

SPIROFLEX SPIRAL-WOUND GASKETS

Spiral-wound gaskets have long been used as sealing elements in refineries, chemical plants, gas installations, water treatment plants and in general pipeline construction.

Spiroflex gaskets SpV retain the same filler strip throughout. Common filler materials include graphite, sintered or unsintered PTFE and mica. Spiroflex gaskets SpV are only suitable for flange connections below PN 25 where there are sufficiently high bolt loads available.

BAM test report: Profile SpV with graphite for liquid and gaseous oxygen 350 °C, 250 bar (Manufacturer certificate on the basis of a BAM test report).

Spiroflex gaskets with sealing zone Profile SpZ have the same filler strip inside and outside and a PTFE filler strip in the middle area. They have a number of distinct technical advantages:

- » Lower seating stress required with higher leak-tightness, as the surface pressure is concentrated on the middle area of the sealing zone of unsintered PTFE. This allows Profile SpZ gaskets to be used from PN 10. The minimum surface pressure is 30 N/mm² as opposed to the 50 N/mm² otherwise required.
- » The surface pressure creates smaller radial forces than for example gaskets that are filled entirely with PTFE. There is therefore no need to support the spiral with an inner ring at smaller nominal diameters up to max. DN 200 and at low sealing pressures of approx. 60 N/mm². High pressure and/or frequent load changes require a high sealing pressure, in this case the spirals should be supported with an appropriate flange design or additional rings.
- » As the PTFE sealing zone is protected by areas filled with graphite, it can withstand extreme operational conditions.
- » Using a helium leak detector, leak rates of 10⁻⁸ mbar l s⁻¹ m⁻¹ have been measured on SpZ gaskets DN 150 with PTFE sealing zone.

Spiroflex gaskets SpFS in the "Firesafe" range have unsintered PTFE filler strips on the inside and graphite filler strips on the outside. They are suitable for applications where the product may not come into contact with the graphite and in an operating temperature range below 250 °C. At temperatures above 250 °C which require to be "Firesafe", Spiroflex gaskets SpV with graphite filler band can be used

Application limits

Spiroflex gaskets can be produced in all sizes from DN 10 to a diameter of four metres. However, from a sealing technology point of view, grooved gaskets are recommended for use at diameters above 1000 mm.

We also produce oval-shaped spiral-wound gaskets for the valve and apparatus construction industries, e.g. as valve cover gaskets or manhole covers. Oval-shaped inner and/or outer rings are also possible.

Gasket profiles

Profile	Cross-section
SpV1	
SpV1I	
SpV2I	
SpZ1	
SpZ2	
SpZ2I	
SpFS2I	
SpVNG	
SpZNG	
SpV2I-HT	

Materials for the metal strip

For DIN areas: 1.4541

For ASME areas: 316L (1.4404)

Other materials available on request.

Materials for the sealing filler strip

Graphite up to 550 °C, unsintered PTFE as the sealing zone or sintered PTFE for all the filling up to 260 °C, other materials available on request.

Materials for the outer ring

The standard model has an outer ring of galvanised sheet steel or a bichromatised ring.

Materials for the inner ring

Generally the material for the inner ring is the same as that used for the metal strip.

SPIROFLEX SPIRAL-WOUND GASKETS

Gasket limiting values

Profiles		SpV1, SpV2			SpV1I, SpV2I			SpZ1, SpZ2	SpZ1I; SpZ2I
Materials		1.4541 Graphite	1.4571 PTFE	1.4571 PTFE sintered	1.4541 Graphite	1.4571 PTFE	1.4571 PTFE sintered	1.4571 PTFE/Graphite	1.4571 PTFE/Graphite
Recommended max. roughness of the flange surfaces	μm from to	12,5 50	25 50	25 50	12,5 50	25 50	25 50	25 50	25 50
Surface pressure limits for 20 °C	N/mm^2 σ_v σ_θ	50	50	50	50	50	50	30	30
		150	150	150	300	300	300	150	300
Surface pressure limits for 300 °C	N/mm^2 σ_v σ_θ	60	*	*	60	*	*	45*	45*
		120	*	*	220	*	*	120*	220*

* For PTFE, these surface pressures apply at 250 °C.

You can find gasket characteristic values in accordance with EN13555 on our homepage at www.klinger-kempchen.de

Profile design and gasket thickness

Profile design		single corrugated SpV	single corrugated with zone SpZ	For flange type	Gasket thickness SpV or SpZ to DN					
					80	300	900	1200	1800	≥2000
1	without inner and outer ring	SpV1*	SpZ1*	Tongue and groove Male and female face	2,5	3,0	3,5	4,5	5,5	6,5
1I	with inner ring 1)	SpV1I*	SpZ1I	Male and female face	2,5	3,0	3,5	4,5	5,5	6,5
1I	with inner ring 2)	SpV1I	SpZ1I	specialty-produced male and female face **	4,5	4,5	4,5	4,5	5,5	6,5
2	with outer ring 2)	SpV2	SpZ2*	raised face	4,5	4,5	4,5	4,5	5,5	6,5
2I	with inner and outer ring 2)	SpV2I*	SpZ2I*	raised face	4,5	4,5	4,5	4,5	5,5	6,5
				1) Thickness	1,5	1,5	2,0	3,0	3,0	4,0
				2) Thickness	3,0	3,0	3,0	3,0	3,0	4,0

* Shown in cross-section.

Dimensions in mm

** The groove and/or female face depth at 4.5 mm = 6 mm, at 5.5 mm = 7 mm and at 6.5 mm = 8 mm.

Production tolerances

Production tolerances for spiral-wound gaskets “SPIROFLEX” and filler material projection (thickness tolerance)			Works standard 104	Tolerances in mm	ASME B16.20	Tolerances in mm	
Works standard 127			d1	DN ≤ 100	± 0,4	NPS ≤ 3	±0,8
Sectional steel strip s ^{+0,3} mm				100 < DN ≤ 400	± 0,6	3 < NPS ≤ 24	±1,5
Projection of the filler material strip on each side:				400 < DN ≤ 800	± 0,8	24 < NPS ≤ 60	±3,0
s	minimum	maximum		800 < DN ≤ 1600	± 1,2		
2,5 to 4,5	+ 0,10	+ 0,20		1600 < DN ≤ 2000	± 1,5		
5,5	+ 0,15	+ 0,30	d4	DN ≤ 800	± 0,8	NPS ≤ 60	±0,8
6,5	+ 0,20	+ 0,40		800 < DN ≤ 1600	± 1,5		
7,2	+ 0,40	+ 0,80		1600 < DN ≤ 2000	± 2,0		

SPIROFLEX SPIRAL-WOUND GASKETS

Metal-to-metal spiral gaskets (KNS)

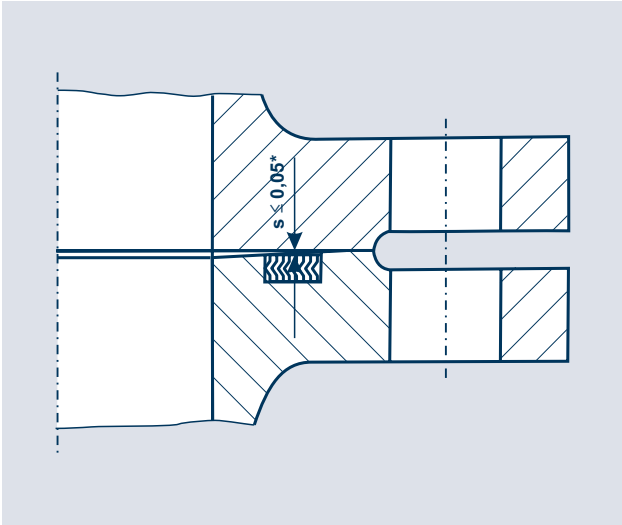
This type of gasket has proven itself in many applications as well in valve construction for power plants. The gasket is in a groove and the flanges are tensioned against each other in such a way as to achieve metal-to-metal contact. The gasket is therefore in metal-to-metal contact. Full contact must be ensured under all operating conditions.

An alignment at stepped face design is also usual. However this gives rise to a risk that the inner and/or outer spirals will find their way into the gap.

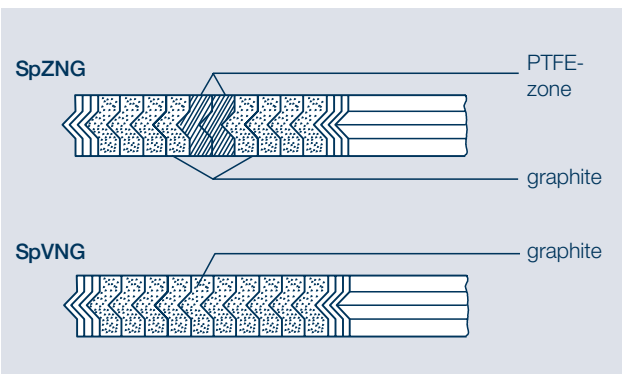
In the case of spiral seals arranged in force shunt, investigations of the spring-back behaviour have shown that the flange rotation of both flanges in the centre of the seal should lead to a gap s of no more than 0.05 mm. Gap $s \geq 0.1$ mm lead to difficulties.

Our Spiroflex gasket fulfils the particular requirement of the user for the lowest possible ferrite and chloride content in the filler. Spiroflex gaskets Profile SpZNG are virtually chloride and ferrite free. For temperatures up to 280 °C we recommend our Profile SpZNG with graphite and PTFE. Here the intermediate filler windings are made of PTFE. During use, a zone of increased surface pressure is produced due to the incompressibility of the PTFE material. Up to temperatures of approximately 350 °C we recommend our gaskets made of pure graphite. We supply gaskets with a thickness of 5.5 mm as double-corrugated models.

The application limit of approx. 350 °C is due to the peculiarities of metal-to-metal connections. Spiral-wound gaskets should not be used in metal-to-metal contact at temperatures above 350 °C without prior testing or experiment.



* $s \leq 0,05$: tight
 $0,05 < s < 0,10$: possibly leaking
 $0,10 \leq s$: leaking



Gasket profiles

Profile	Cross-section
SpVNG	
SpZNG	

SPIROFLEX SPIRAL-WOUND GASKETS

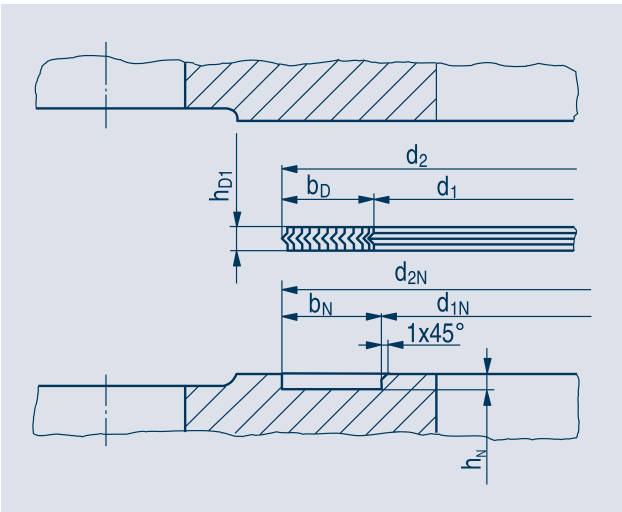
Gasket limiting values

Material	1.4541	< 280 °C = graphite/PTFE > 280 °C = graphite > 350 °C not recommended
$k_0 K_D$	[N/mm]	70 b_D
k_1	[mm]	1,4 b_D
R_z^*	[μ m]	12,5 to 25

Works standard 121

Ordering example for a spiral-wound gasket "SPIROFLEX", Profile SpZNG, works standard 121, for groove $d_{1N} \times d_{2N} \times 3,3$, made of ...¹⁾:

Spiral-wound gasket, SpZNG, WN 121, for groove 600 x 634 x3.3, 1.4541/graphite/PTFE



Recommended gasket and groove width

Ø-Range	40 to 400	80 to 800	160 to 1000	320 to 1600
b_D	6,0 to 8,5	8,6 to 12,0	12,1 to 17	17,1 to 25,0
b_N	8,0 to 10,0	10,5 to 14,0	14,5 to 19,0	19,5 to 28,0

Recommended application range

Range	$d_2 < 1200$	$d_2 < 1600$
Number of corrugations	1	2
$h_{D1}^{+0,3}$	4,5**	5,5**
d_{1N} $d_{2N}^{+0,2}$ $b_N^{+0,1}$	Specified by client	Specified by client
Depth of groove $h_N^{+0,1}$	3,3	3,6

* Recommended maximum roughness of the flange surfaces

** Height of the metal strips; the filler protrudes further

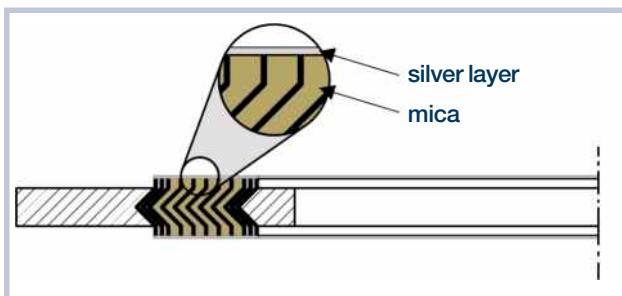
¹⁾ Specify material when placing order

SPIROFLEX SPIRAL-WOUND GASKETS

SPV2I-HT

This type of gasket unifies the features of high-temperature suitable metallic gaskets and the good return-ability behaviour of spiral wound gaskets.

Through the combination of modified spiral wound gaskets with a metallic layer a lowest possible leakage rate is also probable in a temperature range up to 750 °C.



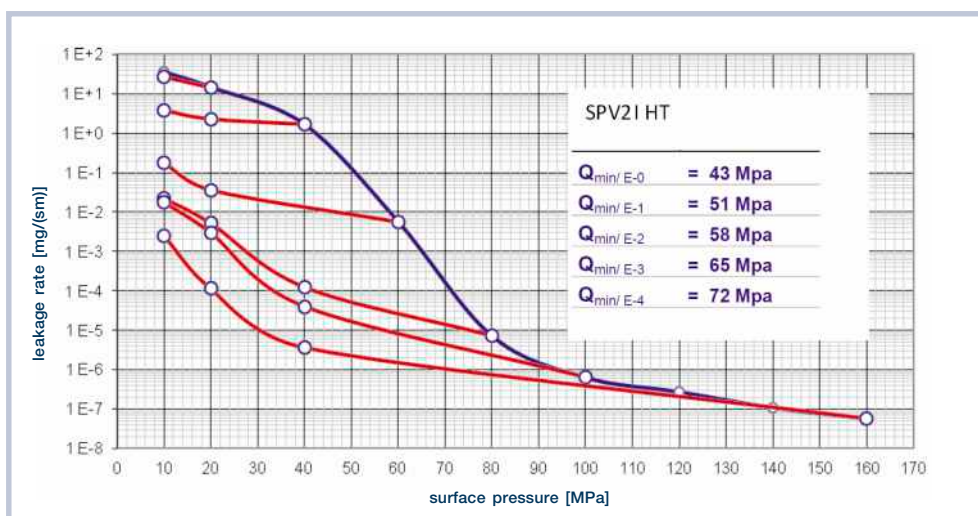
The decisive, leak relevant construction feature is the execution of the soft-material-filled spiral wound gasket, especially that the filling material lines up precisely with the metal band. So the metal band is in direct contact with the silver layer. This leads to a pure metallic sealing between flanges and metal band.

The elastic core additionally enables the compensation of flange distance increase, e.g. by thermic expansion. Up to 0,1 mm this gasket can rebound, thanks to the elastic spiral core.

In the leakage diagram according to EN 13555 this advantageous behaviour is visible in the nearly horizontally running returnability branches. A reduction of the surface pressure therefore does not necessarily lead to a distinctly higher leakage rate. In practice this also means a high blow-off proofness.

The mica filled core is covered by the metallic layer. Thereby the soft material is chambered and protected against volume loss through oxidation.

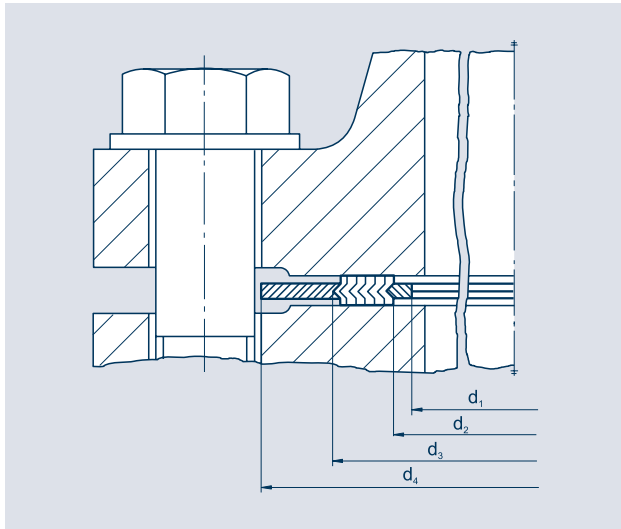
In contrast to conventional metallic gaskets this gasket only needs one third of the normally needed surface pressure.



SPIROFLEX SPIRAL-WOUND GASKETS

for flanges with raised face

04



Conforms to EN 1514-2 for DIN flanges

Ordering example for a spiral-wound gasket "SPIROFLEX", Profile SpV2I, DN 150, PN 63, EN 1514-2, made of ...¹⁾:

Spiral-wound gasket SpV2I, DN 150, PN 63, EN 1514-2, 1.4571 / graphite

EN 1514-2 for DIN flanges

DN	d ₁	d ₂ ^{min}	d ₃ ^{min}		PN		d ₄			
			10-40	63-160	10	25	40	63	100	160
10	18	24	34	34	46	46	46	56	56	56
15	23	29	39	39	51	51	51	61	61	61
20	28	34	46	-	61	61	61	72	72	-
25	35	41	53	53	71	71	71	82	82	82
32	43	49	61	-	82	82	82	-	-	-
40	50	56	68	68	92	92	92	103	103	103
50	61	70	86	86	107	107	107	113	119	119
65	77	86	102	106	127	127	127	137	143	143
80	90	99	115	119	142	142	142	148	154	154
100	115	127	143	147	162	168	168	174	180	180
125	140	152	172	176	192	194	194	210	217	217
150	167	179	199	203	217	224	224	247	257	257
200	216	228	248	252	272	284	290	309	324	324
250	267	279	303	307	327	340	352	364	391	388
300	318	330	354	358	377	400	417	424	458	458
350	360	376	400	404	437	457	474	486	512	-
400	410	422	450	456	488	514	546	543	572	-
500	510	522	550	556	593	624	628	657	704	-
600	610	622	650	656	695	731	747	764	813	-
700	710	722	756	762	810	833	852	879	950	-
800	810	830	864	870	917	942	974	988	-	-
900	910	930	964	970	1017	1042	1084	1108	-	-
1000	1010	1030	1074	1080	1124	1154	1194	-	-	-

- Flanges compliant with the standard not available

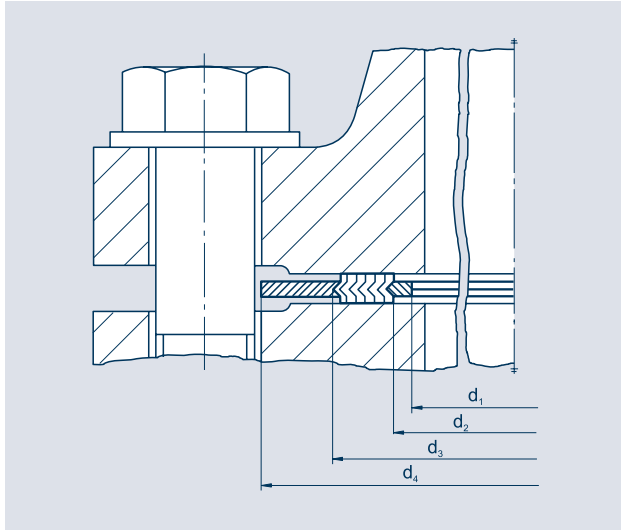
Size delivered corresponding to EN 1514-2 in accordance with WN 190

Dimensions in mm

¹⁾ Specify material when placing order

SPIROFLEX SPIRAL-WOUND GASKETS

for flanges with raised face



Conforms to works standard 104 for DIN flanges

Ordering example for a spiral-wound gasket "SPIROFLEX", Profile SpV2I, DN 150, PN 63 for DIN flanges, works standard 104, made of ...¹⁾:

Spiral-wound gasket SpV2I, DN 150, PN 63, works standard 104, 1.4571 / graphite

04

Works standard 104 for DIN flanges

DN	d ₁	d ₂	d ₃		PN				d ₄					
	10-400	10-400	10-40	63-400	10	16	25	40	63	100	160	250	320	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	-	-	-	-	-	-
25	34	40	54	54	71	71	71	71	82	82	82	83	92	104
32	43	49	65	65	82	82	82	82	-	-	-	-	-	-
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	-	-	-	-
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	950	-	-	-	-
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	-	-	-	-	-	-	-

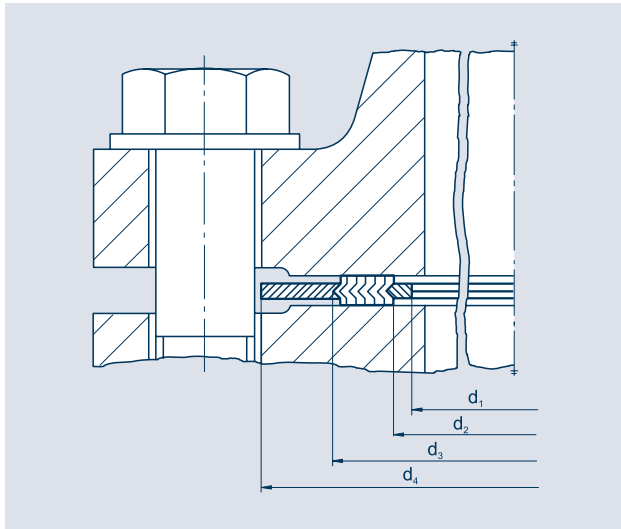
- Flanges compliant with the standard not available

Dimensions in mm

¹⁾ Specify material when placing order

SPIROFLEX SPIRAL-WOUND GASKETS

04



**Dimensions for spiral-wound gaskets
in accordance with EN 12560-2 for flanges
in accordance with ASME/ANSI B16.5**

Ordering example for a spiral-wound gasket "SPIROFLEX",
Profile SpV2I, NPS 5, Class 600,
in accordance with EN 12560-2 for flanges
in accordance with ASME/ANSI B 16.5, made of ...¹⁾:

**Spiral-wound gasket SpV2I, NPS 5, Class 600,
EN 12560-2, ASME/ANSI B16.5, 316L / graphite**

EN 12560-2 for flanges in accordance with ASME/ANSI B16.5

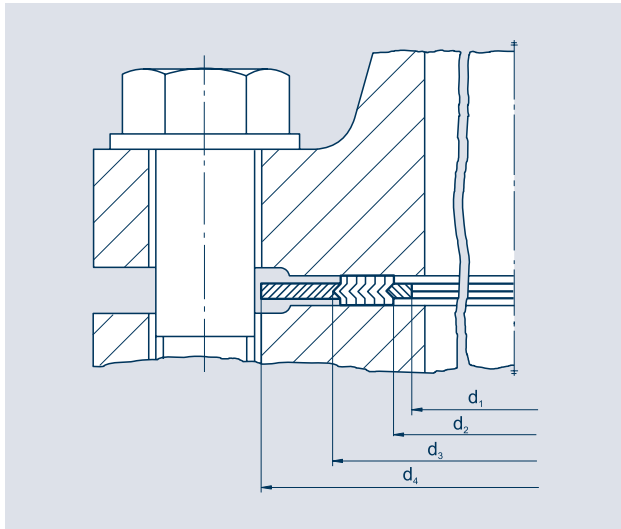
NPS	d ₁ Class					d ₂ Class					d ₃ Class		d ₄ Class					
	150/ 300	600	900	1500	2500	150/ 300	600	900	1500	2500	150 600	900- 2500	150	300	600	900	1500	2500
½	14,3	14,3	14,3	14,3	14,3	19,1	19,1	19,1	19,1	19,1	31,8	31,8	47,8	54,1	54,1	63,5	63,5	69,9
¾	20,7	20,7	20,7	20,7	20,7	25,4	25,4	25,4	25,4	25,4	39,6	39,6	57,2	66,8	66,8	69,9	69,9	76,2
1	27,0	27,0	27,0	27,0	27,0	31,8	31,8	31,8	31,8	31,8	47,8	47,8	66,8	73,2	73,2	79,5	79,5	85,9
1¼	38,1	38,1	33,4	33,4	33,4	47,8	47,8	39,6	39,6	39,6	60,5	60,5	76,2	82,6	82,6	88,9	88,9	104,9
1½	44,5	44,5	41,3	41,3	41,3	54,1	54,1	47,8	47,8	47,8	69,9	69,9	85,9	95,3	95,3	98,6	98,6	117,6
2	55,6	55,6	52,4	52,4	52,4	69,9	69,9	58,7	58,7	58,7	85,9	85,9	104,9	111,3	111,3	143,0	143,0	146,1
2½	66,7	66,7	63,5	63,5	63,5	82,6	82,6	69,9	69,9	69,9	98,6	98,6	124,0	130,3	130,3	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	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	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	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	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	320,8	358,9	352,6	387,4
10	268,3	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	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	457,2	498,6	520,7	549,4
14	349,3	349,3	320,8	320,8	-	371,6	362,0	355,6	362,0	-	406,4	400,1	450,9	485,9	492,3	520,7	577,9	-
16	400,0	400,0	374,7	368,3	-	422,4	412,8	412,8	406,4	-	463,6	457,2	514,4	539,8	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	612,9	638,3	704,9	-
20	500,0	500,0	482,6	476,3	-	525,5	520,7	520,7	514,4	-	577,9	571,5	606,6	654,1	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	790,7	838,2	901,7	-

- Flanges compliant with the standard not available

Dimensions in mm

¹⁾ Specify material when placing order

SPIROFLEX SPIRAL-WOUND GASKETS



**Dimensions for spiral-wound gaskets
in accordance with ASME B16.20 for flanges
in accordance with ASME/ANSI B16.5**

Ordering example for a spiral-wound gasket "SPIROFLEX",
Profile SpV2I, NPS 5, Class 600,
in accordance with ASME B16.20 for flanges
in accordance with ASME/ANSI B 16.5, made of ...¹⁾:

**Spiral-wound gasket SpV2I, NPS 5, Class 600,
ASME B16.20, ASME/ANSI B16.5, 316L / graphite**

For flanges in accordance with ASME/ANSI B16.5

NPS	d ₁ Class					d ₂ Class					d ₃ Class		d ₄ Class						
	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
½	14,2	14,2	-	14,2	14,2	19,1	19,1	-	19,1	19,1	31,8	31,8	47,8	54,1	-	54,1	-	63,5	69,9
¾	20,6	20,6	-	20,6	20,6	25,4	25,4	-	25,4	25,4	39,6	39,6	57,2	66,8	-	66,8	-	69,9	76,2
1	26,9	26,9	-	26,9	26,9	31,8	31,8	-	31,8	31,8	47,8	47,8	66,8	73,2	-	73,2	-	79,5	85,9
1¼	38,1	38,1	-	33,3	33,3	47,8	47,8	-	39,6	39,6	60,5	60,5	76,2	82,6	-	82,6	-	88,9	104,9
1½	44,5	44,5	-	41,4	41,4	54,1	54,1	-	47,8	47,8	69,9	69,9	85,9	95,3	-	95,3	-	98,6	117,6
2	55,6	55,6	-	52,3	52,3	69,9	69,9	-	58,7	58,7	85,9	85,9	104,9	111,3	-	111,3	-	143,0	146,1
2½	66,5	66,5	-	63,5	63,5	82,6	82,6	-	69,9	69,9	98,6	98,6	124,0	130,3	-	130,3	-	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	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	355,6	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	406,4	-	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	-

- Flanges compliant with the standard not available

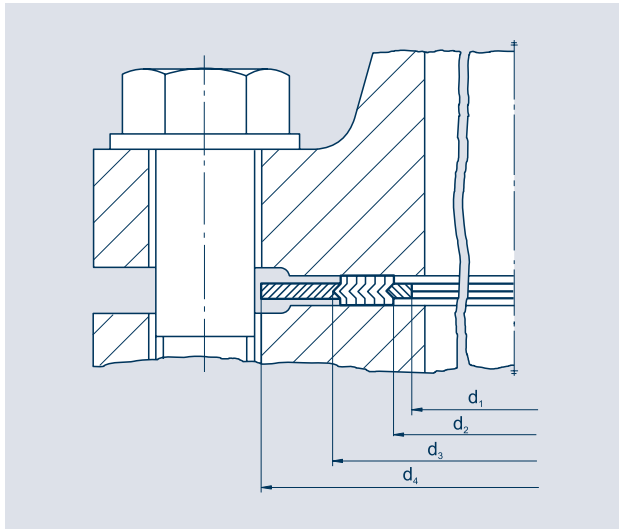
Dimensions in mm

¹⁾ Specify material when placing order

²⁾ With metric bolts it can be advisable to use gaskets in the d₄ size which is approx. 3 mm smaller sizes deviating from ASME B16.20 should in particular be reconciled.

SPIROFLEX SPIRAL-WOUND GASKETS

04



**Dimensions for spiral-wound gaskets
in accordance with ASME B16.20 for flanges
in accordance with ASME/ANSI B16.47 Series B**

(previously API 601 for flanges in accordance with API 605)

Ordering example for a spiral-wound gasket "SPIROFLEX",
Profile SpV2I, NPS 30, Class 150,
in accordance with ASME B16.20 for flanges
in accordance with ASME/ANSI B16.47 Series B, made of ...¹⁾:

**Spiral-wound gasket SpV2I, NPS 30, Class 150,
ASME B16.20, ASME/ANSI B16.47 Series B,
316L / graphite**

For flanges in accordance with ASME/ANSI B16.47 Series B

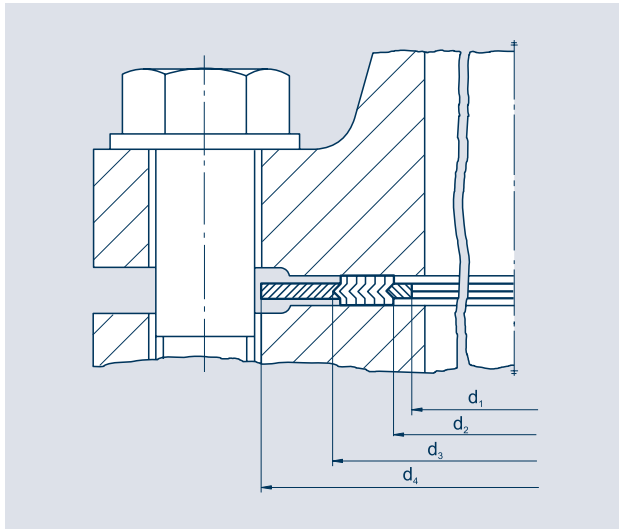
NPS	d ₁ Class					d ₂ Class					d ₃ Class					d ₄ Class				
	150	300	400	600	900	150	300	400	600	900	150	300	400	600	900	150	300	400	600	900
26	654,1	654,1	654,1	644,7	666,8	673,1	673,1	666,8	663,7	692,2	698,5	711,2	698,5	714,5	749,3	725,4	771,7	746,3	765,3	838,2
28	704,9	704,9	701,8	692,2	717,6	723,9	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	958,9
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	860,6	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	965,2	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	1022,4	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	1085,9	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	1255,8	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	-	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	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	1593,9	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	-

- Flanges compliant with the standard not available

Dimensions in mm

¹⁾ Specify material when placing order

SPIROFLEX SPIRAL-WOUND GASKETS



**Dimensions for spiral-wound gaskets
in accordance with ASME B16.20 for flanges
in accordance with ASME/ANSI B16.47 Series A**

(previously API 601 for flanges in accordance with MSS SP-44)

Ordering example for a spiral-wound gasket "SPIROFLEX",
Profile SpV2I, NPS 30, Class 150, ASME B16.20,
ASME/ANSI B16.47 Series A, made of ...¹⁾:

**Spiral-wound gasket SpV2I, NPS 30, Class 150,
ASME B16.20, ASME/ANSI B16.47 Series A,
316L / graphite**

For flanges in accordance with ASME/ANSI B16.47 Series A

NPS	d ₁ Class					d ₂ Class					d ₃ Class					d ₄ Class				
	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	660,4	647,7	660,4	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	704,9	704,9	711,2	698,5	711,2	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	755,7	755,7	755,7	755,7	774,7	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	806,5	806,5	812,8	812,8	812,8	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	857,3	857,3	863,6	863,6	863,6	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	908,1	908,1	917,7	917,7	920,8	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	958,9	952,5	952,5	952,5	1009,7	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	1009,7	1003,3	1000,3	1009,7	1060,5	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	1060,5	1054,1	1051,1	1066,8	1111,3	1079,5	1073,2	1076,5	1104,9	1149,4	1124,0	1120,9	1127,3	1155,7	1200,2	1219,2	1165,4	1178,1	1219,2	1301,8
44	1111,3	1104,9	1104,9	1111,3	1155,7	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	1162,1	1152,7	1168,4	1162,1	1219,2	1181,1	1178,1	1193,8	1212,9	1270,0	1228,9	1228,9	1244,6	1263,7	1320,8	1327,2	1273,3	1289,1	1327,3	1435,1
48	1212,9	1209,8	1206,5	1219,2	1270,0	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	1263,7	1244,6	1257,3	1270,0	-	1282,7	1295,4	1295,4	1320,8	-	1333,5	1346,2	1346,2	1371,6	-	1435,1	1378,0	1403,4	1447,8	-
52	1314,5	1320,8	1308,1	1320,8	-	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	1358,9	1352,6	1352,6	1378,0	-	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	1409,7	1403,4	1403,4	1428,8	-	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	1460,5	1447,8	1454,2	1473,2	-	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	1511,3	1524,0	1517,7	1530,4	-	1536,7	1562,1	1568,5	1593,9	-	1587,5	1612,9	1619,3	1644,7	-	1714,5	1644,7	1682,8	1733,6	-

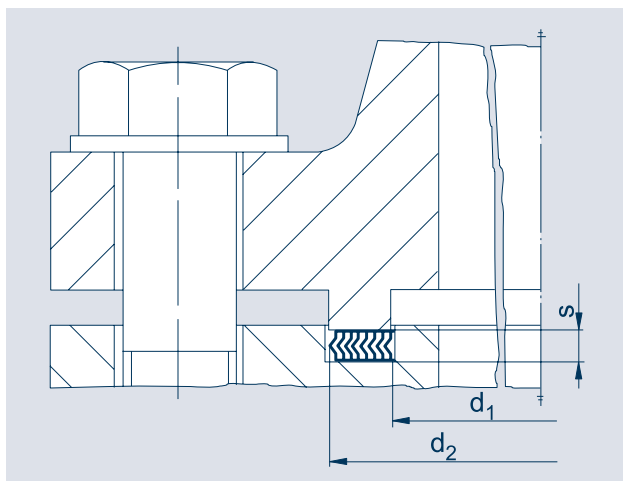
- Flanges compliant with the standard not available

Dimensions in mm

¹⁾ Specify material when placing order

SPIROFLEX SPIRAL-WOUND GASKETS

04



Spiral gaskets "SPIROFLEX" for flanges with tongue and groove

Gasket thickness

Measurements	DN		NPS	s
in mm	to 80	resp.	to 3	2,5
	100 to 300	resp.	4 to 12	3,0
	350 to 900	resp.	14 to 36	3,5
	for 1000	resp.	40	4,5

Conforming to EN 1514-1 Form TG

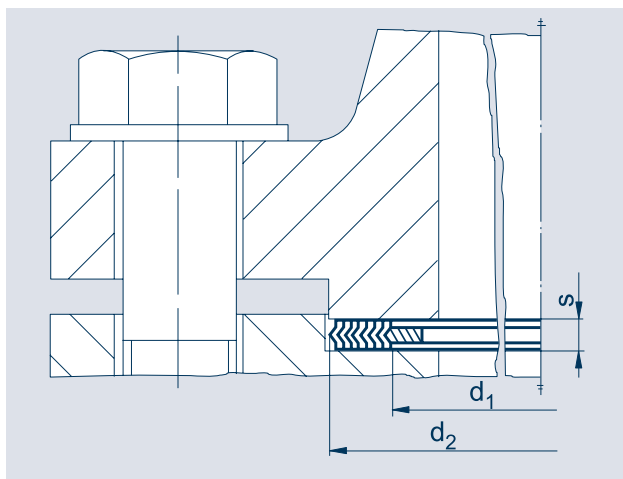
Ordering example for a spiral-wound gasket "SPIROFLEX", Form TG, Profile SpV1, in accordance with EN 1514-1, DN 100, made of ...¹⁾:

Spiral-wound gasket TG, SpV1, EN 1514-1, DN 100, 1.4571 / graphite

Conforming to EN 12560-1 Form TG

Ordering example for a spiral-wound gasket "SPIROFLEX", Form TG, Profile SpV1, NPS 5, EN 12560-1, made of ...¹⁾:

Spiral-wound gasket TG, SpV1, NPS 5", EN 12560-1, 1.4571 / graphite



Spiral gaskets "SPIROFLEX" for flanges with male and female

Gasket thickness

Measurements	DN		NPS	s
in mm	10 to 80	resp.	3/8 to 3	2,5 ^{+0,3}
	100 to 300	resp.	4 to 12	3,0 ^{+0,3}
	350 to 900	resp.	14 to 36	3,5 ^{+0,3}

Conforming to EN 1514-1 Form SR

Ordering example for a spiral-wound gasket "SPIROFLEX", Form SR, Profile SpV1I, DN 100, EN 1514-1, made of ...¹⁾:

Spiral-wound gasket SR, SpV1I, DN 100, EN 1514-1, 1.4571 / graphite

Conforming to EN 12560-1 Form SR

Ordering example for a spiral-wound gasket "SPIROFLEX", Form SR, Profile SpV1I, NPS 5, EN 12560-1, made of ...¹⁾:

Spiral-wound gasket SR, SpV1I, NPS 5", EN 12560-1, 1.4571 / graphite

* see section 3 "General Dimension Tables for DIN, ASME/ANSI, BS for flat gaskets"

¹⁾ Specify material when placing order