

KAMMPROFILE GASKETS

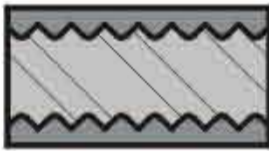
The kammprofile gasket is comprised of a concentrically serrated solid metal core with a soft, conformable sealing material bonded to each face. The soft facing material provides low stress gasket seating, while the serrated geometry of the metal core enhances sealing performance by inducing stress concentrations on the sealing surfaces. The serrations minimize lateral movement of the facing material, while the metal core provides rigidity and blowout resistance.

The kammprofile gasket exhibits excellent compressibility and recovery characteristics, maintaining joint tightness under pressure and temperature fluctuations, temperature differential across the flange core, flange rotation, bolt stress relaxation, and creep. Suitable from vacuum to extremely high pressure application.



TYPES OF GASKETS

Style KG



Style KG kammprofile gaskets are suitable for tongue and groove and male-female flanges in pipe joints and vessels or as a heat exchanger gasket.

Style SKG



Style SKG Kammprofile, utilizing an integral outer locating ring for correct gasket positioning within the material flange bolt circle. Suitable for tongue and groove and male-female flanges in pipe joints and vessels or as a heat exchanger gasket.

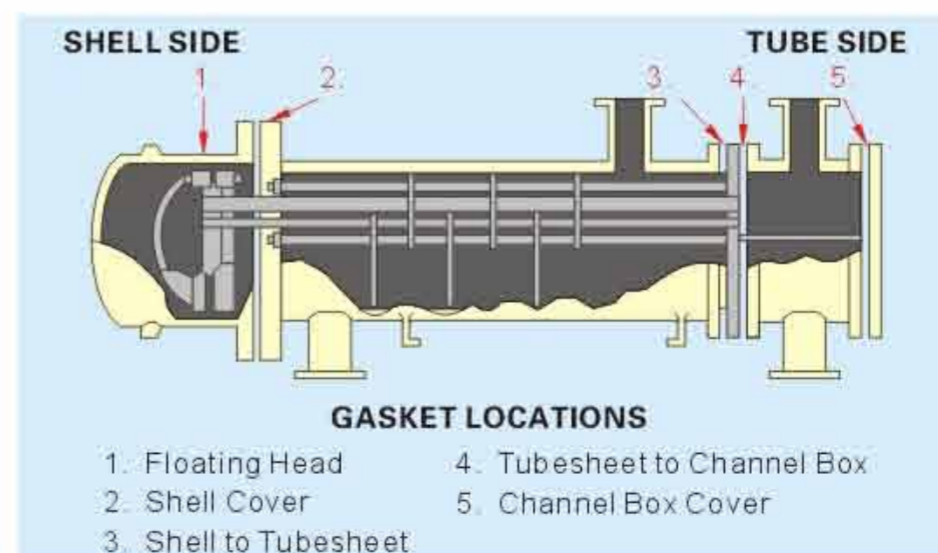
Style LKG



Style LKG is Kammprofile gasket with loose centering ring which reduces the possibility of damage to the core as a result of mechanical stress. These rings may also be spot welded.

IDEAL FOR HEAT EXCHANGER FLANGES

Although suitable for use on standard ASME flanges in a wide range of difficult applications, the kammprofile gasket is proving to be especially suitable as a reliable, cost-effective alternative to jacketed gaskets that are commonly used in heat exchanger applications. Use of the kammprofile gasket will ensure a reliable seal, from initial hydro test through difficult operating conditions. Kammprofile gaskets are suitable for use on TEMA flanges, and when required, pass partition ribs can be supplied in any configuration. The kammprofile gasket provides a integrity, low seating seal, and is ideal for heat exchanger applications with limited bolt load or lighter weight flanges.



STANDARD CORE MATERIALS

Standard core thickness is 4mm as normal (0.16"); other thicknesses and materials are available to suit specific applications.

Core Material	Max. Temperature
Stainless Steel	535-870°C (1000-1600°F)
Carbon Steel	425°C (800°F)
Brass	260°C (500°F)
Copper	315°C (600°F)
Aluminum	425°C (800°F)
Monel	815°C (1500°F)
Nickel	760°C (1400°F)
Inconel	1100°C (2000°F)

STANDARD FACING MATERIALS

Standard facing thickness is 0.5mm (0.020"), other thicknesses and materials are available to suit specific applications.

Facing Material	Max. Temperature	Seating Stress at Room Temp	
		Min. MPa (Psi)	Max. MPa (Psi)
Songraf Flexible Graphite	650°C (1200°F)	17 (2500)	500(72500)
Non-asbestos Sheet	175-400°C (350-750°F)	23 (3300)	500(72500)
PTFE & ePTFE	260°C (500°F)	17(2500)	500(72500)
Mica	850°C (1560°F)	17(2500)	500(72500)
Soft Metals	Per Material	Per Material	Per Material

FLANGE SURFACE FINISH REQUIREMENTS

The ideal flanges surface finish for use with kammprofile gaskets is 125 - 250 μ -inch Ra.

GASKET CONSTANTS

PVRC Constants		
Gb	a	Gs
387 psi	0.334	14 psi

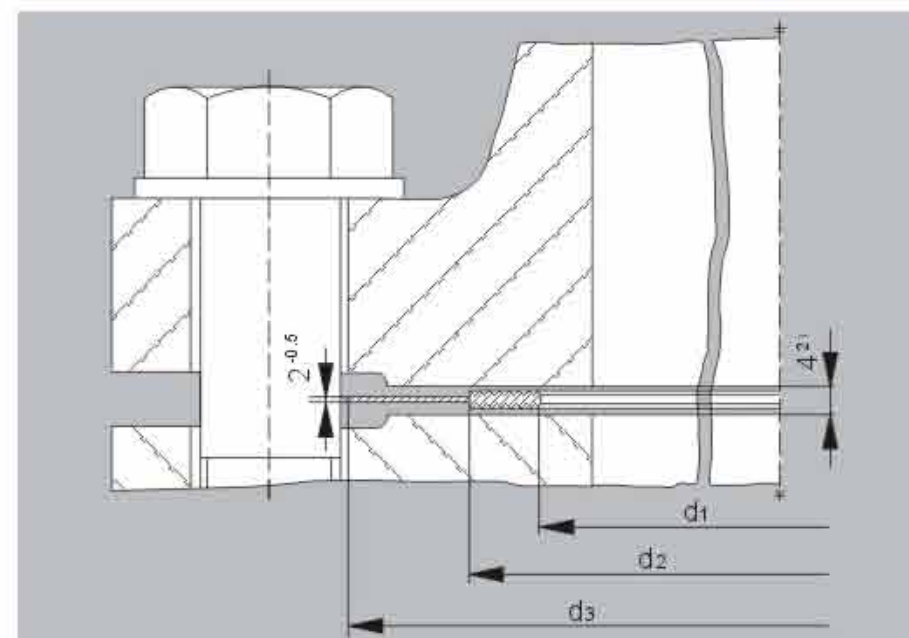
ASME Constants	
m	Y
2	2500 psi

DIMENSIONAL DATA

Ordering example for a Kammprofile gasket with layers, Stype LKG, NPS 5", for ANSI flanges, Class 300, Standard, made of ...):

Kammprofile LKG, NPS 5", Class 300, ASME B16.5, SS 316L/graphite.

The thickness of metal part 3.8+0.2 mm at a nominal size of 4. Please arrange other thicknesses when ordering.



FOR FLANGES IN ACCORDANCE WITH ANSI B16.5



STYLE SKG & LKG To Suit ASME B16.5 and BS 1560 Flanges Class 150 up to 2500								
Dimension in mm			150	300	600	900	1500	2500
NPS	d1	d2	d3					
1/2"	23	33.3	48	54	54	64	64	70
3/4"	28.6	39.7	57	67	67	70	70	76
1"	36.5	47.6	66	73	73	79	79	86
1-1/4"	44.4	60.3	76	83	83	89	89	105
1-1/2"	52.4	69.8	86	95	95	98	98	118
2"	69.8	88.9	105	111	111	143	143	146
2-1/2"	82.5	101.6	124	130	130	165	165	168
3"	98.4	123.8	136	149	149	168	175	197
4"	123.8	154	175	181	194	206	210	235
5"	150.8	182.6	197	216	241	248	254	279
6"	177.8	212.7	222	250	267	289	283	318
8"	228.6	266.7	279	308	321	359	352	387
10"	282.6	320.7	340	362	400	435	435	476
12"	339.7	377.8	410	422	457	499	521	550
14"	371.5	409.6	451	486	492	521	578	
16"	422.3	466.7	514	540	565	575	641	
18"	479.4	530.2	549	597	613	638	705	
20"	530.2	581	606	654	683	699	756	
24"	631.8	682.6	718	775	791	838	902	

FOR FLANGES IN ACCORDANCE WITH ASME B16.47 SERIES A



			150	300	400	600	900
NPS	d1	d2	d3				
26	690	740	772	832	829	864	880
28	740	790	829	895	889	911	943
30	800	850	880	949	943	968	1007
32	845	905	937	1003	1000	1019	1070
34	895	955	987	1054	1051	1070	1134
36	950	1010	1045	1114	1114	1127	1197
38	960	1020	1108	1051	1070	1102	1197
40	1015	1075	1159	1111	1124	1153	1248
42	1065	1125	1216	1162	1175	1216	1299
44	1125	1185	1273	1216	1229	1267	1365
46	1175	1235	1324	1270	1286	1324	1432
48	1220	1290	1381	1321	1343	1388	1483
50	1270	1350	1432	1375	1400	1445	
52	1320	1400	1489	1426	1451	1495	
54	1375	1455	1546	1489	1515	1553	
56	1430	1510	1603	1540	1565	1610	
58	1485	1565	1661	1591	1616	1661	
60	1535	1615	1711	1742	1680	1730	

FOR DIN FLANGES



DN	d1	d2	PN 10	PN 16	PN 25	PN 40	PN 63	PN 100	PN 160	PN 250	PN 320	PN 400
			d3									
10	22	36	46	46	46	46	56	56	56	67	67	67
15	26	42	51	51	51	51	61	61	61	72	72	78
20	31	47	61	61	61	61						
25	36	52	71	71	71	71	82	82	82	83	92	104
32	46	66	82	82	82	82						
40	53	73	92	92	92	92	103	103	103	109	119	135
50	65	87	107	107	107	107	113	119	119	124	134	150
65	81	103	127	127	127	127	137	143	143	153	170	192
80	95	121	142	142	142	142	148	154	154	170	190	207
100	118	144	162	162	168	168	174	180	180	202	229	256
125	142	176	192	192	194	194	210	217	217	242	274	301
150	170	204	217	217	224	224	247	257	257	284	311	348
175	195	229	247	247	254	265	277	287	284	316	358	402
200	224	258	272	272	284	290	309	324	324	358	398	442
250	275	315	327	328	340	352	364	391	388	442	488	
300	325	365	377	383	400	417	424	458	458	536		
350	375	420	437	443	457	474	486	512				
400	426	474	489	495	514	546	543	572				
450	480	528	539	555		571						
500	530	578	594	617	624	628	657	704				
600	630	680	695	734	731	747	764	813				
700	730	780	810	804	833	852	879	950				
800	830	880	917	911	942	974	988					
900	930	980	1017	1011	1042	1084	1108					
1000	1040	1090	1124	1128	1154	1194	1220					
1200	1250	1310	1341	1342	1364	1398	1452					
1400	1440	1510	1548	1542	1578	1618						
1600	1650	1730	1772	1764	1798	1830						
1800	1850	1930	1972	1964	2000							
2000	2050	2130	2182	2168	2230							
2200	2250	2340	2384	2378								
2400	2460	2550	2594									
2600	2670	2760	2794									
2800	2890	2980	3014									
3000	3100	3190	3228									

TYPICAL APPLICATION

✓ HYDROGEN

Design Temperature 450°C (850°F)
Design Pressure 200bar (3,000 psi)

✓ NATURAL GAS

Design Temperature Ambient
Design Pressure 40bar (600 psi)

✓ HEAT TRANSFER FLUID

Design Temperature 300°C (575°F)
Design Pressure 20bar (290 psi)

✓ EXHAUST GAS

Design Temperature 700°C (1300°F)
Design Pressure 1.5bar (20 psi)

✓ STEAM

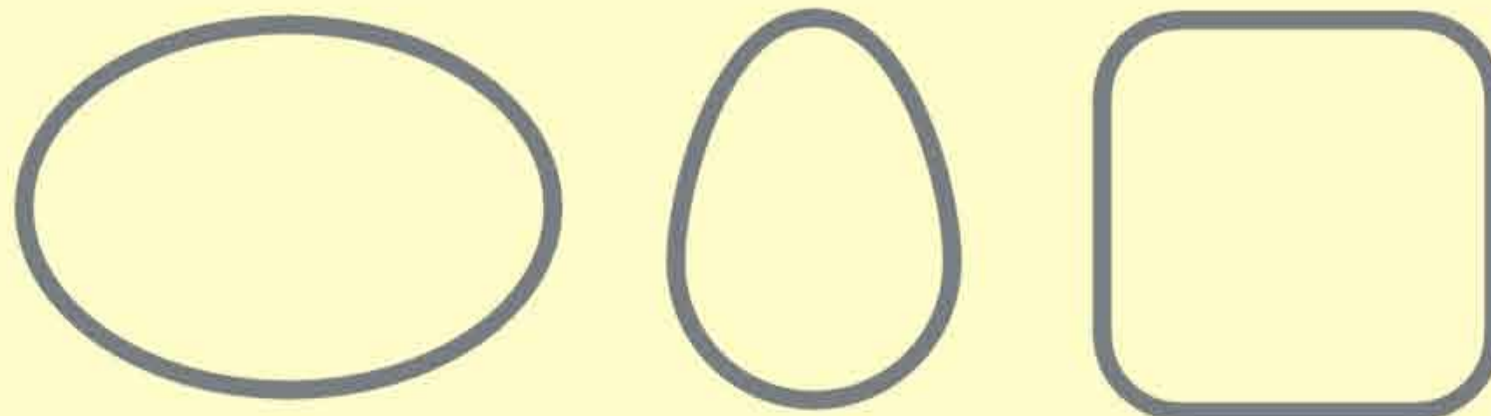
Design Temperature 300°C (575°F)
Design Pressure 20bar (290 psi)

✓ HYDROGEN

Design Temperature 450°C (840°F)
Design Pressure 50bar (725 psi)

SUPERIOR PERFORMANCE

Superior Tightness	Longer life, less maintenance, reduced emissions.
Wide Range of Materials	Core and facing materials to suit almost any application.
Reproducible Construction	Assures consistency from lot to lot.
Easy to Handle and Install	Rigid core facilitates easy handling, less damage.
Wide Pressure Range	Suitable from Vacuum to Class 2500 and higher, reduces inventory requirements.
Wide Temperature Range	Suitable from cryogenics to 1100 °C (2000 °F) depending on core and facing materials.
Low Seating Stress	Ideal for light flanges with limited available bolt load, as well as highly loaded flanges.
Conformable Surfaces	Soft, conformable surface layers accommodate minor dings, nicks and scratches that are detrimental to other types of gasket; also less susceptible to inaccurate bolting. Suitable for use on a wide range of surface finishes.
Fire-safe	Flexible graphite and solid metal cores are inherently fire-safe.
Wide Application	Available for standard and special flanges, in circular and non-circular shapes.
Replaces Jacketed Gaskets	Direct replacement for jacketed gaskets in most applications.
Cost Effective	Longer life, less maintenance, reduced emissions.



Also available in non-circular configurations.