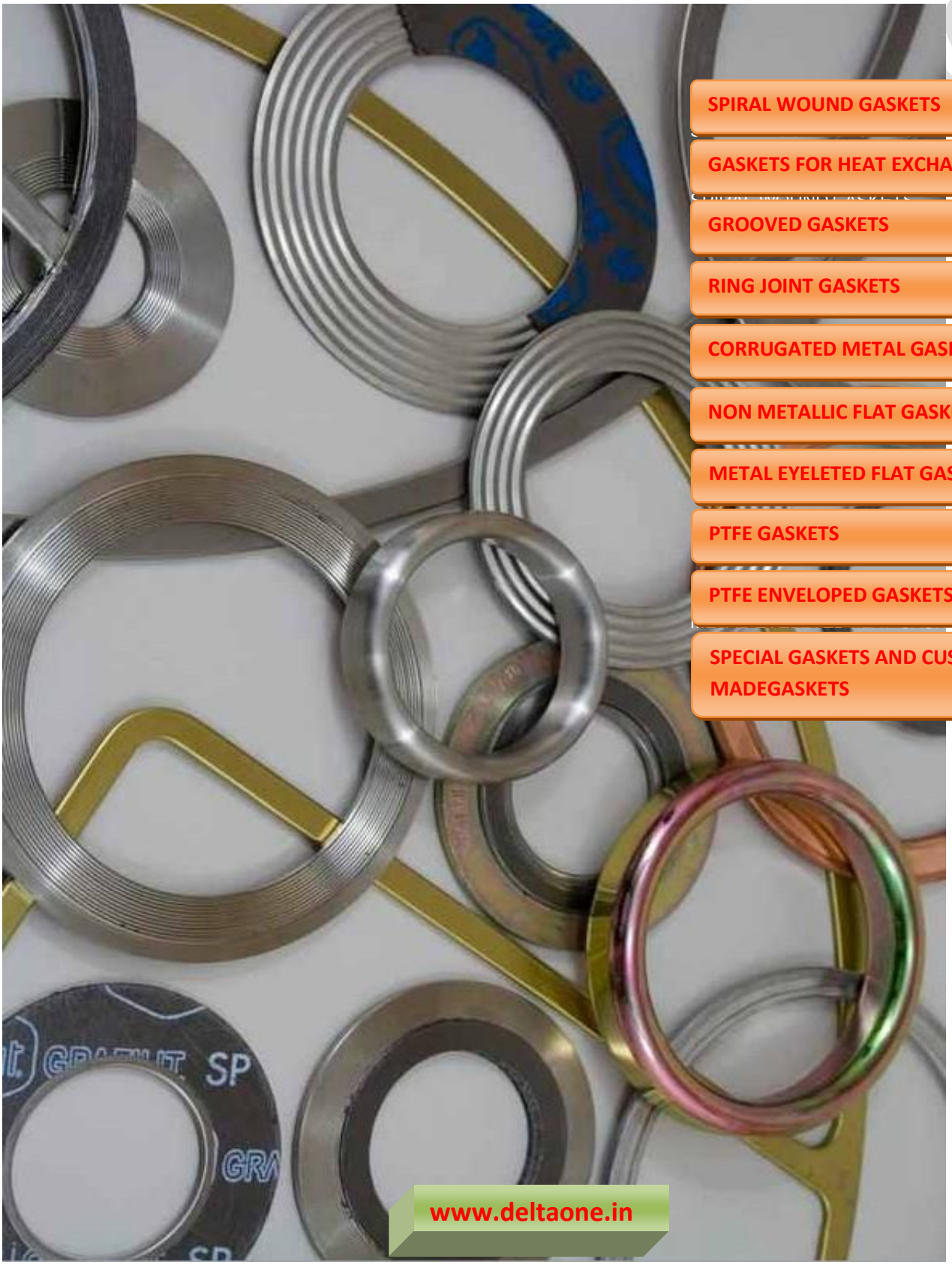
DELTA ONE ENGINEERING
We Make The Difference

Industrial Gaskets



- SPIRAL WOUND GASKETS
- GASKETS FOR HEAT EXCHANGERS
- GROOVED GASKETS
- RING JOINT GASKETS
- CORRUGATED METAL GASKETS
- NON METALLIC FLAT GASKETS
- METAL EYELETED FLAT GASKETS
- PTFE GASKETS
- PTFE ENVELOPED GASKETS
- SPECIAL GASKETS AND CUSTOM MADEGASKETS

www.deltaone.in

About Us

Our Company Overview

A New rise in the world of sealing technology since two years. We are a professional manufacturer of various kinds of sealing and packing material, equipped with rich experienced, highly skilled and fully qualified engineers and staffs. Relying on advanced management system and first-class technology.All our sealing products are extensively applied in those industrial departments, such as petroleum, chemical industry,fertilizer industry,valve & boiler manufacturing industry,thermal power plants,tyre manufacturing, electric power, metallurgy, machinery, automobile, shipping building, pharmacy, aerospace industry, nuclear industry, etc.

Our Mission

- We are a premier manufacturer of standard and specialty gaskets.
- Our goal is to achieve sustained and profitable growth through fair and honest dealings with our customers and our employees.
- Deltaone Engineering is mainly focussed on product quality and customer satisfaction at a fair price, we respond to our customer within TAT and satisfy all your needs
- "Quality first, we guarantee product quality; Customers first, we satisfy customer demands" are the eternal faith of us

Experience counts

- Delta One is supported by well knowledged & trained people having more than three decades of experience in sealing industries.
- In the process we have built excellent long term customer relationships with our customers worldwide.

Reputation built on Quality & Service

- First and foremost, we manufacture a wide variety of gaskets, and if we do not have what you need, we will manufacture to your design and assure all your specifications are met.
- All of our gaskets are precisely machined to ASME standards.
- We stand behind our work and we respond quickly to any customer issues.
- When it comes to customer satisfaction, we take it to heart by supplying the highest quality manufacturing processes and materials that meet and exceed your technical standards, we do not cut corners.
- We thoroughly inspect our products to ensure that they meet our standards and our customers' expectations.

Our commitment to you

- We pledge to provide you with a wide range of quality products, available when you need them, with outstanding service at a fair price to meet your needs.

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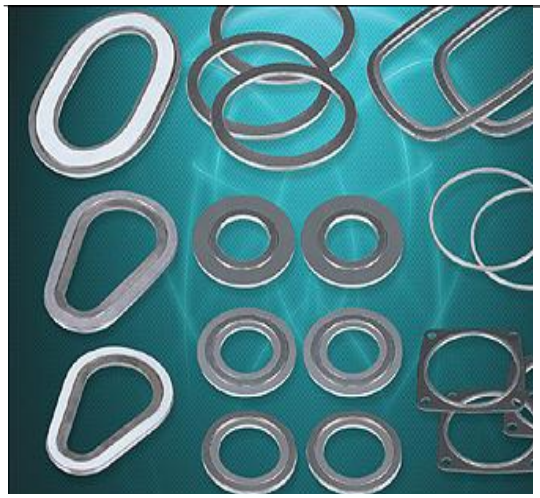
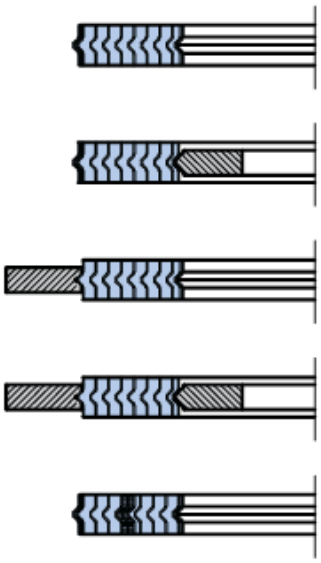


PROPERTIES AND APPLICATION

Spiral wound gaskets are special semi-metallic gaskets of great resilience, therefore they are very suitable for applications featuring heavy operating conditions. Spiral wound gaskets are manufactured by spirally winding a V-shaped metal strip and a strip of non-me- tallic filler material. The metal strip holds the filler, providing the gasket with mechanical resistance and resilience. Spiral wound gaskets can be reinforced by an outer centering ring and/or inner retaining ring. The outer centering ring controls the compression and holds the gasket centrally within the bolt circle. The inner re- taining ring increases the axial rigidity and resilience of the gasket. Spiral wound gaskets should always be in contact with the flange and should not protrude into the pipe or project from the flange. Spiral wound gaskets can be used for sealing flange joints, manhole and handhold covers, tube covers, boilers, heat exchangers, pres- sure vessels, pumps, compressors and valves; in industries such as petrochemical, pharmaceutical, shipbuilding, and food processing, in power industries and nuclear power stations. They are ideal for steam, oil, liquids, gases, acids, alkalines, various organic medium- sand solvents.



ADVANTAGES

- Sealing under heavy operating conditions.
- Strong stress compensation, stable and reliable sealing perfor- mance even under frequent pressure fluctuation condition.
- Solid construction provides stability and sea liability even when the sealing surfaces are slightly corroded or bent.
- Easy installation.

SHAPE AND CONSTRUCTION

Spiral wound gaskets are produced in several styles and combina- tion of materials to fit the most stringent application. Spiral wound gaskets are usually of circular shape, however we can produce them in other shapes such as: oval, rectangular, with round corners, etc. Our standard production program comprises a range of spiral wound gaskets with inner diameters of 10 mm to 3000 mm and a nominal thickness of 3.2 mm, 4.5 mm and 6.5 mm. Spiral wound gaskets of non-standard dimensionsand shapes, and larger diam- eters are available on request.

GASKET STANDARD STYLES

- Gaskets without guide and inner ring
- Gaskets without guide and inner ring
- Gaskets with inner ring
- Gaskets with guide (outer) ring
- Gaskets with guide and with inner ring

*With PTFE sealing zone

Metallic strip

Standard thickness of the metallic strip is 0.2 mm (0.18).

MATERIALS FOR METALLIC STRIP	
ASTM	DIN Material No.
AISI 304	1.4301
AISI 316, 316 L	1.4401, 1.4404
AISI 321	1.4541
AISI 316 Ti	1.4571
Monel (NiCu30Fe)	2.4360

Other alloys available on request.

Filler

- Filler is normally used for thicknesses from 0.5 mm to 0.6 mm.
- Flexible graphite 98%
- Flexible graphite 99.85%
- PTFE, E-PTFE
- Ceramic, Micalit

Centering ring

The centering ring does not come into direct contact with contained fluid. It is normally made of carbon steel and electro plated or painted to avoid corrosion. Other materials are available on request.

Inner ring

Inner ring is used to avoid excessive compression due to high seating stress in high-pressure service and it is also used to reduce turbulence in the flange area. It is normally made of the same material as the gasket metallic strip.

DIMENSIONS

Manufacturing sizes
This limitations are general and can vary according to the special customer requirements.

LIMITATIONS FOR MANUFACTURING DIMENSIONS			
Thicknesss [mm]	Max diameter d3[mm]	Maximum width - bs [mm]	
		Graphite	PTFE
2.5	300	16	13
3.2	700	22	19
4.5	1500	30	24
6.5	3000	35	24
7.2	3000	30	24

Thickness

The standard manufacturing thicknesses for spiral wound gaskets are: 3.2 mm; 4.5 mm; 6.5 mm (measured across metallic strip not including the filler, which protrudes 0.2-0.3 mm beyond the metal).

Manufacturing tolerances

The tolerance of the gasket diameters (d l, d2, d3, d4, s, si) are stipulated by ASM E B 16.20 and EN 1514-2 standards. The gaskets designed for non-standard flanges meet the recommendations by the ASME B 16.20

Dimensions

The dimensions of the standard SWG meet the ASME, BS and EN (DIN) standards.

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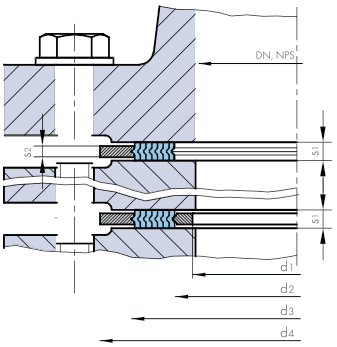

DN (mm)	NPS (in)
15	1/2
20	3/4
25	1
32	1 1/4
40	1 1/2
50	2
65	2 1/2

DN (mm)	NPS (in)
80	3
90	3 1/2
100	4
125	5
150	6
200	8
250	10

DN (mm)	NPS (in)
300	12
350	14
400	16
450	18
500	20
550	22
600	24

SWG for BS 1560 and ASME B 16.5 flanges

NPS (in)	d1 (mm)		d2 (mm)		d3 (mm)	d4 (mm)						
Class (lb)	150-400	600-2500	150-400	600-2500	150-2500	150	300	400	600	900	1500	2500
1/2	12.7	12.7	19.1	19.1	31.8	44.4	50.8	50.8	50.8	60.3	60.3	66.7
3/4	20.6	20.6	27	27	39.7	53.9	63.5	63.5	63.5	66.7	66.7	73
1	27	27	33.3	33.3	47.6	63.5	69.8	69.8	69.8	76.2	76.2	82.5
1 1/4	41.3	39.7	47.6	46	60.3	73	79.4	79.4	79.4	85.7	85.7	101.6
1 1/2	49.2	47.6	55.6	54	69.9	82.5	92.1	92.1	92.1	95.2	95.2	114.3
2	61.9	60.3	71.4	69.9	85.7	101.6	108	108	108	139.7	139.7	142.8
2 1/2	74.6	73	84.1	82.6	98.4	120.6	127	127	127	161.9	161.9	165.1
3	95.3	92.1	104.8	101.6	120.7	133.4	146.1	146.1	146.1	165.1	171.5	193.7
3 1/2	108	104.8	117.5	114.3	133.4	158.8	161.9	158.7	158.7			
4	117.5	114.3	130.2	127	149.2	171.5	177.8	174.6	190.5	203.2	206.4	231.7
5	144.5	141.3	157.2	154	177.8	193.7	212.7	209.5	238.1	244.5	250.8	276.2
6	171.5	168.3	184.2	181	209.6	219.1	247.7	244.5	263.5	285.8	279.4	314.3
8	222.3	219.1	235	231.8	263.5	276.2	304.8	301.6	317.5	355.6	349.3	384.1
10	276.2	269.9	288.9	282.6	317.5	336.5	358.8	355.6	396.9	431.8	431.8	473
12	330.2	323.8	342.9	336.5	374.6	406.4	419.1	415.9	454	495.3	517.5	546.1
14	361.9	355.6	374.6	368.3	406.4	447.7	482.6	479.4	488.9	517.5	574.7	
16	412.7	406.4	425.4	419.1	463.5	511.2	536.6	533.4	561.9	571.5	638.1	
18	466.7	460.4	479.4	473.1	527	546.1	593.7	590.5	609.6	635	701.7	
20	517.5	511.2	530.2	523.9	577.8	603.2	650.9	644.5	679.5	695.3	752.4	
22	574.4	568.4	587.4	581.1	635	657.2	701.7	698.5	730.3			
24	622.3	615.9	635	628.6	685.8	714.4	771.5	765.2	787.4	835	898.5	

EN 1514-2 gaskets for EN 1092-1 flanges

DN (mm)	d1 (mm)	d2 (mm)	d3		d									
PN Class	PN 10-320	PN 10-320	PN 10-40	PN 64-320	PN 10	PN 16	PN 25	PN 40	PN64	PN 100	PN 160	PN250	PN 320	PN 400
10	18	24	36	36	46	46	46	46	56	56	56	67	67	67
15	22	28	40	40	51	51	51	51	61	61	61	72	72	78
20	27	33	47	47	61	61	61	61	72	72	72	77	77	
25	34	40	54	54	71	71	71	71	82	82	82	83	92	104
32	43	49	65	65	82	82	82	82	90	90	90	100		
40	48	54	70	70	92	92	92	92	103	103	103	109	119	135
50	57	66	84	84	107	107	107	107	113	119	119	124	134	150
65	73	82	102	104	127	127	127	127	137	143	143	153	170	192
80	86	95	115	119	142	142	142	142	148	154	154	170	190	207
100	108	120	140	144	162	162	168	168	174	180	180	202	229	256
125	134	146	168	172	192	192	194	194	210	217	217	242	274	301
150	162	174	196	200	217	217	224	224	247	257	257	284	311	348
175	183	195	221	227	247	247	254	265	277	287	284	316	358	402
200	213	225	251	257	272	272	284	290	309	324	324	358	398	442
250	267	279	307	315	327	328	340	352	364	391	388	442	488	
300	318	330	358	366	377	383	400	417	424	458	458	538		
350	363	375	405	413	437	443	457	474	486	512				
400	414	426	458	466	488	495	514	546	543	572				
450	460	478	526	551	558	567	564	571	534					
500	518	530	566	574	593	617	624	628	657	704				
600	618	630	666	674	695	734	731	747	764	813				
700	718	730	770	778	810	804	833	852	879					
800	818	830	874	882	917	911	942	974	988					
900	910	930	974	982	1017	1011	1042	1084	1108					
1000	1010	1030	1078	1086	1124	1128	1154	1194	1220					
1200	1210	1230	1280	1290	1341	1342	1364	1398	1452					
1400	1420	1450	1510		1548	1542	1578	1618						
1600	1630	1660	1720		1772	1764	1798	1830						
1800	1830	1860	1920		1972	1964	2000							
2000	2020	2050	2120		2182	2168	2230							
2200	2230	2260	2330		2384	2376								
2400	2430	2480	2530		2594									
2600	2630	2660	2730		2794									
2800	2830	2860	2930		3014									
3000	3030	3060	3130		3228									

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ASME B 16.20 gaskets for ASME B 16.5 flanges

NPS (in)	d1 (mm)					d2 (mm)					d3 (mm)		d4 (mm)						
Class (lb)	150-300	400-600	900	1500	2500	150-300	400-600	900	1500	2500	150-600	900-2500	150	300	400	600	900	1500	2500
1/2	14.2	14.2	14.2	14.2	14.2	19.1	19.1	19.1	19.1	19.1	31.8	31.8	47.8	54.1	54.1	54.1	63.5	63.5	69.9
3/4	20.6	20.6	20.6	20.6	20.6	25.4	25.4	25.4	25.4	25.4	39.6	39.6	57.2	66.8	66.8	66.8	69.9	69.9	76.2
1	26.9	26.9	26.9	26.9	26.9	31.8	31.8	31.8	31.8	31.8	47.8	47.8	66.8	73.2	73.2	73.2	79.5	79.5	85.9
1 1/4	38.1	38.1	38.1	33.3	33.3	47.8	47.8	39.6	39.6	39.6	60.5	60.5	76.2	82.6	82.6	82.6	88.9	88.9	104.9
1 1/2	44.5	44.5	44.5	41.4	41.4	54.1	54.1	47.8	47.8	47.8	69.9	69.9	85.9	95.3	95.3	95.3	98.6	98.6	117.6
2	55.6	55.6	55.6	52.3	52.3	69.9	69.9	58.7	58.7	58.7	85.9	85.9	104.9	111.3	111.3	111.3	143.0	143.0	146.1
2 1/2	66.5	66.5	66.5	63.5	63.5	82.6	82.6	69.9	69.9	69.9	98.6	98.6	124.0	130.3	130.3	130.3	165.1	165.1	168.4
3	81.0	81.0	81.0	81.0	81.0	101.6	101.6	95.3	92.2	92.2	120.7	120.7	136.7	149.4	149.4	149.4	168.4	174.8	196.9
4	106.4	106.4	106.4	106.4	106.4	127.0	120.7	120.7	117.6	117.6	149.4	149.4	174.8	181.1	177.8	193.8	206.5	209.6	235.0
5	131.8	131.8	131.8	131.8	131.8	155.7	147.6	147.6	143.0	143.0	177.8	177.8	196.9	215.9	212.9	241.3	247.7	254.0	279.4
6	157.2	157.2	157.2	157.2	157.2	182.6	174.8	174.8	171.5	171.5	209.6	209.6	222.3	251.0	247.7	266.7	289.1	282.7	317.5
8	215.9	209.6	196.9	196.9	196.9	233.4	225.6	222.3	215.9	215.9	263.7	257.3	279.4	308.1	304.8	320.8	358.9	352.6	387.4
10	268.2	260.4	246.1	246.1	246.1	287.3	274.6	276.4	266.7	270.0	317.5	311.2	339.9	362.0	358.9	400.1	435.1	435.1	476.3
12	317.5	317.5	292.1	292.1	292.1	339.9	327.2	323.9	323.9	317.5	374.7	368.3	409.7	422.4	419.1	457.2	498.6	520.7	549.4
14	349.3	349.3	320.8	320.8		371.6	362.0	356.6	362.0		406.4	400.1	450.9	485.9	482.6	492.3	520.7	577.9	
16	400.1	400.1	374.7	368.3		422.4	412.8	412.8	406.7		463.6	457.2	514.4	539.8	536.7	565.2	574.8	641.4	
18	449.3	449.3	425.5	425.5		474.7	469.9	463.6	463.6		527.1	520.7	549.4	596.9	593.9	612.9	638.3	704.9	
20	500.1	500.1	482.6	476.3		525.5	520.7	520.7	514.4		577.9	571.5	606.6	654.1	647.7	682.8	698.5	755.7	
24	603.3	603.3	590.6	577.9		628.7	628.7	628.7	616.0		685.8	679.5	717.6	774.7	768.4	790.7	838.2	901.7	

ASME B 16.20 gasket for ASME B 16.47 Series B flanges

NPS (in)	d1 (mm)					cl2 (mm)					d3 (mm)					d4 (mm)				
Class (lb)	150	300	400	600	900	150	300	400	600	900	150	300	400	600	900	150	300	400	600	900
26	654.1	654.1	654.1	644.7	666.8	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	704.9	704.9	701.8	692.2	717.6	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	755.7	755.7	752.6	752.6	781.1	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	958.3
32	806.5	806.5	800.1	793.8	838.2	825.5	825.5	812.8	831.9	863.6	850.9	863.6	858.5	882.7	914.4	881.1	939.8	911.4	933.5	1016.0
34	857.3	857.3	850.9	850.9	895.4	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	908.1	908.1	898.7	901.7	920.8	927.1	927.1	917.7	939.8	946.2	958.9	962.2	965.2	990.6	997.0	987.6	1047.8	1022.4	1047.8	1124.0
38	958.9	971.6	952.5	952.5	1009.7	974.6	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	1009.7	1003.3	1000.3	1009.7	1060.5	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	1060.5	1054.1	1051.1	1066.8	1111.3	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	1111.3	1124.0	1104.9	1111.3	1155.7	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	1162.1	1178.1	1168.4	1162.1	1219.2	1181.1	1216.2	1193.8	1212.9	1270.0	1224.0	1254.3	1244.6	1263.7	1320.8	1255.7	1317.8	1289.1	1327.2	1435.1
48	1212.9	1231.9	1206.5	1219.2	1270.0	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	1263.7	1267.0	1257.3	1270.0		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	1314.5	1317.8	1308.1	1320.8		1335.5	1368.6	1346.2	1371.6		1376.4	1406.7	1397.0	1422.4		1408.2	1470.2	1454.2	1498.6	
54	1365.3	1365.3	1352.6	1378.0		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	1422.4	1428.8	1403.4	1428.8		1444.8	1479.6	1454.2	1479.6		1477.8	1524.0	1505.0	1530.4		1514.6	1593.8	1568.5	1612.9	
58	1478.0	1484.4	1454.2	1473.2		1500.4	1535.2	1505.0	1536.7		1528.8	1573.3	1555.8	1587.5		1579.6	1655.8	1619.3	1663.7	
60	1535.2	1557.3	1517.7	1530.4		1557.3	1589.0	1568.5	1593.9		1586.0	1630.4	1619.3	1644.7		1630.4	1706.6	1682.8	1733.6	

ASME B 16.20 gaskets for ASME B 16.47 Series A flanges

NPS (in)	d1 (mm)					d2 (mm)					cB (mm)					d4 (mm)				
Class (lb)	150	300	400	600	900	150	300	400	600	900	150	300	400	600	900	150	300	400	600	900
26	654.05	654.05	660.4	647.7	666.75	673.1	685.8	685.8	685.8	685.8	704.85	736.6	736.6	736.6	736.6	774.7	835.15	831.85	866.9	882.65
28	704.85	704.85	711.2	698.5	711.2	723.9	736.6	736.6	736.6	736.6	755.65	787.4	787.4	787.4	787.4	831.85	898.65	892.3	914.4	946.15
30	755.65	755.65	755.65	755.65	774.7	774.7	793.75	793.75	793.75	793.75	806.45	844.55	844.55	844.55	844.55	882.65	952.5	946.15	971.55	1009.65
32	806.45	806.45	812.8	812.8	812.8	825.5	850.9	850.9	850.9	850.9	860.55	901.7	901.7	901.7	901.7	939.8	1006.6	1003.3	1022.4	1073.15
34	857.25	857.25	863.6	863.6	863.6	876.3	901.7	901.7	901.7	901.7	911.35	952.5	952.5	952.5	952.5	990.6	1057.4	1054.1	1073.2	1136.65
36	908.05	908.05	917.7	917.7	920.75	927.1	955.8	955.8	955.8	958.85	968.5	1006.6	1006.6	1006.6	1009.65	1047.75	1117.6	1117.6	1130.3	1200.15
38	958.85	952.5	952.5	952.5	1009.65	977.9	977.9	971.55	990.6	1035.05	1019.3	1016	1022.35	1041.4	1085.85	1111.25	1054.1	1073.15	1104.9	1200.15
40	1009.65	1003.3	1000.25	1009.65	1060.45	1028.7	1022.35	1025.65	1047.75	1098.55	1070.1	1070.1	1076.45	1098.55	1149.35	1162.05	1114.55	1127.25	1155.7	1250.95
42	1050.45	1054.1	1051.05	1066.8	1111.25	1079.5	1073.15	1076.45	1104.9	1149.35	1123.95	1120.9	1127.25	1155.7	1200.15	1219.2	1165.35	1178.05	1219.2	1301.75
44	1111.25	1104.9	1104.9	1111.25	1155.7	1130.3	1130.3	1130.3	1162.05	1206.5	1178.05	1181.1	1181.1	1212.85	1257.3	1276.35	1219.2	1231.9	1270	1368.55
46	1162.05	1152.65	1168.4	1162.05	1219.2	1181.1	1178.05	1193.8	1212.85	1270	1228.85	1228.85	1244.6	1263.65	1320.8	1327.15	1273.3	1289.05	1327.2	1435.1
48	1212.85	1209.8	1206.5	1219.2	1270	1231.9	1235.2	1244.6	1270	1320.8	1279.65	1286	1295.4	1320.8	1371.6	1384.3	1324.1	1346.2	1390.7	1485.9
50	1263.65	1244.6	1257.3	1270		1282.7	1295.4	1295.4	1320.8		1333.5	1346.2	1346.2	1371.6		1435.1	1377.95	1403.35	1447.8	
52	1314.45	1320.8	1308.1	1320.8		1333.5	1346.2	1346.2	1371.6		1384.3	1397	1397	1422.4		1492.25	1428.75	1454.15	1498.6	
54	1358.9	1352.55	1352.55	1377.95		1384.3	1403.35	1403.35	1428.75		1435.1	1454.15	1454.15	1479.55		1549.4	1492.25	1517.65	1555.8	
56	1409.7	1403.35	1403.35	1428.75		1435.1	1454.15	1454.15	1479.55		1485.9	1504.95	1504.95	1530.35		1606.55	1543.05	1568.45	1612.9	
58	1460.5	1447.8	1454.15	1473.2		1485.9	1511.3	1504.95	1536.7		1536.7	1562.1	1555.75	1587.5		1663.7	1593.85	1619.25	1663.7	
60	1511.3	1524	1517.65	1530.35		1535.7	1562.1	1568.45	1593.85		1587.5	1612.9	1619.25	1644.65		1714.5	1644.65	1682.75	1733.6	

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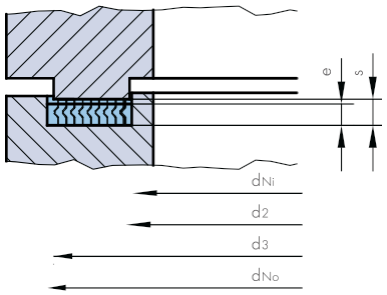
Industrial Gaskets
SPIRAL WOUND GASKETS

LOAD BEARING GASKETS



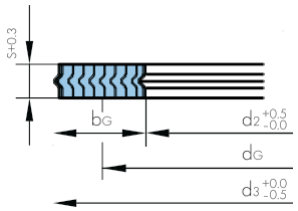
Gasket compression

Spiral-would gaskets shall be designed in such a way that a uniform bolt stress, based on the nominal root diameter, will compress the gasket to a thickness (e).

STANDARD GASKET COMPRESSION			
s	3.2	4.5	6.5
e	$2,5^{*0.1}$	$3.3^{\pm01}$	4.7^{*01}

Connections with non-load bearing gaskets

Since no standards exist as yet for the use of spiral-wound gaskets in no-load bearing connections, the application of guidelines from the adjacent table is recommended
Gaskets and grooves dimensions

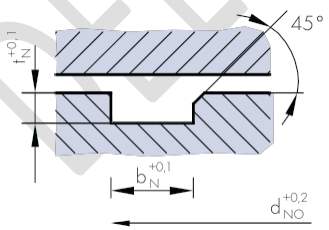


SPIRAL-WOUND GASKET				GROOVE				
d_M	s	b_G	d_3	d_2	d_{NO}	b_N	d_{NI}	t_n
< 300	3.2	5-9	d_G+b_G	d_G-b_G	d_3+1	$b_G/0.86$	d_{N0}-2bN	$2.5^{\wedge-1}$
< 1000	3.2	9-17	d_G+b_G	d_G-b_G	$d_3+1.5$		d_{N0}-2bN	2.5^{*-1}
< 300	4.5	5-9	d_G+b_G	d_G-b_G	d +1		d_{N0}-2bN	3.3^{*0-1}
< 1000	4.5	9-17	d_G+b_G	d_G-b_G	$d_3+1.5$		d_{N0}-2bN	3.3^{*0-1}

b_G-gasketwidth
b_N-groove width

Tolerance Table

FLANGE SIZE		PROJECTION AND RECESS			SMOOTH CONTACT FACE					
NPS (in)	DN (mm)	d2	d3	s1	d1	d2	d3	d4	s1	s2
< 10"	< 300	±0.5	±0.5	+0.8+0.1	±0.8	±0.8	±0.8	±0.8	+0.8+0.1	+0.25-0.15
10"-24"	300-700	±0.8	±0.8	+0.8+0.1	±0.8	±0.8	±0.8	+0.8-1.6	+0.8+0.1	+0.25-0.15
26"-50"	800-1200	±1.2	±1.2	+0.8+0.1	±1.6	±1.6	±1.6	+0.8-2.0	+0.8+0.1	+0.25-0.15
> 50"	> 1200				±2.4	±2.4	±2.4	+0.8-3.0	+0.8+0.1	+0.25-0.15



Gasket parameters

		DIN 2505		ASME	
Gasket Type	MATERIAL (Jacket)	ki [mm]	koxKo [N/mm]	m	y [MPa]
MS 10, MS 12, MS 14, MS 16	Steel, Cr-Steel	1.3xbD	50xbD	1.3	50
	CrNi-Steel, Monel	1.4xbD	55xbD	1.4	55
	CrNi-Steel (Graphite/PTFE)	1.2xbD	40xbD	1.2	40

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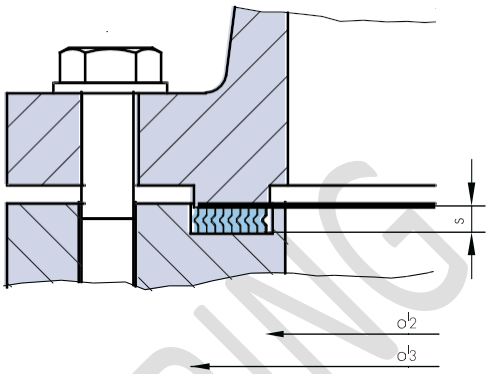
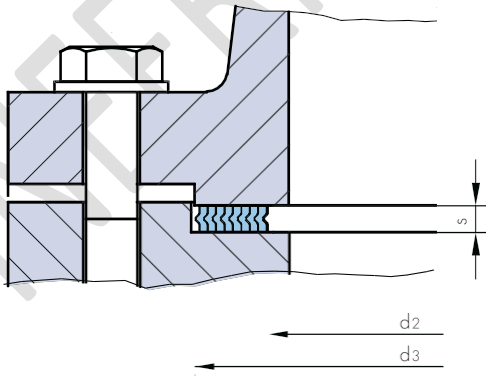
Industrial Gaskets
SPIRAL WOUND GASKETS

All standard and non-standard types can be delivered in non-standard dimensions according to customer request.

EN 1092 and ASME B 16.5 TONGUE and GROOVE flanges meet SWG dimensions according to ASME B 16.21 or other costumer request.



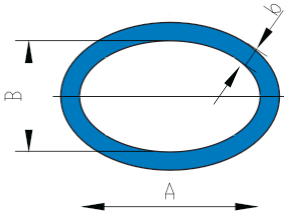
EN 1092 and ASME B 16.5 MALE and FEMALE flanges meet SWG dimensions according to ASME B 16.21 or other costumer request.



NON-STANDARD SWG

Gaskets for Boilers Hand holes and Manholes:
Gaskets can be manufactured in other shapes like oval and oblong (stadium). There is no specific standard for this type of gasket. When ordering it providing complete specifications is required: inside dimensions (AxB), width (b) and thickness (s) or a drawing.

Oval shape



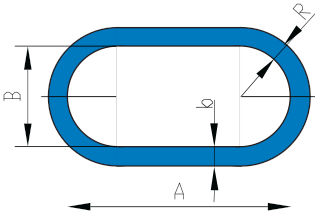
Dim.: AxBxbxs (mm)

GASKET ORDERING EXAMPLE

Spiral wound gasket MS 10,
A x B x b x s,
Winding: AISI 316,
Filler: Graphite 98%

Spiral wound gasket MS 16,
ASME B 16.20 for ASME B16.5, 2”-150lbs,
Winding, inner ring: AISI 316,
Filler: Graphite 98%,
Centering ring: CS

Oblong (stadion) shape



Dim.: AxBxbxs (mm)

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Industrial Gaskets
METAL – JACKETED GASKETS

PROPERTIES AND APPLICATION

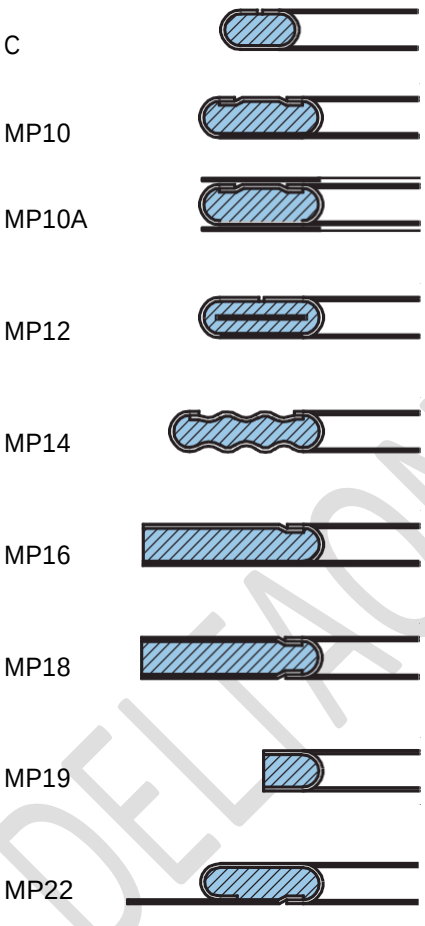
Metal - jacketed gaskets are particularly suitable for sealing flat surfaces of heat exchangers, gas pipes, cast iron flanges, autoclaves and similar. By their sealing efficiency, provided by exerting strong pressure on circular rims of the flanges, metal - jacketed gaskets can stand up to 30% deviation from the initial thickness, which is very useful in case of irregular or faulty flange rims. The chemical compatibility of the metal and the medium being sealed should be considered.

ADVANTAGES

- Suitablefor high assembly stress.
- Highly resistant against blow-out.

SHAPE AND CONSTRUCTION

Metal-jacketed gaskets are produced in several types to meet the requirements of the most demanding applications. Inside a metallic jacket they feature a soft filler as shown in the figure.



Material	ASTM	DIN Material No.
Low Carbon Steel	Soft iron (CS)	1.0333
Stainless steel	AISI 304	1.4301
Stainless steel	AISI 316,316 L	1.4401, 1.4404
Stainless steel	AISI 321	1.4541
Stainless steel	AISI 316 Ti	1.4571
Monel (NiCu30Fe)	Alloy 400	2.4360
Copper	Copper	2.0090
Brass	Brass Ms 63	2.0321

The metallic jacket is normally 0.4 mm thick. Other materials are available on customer request.

Filler

The standard filler material is Flexible Graphite.
Other fillers I ike ceramic, mineral or other can be also used.

SIZE

The metal jacketed gaskets come in sizes according to EN 1514-4 ASMEB16.21 standards.

Maximum size:

Outside diameter: up to 4000 mm
Thickness: from 2 to 12 mm

MANUFACTURING TOLERANCES		
Gasket inside diameter (mm)	Diameter tolerance (mm)	
	Inside diameter	Outside diameter
Up to 150	+ 0.8; -0.0	+ 0.0; -0.8
from 150 to 1500	+ 1.6;-0.0	+ 0.0; -1.6
1500 or greater	+ 2.4;-0.0	+ 0.0; -2.4

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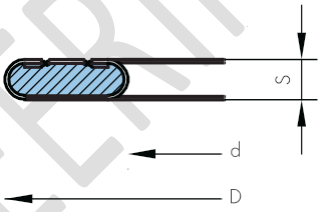
Industrial Gaskets
METAL – JACKETED GASKETS

		DIN 2505		ASME	
Gasket Type	MATERIAL (Jacket)	ki [mm]	koxKD[N/mm]	m	y [MPa]
MP 10, MP 12, MP 16, MP 18, MP 19, MP 22	Cr-Ni steel	2.0XDD	100xbD	2.0	100
	Soft iron	1 .8XDD	70xbD	1.8	70
	Cu	1 .6XDD	60XDD	1.6	60
	Ms	1 .6XDD	60xbD	1.6	60

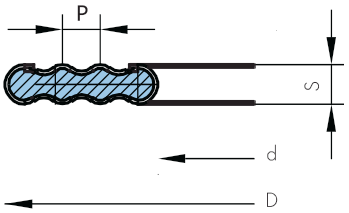
STANDARDS FOR METAL JACKETED GASKETS USED WITH FLANGES	
METAL JACKETED GASKETS - Standard	Flange Standard
EN 1514-4	EN 1092
ASME B 16.20	ASME B 16.5
ASME B 16.20	ASME B 16.47

MP10 and MP14 dimensions for ASME B 16.5 flange

NPS (in)	d (mm)	D (mm)						
	Class (lb)	150	300	400	600	900	1500	2500
1/2"	23.8	44.5	50.8	50.8	50.8	60.4	60.4	66.8
3/4"	31.8	54	63.5	63.5	63.5	66.7	66.7	73.1
1"	36.5	63.5	69.9	69.9	69.9	76.2	76.2	82.5
1 1/4"	46	73	79.4	79.4	79.4	85.8	85.8	101.6
1 1/2"	52.4	82.6	92.1	92.1	92.1	95.3	95.3	114.3
2"	73.2	101.6	108	108	108	139.7	139.7	143
2 1/2"	85.9	120.6	127	127	127	161.9	161.9	165.1
3"	107.8	133.4	146.1	146.1	146.1	165.1	171.5	193.8
4"	131.8	171.5	177.8	174.7	190.5	203.2	206.5	231.9
5"	152.4	193.8	212.8	209.5	238.2	244.6	250.9	276.3
6"	190.5	219.1	247.7	244.5	263.6	285.8	279.4	314.5
8"	238.3	276.3	304.8	301.7	317.5	355.6	349.3	384.3
10"	285.8	336.6	358.8	355.6	396.9	431.8	431.8	473.2
12"	342.9	406.4	419.1	415.9	454.1	495.3	517.6	546.1
14"	374.7	447.7	482.6	479.5	489	517.6	574.7	
16"	425.5	511.2	536.6	533.4	562	571.5	638.2	
18"	489	546.1	593.7	590.6	609.6	635	701.8	
20"	533.4	603.3	650.9	644.5	679.5	695.5	752.5	
24"	641.4	714.4	771.6	765.3	787.4	835.1	898.6	



MP14



Gasket dimensions for ASME B16.47 Series A raised face flanges

NPS (in)	d (mm)	D (mm)				
	Class (lb)	150	300	400	600	900
26"	673.1	771.6	831.8	828.8	863.6	879.6
28"	723.9	828.8	895.3	889	911.3	943.1
30"	774.7	879.6	949.4	943.1	968.5	1006.6
32"	825.5	936.7	1003.3	1000.2	1019.3	1070.1
34"	876.3	987.5	1054.1	1051	1070.1	1133.6
36"	927.1	1044.7	1114.7	1114.5	1127.2	1197.1
38"	977.9	1108.2	1051	1070.1	1101.8	1197.1
40"	1028.7	1159	1111.2	1124	1152.6	1248
42"	1079.5	1286.1	1162	1174.7	1216.1	1298.7
44"	1130.3	1273.3	1216.1	1228.8	1267	1365.2
46"	1181.1	1324.1	1270	1286	1324.1	1432
48"	1231.9	1381.2	1320.8	1343.1	1387.6	1482.8
50"	1282.7	1432	1374.9	1400.3	1444.7	
52"	1333.5	1489.2	1425.7	1451.1	1495.5	
54"	1384.3	1546.3	1489.2	1514.6	1552.7	
56"	1431.1	1603.5	1540	1565.4	1603.5	
58"	1485.9	1660.6	1590.8	1616.2	1660.6	
60"	1536.7	1711.4	1641.6	1679.7	1730.5	

TOLERANCE (mm)

	up to 24"	above 24"
D	+ 1.58	+ 3.3
	0	0
d	+ 1.58	+ 3.3
	0	0
s	+ 0.8	+ 0.8
	0	0

GASKET ORDERING EXAMPLE

STANDARD DIMENSION:
jacketed gasket MP 10,
ASMEB16.5, 8"-600lbs,
Material: AISI 304,
Filler: Graphite

NON-STANDARD DIMENSION: Metal
Metal jacketed gasket MP 10,
D = 836 mm, d = 804 mm, s = 3,2 mm
Material: Cu,
Filler: Ceramic

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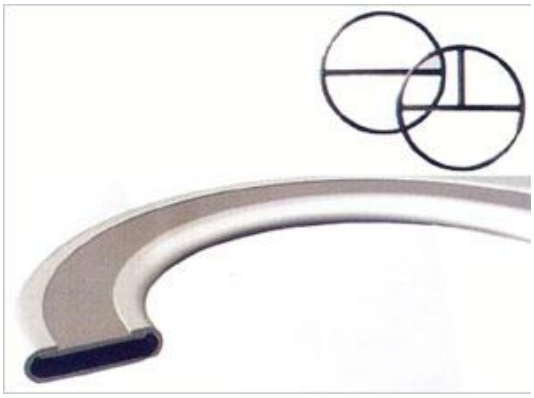
Industrial Gaskets
METAL - JACKETED GASKETS



PROPERTIES AND APPLICATION

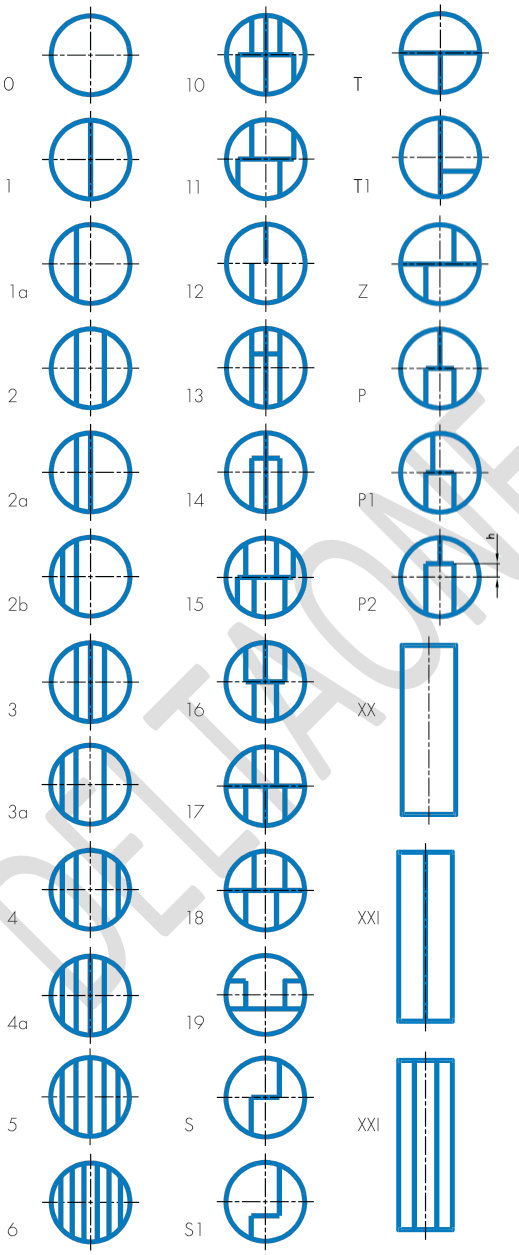
Heat Exchanger Gasket is a term that has been given to gasket used in heat exchangers. The structure of the gasket or its type varies according to the operating conditions of the exchangers. The heat exchanger gaskets come in a wide spectre of types including single or double jacketed, corrugated, plain metal, soft and many other. A large selection of different materials allows heat exchangers to operate at temperatures beyond the capabilities of most soft gasket materials.

ADVANTAGES

- Available in wide range of materials, since they are all custom made. There are few limitations regarding size and shape.
- The Metal jacket provides mechanic strength to contain the filler and improves chemical resistance.
- Unique construction provides stability and ensures trouble-free handling and installation.

SHAPE AND CONSTRUCTION

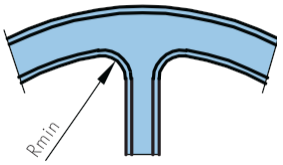
These gaskets are used in shell and tube type heat exchangers. They can be manufactured in very different sizes, shapes, with or without bars. The primary seal is at the inner diameter of the gasket, the outer gasket diameter acts as a secondary seal. The bars seal between the heat exchangers passages.
The Heat exchanger gaskets are produced in several types to meet the most demanding applications. Gaskets for heat exchangers can be manufactured in metal or alloy with a thickness 0.4 mm featuring a soft core inside a metallic jacket.



MP10WITH INTEGRAL BAR

Gaskets with integrated bars

Traditionally double-jacketed gaskets for heat exchangers are manufactured with integrated bars. There is a radius between the bars and an internal diameter of the gaskets.



The values of the corresponding radius for the most commonly used metals and alloys are shown in the following table. If a radius is less than R min, the material can crack, reducing the sealing properties of the gaskets.

GASKET MATERIALS and R min	
Gasket material	Rmin
Copper	8m
Soft iron (CS)	8 mm
Brass, Monel	10 mm
Stainless steel	10 mm

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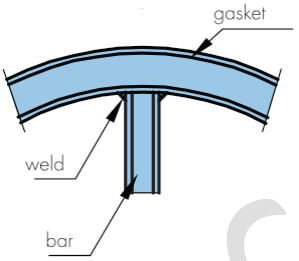
Industrial Gaskets
GASKETS FOR HEAT EXCHANGERS

Gaskets with welded bars

Gaskets with welded bars have eliminated one of the greatest problems of conventional gaskets, which are cracks in the radius area. Metal or alloys are commercially available in sheets or rolls of 1000 mm width.

The primary and secondary seals are continuous all around the gasket. The gasket has an excellent sealability, reducing leaks to the environment. The bars which seal between the heat exchangers passages are plasma or TIG welded with spot welds at each end. These welds should be soft and small to avoid areas of increased resistance to seating.



MP10 WITH WELDED BAR

Materials For Heat Exchanger Gaskets

The selection of the jacket material depended on operating conditions. The standard filler is Flexible Graphite.

Metallic jacket

MATERIAL	ASTM	DIN Material No.
Low Carbon Steel	Soft iron (CS)	1.0333
Stainless steel	AISI 304	1.4301
Stainless steel	AISI 316, 316 L	1.4401, 1.4404
Stainless steel	AISI 321	1.4541
Stainless steel	AISI 316 Ti	1.4571
Monel (NiCu30Fe)	Alloy 400	2.4360
Copper	Copper	2.0090
Brass	Brass Ms 63	2.0321
Titanium	B348 Gr.1	3.7025

Other alloys available on request

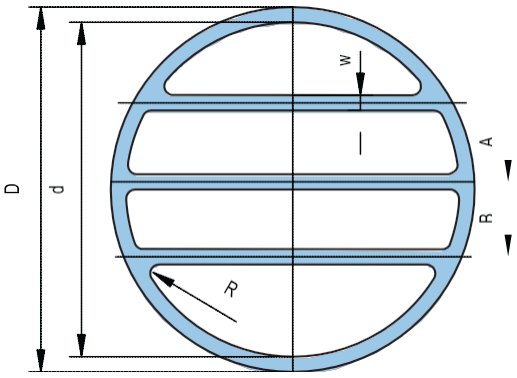
Filler

Flexible graphite, ceramic, calandered sealing materials,

SIZES

STANDARD DIMENSIONS	
gasket thickness	3.2 mm
gasket width	10, 13 and 16 mm
bar width	8, 10 and 13 mm

Gaskets with outside diameter to 1000 mm are normally made with integrated bars. Gaskets with an outside diameter greater than 1000 mm are normally made with welded bars. According to the heat exchangers shapes and sizes other dimensions can be manufactured on request.



MP10

GASKET ORDERING EXAMPLE

Gasket style (MP 10, MP 14), shape drawing dimensions: outside diameter D, inside diameter d, gasket thickness s, bar width w, radius R and distance between bars (A, B). Material for metal jacket, material for filler.

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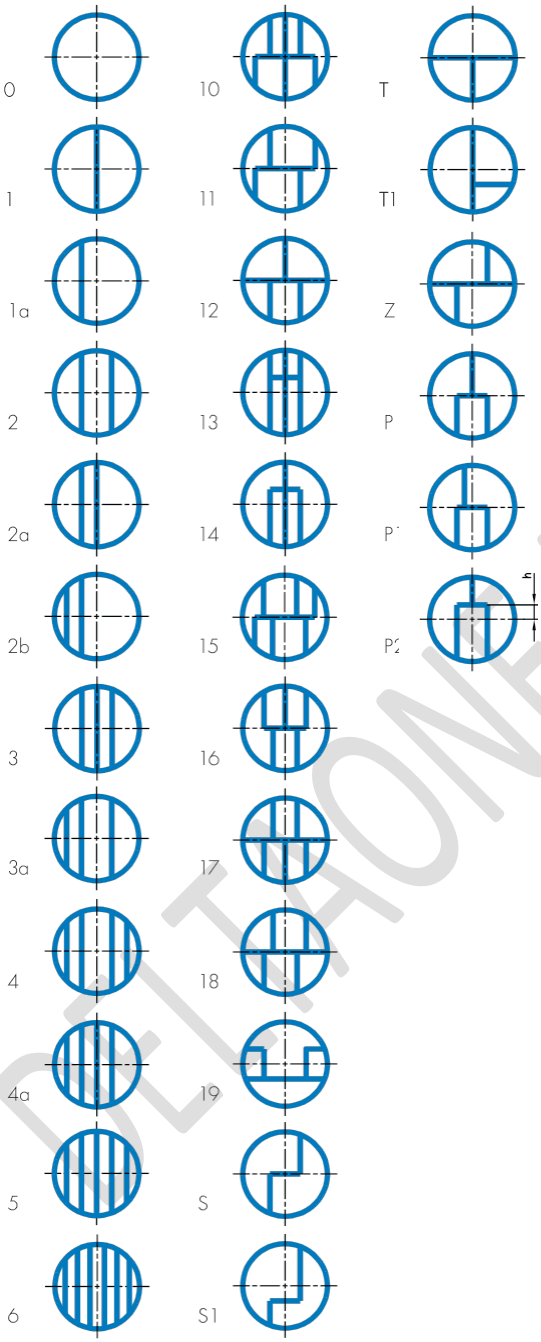
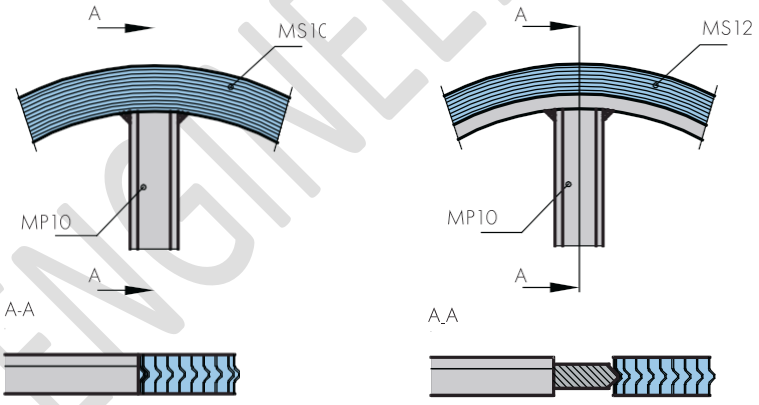
Industrial Gaskets
GASKETS FOR HEAT EXCHANGERS



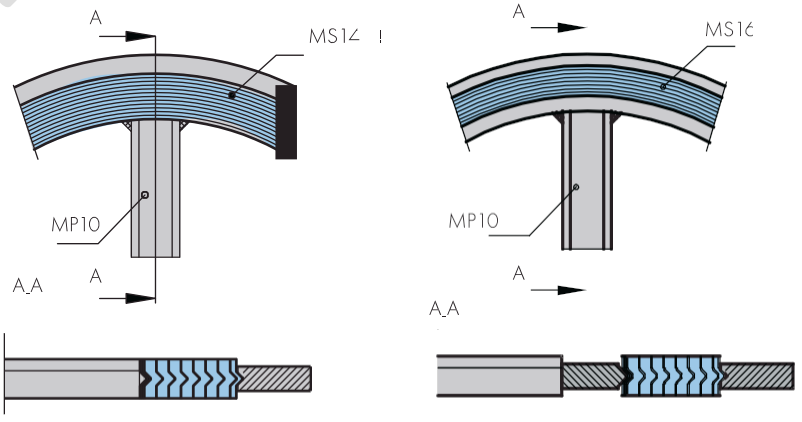
SPIRAL WOUND GASKETS FOR HEAT EXCHANGERS

The spiral wound gaskets of MS10, MS12, MS14 or MS16 type can be manufactured with one or more metal jacketed bars (profile MP10) in different shape shown in drawing. Metal-jacketed bars are welded and made of the same material as the spiral windings. The standard thicknesses are 3.2 mm, 4.5 mmy 6.5 mm and 7.2 mm.

MAX. DIMENSIONS	
Thickness s [mm]	Max. diameter d3 [mm]
3.2	750
4.5	1500
6.5	2200
7.2	2500



MS212



MS214 MS216

GASKET ORDERING EXAMPLE

SWG style,
metal jacketed profile (MP10),
material,
shape drawing

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Industrial Gaskets
GROOVED GASKETS

PROPERTIES AND APPLICATION

The grooved gasket are the preferred gaskets when improved performance at low seating stresses is required. It features excellent anti-blow-out properties. A tighter joint is provided with reliable solid metal to metal seal combined with a soft sealing face. Metal gaskets with grooved faces have proven to be very effective for sealing flange connections, and are particularly suitable for applications where high temperatures, pressures and fluctuating conditions are encountered. Non-metal cover layers ensure that flanges are not damaged, even at extreme loads, and provide excellent sealing properties when supported by the grooved metallic gasket. The grooved gasket can be used as an alternative for applications associated with jacketed gaskets (for heat exchangers, vessels and reactors and various flanged connections).

ADVANTAGES

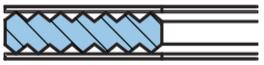
Capable of sealing pressures exceeding 250 bar.
Capable of withstanding temperatures up to 700°C.
Particularly effective in maintaining performance under condition of fluctuating temperatures and pressures.
Solid construction provides stability even for large diameters and ensures trouble-free handling and installation.
Gaskets can be fitted to existing assemblies without modification.

SHAPE AND CONSTRUCTION

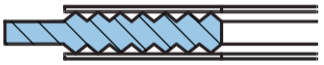
The grooved gaskets are produced in several types to fit the most demanding applications.

METAL CORE		
Material	ASTM	DIN Material No.
Stainless steel	AISI 321	1.4541
Stainless steel	AISI316TI	1.4571

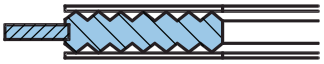
M7A



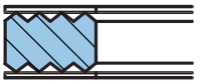
M7B



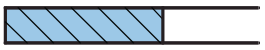
M7C



M7D



M10



M10A

SIZES

Upon request the grooved gaskets can be manufactured in various shapes and sizes.

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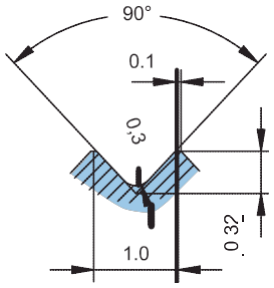
Industrial Gaskets
GROOVED GASKETS

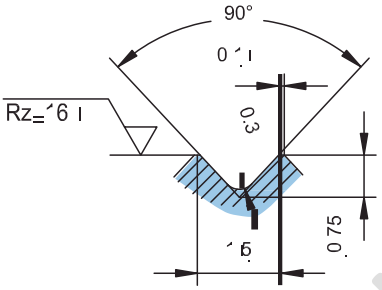
FINE GROVE PROFILE

S1=0.5mm

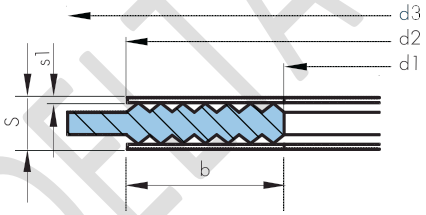


STANDARD GROVE PROFILE

S1= 1mm



M78



PROFILE	s1 (mm)
standard	1.0
fine	0.5

EN 12560-6 Grooved Gaskets for ASME B16.5 flanges

NPS (in)	d1 (mm)	d3 (mm)						
	Class (lb)	150	300	400	600	900	1500	2500
1/2"	23.8	44.5	50.8	50.8	50.8	60.4	60.4	66.8
3/4"	31.8	54	63.5	63.5	63.5	66.7	66.7	73.1
1"	36.5	63.5	69.9	69.9	69.9	76.2	76.2	82.5
1 1/4"	46	73	79.4	79.4	79.4	85.8	85.8	101.6
1 1/2"	52.4	82.6	92.1	92.1	92.1	95.3	95.3	114.3
2"	73.2	101.6	108	108	108	139.7	139.7	143
2 1/2"	85.9	120.6	127	127	127	161.9	161.9	165.1
3"	107.8	133.4	146.1	146.1	146.1	165.1	171.5	193.8
4"	131.8	171.5	177.8	174.7	190.5	203.2	206.5	231.9
5"	152.4	193.8	212.8	209.5	238.2	244.6	250.9	276.3
6"	190.5	219.1	247.7	244.5	263.6	285.8	279.4	314.5
8"	238.3	276.3	304.8	301.7	317.5	355.6	349.3	384.3
10"	285.8	336.6	358.8	355.6	396.9	431.8	431.8	473.2
12"	342.9	406.4	419.1	415.9	454.1	495.3	517.6	546.1
14"	374.7	447.7	482.6	479.5	489	517.6	574.7	
16"	425.5	511.2	536.6	533.4	562	571.5	638.2	
18"	489	546.1	593.7	590.6	609.6	635	701.8	
20"	533.4	603.3	650.9	644.5	679.5	695.5	752.5	
24"	641.4	714.4	771.6	765.3	787.4	835.1	898.6	

EN 1514-6 grooved gaskets for EN 1092-1 flanges

DN (mm)	d1 (mm)	d2 (mm)			d3(mm)							
	PN Class	PN 10-40	PN 63-160	PN 250-400	PN 10	PN 16	PN 25	PN 40	PN 63	PN 100	PN 160	PN 250
10	22	36	36	36	46	46	46	46	56	56	56	67
15	26	42	42	42	51	51	51	51	61	61	61	72
20	31	47	47	47	61	61	61	61				
25	36	52	52	52	71	71	71	71	82	82	82	83
32	46	62	62	66	82	82	82	82				
40	53	69	69	73	92	92	92	92	103	103	103	109
50	65	81	81	87	107	107	107	107	113	119	119	124
65	81	100	100	103	127	127	127	127	137	143	143	153
80	95	115	115	121	142	142	142	142	148	154	154	170
100	118	138	138	146	162	162	168	168	174	180	180	202
125	142	162	162	178	192	192	194	194	210	217	217	242
150	170	190	190	212	217	217	224	224	247	257	257	284
175	195	215	215	245	247	247	254	265	277	287	284	316
200	220	240	248	280	272	272	284	290	309	324	324	358
250	270	290	300	340	327	328	340	352	364	391	388	442
300	320	340	356	400	377	383	400	417	424	458	458	
350	375	395	415		437	443	457	474	486	512		
400	426	450	474		489	495	514	546	543	572		
450	480	506			539	555		571				
500	530	560	588		594	617	624	628	657	704		
600	630	664	700		695	734	731	747	764	813		
700	730	770	812		810	804	833	852	879	950		
800	830	876	886		917	911	942	974	988			
900	930	982	994		1017	1011	1042	1084	1108			
1000	1040	1098	1110		1124	1128	1154	1194	1220			
1200	1250	1320	1334		1341	1342	1364	1398	1452			

GASKET ORDERING EXAMPLE

Grooved gasket M7A,
EN 1514-6, DN 80, PN 40,
1.4541/Graphite

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Industrial Gaskets
RING JOINT GASKETS

PROPERTIES AND APPLICATION

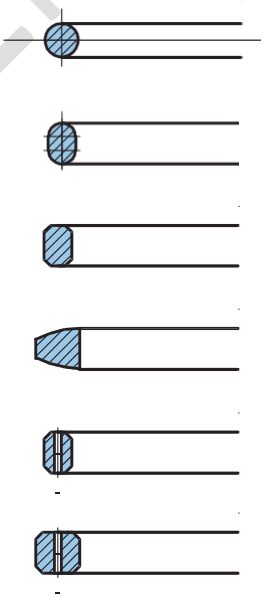
The metallic ring joint gaskets are manufactured according to the API 6A and ASME B 16.20 standards for application at elevated temperatures and pressures. The small sealing area with high contact pressure results in great reliability. The contact surfaces of the gaskets and flange should be carefully processed. Some types of ring-joints are pressure activated, that means, higher the pressure better the sealability.

ADVANTAGES

The metal ring joint gaskets have been designed to withstand exceptionally high assembly loads over a small area, thus producing high seating stresses.

SHAPE AND CONSTRUCTION

The ring joint gaskets are produced in several shapes and sizes to meet the most demanding applications.



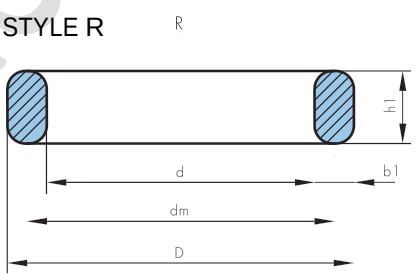
STANDARD MATERIALS

STANDARD MATERIALS RECOMMENDED BY THE ASME B16.20				
ASTM	DIN Material No.	Maximum HB	Maximum HV	Material code
Soft Iron	1.1003	90	56	D
LowCS	1.0038	120	68	S
4-6 Cr 1/2 Mo	1.7362	130	72	F5
AISI410	1.4000	170	86	S410
AISI 304	1.4301	160	83	S304
AISI316	1.4401	160	83	S316
AISI 347	1.4550	160	83	S347

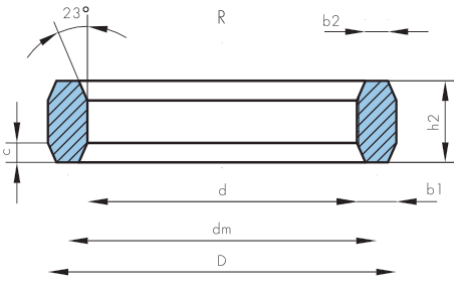
DIMENSIONS

STANDARDS FOR RING JOINT GASKETS USED WITH FLANGES		
Ring Joints Gaskets Style	Ring Joints Gaskets Standard	Flange Standard
R	ASMEB 16.20 API 6A	ASMEB 16.5 ASMEB 16.47 series A
RX	ASMEB 16.20 API6A	API6B
BX	API6A	API 6BX

STYLE R

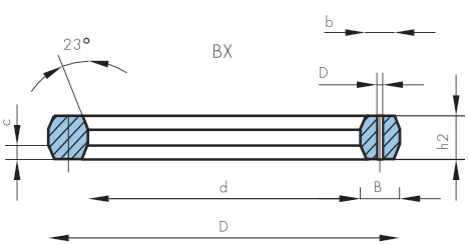


OVAL SECTION

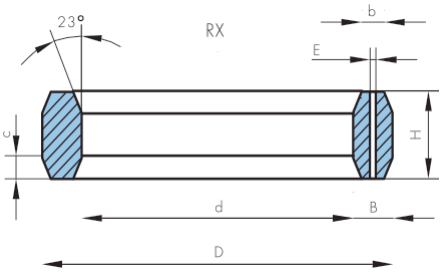


OCTAGONAL SECTION

STYLE BX



STYLE RX



GASKET ORDERING EXAMPLE

RING-JOINT GASKET API 6A
R30-oval, material AISI 321

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Industrial Gaskets
RING JOINT GASKETS

ASME-ANSI B16.5					ASME B16-47A		API6B			Tolle-rances	+/-0,38	+/-0,38	+/-0,17	+/-0,39	+/-0,39	+/-0,20		
NOMINAL PIPE SIZE (in)										R	DIMENSIONS (mm)						WEIGHT (kg)	
150 lb	300-600 lb	900 lb	1500 lb	2500 lb	300-600 lb	900 lb	2000 lb	3000 lb	5000 lb		D	d	dm	hi	h2	b1	OVAL	OCTAG.
	1/2									R11	40.49	27.79	34.14	11.18	9.65	6.35	0.05	0.05
		1/2	1/2							R12	47.65	31.75	39.70	14.22	12.70	7.95	0.10	0.10
	3/4			1/2						R13	50.83	34.93	42.88	14.22	12.70	7.95	0.10	0.10
		3/4	3/4							R14	52.40	36.50	44.45	14.22	12.70	7.95	0.11	0.11
1										R15	55.58	39.68	47.63	14.22	12.70	7.95	0.12	0.12
	1	1	1	3/4			1	1	1	R16	58.75	42.85	50.80	14.22	12.70	7.95	0.12	0.11
1 1/4										R17	65.10	49.20	57.15	14.22	12.70	7.95	0.14	0.13
	1 1/4	1 1/4	1 1/4	1			1 1/4	1 1/4	1 1/4	R18	62.28	52.38	60.33	14.82	12.70	7.95	0.15	0.14
1 1/2										R19	73.05	57.15	65.10	14.82	12.70	7.95	0.16	0.15
	1 1/2	1 1/2	1 1/2				1 1/2	1 1/2	1 1/2	R20	76.23	60.33	68.28	14.82	12.70	7.95	0.17	0.15
				1 1/4						R21	83.37	61.11	72.24	17.53	16.00	11.13	0.30	0.29
2										R22	90.50	74.60	82.55	14.82	12.70	7.95	0.20	0.19
	2			1 1/2			2			R23	93.68	71.42	82.55	17.53	16.00	11.13	0.34	0.33
		2	2					2	2	R24	106.3	84.12	95.25	17.53	16.00	11.13	0.39	0.38
2 1/2										R25	109.5	93.65	101.6	14.22	12.70	7.95	0.25	0.23
	2 1/2			2			2 1/2			R26	112.73	90.47	101.6	17.53	16.00	11.13	0.42	0.41
		2 1/2	2 1/2					2 1/2	2 1/2	R27	119.08	96.82	107.9	19.05	16.00	11.13	0.45	0.43
				2 1/2						R28	123.8	98.43	111.13	14.22	17.53	12.70	0.57	0.55
3										R29	122.2	107.9	114.30	17.53	12.70	7.95	0.28	0.26
	3									R30	128.6	106.3	117.48	17.53	16.00	11.13	0.48	0.47
	3	3					3	3		R31	134.9	112.70	123.8	17.53	16.00	11.13	0.51	0.50
				3						R32	139.7	114.30	127.0	19.05	17.53	12.70	0.65	0.63
3 1/2										R33	139.7	123.8	131.7	14.22	12.70	7.95	0.32	0.30
	3 1/2									R34	142.9	120.6	131.7	17.53	16.00	11.13	0.54	0.52
			3						3	R35	147.6	125.4	136.5	17.53	16.00	11.13	0.56	0.55
4										R36	157.1	141.2	149.2	14.22	12.70	7.95	0.37	0.34
	4	4					4	4	3 1/2	R37	160.3	138.1	149.2	17.53	16.00	11.13	0.62	0.60
				4						R38	173.0	141.3	157.1	22.35	20.57	15.88	1.16	1.14
			4						4	R39	173.0	150.8	161.9	17.53	16.00	11.13	0.67	0.65
5										R40	179.4	163.5	171.4	14.22	12.70	7.95	0.42	0.39
	5	5					5	5		R41	192.11	169.8	180.9	17.53	16.00	11.13	0.75	0.73
				5						R42	209.5	171.4	190.5	24.40	23.88	19.05	1.91	1.88
6										R43	201.6	185.7	193.6	14.22	12.70	7.95	0.48	0.44
			5						5	R44	204.8	182.5	193.6	17.53	16.00	11.13	0.80	0.78
	6	6					6	6		R45	222.2	200.0	211.15	17.53	16.00	11.13	0.87	0.85
			6						6	R46	223.8	198.4	211.15	19.05	17.53	12.70	1.08	1.05
				6						R47	247.6	209.5	228.6	25.40	23.88	19.05	2.29	2.26
8										R48	255.6	239.7	247.6	14.22	12.70	7.95	0.61	0.56
	8	8					8	8		R49	281.0	258.7	269.8	17.53	16.00	11.13	1.11	1.09
			8						8	R50	285.7	254.0	269.8	22.35	20.57	15.88	1.99	1.95
				8						R51	301.6	257.1	279.4	28.70	26.92	22.23	3.65	3.69
10										R52	312.7	296.8	304.8	14.22	12.70	7.95	0.75	0.69
	10	10					10	10		R53	334.9	312.7	323.8	17.53	16.00	11.13	1.34	1.30
			10						10	R54	339.7	307.9	323.8	22.35	20.57	15.88	2.39	2.35
				10						R55	371.4	314.3	342.9	36.58	35.05	28.58	7.35	7.68
12										R56	388.9	373.0	381.0	14.22	12.70	7.95	0.93	0.87
	12	12			12	12	12	12		R57	392.1	369.8	381.0	17.53	16.00	11.13	1.57	1.53
			12							R58	403.2	358.7	381.0	28.70	26.92	22.23	4.98	5.03
14										R59	404.8	388.9	396.8	14.22	12.70	7.95	0.98	0.90
				12						R60	438.1	374.6	406.4	39.62	38.10	31.75	10.47	11.09
	14				14		14	14		R61	430.2	407.9	419.1	17.53	16.00	11.13	1.73	1.69
		14				14				R62	434.9	403.2	419.1	22.35	20.57	15.88	3.09	3.04
			14							R63	444.5	393.7	419.1	33.27	31.75	25.40	7.33	7.54
16										R64	461.9	446.0	454.0	14.22	12.70	7.95	1.12	1.03
	16				16		16			R65	481.0	458.7	469.9	17.53	16.00	11.13	1.94	1.89
		16				16		16		R66	485.7	454.0	469.9	22.35	20.57	15.88	3.47	3.40
			16							R67	498.4	441.3	469.9	36.58	35.05	28.58	10.07	10.53
18										R68	525.4	509.5	517.5	14.22	12.70	7.95	1.28	1.18
	18				18		18			R69	544.5	522.2	533.4	17.53	16.00	11.13	2.20	2.15
		18				18		18		R70	552.4	514.3	533.4	25.40	23.88	19.05	5.35	5.27
			18							R71	561.9	504.8	533.4	36.58	35.05	28.58	11.43	11.95
20										R72	566.7	550.8	558.8	14.22	12.70	7.95	1.38	1.27
	20				20		20			R73	596.9	571.5	584.2	19.05	17.53	12.70	2.99	2.92
		20				20		20		R74	603.2	565.1	584.2	25.40	23.88	19.05	5.85	5.77
			20							R75	615.9	552.4	584.2	39.62	38.10	31.75	15.05	15.94
24										R76	681.0	665.1	673.1	14.22	12.70	7.95	1.R6	1.53
	24				24					R77	708.0	676.2	692.1	22.35	20.57	15.88	5.11	5.01
		24				24				R78	717.5	666.7	692.1	33.27	31.75	25.40	12.10	12.46
			24							R79	727.0	657.2	692.1	44.45	41.40	34.93	22.58	22.06
				22						R80	623.9	608.0	615.9		12.70	7.95		1 40
					22					R81	649.3	620.7	635.0		19.05	14.30		3.86
									1	R82	68.28	46.02	57.15		16.00	11.13		0?3
									1 1/2	R84	74.63	52.37	63.50		16.00	11.13		0.25
									2	R85	92.08	66.68	79.38		17.53	12.70		0.40
									2 1/2	R86	106.3	74.62	90.50		20.57	15.88		0.65

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Industrial Gaskets
CORRUGATED METAL GASKETS

PROPERTIES AND APPLICATION

Corrugated gaskets without layer

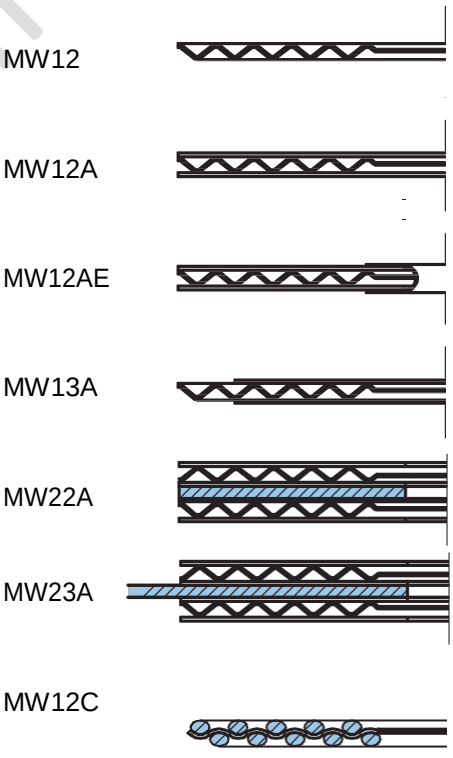
There are different types of metal gaskets, like flat, groove, tongue and sectional ones. They are used where compressibility (elasticity) of sealing material is not required. The construction of such gaskets based on the principle of different hardness of adjacent materials. These gaskets come in various shapes and there are almost no limits concerning their size.

The corrugated metal gaskets have been proven to be both reliable and cost-effective for the application on flanges and heads where bolt loading is sufficient. Their operation principle is based on different degrees of hardness of adjacent materials. The sealing effect is produced by the constant load to which a gasket is exposed. They are used in applications, which require mechanical strength, thermal conductivity, as well as temperature and corrosion resistance. They are particularly useful when compressibility is not a factor and where sufficient clamping force is available. Metal gaskets feature greater mechanical strength, better heat transfer and resistance to higher temperatures and pressures, and can offer advantages over the clad type gaskets in certain applications.

Corugated gaskets with soft layer

Corrugated metal is covered with graphite, ceramic or PTFE layers. An additional finishing layer is applied depending on the requirements of the medium to be sealed. Such gaskets are used on uneven or distorted sealing surfaces, where more elastic materials with better sealing performance are needed.

The corrugated metal gaskets with soft layer on both sides are used in low-pressure applications in large diameter flue gas ducts at high temperatures. The use of corrugated gaskets eliminates the problem of difficult handling whith large non-metal gaskets used in those applications. They are suitable for gas pipes and valve caps, or wherever acids, oils and chemicals are found. They can be used at lower pressures and higher temperatures.



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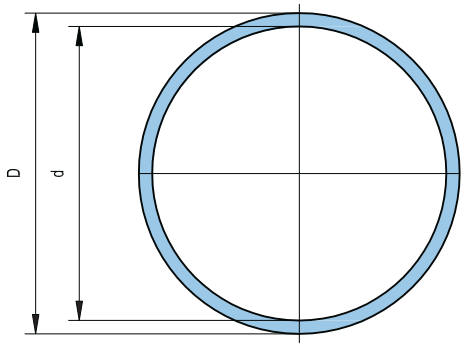
Industrial Gaskets
CORRUGATED METAL GASKETS

ADVANTAGES

- Outstanding mechanical strength and thermal conductivity.
- Capable of withstanding high temperatures.
- There are almost no limitations regarding size.
- Solid construction provides stability even for large diameters and ensures trouble-free handling and installation.

SHAPE AND CONSTRUCTION

The metal gaskets are produced in several types to meet the most demanding applications. Shapes: Round, Oval, Rectangular, etc.



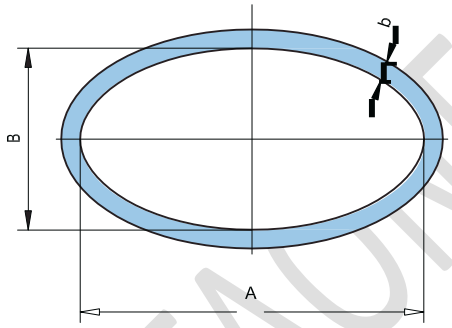
MATERIALS FOR METAL AND CORUGATED METAL GASKETS		
Material	ASTM	DIN Material No.
Low Carbon Steel	Soft iron (CS)	1.0333
Stainless steel	AISI 304	1.4301
Stainless steel	AISI316, 316 L	1.4401, 1.4404
Stainless steel	AISI 321	1.4541
Stainless steel	AISI 316 Ti	1.4571

SIZE

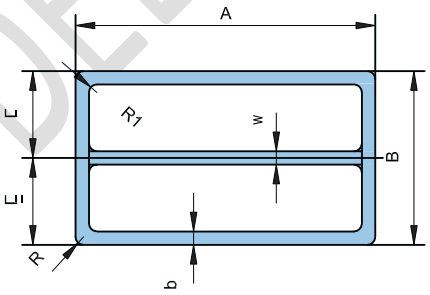
The gasket constructions with an outside diameter 1000 mm is usually made in one piece, larger dimensions are welded. Welding is also recommended for cost-effectiveness.

Profile

The metal is 0.5 mm thick and the corrugation pitch is 3 mm, 4 mm, 5 mm or 6 mm depending on the width and size of the gaskets. The thickness of corrugation is approx. 1 mm to 1.5 mm, depending on gasket size. Corrugated metal is covered with graphite, ceramic or PTFE layers in thickness 0.5 mm - 2 mm.



Tip: AxBxb(oval)



GASKET ORDERING EXAMPLE

STANDARD SIZE:

CORRUGATED GASKET M12A, EN 1514-4 DN 100, PN40,
Material: 1.4571 /Graphite

NON-STANDARD DIMENSION:

CORRUGATEDGASKET M12A, D=946 mm, D=914 mm, S=3.5 mm,
Material: AISI316Ti/Graphite

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Industrial Gaskets
NON METALLIC FLAT GASKETS

PROPERTIES AND APPLICATION

The non-metallic or flat gaskets are the most typical ones from the family of flat static gaskets. They are used in a large number by various industries and in a variety of applications. Soft gaskets are made of non-asbestos (CSF), graphite, PTFE, mica, aramide/ graphite and rubber sealing materials. Available are standard and nonstandard gasket design.

Gasket materials and application

Copressed-S. Line	Basis	Max.T[C7F°]		Max. P[bar/psi]	Application and properties
BA-202	Organic fibres, NBR	• Peak • Continuous	180/356 140/2 84	2/29	for ower oadings, good resistance to water, gases, oils, Fuels
BA-203	Aramid fibres, NBR	• Peak • Continuous	250/482 200/392	2/29	for medium oading, good resistance to water, gases, oils, fuels
BA-50	Aramid fibres, NBR	• Peak • Continuous	2 80/536 220/428	2/29	good dynamic resistance for higher loading, gas, food industry
BA-55	Syntetic fibres, NBR	• Peak • Continuous	350/662 270/518	2/29	excellent thermal properties and good steam resistance, economical quality for wide field of app ication
BA-U	Aramid fibres, NBR	• Peak • Continuous	350/662 250/482	2/29	genera use
BA-GL	Glass fibres, NBR	• Peak • Continuous	440/824 350/662	2/29	very good therma properties and excellent torque retention
BA-CF	Carbon fibres, NBR	• Peak • Continuous	400/752 300/572	2/29	resistance to steam and alkaline media, chemica and petrochemica industry
BA-Auto	Aramid fibres, SBR	• Peak • Continuous	280/536 220/428	2/29	controlled swell properties in oil, automotive industry
BA-N	Aramid fibres, CR	• Peak • Continuous	350/662 270/518	2/29	resistance to refrigerant, genera use
BA-C	Aramid fibres, CSM	• Peak • Continuous	200/392 150/302	2/29	excellent resistance to acids anda ka ine media
BA-R	Aramide fibres, NBR/SBR, wire reinforced	• Peak • Continuous	400/752 350/662	2/29	great strenght, for dynamic oadings, automotive and petrochemica industry, shipyards
BA-R3 00	Inorganic fibres, NBR, special reinforced	• Peak • Continuous	550/1022 450/842		excellent dynamic and therma resistance, automotive and petrochemica industry, shipyards
BA-R302	Inorganic fibres, NBR, special reinforcement	• Peak • Continuous	650/1202 600/1112		extreme dynamic and therma resistance, automotive and petrochemica industry, shipyards
BA-U R200	Aramid fibres, NBR, Expanded metal	• Continuous	75/143	2/29	improved strenght, for dynamic oadings, high pressure appications, district heating, ship's piping system

High Performance Line	Basis	Max.T[C7F°]		Max. P [bar/psi]	Application and properties
BAU 2000	Aramid fibres, NBR	• Peak • Continuous	400/752 280/536	2/29	environment friendly gasket materia with specially balanced sea ling, thermal, chemical and mechanica properties allows universa use
BAGL 3000	Glass fibres, NBR	• Peak • Continuous	440/8 24 350/662	2/29	environment friendly gasket material with excellent torque retention and therma resistance
BACF 4000	Carbon fibres, NBR	• Peak • Continuous	440/8 24 350/662	2/29	environment friendly gasket material with very good resistance to strong alkaline media and steam
BAX 5000	Aramid fibres, NBR	• Peak • Continuous	400/752 250/482	2/29	environment friendly gasket material with supreme mechanica properties
BAM 6000	Biosoluble mineral fibres, NBR	• Peak • Continuous	440/8 24 350/662	2/29	environment friendly gasket materia with excellent resistance to steam and ong-term steam sea ability

		Basis	Max. temperature [°C / F]	Max. pressure [bar/psi]	Application and properties
Graphite sealing material					
GRAFILIT	SF	Expanded graphite	Continuous (air) 450 / 842	80/1160	excellent creep, strength, chemical stability
	SL	Expanded graphite, Flat stainless steel insertion		100/1450	excellent creep, strength, chemical stability with very good surface loadings and operating pressure
	SP	Expanded graphite, Tanged stainless steel insertion		200 / 2900	excellent creep, strength, chemical stability with very good surface loadings and operating pressure
Aramid / Graphite sealing material					
DONIFLEX	GLD	Aramid fibers, fillers and graphite	Continuous 360 / 680	100/1450	outstanding chemical and thermal resistance, environment friendly, steam sheet
	GMD	Aramid fibers, fillers and graphite			excellent resistance to hot water, steam and oils
	GMDr	Aramid fibers, fillers and graphite			excellent resistance to hot water, steam and oils, specially designed for radiators and boilers
	GR-A	Aramid fibers, fillers and graphite, tanged steel insert	Continuous 400 / 752	150/2175	excellent thermal and stress resistance for applications that require high strength and thermal integrity at extreeme temperature
	GR-EM	Aramid fibers, fillers and graphite, expanded mild steel insert			exceptional radial strength, significantly improved tensile strength, resilience and other fluid resisting properties
	GR-SP	Aramid fibers, fillers and graphite, pegged AISI 316 steel core	Continuous 450 / 842		excellent thermal and stress resistance, good adaptability, for application in automotive, petrochemical industry and exhaust systems
Elastomeric sealing products					
DONIGUM		NBR, SBR, NR, CR, BR, EPDM	depends on product type	depends on product type	various applications for low bolting loads - depends on product type
PTFE sealing materials					
DONIFLON		Virgin PTFE, Filled PTFE, Expanded PTFE	Continuous 270 / 543 Peak 315/588	depends on installation and working parameters	excellent resistance to strong chemicals

Temperature and pressure represent maximum values and should nol be used simultaneously. They are given only as guidance, since ihey depend not only on the type of gasket materia but also on the assembly conditions. Very important factors are thickness of material, nature of service medium, type of flange and surface stress. Steam application requires specia considerations.

SIZE AND CONSTRUCTION - CUSTOM MADE GASKETS

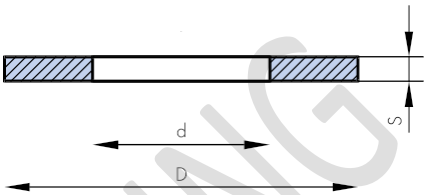
The non-metallic gaskets are produced in several sizes and shapes to meet the most demanding applications. They are available in standard and non-standard gasket design. By non-standard gasket we can provide any shape and size according to customer design or sample.

DIMENSIONS

The dimensions of our standard gaskets meet the requirements of the EN 1514-1, ANSI B16.21 or other standards. Gaskets of up to 1500 mm x 1500 mm are made from one piece, while larger ones are assembled from segments. Two kinds of splicing are used: dove-tail and bevelled (practically there is no limitation regarding gasket dimension). According to the gasket shapes and sizes all other dimensions can be manufactured upon request.

STANDARDS FOR NON-METALLIC FLAT GASKETS	
Gasket Standard	Flange Standard
EN 1514-1 ASME B 16.21 (ASME B16.5)	EN 1092-1,-2,-3,-4, EN 545, EN 598, EN 969

BA 10



BA 10 for raised face flanges ASME B 16.21 (ASME B16.5)

NPS (in)	d (mm)	D (mm)					
	Class (lb)	150	300	400	600	900	1500
1/2"	21.4	47.6	54	54	54	63.5	63.5
3/4"	27	57.2	66.7	66.7	66.7	69.8	69.8
1"	33.3	66.7	73	73	73	79.4	79.4
1 1/4"	42	76.2	82.5	82.5	82.5	88.9	88.9
1 1/2"	48.4	85.7	95.2	95.2	95.2	98.4	98.4
2"	60.3	104.8	111.1	111.1	111.1	142.9	142.9
2 1/2"	73	123.8	130.2	130.2	130.2	165.1	165.1
3"	88.9	136.5	149.2	149.2	149.2	168.3	174.6
3 1/2"	101.6	161.9	165.1	161	161		
4"	114.3	174.6	181	177.8	193.7	206.4	209.5
5"	141.3	196.8	215.9	212.7	241.3	247.6	254
6"	168.3	222.2	250.8	247.6	266.7	288.9	282.6
8"	219.1	279.4	308	304.8	320.7	358.8	352.4
10"	273	339.7	362	358.8	400	435	435
12"	323.8	409.6	422.3	419.1	457.2	498.5	520.7
14"	355.6	450.9	485.8	482.6	492.1	520.7	577.8
16"	406.4	514.4	539.7	536.6	565.1	574.7	641.3
18"	457.2	549.3	596.9	593.7	612.8	638.2	704.8
20"	508	606.4	654	647.7	682.6	698.5	755.7
22"	558.8	660.4	704.9	701.7	733.4		
24"	609.6	717.5	774.7	768.3	790.6	838.2	901.7
26"	660.4	774	835	831.9	866.8	882.6	
28"	711.2	831.9	898.5	892.2	914.4	946.1	
30"	762	882.7	952.5	946.2	971.6	1010	
32"	812.8	939.8	1006	1003	1022	1073	
34"	863.6	990.6	1057	1054	1073	1037	
36"	914.4	1047.	1118	1118	1130	1200	
38"	965.2	1111.3					
40"	1016	1162.1					
42"	1066.	1219.					
44"	1117.5	1276					
46"	1169.6	1327					
48"	1220	1384					
50"	1270	1435					
52"	1320	1492					
54"	1372	1549					
56"	1422	1606					
58"	1475	1663					
60"	1525	1714					

TOLERANCES

(mm)	up to 600	over 600
d	±0.4	+0
		-3.2
D	±0.4	+0
		-3.2

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Industrial Gaskets
NON METALLIC FLAT GASKETS

EN 1514-1
BA 10 for EN 1092-1 flanges

DN (mm)	d (mm)	D (mm)							
	PN Class	PN2.5	PN6	PN10	PN16	PN25	PN40	PN64	PN 100
10	18	38	38	45	45	45	45	56	56
15	22	43	43	50	50	50	50	61	61
20	28	53	53	60	60	60	60	72	72
25	35	63	63	70	70	70	70	82	82
32	43	75	75	82	82	82	82	88	88
40	49	85	85	92	92	92	92	103	103
50	61	95	95	107	107	107	107	113	120
65	77	115	115	127	127	127	127	138	145
80	90	132	132	142	142	142	142	148	155
100	115	152	152	162	162	168	168	175	180
125	141	182	182	192	192	195	195	210	217
150	169	207	207	218	218	225	225	247	257
175	195	237	237	248	248	255	267	277	287
200	220	262	262	273	273	285	292	309	324
250	274	318	318	328	330	342	353	364	391
300	325	373	373	378	385	402	418	424	458
350	368	423	423	438	445	458	475	486	512
400	420	473	473	490	497	515	547	543	627
450	470	528	528	540	557	565	572	588	704
500	520	578	578	595	618	625	628	657	813
600	620	680	680	695	735	730	745	764	950
700	720	785	785	810	805	830	850	879	
800	820	890	890	915	910	940	970	988	
900	920	990	990	1015	1010	1040	1080	1108	
1000	1020	1090	1090	1120	1125	1150	1190	1220	
1200	1220	1290	1305	1340	1340	1360	1395		
1400	1420	1490	1520	1545	1540	1575	1615		
1600	1620	1700	1720	1770	1760	1795	1830		
1800	1820	1900	1930	1970	1960	2000			
2000	2020	2100	2135	2180	2165	2230			
2200	2220	2305	2345	2380	2375				
2400	2420	2505	2555	2590	2585				
2600	2620	2705	2760	2790	2785				
2800	2820	2920	2970	3010					
3000	3020	3120	3170	3225					
3200	3220	3320	3380						
3400	3420	3520	3590						
3600	3620	3730	3800						
3800	3820	3930							
4000	4020	4130							

TOLERANCES

(mm)	up to 600	over 600
d	±0.4	+0
		-3.2
D	±0.4	+0
		-3.2

GASKET ORDERING EXAMPLE

EN 1514-1, DN65, PN 16, Form FF,
moteriolTESNITBA-U, 2 mm

ASME B 16.21,4-300 lbs, Form RF,
moteriol TESNIT BAM 6000, 2 mm

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Industrial Gaskets
METAL EYELETED FLAT GASKETS

PROPERTIES AND APPLICATION

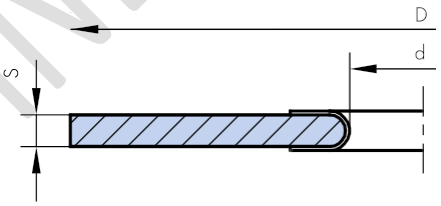
The metal eyeleted flat gaskets offer special protection against blowout for the sealing of critical or dangerous media. The sealing insert is usually made from TESNIT BA or Grafilit gasket material. The standard metal jacket is formed with an austenitic stainless steel leaf with a thickness 0.15 mm - 0.2 mm U-shaped and pressed in such a way that it becomes a single body with a base seal. The good melleability grade of the austenitic stainless steel gives to the covering excellent mechanical properties and good resistance to erosion, while the well known resistance to heat and to corrosion ensures the long working life of the seal.

ADVANTAGES

- Blow out protection.
- Protection against chemical attack.
- Improved sealability due to the local higher stress under eyelet.

SHAPE AND CONSTRUCTION

Gaskets are available according to EN 1514-1, ASME B 16.21 and other Standard Forms. Custom made gaskets are available upon request.

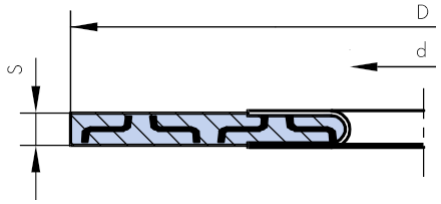


SIZE

The only limitation of the eyeleted gasket is the size of the basic gasket material.
Size limitations:
From 20 mm to 400 mm one piece eyelet.
From 400 mm upwards plasma welded eyelet.
The standard production follows the sizes and norms by ASME B16-21 and EN 1514-1.

GASKET ORDERING EXAMPLE

EN 1514-1, DN65, PN 16, Form RF,
material TESNIT BA-U, 2 mm, eyelet AISI 316



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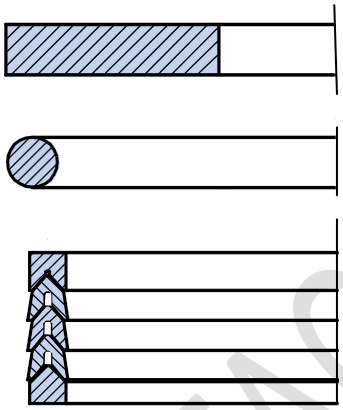
Industrial Gaskets

PTFE GASKETS

PROPERTIES AND APPLICATION

PTFE gaskets ore one of the most suitable types of gaskets for a variety o sealing applications and are mostly based on virgin PTFE or filled PTFE. PTFE gaskets provide an extensive range of applicability. PTFE is a fluoropolymer, which features an outstanding chemical resistivity to almost all chemicals, good thermal insulation properties, and use- ful mechanical and processing characteristics. The above-mentioned PTFE features can be usefully applied in PTFE gaskets. They can be mostly used in valve seats, bearings, requested to resin sliding and chemicals, elastic band for un-lubricated compressors, O-rings where elastomers can not withstand. An extended range of improved mechanical and processing properties can be additionally reached by combination of virgin PTFE and different fillers. Different combination offer a variety of different properties describet in the following table.

Filler	Improved properties
Glass	• enhanced wear resistance • chemical resistance
Graphite	• extremely low coefficient of friction • fairly good compressive strength • good wear resistance
Carbon	• good thermal resistance • resistance to deformation
Bronze	• enhanced compressive strength • good wear resistance • high thermal conductivity



Expanded PTFE Gaskets and Seal materials consist of virginal PTFE with multidirectional fibrous and/or porous structure, which the extruded PTFE consists of. A special manufacturing process provides the material with special chemical and physical properties. This can be of advantage in wide range of the applications.

ADVANTAGES

Virgin PTFE, PTFE compounds and expanded PTFE offer a wide range of compounded products with good mechanical properties, electrical properties, thermal properties, chemical resistance, low friction coefficient and good resistance to wear.

SHAPE AND CONSTRUCTION SIZE

Several types of PTFE gaskets are produced to meet the most demanding application.

Materials

DELTAONE Engineering is using virgin PTFE powder and compounds for RAM extrusion and compression moulding delivered exclusively by recognised supplier.

SIZE

SIZE limitations: each peace can feature a maximum external diameter of up to 1000 mm.

GASKET ORDERING EXAMPLE

EN 1514-1, DN 65, PN 16,
Form IBC(virgin PTFE, 2 mm

STANDARDS FOR PTFE GASKETS USED WITH FLANGES	
Gasket Standard	Flange Standard
EN 1514-1	EN 1092-1,-2, -3, -4, EN 545, EN 598, EN 969

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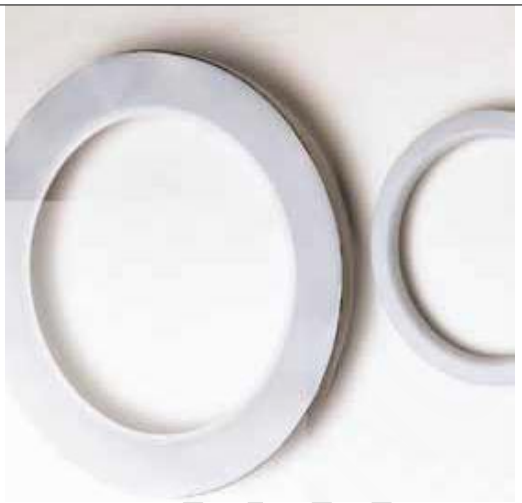
Industrial Gaskets

PTFE ENVELOPED GASKETS



PROPERTIES AND APPLICATION

The sealing insert is made of corrugated stainless steel, soft non-asbestos material, or rubber and different combinations. This insert is coated with PTFE and open on one side, usually on the outside. Thanks to the high chemical stability, good mechanical properties and permanent resistance in the atmosphere (humidity, gasses, temperature changes) they are suitable for all types of gaskets and different media, mostly for aggressive chemicals.

ADVANTAGES

Thanks to the high stability of C-F bond virgin PTFE, which is used for the envelope, exhibits extraordinary chemical resistance. Combinations of two or more insert materials allow a large number of different applications.

SHAPE AND CONSTRUCTION

The PTFE enveloped gaskets are produced in several types to meet the most demanding applications. Standard shapes are round or oval.
Enveloped materials: Virgin PTFE,
Base material: Stainless steel, non-asbestos material, rubber, ...

SIZE

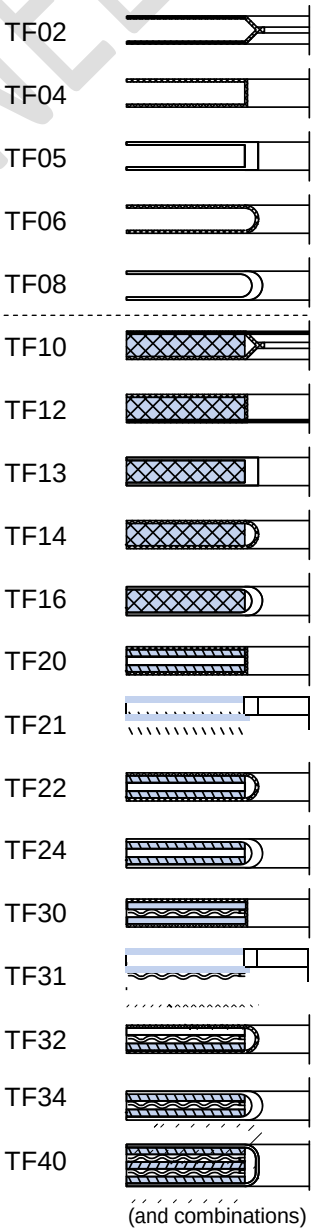
The PTFE envelope for gaskets with maximum external diameter of up to 500 mm are made in one piece, for gaskets with greater diameters they are welded. Oval shapes of PTFE envelopes are welded. There are no limitations regarding sizes for gaskets with welded envelopes.

EN 1514-3

DN (mm)	Gasket inside diameter (mm)	Envelope outside diameter (mm)	Gasket outside diameter (mm)					
	PN Class		PN6	PN 10	PN 16	PN25	PN40	PN63
10	18	36	39	46	46	46	46	56
15	22	40	44	51	51	51	51	61
20	17	50	54	61	61	61	61	72
25	34	60	64	71	71	71	71	82
32	43	70	76	82	82	82	82	88
40	49	80	86	92	92	92	92	103
50	61	92	96	107	107	107	107	113
65	77	110	116	127	127	127	127	138
80	89	126	132	142	142	142	142	148
100	115	151	152	162	162	168	168	174
125	141	178	182	192	192	194	194	210
150	169	206	207	218	218	224	224	247
200	220	260	262	273	273	284	290	309
250	273	314	317	328	329	340	352	364
300	324	365	373	378	384	400	417	424
350	356	412	423	438	444	457	474	486
400	407	469	473	489	495	514	546	543
450	458	528	528	539	555	564	571	
500	508	578	578	594	617	624	628	
600	610	679	679	695	734	731	747	

GASKET ORDERING EXAMPLE

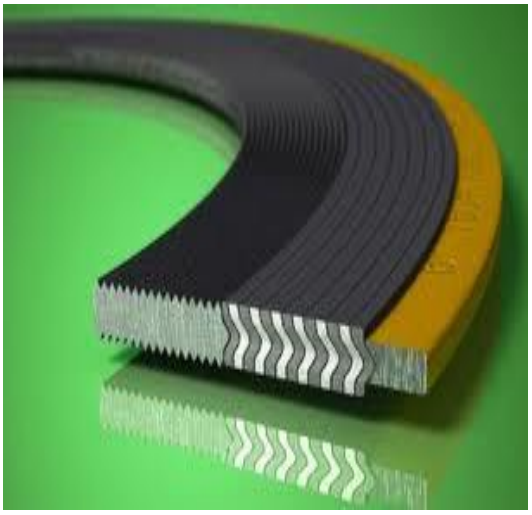
EN 1514-3, Type C, DN 65, PN 16, 2 mm, virgin PTFE



DELTA ONE ENGINEERING
We Make The Difference

Industrial Gaskets

SPECIAL GASKETS AND CUSTOM MADE GASKETS



PROPERTIES AND APPLICATION

DELTAONE with its own technology, knowledge and experience is capable to meet various customer needs. In close co-operation with customers the company develops and produces special types of gaskets for various applications. Gaskets are produced up to the size of 4000 mm in different special types for the most demanding applications in process industry for sealing hot gases ...

ADVANTAGES

- Custom made gaskets according to customers demand.
- Special large single piecegaskets upto4000mm insizes.
- Unique and strong construction allows easy hand ling and transport.
- High temperature resistance upto700°C (depends on material).
- Capability to compensate irregularities on flanges.

SHAPE AND CONSTRUCTION

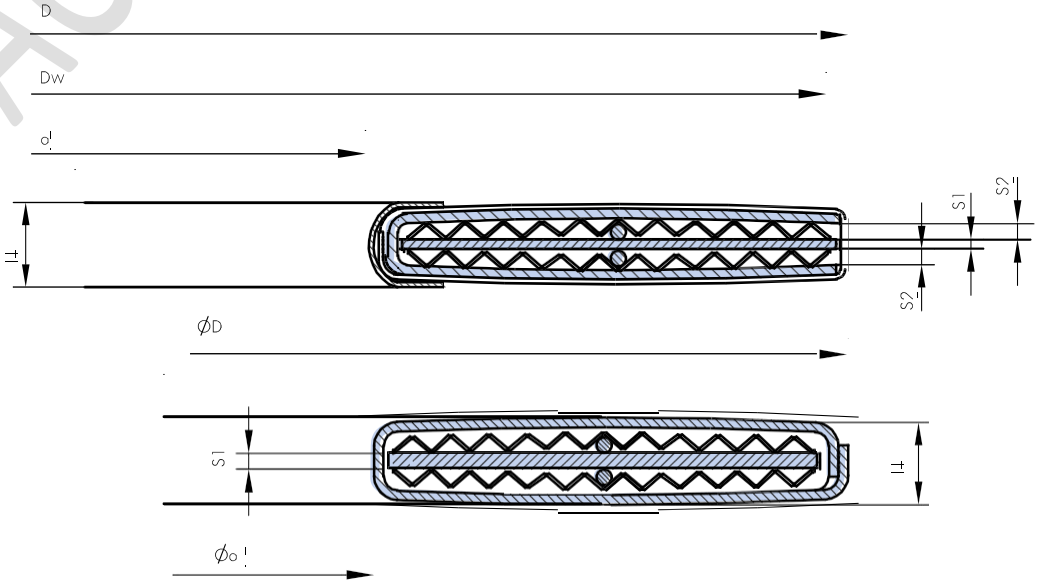
Custom-made gaskets are made to customer's own drawing and specification, samples and templates. A highly skilled hardworking team can provide almost any customers demand.

DIMENSION

Up to 4000 mm, according to customers specification.

GASKET ORDERING EXAMPLE

According to customer specification.



Contact us

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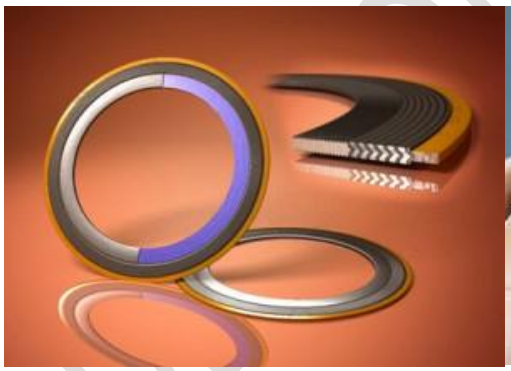

Thank you for contacting us