSF



GPTs VCFS has passed API 6FB Fire Test

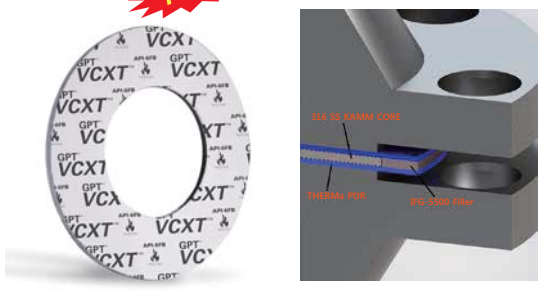
GPT VCS-ID

NEW



GPT VCXT

NEW



GPTs VCXT has passed API 607 and API 6FB Fire Test

Material Physical Properties

Retainer Material Physical Properties (Typical Values)

ASME	Test Method	Rubber Faced Phenolic	G-10 Glass Reinforced Epoxy	G-10CR(NEMA Grade) Glass Reinforced Epoxy	G-11 Glass Reinforced Epoxy
D149	Dielectric Strength [Volts/Mil]	500	800	800	550
D695	Compressive Strength [psi]	25,000	65,000	65,000	58,000
D229	Water Absorption [%]	1.6	0.04	0.085	0.085
D257	Insulation Resistance [MΩ]	40,000	300,000	300,000	225,000
D790	Flexural Strength [psi]	22,500	65,000	57,700	58,000
D785	Hardness Rockwell "M"	85	115	90~110	
D256	IZOD Impact Strength [Ft-Lbs/Inch]	1.2	26.0	12.0	10.0
D638	Tensile Strength [psi]	20,000	51,000	41,000	41,000
D732	Shear Strength [psi] 21,000 21,000	10,000	21,000	21,200	21,000
	Temperature Range [Degrees °F]	-65 to +175	-200 ~ +302	-459 ~ +266	-50 ~ +392
	Temperature Range [Degrees °C]	-54 to +79	-129 ~ +150	-273 ~ +130	-46 ~ +200

* Standard Thickness : 1) Low pressure Type (SGE, Trojan, PGE Type)-- 3.2T (0.125")
 2) High Pressure Type (SVCS, INTEGRA, VCS type) – 6.5T(0.256")

Seal Element Temperature Limit (Typical Values)

Element	Nitrile(NBR)	Viton(FKM)	TEFLON(PTFE)	Neoprene(CR)	EPDM	Silicone(SL)
Degree Fahrenheit (°F)	-22 to 250	-15 to 392	-250 to 450	-22 to 250	-40 to 302	-76 to 392
Degree Celsius(°C)	-30 to 120	-26 to 200	-156 to 232	-30 to 120	-40 to 150	-60 to 200

Sleeve Material Physical Properties (Typical Values)

Element	G010 GRE	G011 GRE	Mylar	Nomex	Phenolic	Poly-ethylene	HM-HS2625
Dielectric strength [Volts/mm]	800	500	4000	400	400	400	2500
Water absorption [%]	0.04	0.085	0.8	1.0	1.6	0.01	
Flexural strength [psi]	57700	58000	13000	20000	16000	7000	N/A
Operation Temp [°F]	302	392	250	425	220	180	260
peration Temp [°C]	150	200	120	218	105	82	125

* HM-HS2626 is heat shrinkable tube that have excellent flexibility, insulation, incombustibility and light weight

* Other Sleeve Material : PTFE (200°C) , Kepton (240°C)

* Spiral wound Mylar is a general-purpose material recommended for bolting applications with flange temperatures below 120°C. This material has fair resistance to crushing, cracking, breaking and thread pinch.

* NOMEX is a high temperature sleeve material manufactured from solid organic polymer and is suitable for temperatures up to 218°C

Metal Core

Metal core material is normally high Integrity 316 stainless steel.
 It is possible to use high-grade material according to customer's request.

Insulation Washer

Material is G-10 GRE (Glass reinforced Epoxy) and G-11 GRE.
 Washer thickness : 1) SAMSUNG INDUSTRY- 3.0mm 2) GPT, APS -- 1/8"

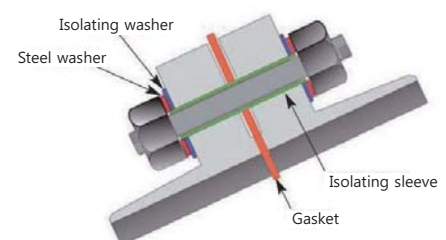
Metallic Washer

Material : 1) Zinc Plated Carbon steel
 2) Stainless Steel washer
 Washer thickness : 1) SAMSUNG INDUSTRY- 3.0mm
 2) GPT, APS -- 1/8"

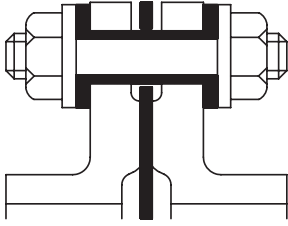
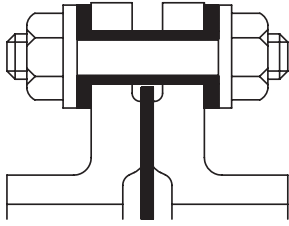
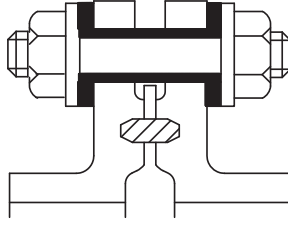
Bolt / Nut

Standard is stud bolt of ASTM specification
 Other Specification : KS, JIS, DIN, ASME(ANSI)

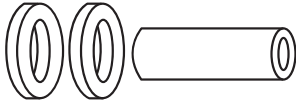
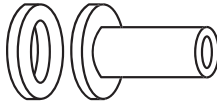
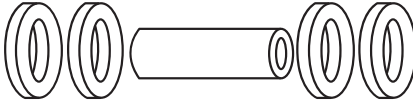
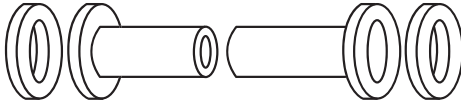
How to tighten the flange bolt



Standard Style

Fill face type	Raised face type	Flange type-Basic Oval or Oct
 <p>Full-length sleeves, Insulating washers, full face Insulating gasket.</p>	 <p>Full-length sleeves, Insulating washers, full face Insulating gasket.</p>	 <p>Full-length sleeves, Insulating washers, Insulating ring joint gasket.</p>

Sleeve/Washer Type

Single washer sets (SS)		Metal washer x1 Insulation washer x1 Insulation Sleeve x1
		Metal washer x 1 Integral Sleeve x 1
Double washer sets (DW)		Metal washer x2 Insulation washer x2 Insulation Sleeve x1
		Metal washer x2 Integral Sleeve x2

How to order insulation gasket kit

Quantity	Flange Specification	Normal Pipe Size	Class	Gasket Type	Gasket Style (Product Code)	Retainer Material	Metal Core Material	Seal Element	Washer Material	Washer Type	Sleeve Material	Gasket I.D (Schedule Pipe Flange)	Flange Type
	ASME API MSS BS DIN JIS KS AWWA Other	Specify Below	150# ~ 2500# Other	RF FF	Specify Above SGE SVCS TROJAN-I TROJAN-II INTEGRA-II PGEIVCS VCSF	Specify Above G-10 G-11 G-10CR	316L etc	Specify Above NBR Viton PTFE CR EPDM CR	Specify Above G-10 G-11	Specify Above SW DW	Specify Above G-10 G-11 Mylar Nomex	STD SCH 5s ~SCH 120	W=Weld Neck Slip On RTJ Other

The above information should be provided when ordering the Insulation Kit. In particular, the flange type and flange bore size (= gasket ID) are very important parts to realize the characteristic of the insulation kit.

Insulation Kit를 주문할 때는 상기의 내용이 제공되어야 한다. 특히 Flange Type 및 Flange Bore Size (= Gasket ID)는 Insulation Kit의 특징점을 구현하기 위해서 매우 중요한 부분이다.

Insulation Gasket SGE Dimensions for ANSI B16.5

Size (NPS)	150#										
	RF		FF				Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size		B.C.D	Insul' Q'ty		Steel Q'ty
1/2	15.8	45.7	15.8	88.9	4	15.9	60.5	1/2	8	8	4
3/4	20.9	55.2	20.9	98.6	4	15.9	69.9	1/2	8	8	4
1	26.7	64.8	26.7	108.0	4	15.9	79.2	1/2	8	8	4
1 1/4	35.1	74.3	35.1	117.3	4	15.9	88.9	1/2	8	8	4
1 1/2	40.9	83.8	40.9	127.0	4	15.9	98.6	1/2	8	8	4
2	52.5	101.6	52.5	152.4	4	19.1	120.7	3/8	8	8	4
2 1/2	62.7	120.7	62.7	177.8	4	19.1	139.7	3/8	8	8	4
3	77.9	133.4	77.9	190.5	4	19.1	152.4	3/8	8	8	4
3 1/2	90.1	158.8	90.1	215.9	8	19.1	177.8	3/8	16	16	8
4	102.3	171.5	102.3	228.6	8	19.1	190.5	3/8	16	16	8
5	128.2	193.7	128.2	254.0	8	22.2	215.9	3/4	16	16	8
6	154.1	219.1	154.1	279.4	8	22.2	241.3	3/4	16	16	8
8	202.7	276.2	202.7	342.9	8	22.2	298.5	3/4	16	16	8
10	254.5	336.6	254.5	406.4	12	25.4	362.0	7/8	24	24	12
12	304.8	406.4	304.8	482.6	12	25.4	431.8	7/8	24	24	12
14	336.6	447.7	336.6	533.4	12	28.6	476.3	1	24	24	12
16	387.4	511.2	387.4	596.9	16	28.6	539.8	1	32	32	16
18	438.2	546.1	438.2	635.0	16	31.8	577.9	1 1/8	32	32	16
20	489.0	603.3	489.0	698.5	20	31.8	635.0	1 1/8	40	40	20
24	590.6	714.4	590.6	812.8	20	34.9	749.3	1 1/4	40	40	20

Size (NPS)	300#										
	RF		FF				Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size		B.C.D	Insul' Q'ty		Steel Q'ty
1/2	15.8	52.1	15.8	95.3	4	15.9	66.5	1/2	8	8	4
3/4	20.9	64.8	20.9	117.3	4	19.1	82.6	5/8	8	8	4
1	26.7	71.1	26.7	124.0	4	19.1	88.9	5/8	8	8	4
1 1/4	35.1	80.6	35.1	133.4	4	19.1	98.6	5/8	8	8	4
1 1/2	40.9	93.3	40.9	155.4	4	22.2	114.3	3/4	8	8	4
2	52.5	108.0	52.5	165.1	8	19.1	127.0	5/8	16	16	8
2 1/2	62.7	127.0	62.7	190.5	8	22.2	149.4	3/4	16	16	8
3	77.9	146.1	77.9	209.6	8	22.2	168.1	3/4	16	16	8
3 1/2	90.1	161.9	90.1	228.6	8	22.2	184.2	3/4	16	16	8
4	102.3	177.8	102.3	254.0	8	22.2	200.2	3/4	16	16	8
5	128.2	212.7	128.2	279.4	8	22.2	235.0	3/4	16	16	8
6	154.1	247.7	154.1	317.5	12	22.2	269.7	3/4	24	24	12
8	202.7	304.8	202.7	381.0	12	25.4	330.2	7/8	24	24	12
10	254.5	358.8	254.5	444.5	16	28.6	387.4	1	32	32	16
12	304.8	419.1	304.8	520.7	16	31.8	450.9	1 1/8	32	32	16
14	336.6	482.6	336.6	584.2	20	31.8	514.4	1 1/8	40	40	20
16	387.4	536.6	387.4	647.7	20	34.9	571.5	1 1/4	40	40	20
18	438.2	593.7	438.2	711.2	24	34.9	628.7	1 1/4	48	48	24
20	489.0	650.9	489.0	774.7	24	34.9	685.8	1 1/4	48	48	24
24	590.6	771.5	590.6	914.4	24	41.3	812.8	1 1/2	48	48	24

Size (NPS)	600#										
	RF		FF				Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size		B.C.D	Insul' Q'ty		Steel Q'ty
1/2	15.8	52.1	15.8	95.3	4	15.9	66.5	1/2	8	8	4
3/4	20.9	64.8	20.9	117.3	4	19.1	82.6	5/8	8	8	4
1	26.7	71.1	26.7	124.0	4	19.1	88.9	5/8	8	8	4
1 1/4	35.1	80.6	35.1	133.4	4	19.1	98.6	5/8	8	8	4
1 1/2	40.9	93.3	40.9	155.4	4	22.2	114.3	3/4	8	8	4
2	52.5	108.0	52.5	165.1	8	19.1	127.0	5/8	16	16	8
2 1/2	62.7	127.0	62.7	190.5	8	22.2	149.4	3/4	16	16	8
3	77.9	146.1	77.9	209.6	8	22.2	168.1	3/4	16	16	8
3 1/2	90.1	158.8	90.1	228.6	8	25.4	184.2	7/8	16	16	8
4	102.3	190.5	102.3	273.1	8	25.4	215.9	7/8	16	16	8
5	128.2	238.1	128.2	330.2	8	28.6	266.7	1	16	16	8
6	154.1	263.5	154.1	355.6	12	28.6	292.1	1	24	24	12
8	202.7	317.5	202.7	419.1	12	31.8	349.3	1 1/8	24	24	12
10	254.5	396.9	254.5	508.0	16	34.9	431.8	1 1/4	32	32	16
12	304.8	454.0	304.8	558.8	20	34.9	489.0	1 1/4	40	40	20
14	336.6	489.0	336.6	603.3	20	38.1	527.1	1 3/8	40	40	20
16	387.4	562.0	387.4	685.8	20	41.3	603.3	1 1/2	40	40	20
18	438.2	609.6	438.2	743.0	20	44.5	654.1	1 5/8	40	40	20
20	489.0	679.5	489.0	812.8	24	44.5	723.9	1 5/8	48	48	24
24	590.6	787.4	590.6	939.8	24	50.8	838.2	1 7/8	48	48	24

Bolt L Calculation

$$= (\text{Flange bottom height} \times 2) + (\text{Nut } T \times 2) + \text{After tightening Gasket } T + (\text{Steel washer } T \times 2) + (\text{Insulation washer } T \times 2) + \{(\text{Bolt pitch} \times 3) \times 2\}$$

Insulation Gasket SVCS Dimensions for ANSI B16.5

Size (NPS)	150#										
	RF		FF				Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size		B.C.D	Insul' Q'ty		Steel Q'ty
1/2	15.8	45.7	15.8	88.9	4	15.9	60.5	1/2	8	8	4
3/4	20.9	55.2	20.9	98.6	4	15.9	69.9	1/2	8	8	4
1	26.7	64.8	26.7	108.0	4	15.9	79.2	1/2	8	8	4
1 1/4	35.1	74.3	35.1	117.3	4	15.9	88.9	1/2	8	8	4
1 1/2	40.9	83.8	40.9	127.0	4	15.9	98.6	1/2	8	8	4
2	52.5	101.6	52.5	152.4	4	19.1	120.7	3/8	8	8	4
2 1/2	62.7	120.7	62.7	177.8	4	19.1	139.7	3/8	8	8	4
3	77.9	133.4	77.9	190.5	4	19.1	152.4	3/8	8	8	4
3 1/2	90.1	158.8	90.1	215.9	8	19.1	177.8	3/8	16	16	8
4	102.3	171.5	102.3	228.6	8	19.1	190.5	3/8	16	16	8
5	128.2	193.7	128.2	254.0	8	22.2	215.9	3/4	16	16	8
6	154.1	219.1	154.1	279.4	8	22.2	241.3	3/4	16	16	8
8	202.7	276.2	202.7	342.9	8	22.2	298.5	3/4	16	16	8
10	254.5	336.6	254.5	406.4	12	25.4	362.0	7/8	24	24	12
12	304.8	406.4	304.8	482.6	12	25.4	431.8	7/8	24	24	12
14	336.6	447.7	336.6	533.4	12	28.6	476.3	1	24	24	12
16	387.4	511.2	387.4	596.9	16	28.6	539.8	1	32	32	16
18	438.2	546.1	438.2	635.0	16	31.8	577.9	1 1/8	32	32	16
20	489.0	603.3	489.0	698.5	20	31.8	635.0	1 1/8	40	40	20
24	590.6	714.4	590.6	812.8	20	34.9	749.3	1 1/4	40	40	20

Size (NPS)	300#										
	RF		FF				Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size		B.C.D	Insul' Q'ty		Steel Q'ty
1/2	15.8	52.1	15.8	95.3	4	15.9	66.5	1/2	8	8	4
3/4	20.9	64.8	20.9	117.3	4	19.1	82.6	5/8	8	8	4
1	26.7	71.1	26.7	124.0	4	19.1	88.9	5/8	8	8	4
1 1/4	35.1	80.6	35.1	133.4	4	19.1	98.6	5/8	8	8	4
1 1/2	40.9	93.3	40.9	155.4	4	22.2	114.3	3/4	8	8	4
2	52.5	108.0	52.5	165.1	8	19.1	127.0	5/8	16	16	8
2 1/2	62.7	127.0	62.7	190.5	8	22.2	149.4	3/4	16	16	8
3	77.9	146.1	77.9	209.6	8	22.2	168.1	3/4	16	16	8
3 1/2	90.1	161.9	90.1	228.6	8	22.2	184.2	3/4	16	16	8
4	102.3	177.8	102.3	254.0	8	22.2	200.2	3/4	16	16	8
5	128.2	212.7	128.2	279.4	8	22.2	235.0	3/4	16	16	8
6	154.1	247.7	154.1	317.5	12	22.2	269.7	3/4	24	24	12
8	202.7	304.8	202.7	381.0	12	25.4	330.2	7/8	24	24	12
10	254.5	358.8	254.5	444.5	16	28.6	387.4	1	32	32	16
12	304.8	419.1	304.8	520.7	16	31.8	450.9	1 1/8	32	32	16
14	336.6	482.6	336.6	584.2	20	31.8	514.4	1 1/8	40	40	20
16	387.4	536.6	387.4	647.7	20	34.9	571.5	1 1/4	40	40	20
18	438.2	593.7	438.2	711.2	24	34.9	628.7	1 1/4	48	48	24
20	489.0	650.9	489.0	774.7	24	34.9	685.8	1 1/4	48	48	24
24	590.6	771.5	590.6	914.4	24	41.3	812.8	1 1/2	48	48	24

Insulation Gasket SVCS Dimensions for ANSI B16.5

Size (NPS)	600#											
	RF		FF					Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size	B.C.D		Insul' Q'ty	Steel Q'ty		
½	15.8	52.1	15.8	95.3	4	15.9	66.5	½	8	8	4	
¾	20.9	64.8	20.9	117.3	4	19.1	82.6	¾	8	8	4	
1	26.7	71.1	26.7	124.0	4	19.1	88.9	¾	8	8	4	
1¼	35.1	80.6	35.1	123.4	4	19.1	98.6	¾	8	8	4	
1½	40.9	93.3	40.9	155.4	4	22.2	114.3	¾	8	8	4	
2	52.5	108.0	52.5	165.1	8	19.1	127.0	¾	16	16	8	
2½	62.7	127.0	62.7	190.5	8	22.2	149.4	¾	16	16	8	
3	77.9	146.1	77.9	209.6	8	22.2	168.1	¾	16	16	8	
3½	90.1	158.8	90.1	228.6	8	25.4	184.2	¾	16	16	8	
4	102.3	190.5	102.3	273.1	8	25.4	215.9	¾	16	16	8	
5	128.2	238.1	128.2	330.2	8	28.6	266.7	1	16	16	8	
6	154.1	263.5	154.1	355.6	12	28.6	292.1	1	24	24	12	
8	202.7	317.5	202.7	419.1	12	31.8	349.3	1½	24	24	12	
10	254.5	396.9	254.5	508.0	16	34.9	431.8	1½	32	32	16	
12	304.8	454.0	304.8	558.8	20	34.9	489.0	1½	40	40	20	
14	336.6	489.0	336.6	603.3	20	38.1	527.1	1¾	40	40	20	
16	387.4	562.0	387.4	685.8	20	41.3	603.3	1½	40	40	20	
18	438.2	609.6	438.2	743.0	20	44.5	654.1	1¾	40	40	20	
20	489.0	679.5	489.0	812.8	24	44.5	723.9	1¾	48	48	24	
24	590.6	787.4	590.6	939.8	24	50.8	838.2	1¾	48	48	24	

Size (NPS)	900#											
	RF		FF					Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size	B.C.D		Insul' Q'ty	Steel Q'ty		
½	15.8	61.6	15.8	120.7	4	22.2	82.6	¾	8	8	4	
¾	20.9	67.9	20.9	130.0	4	22.2	88.9	¾	8	8	4	
1	26.7	77.5	26.7	149.4	4	25.4	101.6	¾	8	8	4	
1¼	35.1	87.0	35.1	158.5	4	25.4	111.3	¾	8	8	4	
1½	40.9	96.5	40.9	177.8	4	28.6	124.0	1	8	8	4	
2	52.5	139.7	52.5	215.9	8	25.4	165.1	¾	16	16	8	
2½	62.7	161.9	62.7	244.3	8	31.8	190.5	1	16	16	8	
3	77.9	165.1	77.9	241.3	8	34.9	190.5	¾	16	16	8	
4	102.3	203.2	102.3	292.1	8	31.8	235.0	1½	16	16	8	
5	128.2	244.5	128.2	349.3	8	34.9	279.4	1½	24	24	12	
6	154.1	285.8	154.1	381.0	12	31.8	317.5	1½	24	24	12	
8	202.7	355.6	202.7	469.9	12	38.1	393.7	1¾	24	24	12	
10	254.5	431.8	254.5	546.1	16	38.1	469.9	1¾	32	32	16	
12	304.8	495.3	304.8	609.6	20	38.1	533.4	1¾	40	40	20	
14	336.6	517.5	336.6	641.4	20	41.3	558.8	1½	40	40	20	
16	387.4	571.5	387.4	704.9	20	44.5	616.0	1¾	40	40	20	
18	438.2	635.0	438.2	787.4	20	50.8	685.8	1¾	40	40	20	
20	489.0	695.3	489.0	857.3	20	54.0	749.3	2	40	40	20	
24	590.6	835.0	590.6	1041.4	20	66.7	901.7	2½	40	40	20	

Size (NPS)	1500#											
	RF		FF					Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size	B.C.D		Insul' Q'ty	Steel Q'ty		
½	15.8	61.6	15.8	120.7	4	22.2	82.6	¾	8	8	4	
¾	20.9	67.9	20.9	130.0	4	22.2	88.9	¾	8	8	4	
1	26.7	77.5	26.7	149.4	4	25.4	101.6	¾	8	8	4	
1¼	35.1	87.0	35.1	158.5	4	25.4	111.3	¾	8	8	4	
1½	40.9	96.5	40.9	177.8	4	28.6	124.0	1	8	8	4	
2	52.5	139.7	52.5	215.9	8	25.4	165.1	¾	16	16	8	
2½	62.7	161.9	62.7	244.3	8	28.6	190.5	1	16	16	8	
3	77.9	171.5	77.9	266.7	8	31.8	203.2	1½	16	16	8	
4	102.3	206.4	102.3	311.2	8	34.9	241.3	1½	16	16	8	
5	128.2	250.8	128.2	374.7	8	41.3	292.1	1½	16	16	8	
6	154.1	279.4	154.1	393.7	12	31.8	317.5	1¾	24	24	12	
8	202.7	349.3	202.7	482.6	12	44.5	393.7	1½	24	24	12	
10	254.5	431.8	254.5	584.2	12	50.8	482.6	1¾	24	24	12	
12	304.8	517.5	304.8	673.1	16	54.0	571.5	2	32	32	16	
14	336.6	574.7	336.6	749.3	16	60.3	635.0	2½	32	32	16	
16	387.4	638.2	387.4	825.5	16	66.7	704.9	2½	32	32	16	
18	438.2	701.7	438.2	914.4	16	73.0	774.7	2¾	32	32	16	
20	489.0	752.5	489.0	984.3	16	79.4	831.9	3	32	32	16	
24	590.6	898.5	590.6	1168.4	16	92.1	990.6	3½	32	32	16	

Size (NPS)	2500#											
	RF		FF					Bolt Size	Washer		Sleeve	
	ID	OD	ID	OD	Hole Q'ty	Hole Size	B.C.D		Insul' Q'ty	Steel Q'ty		
½	15.8	67.9	15.8	133.4	4	22.2	88.9	¾	8	8	4	
¾	20.9	74.3	20.9	139.7	4	22.2	95.3	¾	8	8	4	
1	26.7	83.8	26.7	158.8	4	25.4	108.0	¾	8	8	4	
1¼	35.1	102.9	35.1	184.2	4	28.6	130.0	1	8	8	4	
1½	40.9	115.6	40.9	203.2	4	31.8	146.1	1½	8	8	4	
2	52.5	142.9	52.5	235.0	8	28.6	171.5	1	16	16	8	
2½	62.7	165.1	62.7	266.7	8	28.6	196.9	1½	16	16	8	
3	77.9	193.7	77.9	304.8	8	34.9	228.6	1½	16	16	8	
4	102.3	231.8	102.3	355.6	8	41.3	273.1	1½	16	16	8	
5	128.2	276.2	128.2	419.1	8	47.6	323.9	1¾	16	16	8	
6	154.1	314.3	154.1	482.6	8	54.0	368.3	2	16	16	8	
8	202.7	384.2	202.7	552.5	12	54.0	438.2	2	24	24	12	
10	254.5	473.1	254.5	673.1	12	66.7	539.8	2½	24	24	12	
12	304.8	546.1	304.8	762.0	12	73.0	619.3	2¾	24	24	12	

Note :

Gasket I/D Dimensions can change depending on Schedule Pipe Flange, and the above table is along the STD Schedule Pipe.

For Flange Isolation kits over 24" in addition to the above please specify:

When ordering an Insulation Kit with dimensions greater than 24 ", or with other specifications (API, MSS, JIS, DIN, etc.), please refer to our Gasket Technical Data Book or contact the sales technical department.

24" 사이즈 보다 크거나 다른 Specification (API, MSS, JIS, DIN 등 등)의 Insulation Kit는 당사의 Gasket Technical Data Book을 참조하거나 영업기술부에 문의하여 주시기 바랍니다.

Other Technical Data : Installation and Torque Table. Seating Sterrs etc.

We supply not only our products but also various insulation kit products which have been verified in the world. Please refer to our each product brochure or our homepage (<http://mail.ssigp.com>) for detailed product technical data.

당사는 당사제품뿐만 아니라 세계적으로 품질이 검증된 다양한 인슐레이션 Kit 제품을 단독으로 공급하고 있습니다. 제품별 상세한 자료는 제품 브로셔 또는 당사 홈페이지 (<http://mail.ssigp.com>) 참고하시기 바랍니다.

Technical and Design Information

Gasket design, "m" (gasket factor) and "y" (minimum gasket seating stress) and "Sg(max)" (maximum gasket stress) values The Division 2 Section VIII of the ASME Pressure Vessel and boiler Code suggests the equations for gasket design, "m" (gasket factor), "y" (minimum gasket seating stress) and "Sg(max)" (maximum gasket stress) values. They are not meant to be used as gasket seating stress values in actual service.; however they are based on the results of successful practical applications.

"m" (gasket factor = Maintenance Factor)

The "M" Factor is the element that provides the additional preload required for flange fasteners to maintain the compressive load on the gasket after applying internal pressure to the flange joint. When the inner pressure is applied to the flange joint to which the fastener force is applied, the hydrostatic end force in the direction to open the flange and the internal force acting on the gasket are generated. If the hydrostatic end force is less than the internal force, the fluid will leak, and if the fastener force is too small, the fluid will leak due to an internal force.

The "m" Factor is defined as the ratio of the effective pressure of the gasket to the internal pressure of the working fluid.

$$m = (W - A_2P) / A_1P$$

Where: W = Total Fastener force [lbs. or N]

A₂ = Inside area of gasket [in² or mm²]

P = Test pressure [psi or N/mm²]

A₁ = Gasket contact area [in² or mm²]

A₂P = Hydrostatic end force [lbs]

A₁P = Internal force [lbs]

"y" - Minimum Design Seating Stress

The "Y" factor is the minimum compressive stress in pounds per square inch (psi) on the contact area of the gasket necessary to provide a seal at an internal pressure of 2 psi. This value is not meant to be a seating stress value for actual service.

$$y = W / A_1 \text{ [psi]}$$

Minimum Seating Stress at operational condition

$$W_{m1} = H + H_p = (\pi G^2 P / 4) + (2b\pi G m P) \text{ [lbs]}$$

$$W_{m2} = \pi b G y \text{ [lbs]}$$

Maximum Seating Stress

$$S_{g(max)} = W_m / ((\pi/4) (OD^2 - ID^2)) \text{ or } W_m / ((\pi/4) ((OD - 0.125)^2 - ID^2)) \text{ [psi]}$$

Where:

H = load due to internal pressure applied to flange [lbs]

H_p = compressive force applied to gaskets and flange contact surfaces [lbs]

G = diameter of the location of gasket load reaction, see table 3 [in]

P = design pressure [psi]

m = gasket Factor, see table 1

b = effective gasket seating width, see table 2 [in]

y = minimum gasket seating stress, see table 1 [psi]

W_m = bolt load as the greater of the values W_{m1} and W_{m2} [lbs]

OD = gasket external diameter [in]

ID = gasket internal diameter [in]

Tightening Torque

$$T_1 = k d W_{m1}$$

$$T_2 = k d W_{m2}$$

Where

T = Tightening Torque [lbs-inch]

d = Normal Bolt Size [inch]

k = Torque Coefficient (0.12~0.24)

Note

1. Torque Coefficient (k) varies depending on the material, size, coating, and lubrication of the bolts.
2. For more detail gasket design and bolt torque, consult our sales engineering team or our technical handbook.

Table 1 - Gasket Factor "m" and Minimum Design Seating Stress "y"

Gasket Design	Gasket Material	Gasket Style	Gasket Factor "M"	Min, Design Seating Stress (psi)	Facing Sketch and Column in Table 2	Column bo
Rubber Sheet & Gasket	Below 75A shore Durometer without Fabric	SSI 5000	0.50	0	(la) (lb) (lc) (ld) (4) (5)	I
	75A or higher shore Durometer without Fabric		1.00	200		
	with fabric insertion	SSI 5000R	1.25	400		
Steel Rubber Gasket	Without fabric insertion	SSI 5020	1.00	290	(la) (lb) (lc) (ld) (4) (5)	II
	With fabric insertion	SSI 5020R	1.25	400		
Compressed Non-asbestos Joint Sheet Gasket	3.2T (1/8")	TH3000, TH3000W, TH3200, TH3200W	2.00	1600	(la) (lb) (lc) (ld) (4) (5)	II
	1.6T (1/16")		2.75	3700		
	0.8T (1/36")		3.50	6500		
Spiral Wound Gasket	Graphite filler	SSI 934, 934R,964R	3.00	10000	(la) (lb)	II
	Non-asbestos & PTFE filler		3.00	7500		
	Low stress filler		3.00	5000		
Corrugated metal with filler or Corrugated metal jacketed with filler	Soft aluminum	SSI 841	2.50	2900	(la) (lb) (lc) (ld) (2)	II
	Soft copper or brass		2.75	3700		
	Iron or soft steel		3.00	4500		
	Monel or 4%~6% chrome		3.25	5500		
	Stainless steel & Nickel based alloys		3.50	6500		
Corrugated metal	Soft aluminum	SSI 844	2.75	3700	(la) (lb) (lc) (ld)	II
	Soft copper or brass		3.00	4500		
	Iron or soft steel		3.25	5500		
	Monel or 4%~6% chrome		3.50	6500		
	Stainless steel & Nickel based alloys		3.75	7600		
Flat metal jacketed with filler	Soft aluminum	SSI 840, 842, 843	3.25	5500	(la) (lb) (lc) (ld) (2)	II
	Soft copper or brass		3.50	6500		
	Iron or soft steel		3.75	7600		
	Monel		3.50	8000		
	4%~6% chrome		3.75	9000		
	Stainless steel & Nickel alloys		3.75	9000		
Grooved metal without filler	Soft aluminum	SSI 820,821,822,823	3.25	5500	(la) (lb) (lc) (ld) (2) (3)	II
	Soft copper or brass		3.50	6500		
	Iron or soft steel		3.75	7600		
	Monel or 4%~6% chrome		3.75	9000		
	Stainless steel & Nickel based alloys		4.25	10100		
Grooved metal with filler	Graphite filler	SSI 820,821,822,823	3.20	2500	(la) (lb) (lc) (ld) (2)	II
	Non-asbestos & PTFE filler		3.20	2500		
Solid flat metal	Soft aluminum	SSI 824	4.00	8800	(la) (lb) (lc) (ld) (2) (3) (4) (5)	I
	Soft copper or brass		4.75	13000		
	Iron or soft steel		5.50	18000		
	Monel or 4%~6% chrome		6.00	21800		
	Stainless steel & Nickel alloys		6.50	26000		
Ring Joint	Iron or soft steel	SSI 811 ~ 819	5.50	18000	(6)	I
	Monel or 4%~6% chrome		6.00	21800		
	Stainless steel & Nickel alloys		6.50	26000		

Table 2 – Effective width

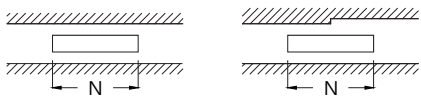
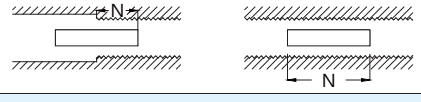
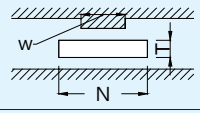
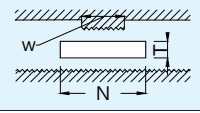
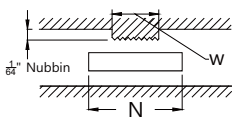
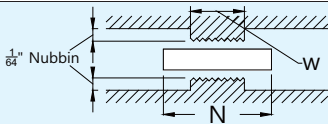
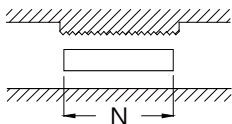
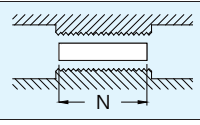
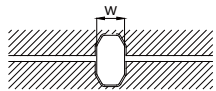
Facing Sketch Exaggerated	Basic Gasket Seating Width b_0	
	Column I	Column II
(1a) 	N/2	N/2
(1b) See Note(1) 		
(1c)  $W \leq N$	$(w+T)/2$; $(w+N)/4$ Max	$(w+T)/2$; $(w+N)/4$ Max
(1d)  $W \leq N$		
(2)  $W \leq N/2$	$(w+N)/4$	$(w+3N)/8$
(3)  $W \leq N/2$	N/4	3N/8
(4) See Note(1) 	3N/8	7N/16
(5) See Note(1) 	N/4	3N/8
(6) 	W/8	-
Effective Gasket Seating Width, b $b = b_0$ if $b_0 \leq 1/4"$ or $b = 0.5(b_0)0.5$ if $b_0 > 1/4"$ Note 1 : Where serrations do not exceed 1/64" depth and 1/32" width spacing, sketches (1b) and (1d) shall be used.		

Table 3 - Location of gasket load reaction

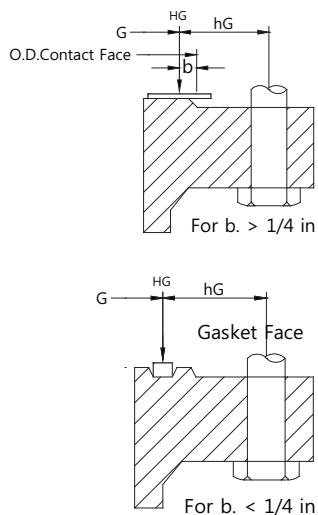


Table 4 - Typical Flange Surface Finish Requirements

Gasket Description	Flange Surface Finish R_a (μm)
Flat Non-Metalic ($T < 1.5\text{mm}$)	3.2 ~ 6.3
Flat Non-Metalic ($T < 1.5\text{mm}$)	3.2 ~ 12.5
Corrugated Metallic	1.6 max
Covered Corrugated Metallic	3.2 max
Spiral Wound	3.2 ~ 6.3
Metal Jacket	2.5 max
Flat Metallic	1.6 max
Metallic Grooved	1.6 max
Covered Metallic Grooved (Kammprofile)	3.2 ~ 6.3
Ring Joint	1.6 max

GLAND PACKING

SSI 200 Series

SSI 201

Grease Impregnated Cotton Braided Packing | 그리스입 면 패킹



Characteristic

High quality cotton threads are made into square or lattice braids and treated with chemically stable grease. It is especially suitable for brass-made stem tube.

고품질의 순면사를 치밀하게 편조하여 화학적으로 안정된 특수 그리스를 처리한 패킹으로서 SLEEVE 마모를 원하지 않는 저속 PUMP나 황동으로 만들어진 SLEEVE에 적합한 제품.

Application

Brass sleeves, marine shafts, salty and murky water, centrifugal pumps.



P (bar)	10	-	-
V (m/s)	8	-	-
pH	6~8		
T (°C)	-50~80		

SSI 204

Lubricated P.T.F.E Impregnated Hemp Flax Packing | PTFE함침 Hemp-Flax섬유패킹



Characteristic

Natural HEMP-FLAX fiber with special lubrication is impregnated with highly purified P.T.F.E solution. It is suitable for pure water and sea water pumps and for the flange of curving pipes.

천연의 HEMP-FLAX 섬유사에 고순도의 P.T.F.E 용액을 함침시켜 특수 윤활유를 처리하여 제작한 패킹으로서 청수 및 해수 PUMP에 뛰어난 성능을 발휘하며 선박의 선미축 패킹으로 많이 사용된다.

Application

Salty water, marine shafts, centrifugal pumps, Nutrition.



P (bar)	14	104	62
V (m/s)	12	2.5	2
pH	4~14		
T (°C)	-50~120		

SSI 206

Lubricated P.T.F.E Impregnated Synthetic Fiber Packing | 윤활유입 PTFE 함침 합성섬유패킹



Characteristic

New developed synthetic fiber, has excellent heat-proof and durability, are treated with P.T.F.E fluid, and braided with special lubricant oil. It can cover weak point of Asbestos packing and minimizing the development.

내약품성과 내구성이 뛰어난 신소재 합성섬유에 P.T.F.E를 함침하고 특수한 윤활유를 첨가하여 윤활성이 우수하다. 석면의 단점을 보완한 제품으로 사용 후 경화현상을 줄이고 기존의 비석면 제품보다 경제적이다.

Application

Normal water pump, weak acid, weak alkaline, solvent, normal oil.



P (bar)	32	207	103
V (m/s)	11	1	1.5
pH	2~12		
T (°C)	-17~260		

SSI 700 Series

SSI 701

Talent 1.



Characteristic

High tensile strength aramide fiber and excellent chemical resistance P.T.F.E fiber are mixed and braided. It is suitable for rotating or reciprocating machines requiring high performance.

고장력의 아라미드 섬유와 내약품성이 우수한 P.T.F.E. 섬유를 혼합 편조한 제품으로 고성능을 요구하는 회전 또는 왕복운동 기기에 적합한 제품이다.

Application

High pressure and speed, solvents, mild acids, strong gases, alkaline products, strong chemical fluids except melted alkaline metal, for universal use except with oxygen.



P (bar)	20	150	200
V (m/s)	20	1.5	1
pH	2~12		
T (°C)	280		

SSI 703

Talent 3.



Characteristic

P.T.F.E. is reinforced with aramid fiber and then braided. It has high density and high tensile strength. It can be applied to general pH ranges and is especially adaptable to high pressure of over 500bar for piston pumps of revolving movement.

P.T.F.E 섬유의 모서리 부분을 강인한 아라미드 섬유로 보강하여 만든 패킹. 500bar 이상 고압 범위에도 사용할 수 있는 세계 최초로 개발된 52CARRIER 편조기로 치밀하고 강력하게 편조하여 사용기간을 약 2배 이상 연장시킨 고품질 패킹이다.



P (bar)	20	500	500
V (m/s)	15	1.5	1
pH	2~13		
T (°C)	-200~280		

SSI 704

Talent 4.



Characteristic

Graphite filled P.T.F.E. fiber which is capable of good friction and heat conduction is reinforced with aramid fiber.

P.T.F.E.에 고순도 흑연, 특수윤활제를 분산시켜 제조된 특수섬유에 모서리 부분을 강인한 아라미드 섬유로 보강하여 내구성을 높인 패킹. 열전도성과 마찰력이 우수하며 특히 슬러지가 많이 함유되어 패킹의 수명이 단축되는 것을 방지하여 제지산업 및 제당산업에 뛰어난 성능을 보인다. Z-PAC 장착시 Inner Ring과 Out Ring으로 사용시에 우수한 성능을 보장한다.

Application

Water and waste process equipment, hot water, oil gases and solvents of mild acidity and alkalinity and for machineries of revolving and reciprocating movement.



P (bar)	20	250	200
V (m/s)	25	2	2
pH	2~12		
T (°C)	-200~280		

SSI 784G

Talent 10.



Characteristic

It is a braided packing made by mixing synthetic fibers with special fibers made by dispersing high purity graphite and special lubricant in PTFE. It is an advanced packing which is specially manufactured to reduce the hardening phenomenon of packing and to prevent wear of the sleeve even in the bad condition that contains a lot of slurry in sulfuric acid.

P.T.F.E.에 고순도 흑연, 특수윤활제를 분산시켜 제조된 특수 섬유에 합성사를 혼합하여 편조한 패킹. 황산에 슬러지가 많이 함유되어 악조건에서 경화현상을 줄이고 슬리브의 마모가 없도록 특수 제작된 첨단 패킹이다.

Application

Sulfuric pumps, by products of fluid oil, acids, alkali, water, steam, solvents.



P (bar)	50	500	250
V (m/s)	26	1.5	1
pH	0~14		
T (°C)	-100~300		

SSI 750 Series

SSI 751

P.T.F.E Fiber Braided Packing | PTFE섬유 편조 패킹



Characteristic

Pure P.T.F.E. fiber yarns of excellent chemical resistance and durability are braided into square cross sections. This product is nonlubricated.

내약품성과 내구성이 우수한 P.T.F.E.섬유를 첨단 편조기로 제작한 유연하고 치밀한 조직을 가진 패킹이다.

Application

Valves especially for alternating motion; chemicals, mixers, gases, high pressures, steam, except melted alkaline metals.



P (bar)	-	100	50
V (m/s)	-	2	1.5
pH	0~14		
T (°C)	-50~280		

SSI 752

Lubricated P.T.F.E Fiber Braided Packing | 윤활유 PTFE섬유 편조 패킹



Characteristic

PTFE fiber is a braided product impregnated with PTFE dispersion and heat-resistant special lubricant. It is excellent in abrasion resistance and mechanical strength.

P.T.F.E.섬유에 P.T.F.E. 분산액과 내열성 특수윤활제를 함침시켜 편조한 제품으로 내마모성과 기계적 강도가 우수하다.

Application

Centrifugal pump, air and gas valves, concentrated acids, strong and oxidizing substances.



P (bar)	20	100	100
V (m/s)	20	2	2
pH	0~14		
T (°C)	-200~280		

SSI 753

Lubricated Graphite Filled P.T.F.E. Braided Packing | 그래파이트 코팅 윤활유 PTFE섬유 편조 패킹



Characteristic

Packed braided fabric made by dispersing high purity graphite and special lubricant in P.T.F.E. It is economical because it has excellent thermal conductivity and long life, especially because there is no SLEEVE wear. It exhibits a special performance of chemical resistance and low friction.

P.T.F.E.에 고순도 흑연, 특수윤활제를 분산시켜 제조된 섬유를 편조한 패킹. 열전도성이 우수하여 수명이 길고 특히 SLEEVE 마모가 없어 경제적이다. 내약품성과 저마찰성의 특수한 성능을 나타낸다.

Application

High velocity water centrifugal pumps, steam oil, solvent, all products containing acid and alkali except oleum, nitric acid and turpentine, paper products.



P (bar)	20	500	200
V (m/s)	25	2	1.5
pH	0~14		
T (°C)	-200~280		

SSI 753 G2

Gore™ G2 Fiber High Pressure Packing | 초고압 패킹



Characteristic

Packed with high purity graphite and special lubricant dispersed in P.T.F.E., braided special fibers, Gore™ G2, made of high tensile strength.

P.T.F.E.에 고순도 흑연, 특수윤활제를 분산시켜 고 인장력으로 제조된 특수섬유를 편조한 패킹.

Application

High pressure valves and pumps, chemical processing, pharmaceutical production, power generation, paint production, nuclear power plants.



P (bar)	100	400	400
V (m/s)	20	2.5	2.5
pH	0~14		
T (°C)	-212~288		

SSI 753 GFO

GORE™ GFO Fiber Packing | GFO 섬유 패킹



Characteristic

GORE™ GFO® Fiber Packing Hardened or department can not minimize shaft wear and plus objections excellent lubricity and highly temperature conductivity Cool Running non-stop from high speed shaft speed in continuous operation is maintained, allowable temperature and chemical resistance, is widely used. GFO® packing due to high durability and long life, incessant high performance and high-speed pump, mixer, agitator and rotating or reciprocation shaft sealing Run.

GORE™ GFO® Fiber로 편조된 패킹은 장시간 사용하셔도 경화되거나 부서지지 않아 시프트의 마모가 최소화되며 우수한 자체 윤활성과 높은 열전도성은 고속 회전에서도 잘 견디며 변함없는 성능을 나타냅니다. 고속의 펌프, 믹서, 교반기 그리고 회전 또는 왕복 운동의 시프트 실링에 사용됩니다.

Application

Shaft on high-speed pumps, mixer, agitators, any other equipment with rotating or reciprocating shafts.



P (bar)	20	200	200
V (m/s)	21.8	2	2
pH	0~14		
T (°C)	-250~288		

SSI 754

Aramid Fiber Braided Packing | 아라미드 섬유 편조 패킹



Characteristic

Packing of aramid fiber treated with T.F.E dispersion and special lubricant. It is more effective when used in areas that need frequent replacement because it is more tough than steel.

아라미드 섬유에 T.F.E. 분산액과 특수윤활유를 처리한 패킹. 강철보다 고인장이므로 자주 교환해야 하는 부위에 사용하면 효과적이다.

Application

Pump, valve, piston, expansion joint, paper, water, stone, solvent, mild acid, alkali, oil, universal use except for iii oxygen, strong alkali and oxides.



P (bar)	30	220	100
V (m/s)	25	2	1.5
pH	2~12		
T (°C)	-100~280		

SSI 754S

Spun Aramid Fiber Braided Packing | Spun아라미드 섬유 편조 패킹



Characteristic

Spun Aramid Fibers with P.T.F.E Dispersion and treated with a special lubrication oil, are braided into square cross sections.

스핀아라미드 섬유에 P.T.F.E. 분산액과 내열성 특수윤활유를 처리하여 편조한 제품으로 SSI 754와 유사제품으로 주문자 사양으로 제작이 가능하다.



P (bar)	20	240	240
V (m/s)	11	3	1
pH	2~12		
T (°C)	-195~288		

SSI 754W

Special Spun Aramid Fiber Braided Packing | 특수 Spun아라미드 섬유 편조 패킹



Characteristic

Special Spun Aramid Fibers with P.T.F.E dispersion and treated with a special lubrication oil, are braided into square cross sections.

특수 스펀 아라미드 섬유에 P.T.F.E. 분산액과 내열성 특수윤활유를 처리하여 편조한 제품으로 SSI 754와 유사제품으로 주문자 사양으로 제작이 가능하다.



P (bar)	20	240	240
V (m/s)	11	3	1
pH	2~12		
T (°C)	-195~288		

SSI 75500



UHMW Teflon Braided Packing | UHMW 테프론 편조 패킹



Characteristic

UHMW(Ultra-high-molecular-weight) Teflon braided packing is a gland packing which is hybridized with s-PTFE, molybdenum and nano ceramics by a special manufacturing method.

It has excellent mechanical strength, sliding property, heat resistance, thermal conductivity and creep relaxation performance, which makes it possible to suppress surface stress and cold flow during temperature loading. It has passed the API 622 Emission Test to evaluate the anti-VOC (Volatile Organic Compound), ensuring excellent sealing at high temperature and high pressure.

UHMW(초고분자) 테프론 편조패킹은 sPTFE, 몰리브덴 그리고 나노 세라믹을 특수한 제조방법으로 하이브리드화한 yarn을 단면사각형태로 편조한 것이다.

기계적인 강도와 슬라이딩성, 내열성, 열전도성이 매우 우수하며 Creep Relaxation 성능이 대폭 개선되어 온도부하시 표면응력저하와 Cold flow를 억제하는 것이 가능하다. 고온 고압시에 우수한 씰링성이 보장되어 Anti- VOC(Volatile Organic Compound)을 평가하는 API 622 Emission Test에도 합격한 제품이다.



P (bar)	20	200	
V (m/s)	30	2	
pH	0~14		
T (°C)	-200~400		

Advantage

- Excellent thermal conductivity and excellent sliding property. 열전도성이 우수하여 슬라이딩성이 우수하다.
- It can be used for most fluids except strong oxidizing. 강산화성을 제외한 대부분의 유체에 사용가능하다.
- Incompatible fluid: Strong oxidizing acids (sulfuric acid, chromic acid, nitro-hydrochloric acid) 부적절 유체 : 강산화성 산 (황산, 크롬산, 염소)
- Since the surface Stress drop is small at high temperature load, it has excellent sealing property. 고온 부하시에 응력저하가 적기 때문에 우수한 Sealing성을 발휘한다.
- It is easy to cut and fasten due to its excellent flexibility. It is easy to work because it does not change shape of packing even at high temperature. 유연성이 우수하여 커팅과 체결이 쉬우며 고온에서도 패킹의 변화가 적음으로 교체작업이 용이하다.

Application

Pump, valve, expansion joint, paper, water, stone, solvent, mild acid, alkali, oil, universal use except for strong oxidizing acids.

SSI 770 Series

SSI 771

P.T.F.E Impregnated Carbonized Fiber Braided Packing | PTFE 함침 탄화섬유 패킹



Characteristic

Packing of carbonized fiber braided into a lattice and impregnated with P.T.F.E dispersion for a long time. It has excellent heat resistance, chemical resistance, excellent thermal conductivity, long life, and can replace asbestos.

탄화섬유를 격자편으로 편조하여 P.T.F.E 분산액을 장시간 함침시켜 소성시킨 패킹. 내열내약품성이 우수하고 열전도성이 뛰어나 수명이 길고 석면을 대체할 수 있다.

Application

Valve for acid and alkali solvent, sea water, industrial waste and other fluid.



P (bar)	-	250	200
V (m/s)	-	2.5	2
pH	2~12		
Max. T(°C)	200		

SSI 772

Lubricated P.T.F.E. Impregnated Carbonized Fiber Braided Packing | 윤활유입 PTFE 함침 탄화섬유 패킹



Characteristic

Impregnate SSI 771 product with special lubricant evenly. It has excellent heat resistance and chemical resistance and excellent self-lubricating property, so it is less damaged by frictional heat, and its service life is prolonged.

SSI 771 제품에 특수 윤활제를 골고루 함침시킨 패킹. 내열, 내약품성이 우수하며 자기윤활성이 뛰어나 마찰열에 의한 패킹 손상이 적어 수명이 연장된다.

Application

Corrosive fluids, organic solvents, steam, hot water, hydrocarbon, oil, rotary machine, valve, rotary pump, agitator, flange, etc.



P (bar)	50	200	200
V (m/s)	16	2.5	2
pH	2~12		
Max. T(°C)	200		

SSI 773

P.T.F.E Impregnated Carbon Fiber Braided Packing | PTFE 함침 탄소섬유 패킹



Characteristic

Carbon fiber is treated with P.T.F.E dispersion and packed with lattice woven packing. It has excellent heat resistance and chemical resistance, has self-lubricating property and easy dissipation of frictional heat, and has a long life.

탄소섬유를 P.T.F.E. 분산액으로 처리하여 격자편으로 직조한 패킹. 내열, 내약품성이 우수하고 자기윤활성을 갖고 마찰열의 방산이 용이하여 수명이 길다.

Application

Water, vapor, emulsion, acid and alkali, solvent.



P (bar)	-	250	250
V (m/s)	-	3	2
pH	2~12		
Max. T(°C)	300		

SSI 773P



Piston Pump Packing | 피스톤 펌프 패킹



Characteristic

This packing is our patented product which is coated with PTFE dispersion and graphite in SSI 773 Packing to maximize lubrication, heated and press molded in the ring shape of the finished product. Because of maximization of lubrication and excellent resilience and heat resistance of carbon fiber itself, it is possible to extend the service life of the product by minimizing deformation and hardening even in the long term. It is a suitable packing for piston pumps.

이 Packing은 윤활성을 극대화하기 위해서 SSI 773 Packing에 PTFE분산액과 Graphite로 코팅하고 완제품의 링 형상으로 가열, 가압 성형한 당사의 특허제품이다. 윤활성 극대화와 탄소섬유 자체의 우수한 탄성복원력 및 내열성으로 인해 장기간에도 변형 및 경화를 최소화함으로써 제품의 사용수명을 더욱 연장할 수 있는 효과가 있다. 피스톤 펌프용으로 적합한 packing이다.

Application

Corrosive fluids, organic solvents, steam, hot water, hydrocarbon, oil, rotary machine, valve, rotary pump, Piston Pump, agitator, flange, etc.



P (bar)	-	250	250
V (m/s)	-	3	2
pH	2~12		
Max. T(°C)	300		

SSI 774

Lubricated PTFE Impregnated Carbon Fiber Braided Packing | 윤활유입 PTFE 함침 탄소섬유 패킹



Characteristic

SSI 773 product impregnated with special lubricant. It has excellent heat resistance and chemical resistance. It has high thermal conductivity and excellent self-lubricating property. It is economical because it has low friction loss and durability.

SSI 773 제품에 특수 윤활유를 함침시킨 패킹. 내열, 내약품성이 우수하며 열전도성이 높고 자기윤활성이 뛰어나 저 마찰성이므로 동력의 손실을 줄이고 내구성이 높아 경제적이다.

Application

Steam, oil, solvent, mild acids and alkalies.



P (bar)	50	200	250
V (m/s)	15	5	2
pH	2~12		
Max. T(°C)	300		

SSI 775

Lubricated Graphite Fiber Packing | 윤활유입 PTFE 함침 그래파이트섬유 패킹



Characteristic

Special Graphite Filament Yarn braided packing. It has excellent heat resistance and chemical resistance.

특수 Graphite Filament Yarn을 격자편으로 편조한 패킹. 내열, 내약품성이 우수하다.

Application

Valve for acid and alkali solvent, sea water, industrial waste and other fluid.



P (bar)	30	200	80
V (m/s)	20	1.5	1
pH	0~14		
T(°C)	-200~600		

SSI 777

Lubricated Carbon Fiber Packing | 윤활유입 탄소섬유 패킹



Characteristic

To protect the stem surface, the product is fabricated by braiding flexible, continuous filament carbon yarn impregnated with a special lubricant containing corrosion inhibitor molybdenum into the lattice and then graphitized on the surface to prevent gas / liquid from leaking or seeping. It has excellent heat resistance and chemical resistance. It has a long life and stable performance. Therefore, it is widely used in various valves under high temperature and high pressure, and in rotary and reciprocating machines.



P (bar)	30	250	100
V (m/s)	25	2	1.5
pH	2~12		
T (°C)	-200~600		

연속 필라멘트 탄소사를 스템표면을 보호하기위한 부식방지제 몰리브덴이 첨가된 특수윤활제로 함침하고 격자편으로 편조한 후 가스/액체가 누출되거나 스며드는 것을 방지하기 위해서 편조한 표면을 흑연처리한 팩킹이다. 내열, 내약품성이 우수하며 수명이 길고 안정된 성능이 지속되므로 고온, 고압하의 각종밸브 및 회전 및 왕복기계장치에 널리 사용된다.

Application

Valve, pump and reciprocating machine with heated gas, hot oil, steam, hot water, hydrocarbon organic solvent, various chemical media.

SSI 710 Series

SSI 710

Hatch Cover Packing | 해치카바패킹



Characteristic

Special packing for hatch cover made of excellent elastic rubber, chemical resistant synthetic fiber and PTFE fiber. This show excellent sealing performance even under low seating stress without deformation for repeated usage. Order made product.



P (bar)	-	-	-
V (m/s)	-	-	-
pH	0~14		
Max. T (°C)	100		

탄력성이 우수한 특수고무에 내약품성이 좋은 섬유를 편조한 후 PTFE 섬유로 편조한 패킹. 낮은 체부압에도 우수한 Seal성을 발휘하여 반복사용하여도 변형이 거의 없는 Hatch Cover 전용 패킹.

Application

Marine hatch cover packing.

SSI 713

Chemical Gasket & Tape | 케미칼 가스켓



Characteristic

Made of PTFE fiber, which has excellent heat resistance, chemical resistance and sealability, braided and pressed to the size of the customer.



P (bar)	20		
V (m/s)	-	-	-
pH	0~14		
Max. T (°C)	280		

내열, 내약품성 및 밀봉성이 우수한 PTFE 섬유를 편조하여 주문자의 치수에 맞도록 가압가공한 제품.

Application

Strong acids and alkalis, expansion joints.

SSI 400 Series

SSI 400

Graphite Sheet | 그래파이트 시트



Characteristic

Purified natural graphite is treated with acid at high pressure. It is heat and chemical resistant and has excellent flexibility and elasticity so various jigs can be processed again even without any additive or adhesive.



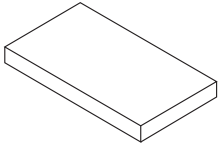

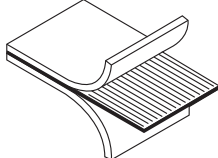
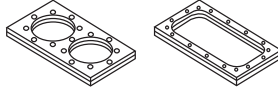
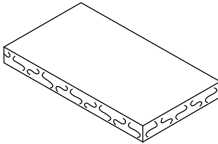
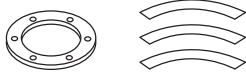
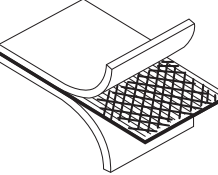
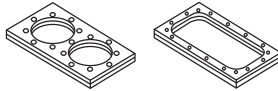
P (bar)	140		
Thickness	0.4/0.8/1.0/1.6/3.0		
pH	0 ~ 14		
T (°C)	-200 ~ 600*		

첨가물을 사용하지 않은 정제된 천연인상 흑연제품. 내열, 내약품성이 뛰어나고 유연성 및 압축 복원력이 우수하여 고온에서도 사용 가능하다. 결합체나 첨가제를 사용하지 않고 여러가지 Mold로 간단하게 재가공 할 수 있다.

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

Application

Valve for acid and alkali solvent, sea water, industrial waste and other fluid.

	Graphite product	Processing technique	SSI 403	End product
SSI 400	Unreinforced, impregnated 	Punching Cutting Scarf cutting Bonding		Simple gaskets Smooth stainless steel ring gaskets with graphite outer layers Corrugated stainless steel ring gaskets with graphite outer layers
SSI 400-P	Reinforced with bonded stainless steel foil 	Punching Cutting Scarf cutting Bonding		Gaskets for pumps and fittings
SSI 400-T	Reinforced with perforated s/s sheet, impregnated 	Punching Cutting Scarf cutting Bonding		Gaskets for pipework
SSI 400-W	Reinforced with inserteel s/s wire mesh 	Punching Cutting Scarf cutting Bonding		Gaskets for pumps and fittings

The SSI 403 is a product that is made by stamping the graphite sheet to a certain size.

SSI 401

Graphite Tape | 그래파이트 테이프



Characteristic

Size-free packing made by cutting the graphite sheet to a certain width and wrinkling the surface. It can be simply molded and used.

Graphite Sheet를 일정한 폭으로 절단하여 표면을 주름가공하여 테이프상으로 만든 프리사이즈 패킹. 간단히 성형시켜 사용 가능하다.

Application

Heated gas, hot oil heat mediator, steam, hot water, high temperature, hydrocarbon organic solvent, various chemicals, pump, valve and shaft.



P (bar)	140
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

SSI 402

Graphite Mold Packing | 그래파이트 몰드 패킹



Characteristic

Packing of graphite sheet with compression molding. It can be used from low temperature to high temperature without damaging the reciprocating and rotating shafts due to the self lubricating of graphite itself, and it is easy to complete sealing and maintenance. Special shapes are available according to customer's request.

Graphite Sheet를 일정한 치수로 압축성형 가공한 패킹. 흑연 자체의 자기 윤활성으로 왕복 및 회전 축에 손상을 주지 않고 저온부터 고온까지 사용 가능하며 완전한 밀봉작용과 보수유지가 간단하다. 다양한 형태로 주문 제작이 가능하다.

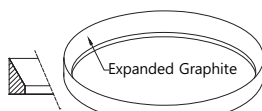
Application

Universal and nuclear use, pumps and valves, LNG valves and pumps, water steam, chemicals.



P (bar)	440
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C



Various Special types

SSI 402 Anti-VOC

Anti-VOC(Volatile Organic Compound) Packing | 휘발성 유기화합물 억제 패킹



Characteristic

Packing of graphite sheet with compression molding. It can be used from low temperature to high temperature without damaging the reciprocating and rotating shafts due to the self-lubricating of graphite itself, and it is easy to seal and maintain.



P (bar)	600
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

Graphite Sheet를 일정한 치수로 압축성형 가공한 패킹. 흑연 자체의 자기윤활성으로 왕복 및 회전축에 손상을 주지 않고 저온에서 고온까지 사용가능하며 밀봉작용과 보수유지가 간단하다.

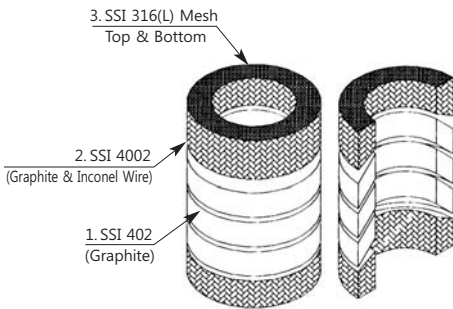
Application

Steam, water, gases, heat medium, oil, hydrocarbon, organic solvents, volatile organic compounds, LNG, extremely low temperature fluids.

Composition

Anti-VOC Packing is composed as shown in the figure. The intermediate stage composed of several low-density graphite is a stress relieving property and it is economical because it can be used semi-permanently due to various changes and thermal hardening phenomenon. By using Graphite & Inconel wire at TOP & BOTTOM, it guarantees excellent sealing at high temperature and high pressure. Packing ring plays a role to ensure compression by uniformly distributing compression force applied to Anti-VOC Packing.

Anti-VOC Packing은 그림과 같이 구성된다. 여러 개의 저밀도 Graphite로 구성된 중간단은 응력완화 특성으로 각종 변화와 열 경화 현상이 없어 반영구적인 사용이 가능하며 경제적이다. 상하단의 Graphite & Inconel wire 사용으로 고온 고압에서 우수한 sealing을 보장하며, Packing ring은 Anti-VOC Packing에 가해지는 압축의 힘을 균일하게 분산시켜 압축을 확실하게 해주는 역할을 한다.

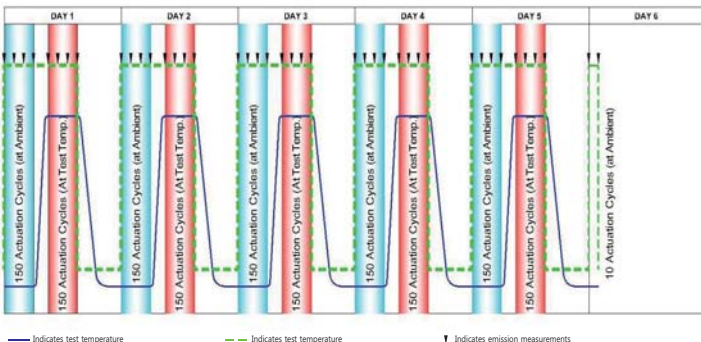


API 622

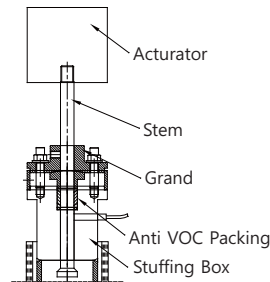
This API Standard specifies the requirements for comparative testing of valve stem packing for process applications where fugitive emissions are a consideration. High temperature packing(s) shall be suitable for use at service temperatures -29°C to 538°C (-20 °F to 1000 °F) and temperature limited packing(s), suitable for manufacturer specified temperature range. Factors affecting fugitive emissions performance that are considered by this Standard include temperature, pressure, thermal cycling, mechanical cycling and corrosion.

이 API기준은 Fugitive Emission을 고려한 응용프로그램의 valve stem packing의 비교 테스트에 대한 요구사항을 명시한다. 고온 packing들은 서비스 온도인 -29°C ~ 538°C (-20 °F ~ 1000 °F)에서 사용하기에 적합 해야하며, 온도 제한 packing들은 제조업체가 명시한 온도범위에 적합 해야한다.

Fugitive emission 수행에 영향을 주는 요인들은 온도, 압력, thermal cycling, mechanical cycling 및 부식이 포함된 이 표준에 의해서 간주된다.



API 622 Emission Test Condition



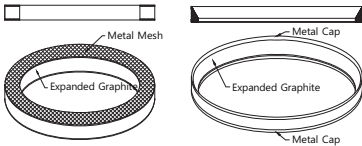
API 622 Emission Test Fixture



API 622 Test Certification

SSI 402MM

Graphite Pressure Seal Gasket | 그래파이트 고압 씌 가스켓



Characteristic

It is a gasket reinforced by wire mesh or metal cap on top and under SSI 402. It can be used from low temperature to high temperature by self-lubricating of graphite itself, and there is little stress relaxation and heat loss phenomenon.

SSI 402의 상하에 와이어메쉬 또는 메탈캡을 보강하여 가공한 가스켓으로 흑연자체의 자기윤활성으로 저온부터 고온까지 사용 가능하며 응력안화와 열감량 현상이 거의 없다.

Application

High pressure valve.



P (bar)	1000
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

SSI 403

Graphite Gasket | 그래파이트 가스켓



Characteristic

This product is made by stamping graphite sheet with a certain dimension. Since there is little reaction to temperature change, wide use is possible. Because SUS 316L and special metal sheet are used as reinforcing material according to the use conditions, sufficient sealing effect can be obtained even in high pressure and high temperature. It is made according to the customer's request.

이 제품은 Graphite Sheet를 일정한 치수로 타발 가공한 것이다. 온도변화에 대한 반응이 거의 없으므로 폭 넓은 사용이 가능하다. 사용조건에 따라 SUS 316L 및 특수한 금속 Sheet를 보강재로 넣기 때문에 고압, 고열에서도 충분한 밀봉효과를 나타낼 수 있다. 주문자 요구에 따라 제작된다.

Application

Hydrocarbon, organic solvent, LNG, how water, high temperature and pressure steam, valve bonnet, gaskets for heat exchanger, general piping flange and engine gasket.



P (bar)	140
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

SSI 4000

Super Expanded Graphite Braided Packing | 만능팽창 흑연 편조 팩킹



Characteristic

Pure graphite is chemically inert, only braided with fibers, requiring acid resistance or packing for high heat, high speed and high pressure. In addition, the natural lubricity disperses the heat during operation and makes the surface smooth, eliminating the wear of the sleeve, thus completely solving the shortcomings of the existing packing.

순수한 Graphite를 섬유로만 편조한 화학적으로 불활성이므로 내산성을 요구하거나 고열, 고속, 고압용의 패킹.또한 천연적 윤활성은 가동시 발열을 분산시키고 매끄러운 표면을 만들어 Sleeve의 마모가 발생하지 않아 기존 패킹의 결점을 완벽하게 해결한다.

Application

Nuclear power technology, chemical industry, high temperature, valve & pump.



P (bar)	200
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

SSI 4001

Expanded Graphite Braided Packing Reinforced With Inconel Wire | 인코넬선입 팽창흑연 편조 패킹



Characteristic

Expanded Graphite Fiber reinforced inconel wire with excellent heat resistance and braided with lattice. It maintains stable performance at high temperature and high pressure and compensates for the disadvantages of existing graphite mold packing.

Expanded Graphite 섬유에 내열성이 우수한 인코넬선을 보강하여 격자편으로 편조한 제품. 고온고압에서 안정된 성능을 유지하고 기존 Graphite mold packing의 단점을 보완하여 신축성이 있다.

Application

Nuclear and chemical industries, degreasing fluids, steam, gases, water, solvents, valves.



P (bar)	440
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

SSI 4002

Expanded Graphite Braided Packing Reinforced With Outside-Braided Inconel Wire | 인코넬매쉬입 팽창흑연편조패킹



Characteristic

Expanded Graphite It makes inconel wire which is excellent in heat resistance to fiber in mesh form and wrapped around fiber. It is a braided product that prevents the graphite from escaping under high temperature and high pressure and has elasticity.

Expanded Graphite 섬유에 내열성이 우수한 인코넬선을 매쉬형태로 섬유주위를 감싼 실로 만든다.

격자 편조한 제품으로 고온 고압에서 Graphite가 빠져나가는 것을 방지하고 신축성이 있다.

Application

High pressure valve and slow rotating, pumps vessels.



P (bar)	440
pH	0~14
T (°C)	-200~600*

*Oxidation Service Temperature
Non-Oxidation Temperature = 1650°C

SSI 4003



Expanded Graphite Braided Packing wrapped with Teflon | 밸브 스템 팩킹



Characteristic

This product uses threads wrapped with Teflon on Expanded Graphite Yarn.

It is a lattice braided product that prevents the graphite from escaping under high temperature and high pressure. It has excellent heat resistance and chemical resistance. Especially, it is suitable for valve stem packing because it has excellent lubricity. Because there is no joint in the middle of the mold packing, it has low mounting stress and it has excellent sealing ability and minimizes the friction with the stem.

이 제품은 Expanded Graphite yarn에 테프론을 Wrapping한 실을 사용한다. 격자편조한 제품으로 고온 고압에서 Graphite가 빠져나가는 것을 방지한다. 내열성, 내화학성이 우수하며 특히 윤활성이 우수하므로 밸브의 스템 팩킹용으로 적합한 제품이다. Mold Packing 중간에는 이음매가 없으므로 낮은 마운팅 Stress으로 씰링성이 우수하며 스템과의 마찰을 최소화할 수 있다.

- Avoids 'slip-stick' effect
- Excellent in control valves
- Easy to cut, assemble and disassemble
- Non-hardening, good reset capability, coefficient of thermal expansion similar to steel
- High cross section density and sealability to minimize emissions
- Wear and extrusion stability through structure reinforcement
- Low coefficient of friction minimises adjustment force on valve



P (bar)	200
pH	0~14
T (°C)	-200~600

Application

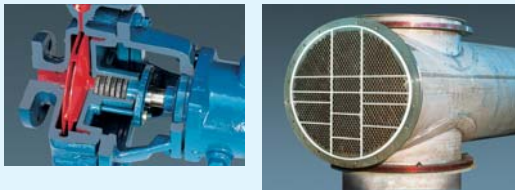
High pressure valve and slow rotating, pumps vessels.

GORE® GASKET & GLAND PACKING

GORE® Sealant Technologies

Innovative Sealing Solutions

- Made of expanded polytetrafluoroethylene (ePTFE)
- Superior chemical resistance (pH 0-14)
- Highly conformable to achieve outstanding tightness



Gore gaskets are proven effective against every performance measure. They seal at low bolt loads, conform to flange deviations, exhibit high dimensional stability, resist creep and cold flow, and are highly resistant to blowout. Gore gaskets are designed to meet the many needs of process piping materials, making them ideal for lowering total sealing system costs. They solve special sealing problems, and provide the ability to standardize with one gasket material across steel, glass-lined and FRP systems wherever non-metallic gaskets are used.

Also, **Gore compression packings** are the highest-performing, most universal products on the market today. Extremely long-lasting, they guard against unexpected packing failure and help reduce plant downtime.

GORE Sealant Products are

- suitable for **various applications** :
- | | |
|-------------------------|-----------|
| - Ducting | - Reactor |
| - Heat Exchanger | - Tank |
| - Mixer | - Tower |
| - Pipe Flange - Turbine | |
| - Pumps | - Valves |

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
© 2013 W. L. Gore & Associates, Inc.

GORE® Sealant Technologies

혁신적인 실란트 솔루션

- ePTFE 소재
- 강력한 내화학성(pH 0-14)
- 우수한 정착성에서 비롯된 뛰어난 기밀성



고어 가스켓의 우수성은 모든 면에서 입증된 바 있습니다. 낮은 볼트 하중에서의 실링 성능과 균일하지 않은 플랜지 표면에 대한 정착성이 뛰어나며, 정착 후 최소의 크기 변화를 자랑하고 크리프와 콜드 플로우, 터짐 현상에 대해 강력한 내성을 보유하고 있습니다.

또한, 공정 내 다양한 배관 소재에 적용 가능하도록 설계되어 실링 시스템 비용 절감에 이상적이며, 특수한 실링 문제를 해결하고 비금속 가스켓이 사용되는 경우 철강, 유리 코팅, FRP 시스템에 시공되는 가스켓의 소재를 하나로 통일해줍니다.

고어 압축 패킹 역시 현재 시판되는 제품 중 가장 우수한 성능과 폭넓은 적용 가능성을 자랑하는 제품으로, 극도로 긴 패킹 수명은 예기치 못한 문제점을 사전에 예방하고 공정의 휴지시간을 최소화하는데 기여하고 있습니다.

- 고어 실란트 제품의 다양한 용도:
- | | |
|----------|-------|
| - 덕팅 | - 리액터 |
| - 열 교환기 | - 탱크 |
| - 믹서 | - 타워 |
| - 배관 플랜지 | - 터빈 |
| - 펌프 | - 밸브 |

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
© 2013 W. L. Gore & Associates, Inc.

GORE® Sealant Technologies

GORE® 유니버설 파이프 가스켓(스타일 800)



본 제품은 화학 공정 배관을 위한 모든 표준형 플랜지를 위한 범용형 가스켓 제품으로서 다양한 배관 소재의 조건을 만족시켜 스텝, 글라스라이트 스텝, FRP시스템 등 다양한 분야를 위한 표준형 제품으로 적용됩니다.

제품의 수명이 길어 전체 시스템 실링 비용을 절감하며 재고 보관의 부담을 낮춰 주고 잘못된 가스켓 사용의 위험을 낮춰 줍니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
©2013 W. L. Gore & Associates, Inc.

GORE® Sealant Technologies

GORE® GR 시트 가스켓



비교할 수 없는 신뢰도의 실링력을 자랑하는 본 제품은 강력한 화학 액체를 다루는 스텝 파이프 및 장비의 플랜지 실링에 가장 이상적으로 적용되는 제품입니다.

PTFE 가스켓 재질로 크리프 및 콜드 플로우 현상을 방지하며 타 PTFE시트 카스켓 대비 고온에 대한 내성이 강합니다.

또한 리크로 인해 가스켓이 늘어지는 현상을 방지합니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
©2013 W. L. Gore & Associates, Inc.

GORE® Sealant Technologies

GORE® 조인트 실란트



최초의 현장 제작형 가스켓인 본 제품은 대형장비 플랜지에 있어서 시트형 가스켓 보다 훨씬 더 다목적, 경제적인 제품입니다. 복잡한 표면을 위한 최적의 솔루션으로서 거칠고 울퉁불퉁한 표면의 플랜지에도 완벽하게 장착됩니다. 이형지를 떼고 표면에 장착한 후 끝단을 겹쳐 붙이기만 하면 되기 때문에 시공 역시 쉽고 간단합니다.

* 산업용으로만 사용 가능합니다.
식품, 약품, 화장품 또는 의료 기기의 제조, 처리, 포장 공정 용도로는 사용할 수 없습니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
© 2013 W. L. Gore & Associates, Inc.

GORE® Sealant Technologies

GORE® 시리즈 500 가스켓 테이프



본 제품은 시간, 비용, 불편함을 모두 해소해 주는 최신 ePTFE 기술의 현장 제작형 제품으로서 대형 스틸 파이프 및 장비 플랜지의 신뢰성을 혁신적으로 높였습니다. 탁월하게 향상된 크리프 내성은 물론, 잘 안착되는 성능으로 장기간 비교할 수 없는 실링력을 제공하며 높은 수준의 내화학성으로 어떤 화학공정에도 적용할 수 있습니다. 테이프 타입의 제품으로서 기존의 대형 가스켓과는 달리 원하는 형태로 재단하여 용이하게 장착할 수 있어 기존의 대형 가스켓 제품이 갖고 있던 재단 및 재고 보관의 번거로움을 완벽히 해결하였습니다.

* 산업용으로만 사용 가능합니다.
식품, 약품, 화장품 또는 의료 기기의 제조, 처리, 포장 공정 용도로는 사용할 수 없습니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
© 2013 W. L. Gore & Associates, Inc.

GORE® Sealant Technologies

GORE® 시리즈 600 가스켓 테이프



본 제품은 글라스 라인드 장비를 위한 현장 제작형 제품으로서 시공 후 가스켓의 조기 파손을 방지하여 줍니다.
 PTFE 엔벨로프 가스켓과는 달리 본 제품은 화학 제품에 의한 성능 저하가 일어나지 않아 장시간에 걸쳐 높은 실링력을 제공하여 드립니다.
 100% 다방향성 확장형 PTFE로 제작된 본 제품은 높은 내화학성을 특징으로 합니다.
 일반 글라스 라인드 플랜지의 불완전성에도 지속적으로 안정적인 규격을 유지할 수 있습니다.
 뿐만 아니라 낮은 비용으로 신속하고 용이하게 설치 및 시공할 수 있습니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
 © 2013 W. L. Gore & Associates, Inc.

GORE® Sealant Technologies

GORE® 가스켓 테이프



본 제품은 다목적의 얇은 현장 제작형 가스켓으로서 FF 스트립 타입 제품입니다.
 2인치(50.8mm) 넓이 이하의 납작한 정사각형 표면 혹은 좁은 면적에 적용되는 제품입니다.
 매우 얇은 단면의 플랜지에 최소의 압착만 가해도 쉽게 장착됩니다.
 시공 및 제거가 용이하여 최소의 압축력을 요하는 장비에 이상적입니다.

* 산업용으로만 사용 가능합니다.
 식품, 약품, 화장품 또는 의료 기기의 제조, 처리, 포장 공정 용도로는 사용할 수 없습니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
 © 2013 W. L. Gore & Associates, Inc.

GORE® PACKING



100% GFO FIBER
Pack It and Forget It.™

G

세계 유일의 팩킹 파이버 실링 보장 프로그램

시장에는 다양한 PTFE/흑연 팩킹이 있습니다. 겉모습은 모두 비슷하지만 제품의 품질면에서 차이가 커 낮은 품질의 제품 선택 시 제품의 조기 하자 발생으로 인해 상당한 시간 및 비용 손실이 발생될 수 있습니다.

이러한 문제점을 해결하기 위해 고어는 '실링 보장 프로그램'을 통해, 직조에 사용되는 모든 고어 파이버 제품에 GORE™ GFO 인증제를 도입하였습니다. 고어는 더 나아가 2차 시장 검증도 함께 진행합니다. GORE™ GFO™ 제품은 팩킹 제품의 성능과 품질을 보장하는 업계 유일의 인증표시입니다.

GORE® GFO® 팩킹

100% GORE® GFO® 파이버로 제조된 고어 팩킹 제품은 다양한 응용분야 및 용도에 지속적인 고성능을 제공하여 드립니다. 타사 PTFE/흑연팩킹과 달리 GORE® GFO® 팩킹은 지난 30여년간 하지않은 지속적인 고성능을 통해 고객의 신뢰를 쌓아 왔습니다. 또한, 높은 내구성 및 긴 수명으로 지속적인 높은 성능을 제공하여 드립니다.

본 제품은 고속 펌프, 믹서 및 교반기의 샤프트 실링 및 기타 회전 혹은 왕복 운동 샤프트와 관련된 장비에 적용됩니다.

GORE® GFO® 팩킹은 소재가 단단해지거나 탄력 저하가 일어나지 않아 샤프트의 마모를 최소화합니다.

더욱이 탁월한 윤활성과 높은 열전도성으로 4,300 fpm(21.8m/s) 속도로 샤프트가 연이어 운전되어도 낮은 온도를 유지시켜 줍니다. 장착 및 해체가 용이한 본 팩킹 제품은 탁월한 내열, 내화학성으로 다양한 조건/환경에 적용될 수 있습니다.

* 산업용으로만 사용 가능합니다.

식품, 약품, 화장품 또는 의료 기기의 제조, 처리, 포장 공정 용도로는 사용할 수 없습니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
©2013 W. L. Gore & Associates, Inc.

GORE® PACKING



GORE® 밸브 스템 팩킹

GORE® 밸브 스템 팩킹은 밸브 스템(축)의 마모를 제거하고, 자체 영구적으로 사용할 수 있는 유연하고, 자체 윤활 기능을 가진 패킹입니다.

GORE™ 밸브 스템 팩킹은 케이블과 같이 길게 제공되어 쉽게 설치되고, 압축되면 응집성 실린더를 형성하므로 자르거나 링을 만들 필요가 없습니다.

* 산업용으로만 사용 가능합니다.

식품, 약품, 화장품 또는 의료 기기의 제조, 처리, 포장 공정 용도로는 사용할 수 없습니다.

GORE 및 디자인은 W. L. Gore & Associates의 등록 상표입니다.
©2013 W. L. Gore & Associates, Inc.

APPENDIX

PROJECT-OFFSHORE

Date	Project Name	Client	Location	Customer
2016.09	Odoptu Stage2	Hyundai Heavy Industries Co.,Ltd	Russia	Exxon Mobil
2016.08	LCP-BADAMYAR	Hyundai Heavy Industries Co.,Ltd	MYANMAR	TOTAL
2014.03	MOHO NORD TLP	Hyundai Heavy Industries Co.,Ltd	Congo	TOTAL
2014.01	HEBRON PJT	Hyundai Heavy Industries Co.,Ltd	Canada	Exxon Mobil
2013.07	Delta House PJT	Hyundai Heavy Industries Co.,Ltd	U.S. Gulf of Mexico	EXMAR
2013.08	Mafumeria Sul PJT	DSME	Angola	Chevron
2013.04	DSO PJT	Hyundai Heavy Industries Co.,Ltd	Nigeria	Chevron
2013.01	Barzan PJT	Hyundai Heavy Industries Co.,Ltd	Qatar	Rasgas
2012.03	Wheatstone PJT	DSME	Australia	Chevron
2012.01	Goliat PJT	Hyundai Heavy Industries Co.,Ltd	Norway	Eni Norge
2012.01	Atwood Asvantage Deepwater Drillship	DSME		Atwood Ocean
2011.04	Gorgon PJT	Hyundai Heavy Industries Co.,Ltd	West Australia	Chevron
2011.04	Clov PJT	DSME	Angola	Total E&P Angola
2011.02	SHWE PJT	Hyundai Heavy Industries Co.,Ltd	Myanmar	Myanmar E&P(DEP)
2010.06	Grupo-R-Semi Drilling Rig (HULL No.3026/3027)	DSME	"North America"	Grupo-R
2010.04	"Discover Luanda (HULL No.3504)"	DSME	U.S.A	Trans Ocean
2010.02	Discover Inspiration 3rd (HULL No.3503)	DSME	U.S.A	Trans Ocean
2009.12	BONGKOT FIELD DEVELOPEMENT	Hyundai Heavy Industries Co.,Ltd	THAILAND	PPT Exploration & Production
2010.01	Carolina Deepwater Drillship (HULL No.3605)	DSME		PETROSERV SA
2009.03	PAZFLOR FPOS	ILSUNG Corporation	ANGOLA	Daewoo Shipbuilding & Marine Engineering Co.,Ltd
2008.1	PAZFLOR FPOS	DSME	ANGOLA	TOTAL
2008.08	SKARV DEVELOPMENT	Samsung Heavy Industry Co.,Ltd	NORWAY	BP
2008.07	USAN DEEPWATER DEVELOPMENT	Hyundai Heavy Industry Co.,Ltd	ULSAN	Total E & P Nigeria Ltd
2008.07	BORUGE 2 REACTOR	Hyundai Heavy Industry Co.,Ltd	ULSAN	"Hyundai Heavy Industry Co.,Ltd"
2008.02	MARAFIQ IWPP	Hyundai Heavy Industry Co.,Ltd	SAUDI	Jubail Water & Power Company
2007.04	SOUTH PARS PHASE-6,7 & 8 PROJECT	Dealim Industries Co.,Ltd	IRAN	"National Iranian Oil Company (NIOC) / Pars Oil & Gas Company (POGC)"
2007.01	"Sea-Drill RIG (3019~3024)"	DSME		Seadrill Ltd

PROJECT-OFFSHORE

Date	Project Name	Client	Location	Customer
2007.01	VASAI PJT	Samsung Heavy Industry Co.,Ltd	MALAYSIA	ONGC (Oil & Natural Gas Corporation Limited India)
2006.01	BP ANGOLA PLUTONIO FPSO TFI	Hyundai Heavy Industries Co.,Ltd	ANGOLA	BP
2006.01	MOHO BILONDO FIELD DEVELOPMENT	Hyundai Heavy Industries Co.,Ltd	CONGO	TOTAL E&P CONGO
2006.06	Crude Export Facilitiesat NTF,STF and MAA	Hyundai Heavy Industries Co.,Ltd	AL AHMADI, KUWAIT	KUWAIT OIL COMPANY (KOC)
2006.01	EAST AREA EPC-1B	Hyundai Heavy Industries Co.,Ltd	Nigeria	Nigerian National Petroleum Corporation
2006.03	LG EDC & VCM TANK	Hyundai Heavy Industries Co.,Ltd	YOCHON	LG
2006.03	UAE JEBEL ALI "L" PH2 CONDENSER	Hyundai Heavy Industries Co.,Ltd	ULSAN	UAE JEBEL ALI
2006.03	WLGP-SABRATHA PLARFORM	Hyundai Heavy Industries Co.,Ltd	Libya	WGPL
2006.03	STENA	Samsung Heavy Industries Co.,Ltd	Libya	STENA DRILLING
2006.03	CHEVRON TEXACO EGP3A OFFSHORE PLATFORM	Hyundai Heavy Industries Co.,Ltd	NIGERIA	CHEVRON TEXACO
2006.03	SHENZI	Samsung Heavy Industries Co.,Ltd	Mexico	Shenzi Oil and Gas Field.
2006.03	CVX AGBAMI	DSME	NIGERIA	CHEVRON TEXSCO
2006.12	AKPO Field Development PROJECT	Hyundai Heavy Industries Co.,Ltd	NIGERIA	TOTAL
2005.01	Enfield	Samsung Heavy Industry Co., Ltd.	Australia	WOODSIDE
2005.01	Roug-Doi Tay Gas Field Development	Hyundai Heavy Industries Co.,Ltd	Vietnam	KNOC/PV/AKEA/HHI
2005.01	Sable Tier II Compression Proj.	DSME	Nova Scotia	Exxon Mobil
2005.03	Sakalin-1 OPT Proj.	Hyundai Heavy Industries Co.,Ltd	Sakalin	Exxon Mobil
2005.03	MSP Platform Proj.	Hyundai Heavy Industries Co.,Ltd	Nigeria	ONGC (Oil & Natural Gas Corporation Limited India)
2005.03	Dalia Proj.	Samsung Heavy Industry Co., Ltd.	Angola	Total
2005	Great Plutonio FPSO	Hyundai Heavy Industries Co.,Ltd	Angola	BP
2004.02	East Area Proj.	Samsung Heavy Industry Co., Ltd.	Nigeria	Nigeria Natonal Petroleum Compony / Mobil Producing Nigeria Unlimited Exxon Mobil
2004.02	Benuela-Belize Development Proj.	DSME	Benguela Belize	CHEVRON- Texaco

PROJECT-OFFSHORE

Date	Project Name	Client	Location	Customer
2003.02	Sakhalin II, Phase2 Development Prject. (LUN-A) Topside Proj.	Samsung Heavy Industry Co., Ltd.	East of Russian	Sakhalin Energy Investment Company Ltd
2003.02	Studen	Samsung Heavy Industry Co., Ltd.	Mexico	WOODSIDE
2003.02	Magnolia	Samsung Heavy Industry Co., Ltd.	Angola	Magnolia Field
2003.03	Chevron Sanha Condnsa	DSME	Angola	CHEVRON-TEXACO-CA BIND
2003.06	ExxonMobil Kizomba 'B' TLP SWHP	DSME	SAKHALIN	ExxonMobil
2003.02	SAKHALIN-1 Project	Hyundai Heavy Industries Co.,Ltd	(Russia)	Exxon Nefte gas Limited
2003.01	Exxon-Mobil Kizomba 'A,B'	Hyundai Heavy Industries Co.,Ltd	Angola	Exxon-Mobil
2002.02	Modeg Marco Polo TLP	Samsung Heavy Industry Co., Ltd.	Mexico	Enterprise Products Partners / Helix Energy Solutions
2001.07	Arkutun-Dagi PJT	DSME	SAKHARIN	Exxon-Mobil

PROJECT-ONSHORE

Date	Project Name	Client	Customer
2017.04	MAINTENANCE	Korea Midland Power Co.ltd.,	Komipo
2017.03	Banggai Ammonia Plant	TK FLANGE	PT PANCA ARAMA UTAMA (INDONESIA)
2015.6	KJG PT KELLMANTAN	STEEL WORLD	PGN SOLUTION (INDONESIA)
2014.12	SHUQAIQ	Hyundai Heavy Industries Co.,Ltd	SEC
2014.1	FORT HILLS SECONDARY EXTRACTION	SK E&C	Fort Hills Energy L.P
2014.06	Az-Zour North	Hyundai Heavy Industries Co.,Ltd	PTB (Partnerships Technical Bureau of Kuwait
2014.06	Dangjin Thermal power plant	KOREA EAST-WEST POWER CO.,LTD	Daelim Industrial Co., Ltd.
2014.05	Sejong steam supply and power generation	Doosan Heavy Industry Co.,Ltd	KOMIPO
2014.09	LZPP PJT	Daewoo E & C	General Electricity Company of Libya
2014.08	Ruwais Refinery Expansion	Daewoo E & C	Abu Dhabi Refining Company (UAE)
2014.08	MJLP PJT	Daewoo E & C	JORF LASFAR ENERGY CO
2014.04	Pocheon LNG Power Plant	Daelim Industrial Co., Ltd.	Daelim Industrial Co., Ltd.
2014.03	MCCP PJT	Daewoo E & C	Daewoo E & C
2014.02	BCCP PJT	Daewoo E & C	General Electric Co., Libya
2013.04	ZCCP PJT	Daewoo E & C	Daewoo E & C
2012.11	S3 IPP PJT	Daewoo E & C	UAE
2012.09	SUR IPP	Daewoo E & C	OMAN
2010.03	NGL 4	Hyundai engineering Co.,Ltd	Qatar general Petroleum Corporation (Qatar)
2008.03	PVTEX PET	Hyundai E & C	PVTEX DINH VU JSC
2011.07	Effluent Water Disposal Plants	Daelim Industrial Co., Ltd	Kuwait Oil Company (Kuwait)
2009.07	Copp pipe spool-GT project	Sung Gwang Co.,Ltd	Sung Gwang Co.,Ltd
2011.08	Long Harbour Processing Plant	X-METECH	Metz
2011.06	IRPC PJT	GS E & C	Daebong Acrotec Co.,Ltd.
2011.05	LNG Power Plant	Sung Gwang Co.,Ltd	Sung Gwang Co.,Ltd
2009.1	Dung Quat Polypropylene project	Hyundai engineering Co.,Ltd	Petrovietnam

PROJECT-ONSHORE

Date	Project Name	Client	Customer
2009.05	JG Summit Naphtha Cracker	Daelim Industrial Co., Ltd.	JG Summit Olefins Corp.& JG Summit Petrochemical Corp. (Philippines)
2010.01	Plant Rejuvenation & Revamp	Hyundai engineering Co.,Ltd	PETRONAS GAS BHD. (MALAYSIS)
2009.06	SIEMENS Project	Sung Gwang Co.,Ltd	Sung Gwang Co.,Ltd
2009.02	HMC pp Line-3 Project	GS E & C	HMC POLYMERS Co.,Ltd (IRAN)
2007.04	Polypropylene Line-3 Project	GS E & C	HMC POLYMES Co.,Ltd
2007.04	Sohar Aromatics Project	GS E & C	SOHAR AROMATICS (OMAN)
2007.04	C-PJT	Dealim Industries Co.,Ltd	HONAM PETROCHEMICAL CORP.
2006.02	LG-DOW POLYCARBONATE TRAIN-II	G.S E & C	LG
2007.04	SOUTH PARS PHASE-6,7 & 8 PROJECT	"Dealim Industries Co.,Ltd"	National Iranian Oil Company(NIOC) / Pars Oil & Gas Company (POGC)
2007.04	C-PJT	"Dealim Industries Co.,Ltd"	HONAM PETROCHEMICAL CORP.
2010.12	HABSHAN 5 UTILITYS & OFFSITES	Sung Gwang Co.,Ltd	HYUNDAI E&C
2010.01	GULF	Sung Gwang Co.,Ltd	Sung Gwang Co.,Ltd
2009.07	Copp pipe spool-GT project	Sung Gwang Co.,Ltd	Sung Gwang Co.,Ltd
2009.06	SIEMENS Project	Sung Gwang Co.,Ltd	Sung Gwang Co.,Ltd
2010.01	MAINTENANCE	WOONGJIN POLY SILICON	WOONGJIN POLY SILICON
2010.09	MAINTENANCE	"WOLSONG NUCLEAR POWER GENERATION"	"WOLSONG NUCLEAR POWER GENERATION"
2010.02	JGC/HABSHAN	S&TC	HYUNDAI E&C
2011.01	RUWAIS	S&TC	SAMSUNG ENG
2010.09	TECHNIP-JUBAL	S&TC	ARAMCO
2010.06	Daewoo International – JACKET VESSLE	KE&P	KE&P
2010.12	HITACHI SENKO LP RUBBER LINING	SUNGILSIM	SUNGILSIM
2010.12	BLACK HILLS HP	Sedae Enertech	Sedae Enertech
2009.03	PAZFLO FPOS	ILSUNG Corporation	Daewoo Shipbuilding & Marine Engineering Co.,Ltd
2010.1	SARAJEH GAS FIELD EARLY PRODUCTION	DKT	TEHRAN OIL REFINING COMPANY
2011.05	MARC CCR	DAEBONG ACROTEC CO., LTD	L & T
2011.04	LHPP/CARBON STEEL, ARD FABRICATED TANKS	DAEBONG ACROTEC CO., LTD	X-METECH

PROJECT-ONSHORE

Date	Project Name	Client	Customer
2011.02	No.5 BD & No.7 BTX PJT	DAEBONG ACROTEC CO., LTD	FU-TAI
2011.02	MAINTENANCE	LG Chem	LG Chem
2001.08	SAUTH PARS	"Dealim Industries Co.,Ltd"	INDIA (LOCATION)
2000.12	PELICAN 480MW CCPP	"Hyundai engineering And Construction(HDEC)"	"Hyundai engineering And Construction(HDEC)"
2000.04	GSI	SHINHWA E&C	"SAUDI ARABIA (LOCATION)"
2000.03	TOR RFCC	SK E&C	GHANA (LOCATION)
2000.01	MADERO	SK E&C	MEXICO (LOCATION)
1999.04	"PHASE OF THE CRACKING CAR MODEL"	SK E&C	COLUMBIA (LOCATION)
1998.12	SURFUR RECOVERY PLANT	SK E&C	MEXICO (LOCATION)

ETC

Client	Application	Size / Item
DONG KANG METAL CO., LTD	Gasket & Packing for Valve	<ul style="list-style-type: none"> ● 150# ~ 2500#, 1/2" ~ 36" ● Spiral Wound Gasket ● Mold Packing
KPC	Gasket & Packing for Valve	<ul style="list-style-type: none"> ● 150# ~ 2500#, 1/2" ~ 36" ● Spiral Wound Gasket ● Mold Packing
SAMSHIN VALVES	Gasket & Packing for Valve	<ul style="list-style-type: none"> ● 150# ~ 2500#, 1/2" ~ 36" ● Spiral Wound Gasket ● Mold Packing
KUMWOO	Gasket & Packing for Valve	<ul style="list-style-type: none"> ● 150# ~ 2500#, 1/2" ~ 36" ● Spiral Wound Gasket ● Mold Packing
3KVALVE	Gasket & Packing for Valve	<ul style="list-style-type: none"> ● 150# ~ 2500#, 1/2" ~ 36" ● Spiral Wound Gasket ● Mold Packing
SHIN SHIN MACHINERY	Gasket & Packing for Valve	<ul style="list-style-type: none"> ● 150# ~ 2500#, 1/2" ~ 36" ● Spiral Wound Gasket ● Mold Packing
MJ TSR Co., LTD	Gasket for Keyston Butterfly Valve	<ul style="list-style-type: none"> ● 150# ~ 2500#, 1/2" ~ 36" ● Spiral Wound Gasket

Accessories for your oil & gas pipeline needs.



Flange Isolating Gasket Kits

Full, raised, or ring joint gaskets available in a variety of material with accompanying sleeves and washers to fit any application.



Casing Spacers

Field-changeable modular runners are available, as well as rollers. Available in stainless steel and fusion-coated polymer steel bands with 8" and 12" widths, sizes 2" to 120".



Innerlynx® Modular Mechanical Seals

Molded rubber pipe wall penetration seals can be used in treatment plants, valve vaults, tanks and containment dikes. Available in EPDM, nitrile, silicone, and UL three hour fire-rated styles.



Bore Spacer

Designed to support and cradle conduit for ease of installation, allowing optimal free flow of grout and eliminating voids.



Integra II SSA® Gaskets

Severe service gaskets suitable for services up to ANSI 2,500# and API 15,000# classes.



Isojoint® Monolithic Isolating Joints

Monolithic isolating joint available in 1/2" to 144" in diameter. ANSI 150# to 2,500# and up to API 10,000#.



UBolt-Cote® and Atlas® Pipe Support Pads

Eliminate crevice corrosion with the proven UBolt and pipe support combination. Available in polyefin and fusion-applied polymer coats.



Integra II SSAFS® Gaskets

API 6FB approved fire-safe isolation gasket kits that provide exceptionally dependable isolating and sealing capabilities for severe service applications. Featuring a seal that can withstand temperatures up to 1292 °F and proprietary coated hardened steel washers. Available in classes up to ANSI 2500# and API 10,000#.



Kleerband® Flange Protectors

Clear extruded polymer band allows for 360° inspection, and is equipped with grease-injection fittings and a relief-vent plug.



Radolid® Nut & Bolt Protection Caps

To prevent corrosion on fasteners. Low-density polyethylene with VCI (Volatile Corrosion Inhibitor) to provide the ultimate protection.



Kleerergel®

This high-performance grease executes well at high and low temps (-50 °F to 500 °F). It is dielectric and hydrophobic, USDA H-1 category approved for incidental food contact.



Inspect-a-lift® Pipe Supports

Provides the proven solution to crevice corrosion at pipe supports. Allows for easy inspection to DOT compliance.



Foreman Nite Caps

Cast aluminum temporary pipe plugs, sizes 2" to 48". Prevents unwanted foreign materials, small animals, mud or water from contaminating a pipeline.



METAL GASKET, GLAND PACKING, SEAL PRODUCTS

SSI SAMSUNG INDUSTRY CO.,LTD.

■ Head Office & Factory:
 29-51, Sinsan-ro, Saha-gu, Busan, Korea
 TEL: 82-51-315-4500 FAX: 82-51-323-0022
 DIR: 82-51-326-6699
 Homepage: www.ssigp.com
 E-mail: ssi@ssigp.com