

BMS 21 - Non-Metallic Gasket Dimensions for JIS Flanges Flat Ring, Male & Female, Tongue & Groove Gaskets. Dimensions & Tolerances	Issued by:	A D Senior
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Dimensions in millimetres

Nominal Size	Gasket Inner Diameter D ₁	For Full Face / Large Raised Face / Small Raised Face								
		Nominal Pressure 2K	Nominal Pressure 5K	Nominal Pressure		Nominal Pressure 16K	Nominal Pressure 20K	Nominal Pressure 30K	Nominal Pressure 40K	Nominal Pressure 63K
				Standard	Thin					
				10K	10K					
10A	18	-	45	53	55	53	53	59	59	64
15	22	-	50	58	60	58	58	64	64	69
20	28	-	55	63	65	63	63	69	69	75
25	35	-	65	74	78	74	74	79	79	80
32	43	-	78	84	88	84	84	89	89	90
40	49	-	83	89	93	89	89	100	100	108
50	61	-	93	104	108	104	104	114	114	125
65	84	-	118	124	128	124	124	140	140	153
80	90	-	129	134	138	140	140	150	150	163
90	102	-	139	144	148	150	150	163	163	181
100	115	-	149	159	163	165	165	173	183	196
125	141	-	184	190	194	203	203	208	226	235
150	167	-	214	220	224	238	238	251	265	275
175	192	-	240	245	249	-	-	-	-	-
200	218	-	260	270	274	283	283	296	315	330
225	244	-	285	290	294	-	-	-	-	-
250	270	-	325	333	335	356	356	360	380	394
300	321	-	370	378	380	406	406	420	434	449
350	359	-	413	423	425	450	450	465	479	488
400	410	-	473	486	488	510	510	524	534	548
450	460	535	533	541	-	575	575	-	-	-
500	513	585	583	596	-	630	630	-	-	-
550	564	643	641	650	-	684	684	-	-	-
600	615	693	691	700	-	734	734	-	-	-
650	667	748	746	750	-	784	805	-	-	-
700	718	798	796	810	-	836	855	-	-	-
750	770	856	850	870	-	896	918	-	-	-
800	820	906	900	920	-	945	978	-	-	-
850	872	956	950	970	-	995	1038	-	-	-
900	923	1006	1000	1020	-	1045	1088	-	-	-
1000	1025	1106	1100	1124	-	1158	-	-	-	-
1100	1130	1216	1210	1234	-	1258	-	-	-	-
1200	1230	1326	1320	1344	-	1368	-	-	-	-
1300	1335	-	-	-	-	1474	-	-	-	-
1350	1385	1481	1475	1498	-	1534	-	-	-	-

Dimensions in millimetres



Operational Procedure - Rev 0

NWP 01 - Rev 1

<p>BMS 21 - Non-Metallic Gasket Dimensions for JIS Flanges</p> <p>Flat Ring, Male & Female, Tongue & Groove Gaskets. Dimensions & Tolerances</p>	Issued by:	A D Senior
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For Full Face / Large Raised Face / Small Raised Face										
Nominal Size	Gasket Inner Diameter D ₁	Nominal Pressure 2K	Nominal Pressure 5K	Nominal Pressure		Nominal Pressure 16K	Nominal Pressure 20K	Nominal Pressure 30K	Nominal Pressure 40K	Nominal Pressure 63K
				Standard	Thin					
				10K	10K					
1400	1435	-	-	-	-	1584	-	-	-	-
1500	1540	1636	1630	1658	-	1694	-	-	-	-

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JIS Male & Female, Tongue & Groove Type Flanges - Dimensions in millimetres

Nominal Pipe Size	Male & Female		Tongue & Groove	
	Gasket Inner Diameter D ₁	Gasket Outer Diameter D ₂	Gasket Inner Diameter D ₁	Gasket Outer Diameter D ₂
10A	18	38	28	38
15	22	42	32	42
20	28	50	38	50
25	35	60	45	60
32	43	70	55	70
40	49	75	60	75
50	61	90	70	90
65	77	110	90	110
80	90	120	100	120
90	102	130	110	130
100	115	145	125	145
125	141	175	150	175
150	167	215	190	215
200	218	260	230	260
250	270	325	295	325
300	321	375	340	375
350	359	415	380	415
400	410	475	440	475
450	460	523	483	523
500	513	575	535	575
550	564	625	585	625
600	615	675	635	675
650	667	727	682	727
700	718	777	732	777
750	770	832	787	832
800	820	882	837	882
850	872	934	889	934
900	923	987	937	987
1000	1025	1092	1042	1092
1100	1130	1192	1142	1192
1200	1230	1292	1237	1292
1300	1335	1392	1337	1392
1350	1385	1442	1387	1442
1400	1435	1492	1437	1492
1500	1540	1592	1537	1592

Note: 1) The materials used are mainly joint sheet, Graseal and PTFE cut gaskets

Gaskets for JIS Full Face Gaskets - Dimensions in millimetres

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Nom Pipe Size	Gasket Inner Dia D ₁	Nominal Pressure 2K			Nominal Pressure 5K			Nominal Pressure 10K			Nominal Pressure 16K		
		Gasket Outer Dia D ₂	Bolt Circle Dia PCD	No Bolt Holes & Dia	Gasket Outer Dia D ₂	Bolt Circle Dia PCD	No Bolt Holes & Dia	Gasket Outer Dia D ₂	Bolt Circle Dia PCD	No Bolt Holes & Dia	Gasket Outer Dia D ₂	Bolt Circle Dia PCD	No Bolt Holes & Dia
10A	18	-	-	-	75	55	4 x 12	90	65	4 x 15	90	65	4 x 15
15	22	-	-	-	80	60	4 x 12	95	70	4 x 15	95	70	4 x 15
20	28	-	-	-	85	65	4 x 12	100	75	4 x 15	100	75	4 x 15
25	35	-	-	-	95	75	4 x 12	125	90	4 x 19	125	90	4 x 19
32	43	-	-	-	115	90	4 x 15	135	100	4 x 19	135	100	4 x 19
40	49	-	-	-	120	95	4 x 15	140	105	4 x 19	140	105	4 x 19
50	61	-	-	-	130	105	4 x 15	155	120	4 x 19	155	120	8 x 19
65	84	-	-	-	155	130	4 x 15	175	140	4 x 19	175	140	8 x 19
	{77}	-	-	-									
80	90	-	-	-	180	145	4 x 19	185	150	8 x 19	200	160	8 x 23
90	102	-	-	-	190	155	4 x 19	195	160	8 x 19	210	170	8 x 23
100	115	-	-	-	200	165	8 x 19	210	175	8 x 19	225	185	8 x 23
125	141	-	-	-	235	200	8 x 19	250	210	8 x 23	270	225	8 x 25
150	167	-	-	-	265	230	8 x 19	280	240	8 x 23	305	260	12 x 25
175	192	-	-	-	300	260	8 x 23	305	265	12 x 23	-	-	-
200	218	-	-	-	320	280	8 x 23	330	290	12 x 23	350	305	12 x 25
225	244	-	-	-	345	305	12 x 23	350	310	12 x 23	-	-	-
250	270	-	-	-	385	345	12 x 23	400	355	12 x 25	430	380	12 x 27
300	321	-	-	-	430	390	12 x 23	445	400	16 x 25	480	430	16 x 27
350	359	-	-	-	480	435	12 x 25	490	445	16 x 25	540	480	16 x 33
400	410	-	-	-	540	495	16 x 25	560	510	16 x 27	605	540	16 x 33
450	460	605	555	16 x 23	605	555	16 x 25	620	565	20 x 27	675	605	20 x 33
500	513	655	605	20 x 23	655	605	20 x 25	675	620	20 x 27	730	660	20 x 33
550	564	720	655	20 x 25	720	665	20 x 27	745	680	20 x 33	795	720	20 x 39
600	615	770	715	20 x 25	770	715	20 x 27	795	730	24 x 33	845	770	24 x 39
650	667	825	770	24 x 25	825	770	24 x 27	845	780	24 x 33	-	-	-
700	718	875	820	24 x 25	875	820	24 x 27	905	840	24 x 33	-	-	-
750	770	945	880	24 x 27	945	880	24 x 33	970	900	24 x 33	-	-	-

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800	820	995	930	24 x 27	995	930	24 x 33	1020	950	28 x 33	-	-	-
850	872	1045	980	24 x 27	1045	980	24 x 33	1070	1000	28 x 33	-	-	-
900	923	1095	1030	24 x 27	1095	1030	24 x 33	1120	1050	28 x 33	-	-	-
1000	1025	1195	1130	28 x 27	1195	1130	28 x 33	1235	1160	28 x 39	-	-	-
1100	1130	1305	1240	28 x 27	1305	1240	28 x 33	1345	1270	28 x 39	-	-	-
1200	1230	1420	1350	32 x 27	1420	1350	32 x 33	1465	1380	32 x 39	-	-	-
1350	1385	1575	1505	32 x 27	1575	1505	32 x 33	1630	1540	36 x 45	-	-	-
1500	1540	1730	1660	36 x 27	1730	1660	36 x 33	1795	1700	40 x 45	-	-	-

Notes:

- 1) Soft Gaskets include joint sheet gaskets, rubber cut gaskets, cloth reinforced rubber cut gaskets, Graseal and PTFE cut gaskets.
- 2) Joint sheets, Graseal gaskets and PTFE cut gaskets are not recommended for nominal pressures of 2K & 5K.
- 3) Even 10K and 16K full face gaskets are not suitable for gas sealing due to insufficient seating stress.

Notes:

- 1) Soft gaskets include joint sheet gaskets, rubber cut gaskets, cloth reinforced rubber cut gaskets, Graseal and PTFE cut gaskets.
- 2) Joint sheets, Graseal gaskets and PTFE cut gaskets are not recommended for nominal pressures of 2K & 5K.
- 3) For nominal pressure of 30K and above, soft gaskets are not recommended.

Unless otherwise specified on the works order, tolerances shall be in accordance as follows:

- i.e.**
- Outside Diameter < NPS 300mm - + 0 / - 1.50 mm
 > NPS 350mm - + 0 / - 3.00 mm
- Inside Diameter < NPS 300mm - + / - 1.50 mm
 > NPS 350mm - + / - 1.50 mm
- Bolt circle diameter + / - 1.50 mm
- Centre to centre of adjacent bolt holes + / - 0.76 mm