

graphite gasket

gasket spec

description

the graphite gasket are consist of alone expanded graphite or expanded graphite with metal reinforcement. the expanded graphite is produced by high temperature, high pressure and sulphuric acid from nature graphite.

the usually density of expanded graphite is for sealing industry is around 1.3 g/cm³. the expanded graphite is possible to use from -240°C up to 550°C and pressure according to reinforced and others influence according to producer of sheets.

the same like in all others industries can not be absolute purity of material, so also in sealing industry is existing only technical purity of graphite. that's why the most common amount of graphite is 99% and this purity called industrially purity. for example for the nuclear power plant is used graphite with purity 99,7% and this purity called atomic purity. the sealing effect is depending on the purity of graphite. the rest are active and passive ashes.

kind of metal reinforcement

without metal	this is for lowest pressures around 60 bars
smooth inlay	this is only sheets of metal between expanded graphite
tanged insert	the tanged insert arise by holding sheet alternately from both sides.
draw metal	draw-metal is made from steel sheet, in which holes are made by interrupted parallel cuttings. after that the sheet is extended in perpendicular direction. a space form arises. draw-metal has a three-dimensional structure! this is why draw-metal has the highest degree of recovery.
wire mesh	this is produce only from wires

level of sealing surfaces

3,2 - 63 µm Ra

the sealing surfaces would be in a parallel way together, so as the deviation value wasn't greater then 0,4mm per all sealing surface. the sealing surfaces would be uniplanar, so as the deviation value wasn't greater then 0,2mm per width of gasket.

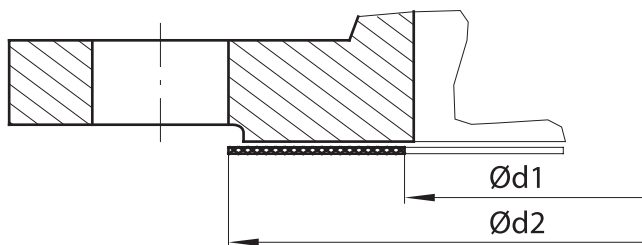
materials and using

material	producer	kind of reinforcement	material of reinforcement	range of temperature	pressure
novaphit SSTC	Frenzelit werke	draw metal	1.4404 (316L)	from -200 up to 550 °C	20 Mpa
novaphit VS	Frenzelit werke	without	-	from -200 up to 550 °C	6 Mpa
novaphit MST	Frenzelit werke	combination of draw metal and smooth inlay	1.4404 (316L)	from -200 up to 550 °C	25 Mpa

the using of materials is dependent on the concrete medium.

dimensions of graphite gasket

according to EN1514-1 type IBC - raised face

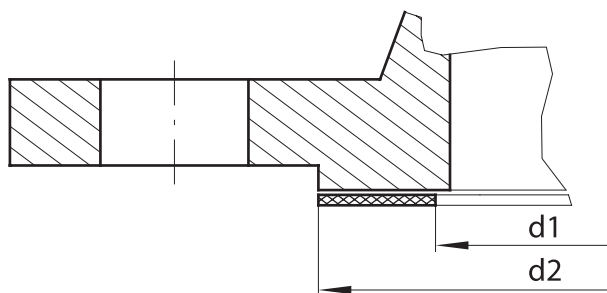


DN	IBC -raised face								
	d1	d2						d1	d2
		PN 2,5	PN 6	PN 10	PN 16	PN 25	PN 40	PN63	
10	18	39	39	46	46	46	46	18	56
15	22	44	44	51	51	51	51	21	61
20	27	54	54	61	61	61	61	25	72

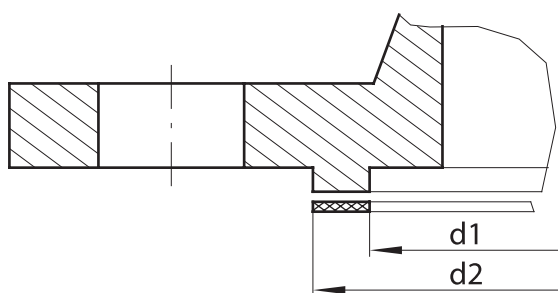


DN	IBC -raised face								
	d1	d2						d1	d2
		PN 2,5	PN 6	PN 10	PN 16	PN 25	PN 40	PN63	
25	34	64	64	71	71	71	71	30	82
32	43	76	76	82	82	82	82	41	88
40	49	86	86	92	92	92	92	47	103
50	61	96	96	107	107	107	107	59	113
60	72	-	106	117	117	117	117	68	123
65	77	116	116	127	127	127	127	73	138
80	89	132	132	142	142	142	142	86	148
100	115	152	152	162	162	168	168	110	174
125	141	182	182	192	192	194	194	135	210
150	169	207	207	218	218	224	224	163	247
175	-	-	-	-	-	-	-	185	277
200	220	262	262	273	273	284	290	210	309
250	273	317	317	328	329	340	352	264	364
300	324	373	373	378	384	400	417	314	424
350	356	423	423	438	444	457	474	360	486
400	407	473	473	489	495	514	546	415	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		
700	712	784	784	810	804	833			
800	813	890	890	917	911	942			
900	915	990	990	1017	1011	1042			
1000	1016	1090	1090	1124	1128	1154			
1100	1120	-	-	1231	1228	1254			
1200	1220	1290	1307	1341	1342	1364			
1400	1420	1490	1524	1548	1542	1578			
1500	1520	-	-	1658	1654	1668			
1600	1620	1700	1724	1772	1764	1798			
1800	1820	1900	1931	1972	1964	2000			
2000	2020	2100	2138	2182	2168	2230			
2200	2220	2307	2384	2384					
2400	2420	2507	2558	2594					
2600	2620	2707	2762	2794					
2800	2820	2924	2972	3014					
3000	3020	3124	3172	3228					
3200	3220	3324	3382						
3400	3420	3524	3592						
3600	3620	3734	3804						
3800	3820	3931							
4000	4020	4131							

according to EN1514-1 type SR -male female



according to EN1514-1 type TG - tongue groove

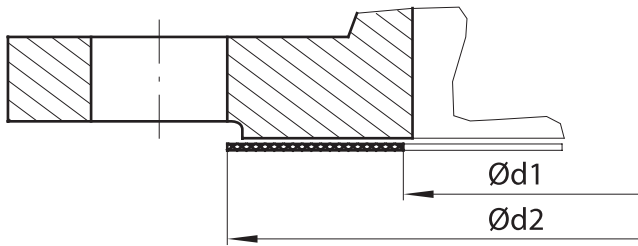


DN	SR - male female	
	d1	d2
10	18	34
15	22	39
20	27	50
25	34	57
32	43	65
40	49	75
50	61	87
65	77	109
80	89	120
100	115	149
125	141	175
150	169	203
200	220	259
250	273	312
300	324	363
350	356	421
400	407	473
450	458	523
500	508	575
600	610	675
700	712	777
800	813	882
900	915	987
1000	1016	1092

DN	TG - tongue groove	
	d1	d2
10	24	34
15	29	39
20	36	50
25	43	57
32	51	65
40	61	75
50	73	87
65	95	109
80	106	120
100	129	149
125	155	175
150	183	203
200	239	259
250	292	312
300	343	363
350	395	421
400	447	473
450	497	523
500	549	575
600	649	675
700	751	777
800	856	882
900	961	987
1000	1062	1092



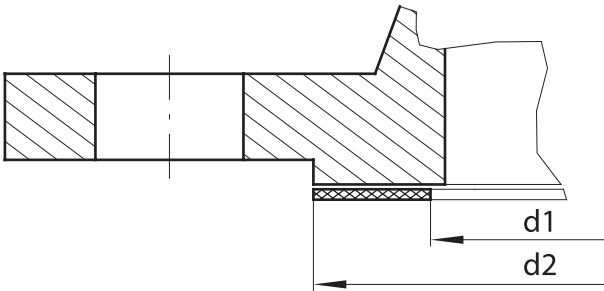
according to ASME B16.5 raised face



DN	RF - raised face							
	d1	d2						
		pressure class						
		150	300	400	600	900	1500	2500
1/2"	22	47	53	54	54	63	63	69
3/4"	27	57	66	66	66	69	69	76
1"	34	66	73	73	73	79	79	85
1 1/4"	43	76	82	82	82	88	88	104
1 1/2"	49	85	95	95	95	98	98	117
2"	61	104	111	111	111	142	142	146
2 1/2"	73	124	130	130	130	165	165	168
3"	89	136	149	149	149	168	174	196
3 1/2"	102	162	165	162	165	-	-	-
4"	115	174	180	175	193	206	209	234
5"	141	196	216	210	241	247	254	279
6"	169	222	251	244	266	289	282	317
8"	220	279	308	302	320	358	352	387
10"	273	339	362	355	400	435	434	476
12"	324	409	422	416	457	498	520	549
14"	356	450	485	479	492	520	577	-
16"	407	514	539	533	565	574	641	-
18"	458	549	597	590	612	638	704	-
20"	508	606	654	645	682	698	755	-
22"	550	660	705	702	733	-	-	-
24"	610	717	774	765	790	838	901	-

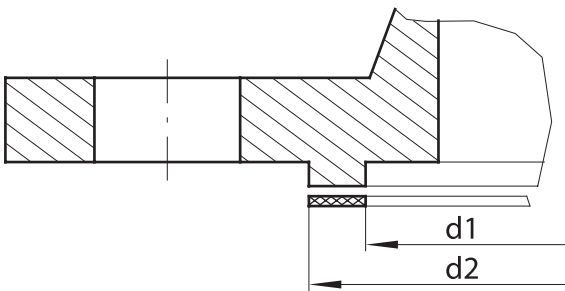


according to ASME B16.5 male female



DN	SR - male female	
	d1	d2
1/2"	21	35
3/4"	27	43
1"	33	51
1 1/4"	42	63
1 1/2"	48	73
2"	60	92
2 1/2"	73	105
3"	89	127
4"	114	157
5"	141	186
6"	168	216
8"	219	270
10"	273	324
12"	324	381
14"	356	413
16"	406	470
18"	457	533
20"	508	584
24"	610	692

according to ASME B16.5 tongue groove



DN	TG - tongue groove	
	d1	d2
10	24	34
15	29	39
20	36	50
25	43	57
32	51	65
40	61	75
50	73	87
65	95	109
80	106	120
100	129	149
125	155	175
150	183	203
200	239	259
250	292	312
300	343	363
350	395	421
400	447	473
450	497	523
500	549	575
600	649	675
700	751	777
800	856	882
900	961	987
1000	1062	1092