

GMORS[®]

Seals to your heart



CONSEAL
International Sealing Engineering

METAL RING JOINT GASKETS



PROTECTIVE COATING

In accordance with API specifications, soft iron and low carbon steel ring joint gaskets are protected with zinc plating to a maximum thickness of 0.002" – 0.0005" unless otherwise specified. Alternative material coatings can be supplied upon request.

CONSEAL metal ring joint gaskets are manufactured according to API 6A and ASME B16.20 standards for applications at elevated temperatures and pressures. Strict quality assurance procedures are applied throughout production from receipt of raw material, through manufacturing to delivery with full material traceability, and can be supplied to NACE specification upon request. Each ring joint gasket is low stress stamped with API license number & material reference complying to API 6A standard.

MATERIAL

Gasket material should be selected to suit the application conditions. It is recommended that the gasket metal should be of a hardness lower than the flange metal. The popular ring joint materials with recommended maximum hardness and identification as specified in API 6A, are show in the table below.

MATERIAL	MAXIMUM HARDNESS		IDENTIFICATION
	BRINELL	ROCKWELL B	
SOFT IRON	90	56	D
LOW CARBON STEEL	120	68	S
F5 ALLOY STEEL	130	72	F5
410 ALLOY STEEL	170	86	410
TYPE 304 STAINLESS STEEL	160	83	5304
TYPE 316 STAINLESS STEEL	160	83	S316
TYPE 316L STAINLESS STEEL	160	83	S316L
TYPE 321 STAINLESS STEEL	160	83	S321
TYPE 347 STAINLESS STEEL	160	83	S347
MONEL 400	150		M
ALLOY 600	200		600
ALLOY 625	200		625
ALLOY 825	200		825

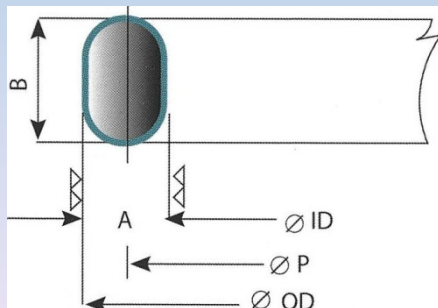
SERIES 'R' MANUFACTURED TO THE STANDARDS ACCORDING TO ASME B16.20 – API STD 6A

NOMINAL BORES/ PRESSURE CLASS RATING										DIMENSIONS								WEIGHT	
ASME-ANSI B16.5				ASME B-16-47A		API 6A – TYPE B				TOLERANCES	+/-0.38	+/-0.38	+/-0.17	+/-0.39	+/-0.39	+/-0.20	+/-0.20	OVAL	OCTAGONAL
150	300-600	900	1500	2500	300-600	900	2000	3000	5000	RING NUMBER	OD (MM)	ID (MM)	P (MM)	B (MM)	H (MM)	A (MM)	C (MM)	KG	KG
	1/2									R 11	40.49	27.79	34.14	11.18	9.65	6.35	4.32	0.05	0.05
		1/2	1/2							R 12	47.65	31.75	39.70	14.22	12.70	7.95	5.23	0.10	0.10
	3/4			1/2						R 13	50.83	34.93	42.88	14.22	12.70	7.95	5.23	0.10	0.10
		3/4	3/4							R 14	52.40	36.50	44.45	14.22	12.70	7.95	5.23	0.11	0.11
1										R 15	55.58	39.68	47.63	14.22	12.70	7.95	5.23	0.12	0.11
	1	1	1	3/4						R 16	58.75	42.85	50.80	14.22	12.70	7.95	5.23	0.12	0.11
1-1/4										R 17	65.10	49.20	57.15	14.22	12.70	7.95	5.23	0.14	0.13
	1-1/4	1-1/4	1-1/4	1						R 18	62.28	52.38	60.33	14.82	12.70	7.95	5.23	0.15	0.14
1-1/2										R 19	73.05	57.15	65.10	14.82	12.70	7.95	5.23	0.16	0.15
	1-1/2	1-1/2	1-1/2							R 20	76.23	60.33	68.28	14.82	12.70	7.95	5.23	0.17	0.15
				1-1/4						R 21	83.37	61.11	72.24	17.53	16.00	11.13	7.75	0.30	0.29
2										R 22	90.50	74.60	82.55	14.82	12.70	7.95	5.23	0.20	0.19
	2			1 1/2			2-1/16			R 23	93.68	71.42	82.55	17.53	16.00	11.13	7.75	0.34	0.33
		2	2					2-1/16	2-1/16	R 24	106.38	84.12	95.25	17.53	16.00	11.13	7.75	0.39	0.38
2-1/2										R 25	109.55	93.65	101.60	14.22	12.70	7.95	5.23	0.25	0.23
	2-1/2						2-9/16			R 26	112.73	90.47	101.60	17.53	16.00	11.13	7.75	0.42	0.41
		2-1/2	2-1/2					2-9/16	2-9/16	R 27	119.08	96.82	107.95	19.05	16.00	11.13	7.75	0.45	0.43
				2-1/2						R 28	123.87	98.43	111.13	14.22	17.53	12.70	8.66	0.57	0.55
3										R 29	122.25	107.95	114.30	17.53	12.70	7.95	5.23	0.28	0.26
	3									R 30	128.61	106.35	117.48	17.53	16.00	11.13	7.75	0.48	0.47
		3					3-1/18	3-1/18		R 31	134.96	112.70	123.85	17.53	16.00	11.13	7.75	0.51	0.50
										R 32	139.70	114.30	127.00	19.05	17.53	12.70	8.66	0.65	0.63
3-1/2										R 33	139.73	123.83	131.78	14.22	12.70	7.95	5.23	0.32	0.30
	3-1/2									R 34	142.91	120.65	131.78	17.53	16.00	11.13	7.75	0.54	0.52
									3-1/18	R 35	147.66	125.40	136.53	17.53	16.00	11.13	7.75	0.56	0.55
4										R 36	157.18	141.28	149.23	14.22	12.70	7.95	5.23	0.37	0.34
	4	4					4-1/16	4-1/16		R 37	160.36	138.10	149.23	17.53	16.00	11.13	7.75	0.62	0.60
										R 38	173.06	141.30	157.18	22.35	20.57	15.88	10.49	1.16	1.14
									4-1/16	R 39	173.06	150.80	161.93	17.53	16.00	11.13	7.75	0.67	0.65
5										R 40	179.40	163.50	171.45	14.22	12.70	7.95	5.23	0.42	0.39
	5	5					5	5		R 41	192.11	169.89	180.98	17.53	16.00	11.13	7.75	0.75	0.73
										R 42	209.55	171.45	190.50	24.40	23.88	19.05	12.32	1.91	1.88
6										R 43	201.63	185.73	193.68	14.22	12.70	7.95	5.23	0.48	0.44
										R 44	204.81	182.55	193.68	17.53	16.00	11.13	7.75	0.80	0.78
	6	6					7-1/16	7-1/16		R 45	222.28	200.02	211.15	17.53	16.00	11.13	7.75	0.87	0.85
										R 46	223.85	198.45	211.15	19.05	17.53	12.70	8.66	1.08	1.05
										R 47	247.65	209.55	228.60	25.40	23.88	19.05	12.32	2.29	2.26
8										R 48	255.60	239.70	247.65	14.22	12.70	7.95	5.23	0.61	0.56
	8	8					9	9		R 49	281.01	258.75	269.88	17.53	16.00	11.13	7.75	1.11	1.09
										R 50	285.76	254.00	269.88	22.35	20.57	15.88	10.49	1.99	1.95
										R 51	301.63	257.17	279.40	28.70	26.92	22.23	14.81	3.65	3.69
10										R 52	312.75	296.85	304.80	14.22	12.70	7.95	5.23	0.75	0.69
	10	10					11	11		R 53	334.98	312.72	323.85	17.53	16.00	11.13	7.75	1.34	1.30
										R 54	339.73	307.97	323.85	22.35	20.57	15.88	10.49	2.39	2.35
										R 55	371.48	314.32	342.90	36.58	35.05	28.58	19.81	7.35	7.68
12										R 56	388.95	373.05	381.00	14.22	12.70	7.95	5.23	0.93	0.87
	12	12					13-5/8	13-5/8		R 57	392.13	369.87	381.00	17.53	16.00	11.13	7.75	1.57	1.53
										R 58	403.23	358.77	381.00	28.70	26.92	22.23	14.81	4.98	5.03
14										R 59	404.83	388.93	396.88	14.22	12.70	7.95	5.23	0.98	0.90
										R 60	438.15	374.65	406.40	39.62	38.10	31.75	22.33	10.47	11.09
	14									R 61	430.23	407.97	419.10	17.53	16.00	11.13	7.75	1.73	1.69
		14								R 62	434.98	403.22	419.10	22.35	20.57	15.88	10.49	3.09	3.04
										R 63	444.50	393.70	419.10	33.27	31.75	25.40	17.30	7.33	7.54
16										R 64	461.98	446.08	454.03	14.22	12.70	7.95	5.21	1.12	1.03
										R 65	481.03	458.77	469.90	17.53	16.00	11.13	7.75	1.94	1.89
		16					16-3/4			R 66	485.78	454.02	469.90	22.35	20.57	15.88	10.49	3.47	3.40
										R 67	498.48	441.32	469.90	36.58	35.05	28.58	19.81	10.07	10.53
18										R 68	525.48	509.58	517.53	14.22	12.70	7.95	5.23	1.28	1.18
										R 69	544.53	522.27	533.40	17.53	16.00	11.13	7.75	2.20	2.15
		18					18	18		R 70	552.45	514.35	533.40	25.40	23.88	19.05	12.32	5.35	5.27
										R 71	561.98	504.82	533.40	36.58	35.05	28.58	19.81	11.43	11.95

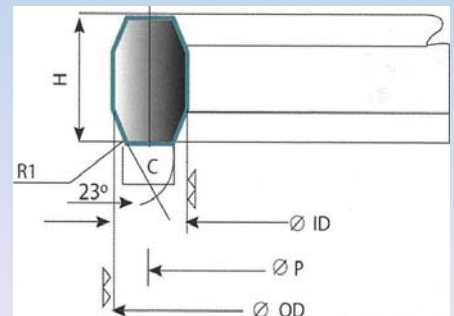
SERIES 'R' MANUFACTURED TO THE STANDARDS ACCORDING TO ASME B16.20 – API STD 6A

NOMINAL BORES/ PRESSURE CLASS RATING										DIMENSIONS								WEIGHT		
ASME-ANSI B16.5				ASME B1 6.47A			API 6A – TYPE 6B			TOLERANCE	RING NUMBER	+/- 0.38	+/- 0.38	+/- 0.17	+/- 0.39	+/- 0.39	+/- 0.20	+/- 0.20	OVAL	OCTAGONAL
150	300-600	900	1500	150	300-600	900	2000	3000	10000*											
										R 72	566.75	550.65	558.8	14.22	12.7	7.95	5.23	1.38	1.27	
	20				20		21-1/4			R 73	596.9	571.5	584.2	19.05	17.53	12.7	8.66	2.99	2.92	
		20				20		20-3/4		R 74	603.25	565.15	584.2	25.4	23.88	19.05	12.32	5.85	5.77	
			20							R 75	615.95	552.45	584.2	39.62	38.1	31.75	22.33	15.05	15.94	
24										R 76	681.05	665.15	673.1	14.22	12.7	7.95	5.23	1.66	1.53	
	24				24					R 77	708.03	676.27	692.15	22.35	20.57	15.88	10.49	5.11	5.01	
		24				24				R 78	717.55	666.75	692.15	33.27	31.75	25.4	17.3	12.1	12.46	
			24							R 79	727.08	657.22	692.15	44.45	41.4	34.93	24.82	22.58	22.06	
				22						R 80	623.9	608	615.95		12.7	7.95	5.23		1.4	
					22					R 81	649.3	620.7	635		19.05	14.3	9.58		3.86	
										R 82	68.28	46.02	57.15		16	11.13	7.75		0.23	
										R 84	74.63	52.37	63.5		16	11.13	7.75		0.25	
										R 85	92.08	66.68	79.38		17.53	12.7	8.66		0.4	
										R 86	106.38	74.62	90.5		20.57	15.88	10.49		0.65	
										R 87	115.91	84.15	100.03		20.57	15.88	10.49		0.72	
										R 88	142.88	104.78	123.83		23.88	19.05	12.32		1.22	
										R 89	133.35	95.25	114.3		23.88	19.05	12.32		1.13	
										R 90	177.81	133.35	155.58		26.92	22.23	14.81		2.05	
										R 91	292.1	228.6	260.35		38.1	31.75	22.33		7.1	
										R 92	239.73	217.47	228.6	17.53	16	11.13	7.75	0.94	0.92	
					26					R 93	768.35	730.25	749.3		23.88	19.05	12.32		7.4	
					28					R 94	819.15	781.05	800.1		23.88	19.05	12.32		7.9	
					30					R 95	876.3	838.2	857.25		23.88	19.05	12.32		8.47	
					32					R 96	936.63	892.17	914.4		26.92	22.23	14.81		12.08	
					34					R 97	987.43	942.97	965.2		26.92	22.23	14.81		12.75	
					36					R 98	1044.58	1000.12	1022.35		26.92	22.23	14.81		13.51	
										R 99	246.08	223.82	234.95		16	11.13	7.75		0.95	
						26				R 100	777.88	720.72	749.3		35.05	28.58	19.81		16.79	
						28				R 101	831.85	768.35	800.1		38.1	31.75	22.33		21.83	
						30				R 102	889	825.5	857.25		38.1	31.75	22.33		23.39	
						32				R 103	946.15	882.65	914.4		38.1	31.75	22.33		24.95	
						34				R 104	1000.13	930.27	966.2		41.4	36.93	24.82		31.49	
						36				R 105	1057.28	987.42	1022.35		41.4	34.93	24.82		33.35	

OVAL SECTION



OCTAGONAL SECTION



NOTES :

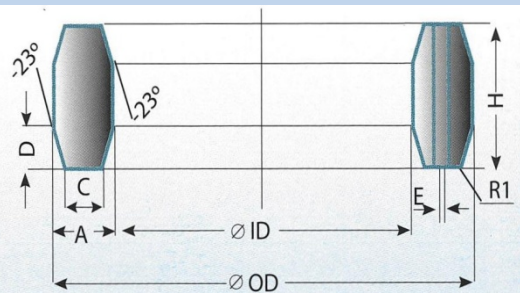
- All dimension are in mm.
- Class 10000 flanges to API 6A – TYPE 6B are obsolete.
- Ring Joint specified in API Std 6A.
- R30 is suitable for lapped flanges only.
- The 23° surface on both grooves and octagonal ring shall have a surface finish and not rougher than 63 RMS.

SERIES 'RX' MANUFACTURED TO THE STANDARDS ACCORDING TO ASME B16.20 – API STD 6A

NOMINAL BORES/PRESSURE CLASS RATING				DIMENSIONS										WEIGHT kg
CLASSES				TOLERANCES	0 +0.50	0 +0.50	0 +0.20	0 +0.20	0 +0.15	0 +0.79	±0.39	see note 3		
2000	3000	5000	2900*	RING NUMBER	OD (mm)	ID (mm) (approx)	H (mm)	A (mm)	C (mm)	D (mm)	R1 (mm)	E (mm)		
				RX 20	76.2	58.72	19.05	8.74	4.62	3.17	1.52		0.24	
2-1/16				RX 23	93.27	69.45	25.4	11.91	6.45	4.24	1.59		0.52	
	2-1/16	2-1/16		RX 24	105.97	82.15	25.4	11.91	6.45	4.24	1.59		0.6	
		3-1/8		RX 25	109.55	92.07	19.05	8.74	4.62	3.17	1.59		0.5	
2-9/16				RX 26	111.91	88.09	25.4	11.91	6.45	4.24	1.59		0.64	
	2-9/16	2-9/16		RX 27	118.26	94.44	25.4	11.91	6.45	4.24	1.59		0.68	
3-1/8	3-1/8			RX 31	134.54	110.72	25.4	11.91	6.45	4.24	1.59		0.78	
		3-1/8		RX 35	147.24	123.42	25.4	11.91	6.45	4.24	1.59		0.86	
4-1/16	4-1/16			RX 37	159.94	136.12	25.4	11.91	6.45	4.24	1.59		0.95	
		4-1/16		RX 39	172.64	148.82	25.4	11.91	6.45	4.24	1.59		1.03	
				RX 41	191.69	167.87	25.4	11.91	6.45	4.24	1.59		1.15	
				RX 44	204.39	180.57	25.4	11.91	6.45	4.24	1.59		1.23	
7-1/16	7-1/16			RX 45	221.84	198.02	25.4	11.91	6.45	4.24	1.59		1.34	
		7-1/16		RX 46	222.25	195.27	28.58	13.49	6.68	4.77	1.59		1.66	
				RX 47	245.26	205.58	41.28	19.84	10.34	6.88	2.29		3.88	
9	9			RX 49	280.59	256.77	25.4	11.91	6.45	4.24	1.52		1.72	
		9		RX 50	283.36	250.04	31.75	16.66	8.51	5.28	1.59		2.43	
11	11			RX 53	334.57	310.75	25.4	11.91	6.45	4.24	1.59		2.06	
		11		RX 54	337.34	304.02	31.75	16.66	8.51	5.28	1.59		2.92	
13-5/8	13-5/8			RX 57	391.72	367.9	25.4	11.91	6.45	4.24	1.59		2.42	
				RX 63	441.73	387.73	50.8	27	14.78	8.45	2.29		11.96	
16-3/4				RX 65	480.62	456.8	25.4	11.91	6.45	4.24	1.52		3	
	16-3/4			RX 66	457.99	424.67	31.75	16.66	8.51	5.28	1.59		4.25	
				RX 69	544.12	520.3	25.4	11.91	6.45	4.24	1.59		3.41	
				RX 70	550.06	510.38	41.28	19.84	10.34	6.88	2.29		9.12	
21-1/4				RX 73	596.11	569.13	31.75	13.49	6.68	5.28	1.52		5.27	
	20-3/4			RX 74	600.86	561.18	41.28	19.84	10.34	6.88	2.29		10.01	
				RX 82	67.87	44.05	25.4	11.91	6.45	4.24	1.52	1.6	0.36	
				RX 84	74.22	50.4	25.4	11.91	6.45	4.24	1.59	1.6	0.4	
				RX 85	90.09	63.11	25.4	13.49	6.68	4.24	1.59	1.6	0.4	
				RX 86	103.58	73.4	28.58	15.09	8.51	4.77	1.59	2.4	0.81	
				RX 87	113.11	82.93	28.58	15.09	8.51	4.77	1.59	2.4	0.9	
				RX 88	139.29	104.33	31.75	17.48	10.34	5.28	1.59	3.2	1.46	
				RX 89	129.77	93.25	31.75	18.26	10.34	5.28	1.59	3.2	3.09	
				RX 90	174.63	134.95	44.45	19.84	12.17	7.41	2.29	3.2	7.75	
				RX 91	286.94	226.58	45.24	30.18	19.81	7.54	2.29	3.2	1.5	
				RX 99	245.67	221.85	25.4	11.91	6.45	4.24	1.52		2.2	
		1-3/8		RX 201	51.46	39.98	11.3	5.74	3.2	1.44	0.51		0.1	
		1-13/16		RX 205	62.31	51.19	11.1	5.56	3.05	1.82	0.51		0.13	
		2-9/16		RX 210	97.64	78.58	19.05	9.53	5.41	3.17	0.76		0.35	
		4-1/16		RX 215	140.89	117.07	25.4	11.91	5.33	4.24	1.52		0.8	

NOTES :

- All dimension are in mm.
- All 23° surfaces shall have a surfaces of finish not rougher than 32 RMS.
- One pressure passage holes “E” required per gasket shall be located at mid point of dimension “C”.

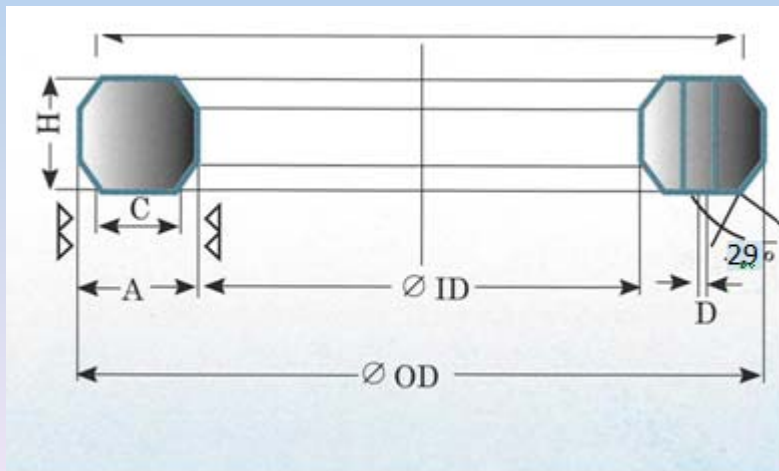


SERIES 'BX' MANUFACTURED TO THE STANDARDS ACCORDING TO ASME B16.20 – API STD 6A

NOMINAL BORES / PRESSURE CLASS RATING						DIMENSIONS								WEIGHT
CLASSES						TOLERANCES	0 +015	0 +015	0 +0.20	0 +0.20	0 -0.15		see note 3	
2000	3000	5000	10000	15000	20000	RING NUMBER	OD (mm)	ID (mm) (approx)	H (mm)	A (mm)	C (mm)	T (mm)	D (mm)	
						BX 150	72.19	53.59	9.30	9.30	7.98	70.87	1.52	0.13
			1-13/16	1-13/16	1-13/16	BX 151	76.40	57.14	9.63	9.63	8.26	75.03	1.52	0.15
			2-1/16	2-1/16	2-1/16	BX 152	84.68	64.20	10.24	10.24	8.79	83.24	1.52	0.19
			2-9/16	2-9/16	2-9/16	BX 153	100.94	78.18	11.38	11.38	9.78	99.31	1.52	0.29
			3-1/16	3-1/16	3-1/16	BX 154	116.84	92.04	12.40	12.40	10.64	115.09	1.52	0.40
			4 -1/16	4 -1/16	4 -1/16	BX 155	147.96	119.52	14.22	14.22	12.22	145.95	1.52	0.55
			7-1/16	7-1/16	7-1/16	BX 156	237.92	200.68	18.62	18.62	15.98	235.28	1.52	1.87
			9	9	9	BX 157	294.46	252.50	20.98	20.98	18.01	291.49	3.05	2.97
			11	11	11	BX 158	352.04	305.76	23.14	23.14	19.86	348.77	3.05	4.35
			13-5/8	13-5/8	13-5/8	BX 159	426.72	375.32	25.70	25.70	22.07	423.09	3.05	6.53
			13-5/8			BX 160	402.59	375.11	23.83	13.74	10.36	399.21	3.05	3.06
			16-3/4			BX 161	491.41	458.99	28.07	16.21	12.24	487.45	3.05	5.35
			16-3/4	16-3/4	16-3/4	BX 162	475.49	447.05	14.22	14.22	12.22	473.48	1.52	1.94
			18-3/4			BX 163	556.16	521.42	30.10	17.37	13.11	551.89	3.05	6.90
			18-3/4	18-3/4		BX 164	570.56	521.38	30.10	24.59	20.32	566.29	3.05	5.86
			21-1/4			BX 165	624.71	587.73	32.03	18.49	13.97	620.19	3.05	8.76
			21-1/4			BX 166	640.03	587.75	32.03	26.14	21.62	635.51	3.05	12.82
26-3/4						BX 167	759.36	733.14	35.86	13.11	8.03	754.28	1.52	8.53
	26-3/4					BX 168	765.25	733.15	35.86	16.05	10.97	760.17	1.52	10.54
			5-3/4			BX 169	173.51	147.65	15.85	12.93	10.69	171.27	1.52	0.73
			6-5/8	6-5/8		BX 170	218.03	189.59	14.22	14.22	12.22	216.03	1.52	1.03
			8 -9/16	8 -9/16		BX 171	267.44	239.00	14.22	14.22	12.22	265.43	1.52	1.24
			11 -5/32	11 -5/32		BX 172	333.07	304.63	14.22	14.22	12.22	331.06	1.52	1.56
30	30					BX 303	852.75	818.80	37.94	16.89	11.60	847.96	1.60	13.18

NOTES :

- All dimension are in mm.
- All 23° surfaces shall have a surfaces of finish not rougher than 32 RMS.
- Radius <<R>> shall be 8 to 12 percent of the gaskets height <<H>>.
- One pressure passage hole required per gasket on centreline.



SPIRAL WOUND GASKETS



CONSEAL spiral wound gaskets are composed of a metallic continuous strip with special shaped profile, coupled with a continuous filling strip (graphite, PTFE, etc) evenly wound in concentric spirals under constant stress.

The main property of the spiral wound gaskets, owing to the elastic action of the special metallic strip profile, offers a perfect sealing under all fluctuating pressure and temperature conditions. A proper selection of the materials (both metal and filler) is able to adequate the spiral wound gaskets to the most various operating conditions.

GASKET SELECTION

Type TP 11

Basic construction of metal windings with filler material. There is no inclusion of inner and outer ring. The inner and outer diameters of the windings are wound without the filler to increase the stability of the gaskets. Suitable for tongue & groove, and male & female flanges.

Type TP 12

Utilizes an external ring which accurately centers gasket on flange face, providing additional radial strength to prevent gasket blow-out and acts as a compression stop. General use on raised face and flat face flanges. Above Class 600 an internal ring is recommended.

Type TP 13

Solid inner metal ring acts as a compression stop and fills the annular space between flange bore and the inside diameter. Designed to prevent accumulation of solids, reduces turbulent flow of process fluid and minimizes erosion on the flange face. Used on flat face and raised face flanges.

Type TP 14

Similar to type TP 12 but fitted with internal ring which gives an additional compression limiting stop, and provides a heat and corrosion barrier, protecting the gasket windings and preventing flange erosion. Suitable for use with raised face and flat face flanges for high pressure and temperature applications - Class 900lb and above or where corrosive or toxic media are present.



SPIRAL WOUND GASKETS

MANUFACTURING PARAMETERS

For optimum sealing performance, spiral wound gaskets should be compressed to a specific thickness.

NOMINAL THICKNESS	COMPRESSED THICKNESS
1.6mm (0.0625")	1.3/1.4mm (0.05/0.055")
2.5mm (0.098")	1.9/2.1mm (0.075/0.085")
3.2mm (0.125")	2.4/2.6mm (0.095/0.105")
4.5mm (0.175")	3.2/3.4mm (0.125/0.135")
6.4mm (0.250")	4.6/5.1 mm (0.180/0.200")
7.3mm (0.285")	5.0/5.25mm (0.197/0.207")

Spiral Wound Gaskets with internal or external guide rings should be fully compressed to the guide ring. This will not damage the gasket or affect the sealing performance, since the rings provide a compression limiting stop.

GASKET MATERIALS

METAL WINDING STRIP	FILLER MATERIALS	INNER & OUTER RING MATERIALS
	GRAPHITE	CARBON STEEL
STAINLESS STEEL 304	PTFE	STAINLESS STEEL 304
STAINLESS STEEL 316		STAINLESS STEEL 316
MONEL		MONEL
NICKEL		NICKEL
INCONEL		INCONEL
INCOLOY		INCOLOY
HASTELLOY		HASTELLOY
DUPLEX		DUPLEX
ZIRCONIUM		ZIRCONIUM
TITANIUM		TITANIUM

IDENTIFICATION

Nominal Pipe Size and Pressure Class



Manufactured to ASME B16.20

Winding Metal / Filler Material

SPIRAL WOUND GASKET MANUFACTURED TO THE STANDARDS ACCORDING TO ASME B16.20

Gaskets Dimensions To ASME B16.20

NPS	Class 150#				Class 300#				Class 400#				Class 600#			
	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID
		OD	ID			OD	ID			OD	ID			OD	ID	
1/2"	47.8	31.8	19.1	14.2	54.1	31.8	19.1	14.2	54.1	31.8	19.1	14.2	54.1	31.8	19.1	14.2
3/4"	57.2	39.6	25.4	20.6	66.8	39.6	25.4	20.6	66.8	39.6	25.4	20.6	66.8	39.6	25.4	20.6
1"	66.8	47.8	31.8	26.9	73.2	47.8	31.8	26.9	73.2	47.8	31.8	26.9	73.2	47.8	31.8	26.9
1-1/4"	76.2	60.5	47.8	38.1	82.6	60.5	47.8	38.1	82.6	60.5	47.8	38.1	82.6	60.5	47.8	38.1
1-1/2"	85.9	69.9	54.1	44.5	95.3	69.9	54.1	44.5	95.3	69.9	54.1	44.5	95.3	69.9	54.1	44.5
2"	104.9	85.9	69.9	55.6	111.3	85.9	69.9	55.6	111.3	85.9	69.9	55.6	111.3	85.9	69.9	55.6
2-1/2"	124.0	98.6	82.6	66.5	130.3	98.6	82.6	66.5	130.3	98.6	82.6	66.5	130.3	98.6	82.6	66.5
3"	136.7	120.7	101.6	81.0	149.4	120.7	101.6	81.0	149.4	120.7	101.6	81.0	149.4	120.7	101.6	81.0
4"	174.8	149.4	127.0	106.4	181.1	149.4	127.0	106.4	177.8	149.4	120.7	102.6	193.8	149.4	120.7	102.6
5"	196.9	177.8	155.7	131.8	215.9	177.8	155.7	131.8	212.9	177.8	147.6	128.3	241.3	177.8	147.6	128.3
6"	222.3	209.6	182.6	157.2	251.0	209.6	182.6	157.2	247.7	209.6	174.8	154.9	266.7	209.6	174.8	154.9
8"	279.4	263.7	233.4	215.9	308.1	263.7	233.4	215.9	304.8	263.7	225.6	205.7	320.8	263.7	225.6	205.7
10"	339.9	317.5	287.3	268.2	362.0	317.5	287.3	268.2	358.9	317.5	274.6	255.3	400.1	317.5	274.6	255.3
12"	409.7	374.7	339.9	317.5	422.4	374.7	339.9	317.5	419.1	374.7	327.2	307.3	457.2	374.7	327.2	307.3
14"	450.9	406.4	371.6	349.3	485.9	406.4	371.6	349.3	482.6	406.4	362.0	342.9	492.3	406.4	362.0	342.9
16"	514.4	463.6	422.4	400.1	539.8	463.6	422.4	400.1	536.7	463.6	412.8	389.9	565.2	463.6	412.8	389.9
18"	549.4	527.1	474.7	449.3	596.9	527.1	474.7	449.3	593.9	527.1	469.9	438.2	612.9	527.1	469.9	438.2
20"	606.6	577.9	525.5	500.1	654.1	577.9	525.5	500.1	647.7	577.9	520.7	489.0	682.8	577.9	520.7	489.0
24"	717.6	685.8	628.7	603.3	774.7	685.8	628.7	603.3	768.4	685.8	628.7	590.6	790.7	685.8	628.7	590.6

NPS	Class 900#				Class 1500#				Class 2500#			
	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID
		OD	ID			OD	ID			OD	ID	
1/2"	63.5	31.8	19.1	14.2	63.5	31.8	19.1	14.2	69.9	31.8	19.1	14.2
3/4"	69.9	39.6	25.4	20.6	69.9	39.6	25.4	20.6	76.2	39.6	25.4	20.6
1"	79.5	47.8	31.8	26.9	79.5	47.8	31.8	26.9	85.9	47.8	31.8	26.9
1-1/4"	88.9	60.5	39.6	38.1	88.9	60.5	39.6	33.3	104.9	60.5	39.6	33.3
1-1/2"	98.6	69.9	47.8	44.5	98.6	69.9	47.8	41.4	117.6	69.9	47.8	41.4
2"	143.0	85.9	58.7	55.6	143.0	85.9	58.7	52.3	146.0	85.9	58.7	52.3
2-1/2"	165.1	98.6	69.9	66.5	165.1	98.6	69.9	63.5	168.4	98.6	69.9	63.5
3"	168.4	120.7	95.3	78.7	174.8	120.7	92.2	78.7	196.9	120.7	92.2	78.7
4"	206.5	149.4	120.7	102.6	209.6	149.4	117.6	97.8	235.0	149.4	117.6	97.8
5"	247.7	177.8	147.6	128.3	254.0	177.8	143.0	124.5	279.4	177.8	143.0	124.5
6"	289.1	209.6	174.8	154.9	282.7	209.6	171.5	147.3	317.5	209.6	171.5	147.3
8"	358.9	257.3	222.3	196.9	352.6	257.3	215.9	196.9	387.4	257.3	215.9	196.9
10"	435.1	311.2	276.4	246.1	435.1	311.2	266.7	246.1	476.3	311.2	270.0	246.1
12"	498.6	368.3	323.9	292.1	520.7	368.3	323.9	292.1	549.4	368.3	317.5	292.1
14"	520.7	400.1	355.6	320.8	577.9	400.1	362.0	320.8				
16"	574.8	457.2	412.8	374.7	641.4	457.2	406.4	368.3				
18"	638.3	520.7	463.6	425.5	704.9	520.7	463.6	425.5				
20"	698.5	571.5	520.7	482.6	755.7	571.5	514.4	476.3				
24"	838.2	679.5	628.7	590.6	901.7	679.5	616.0	577.9				

NOTES :

1. Inner rings are required on all PTFE gaskets and for all Class 900# and above.
2. The gasket outside diameter tolerance for NPS 1/2 through NPS 8 is +/-0.8mm; for NPS 10 through NPS 24, +1.5mm to -0.8mm.
3. The gasket inside diameter tolerance for NPS 1/2 through NPS 8 is +/-0.4mm; for NPS 10 through NPS 24, +/-0.8mm.
4. The outer ring outside diameter is +/-0.8mm.
5. The above dimensions for inner ring ID have been extracted from ASME B16.20a-2000 ADDENDA and converted from inches to millimetres.
6. The above dimensions for outer ring OD & gasket OD and ID have been extracted from ASME B16.20-1998 and converted from inches to millimetres.

SPIRAL WOUND GASKET MANUFACTURED TO THE STANDARDS ACCORDING TO ASME B16.47

Gaskets Dimensions To ASME B16.47 SERIES A Flanges

NPS	Class 150#				Class 300#				Class 400#				Class 600#				Class 900#			
	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID
		OD	ID			OD	ID			OD	ID			OD	ID			OD	ID	
26"	774.7	704.9	673.1	654.1	835.2	736.6	685.8	654.1	831.9	736.6	685.8	660.4	866.9	736.6	685.8	647.7	882.7	736.6	685.8	660.4
28"	831.9	755.7	723.9	704.9	898.7	787.4	736.6	704.9	892.3	787.4	736.6	711.2	914.4	787.4	736.6	698.5	946.2	787.4	736.6	711.2
30"	882.7	806.5	774.7	755.7	952.5	844.6	793.8	755.7	946.2	844.6	793.8	755.7	971.6	844.6	793.8	755.7	1009.7	844.6	793.8	768.4
32"	939.8	860.6	825.5	806.5	1006.6	901.7	850.9	806.5	1003.3	901.7	850.9	812.8	1022.4	901.7	850.9	812.8	1073.2	901.7	850.9	812.8
34"	990.6	911.4	876.3	857.3	1057.4	952.5	901.7	857.3	1054.1	952.5	901.7	863.6	1073.2	952.5	901.7	863.6	1136.7	952.5	901.7	863.6
36"	1047.8	968.5	927.1	908.1	1117.6	1006.6	955.8	908.1	1117.6	1006.6	955.8	917.7	1130.3	1006.6	955.8	917.7	1200.2	1009.7	958.9	920.8
38"	1111.3	1019.3	977.9	958.9	1054.1	1016.0	977.9	952.5	1073.2	1022.4	971.6	952.5	1104.9	1041.4	990.6	952.5	1200.2	1085.9	1035.1	1009.7
40"	1162.1	1070.1	1028.7	1009.7	1114.6	1070.1	1022.4	1003.3	1127.3	1076.5	1025.7	1000.3	1155.7	1098.6	1047.8	1009.7	1251.0	1149.4	1098.6	1060.5
42"	1219.2	1124.0	1079.5	1060.5	1165.4	1120.9	1073.2	1054.1	1178.1	1127.3	1076.5	1051.1	1219.2	1155.7	1104.9	1066.8	1301.8	1200.2	1149.4	1111.3
44"	1276.4	1178.1	1130.3	1111.3	1219.2	1181.1	1130.3	1104.9	1231.9	1181.1	1130.3	1104.9	1270.0	1212.9	1162.1	1111.3	1368.6	1257.3	1206.5	1155.7
46"	1327.2	1228.9	1181.1	1162.1	1273.3	1228.9	1178.1	1152.6	1289.1	1244.6	1193.8	1168.4	1327.2	1263.7	1212.9	1162.1	1435.1	1320.8	1270.0	1219.2
48"	1384.3	1279.7	1231.9	1212.9	1324.1	1286.0	1235.2	1209.8	1346.2	1295.4	1244.6	1206.5	1390.7	1320.8	1270.0	1219.2	1485.9	1371.6	1320.8	1270.0
50"	1435.1	1333.5	1282.7	1263.7	1378.0	1346.2	1295.4	1244.6	1403.4	1346.2	1295.4	1257.3	1447.8	1371.6	1320.8	1270.0	-	-	-	-
52"	1492.3	1384.3	1333.5	1314.5	1428.8	1397.0	1346.2	1320.8	1454.2	1397.0	1346.2	1308.1	1498.6	1422.4	1371.6	1320.8	-	-	-	-
54"	1549.4	1435.1	1384.3	1358.9	1492.3	1454.2	1403.4	1352.6	1517.7	1454.2	1403.4	1352.6	1555.8	1479.6	1428.8	1378.0	-	-	-	-
56"	1606.6	1485.9	1435.1	1409.7	1543.1	1505.0	1454.2	1403.4	1568.5	1505.0	1454.2	1403.4	1612.9	1530.4	1479.6	1428.8	-	-	-	-
58"	1663.7	1536.7	1485.9	1460.5	1593.9	1562.1	1511.3	1447.8	1619.3	1555.8	1505.0	1454.2	1663.7	1587.5	1536.7	1473.2	-	-	-	-
60"	1714.5	1587.5	1536.7	1511.3	1644.7	1612.9	1562.1	1524.0	1682.8	1619.3	1568.5	1517.7	1733.6	1644.7	1593.9	1530.4	-	-	-	-

Gaskets Dimensions To ASME B16.47 SERIES B

NPS	Class 150#				Class 300#				Class 400#				Class 600#				Class 900#			
	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID	OUTER RING OD	GASKET		INNER RING ID
		OD	ID			OD	ID			OD	ID			OD	ID			OD	ID	
26"	725.4	698.5	673.1	654.1	771.7	711.2	673.1	654.1	746.3	698.5	666.8	654.1	765.3	714.5	663.7	644.7	838.2	749.3	692.2	666.8
28"	776.2	749.3	723.9	704.9	825.5	762.0	723.9	704.9	800.1	749.3	714.5	701.8	819.2	755.7	704.9	692.2	901.7	800.1	743.0	717.6
30"	827.0	800.1	774.7	755.7	886.0	812.8	774.7	755.7	857.3	806.5	765.3	752.6	879.6	828.8	778.0	752.6	958.9	857.3	806.5	781.1
32"	881.1	850.9	825.5	806.5	939.8	863.6	825.5	806.5	911.4	860.6	812.8	800.1	933.5	882.7	831.9	793.8	1016.0	914.4	863.6	838.2
34"	935.0	908.1	876.3	857.3	993.9	914.4	876.3	857.3	962.2	911.4	866.9	850.9	997.0	939.8	889.0	850.9	1073.2	971.6	920.8	895.4
36"	987.6	958.9	927.1	908.1	1047.8	965.2	927.1	908.1	1022.4	965.2	917.7	898.7	1047.8	990.6	939.8	901.7	1124.0	997.0	946.2	920.8
38"	1044.7	1009.7	974.6	958.9	1098.6	1047.8	1009.7	971.6	1073.2	1022.4	971.6	952.5	1104.9	1041.4	990.6	952.5	1200.2	1085.9	1035.1	1009.7
40"	1095.5	1063.8	1022.4	1009.7	1149.4	1098.6	1060.5	1022.4	1127.3	1076.5	1025.7	1000.3	1155.7	1098.6	1047.8	1009.7	1251.0	1149.4	1098.6	1060.5
42"	1146.3	1114.6	1079.5	1060.5	1200.2	1149.4	1111.3	1085.9	1178.1	1127.3	1076.5	1051.1	1219.2	1155.7	1104.9	1066.8	1301.8	1200.2	1149.4	1111.3
44"	1197.1	1165.4	1124.0	1111.3	1251.0	1200.2	1162.1	1124.0	1231.9	1181.1	1130.3	1104.9	1270.0	1212.9	1162.1	1111.3	1368.6	1257.3	1206.5	1155.7
46"	1255.8	1224.0	1181.1	1162.1	1317.8	1254.3	1216.2	1178.1	1289.1	1244.6	1193.8	1168.4	1327.2	1263.7	1212.9	1162.1	1435.1	1320.8	1270.0	1219.2
48"	1306.6	1270.0	1231.9	1212.9	1368.6	1270.0	1231.7	1200.2	1346.2	1295.4	1244.6	1206.5	1390.7	1320.8	1270.0	1219.2	1485.9	1371.6	1320.8	1270.0
50"	1357.4	1325.6	1282.7	1263.7	1419.4	1355.9	1317.8	1267.0	1403.4	1346.2	1295.4	1257.3	1447.8	1371.6	1320.8	1270.0	-	-	-	-
52"	1408.2	1376.4	1333.5	1314.5	1470.2	1406.7	1368.6	1317.8	1454.2	1397.0	1346.2	1308.1	1498.6	1422.4	1371.6	1320.8	-	-	-	-
54"	1463.8	1422.4	1384.3	1365.3	1530.4	1422.4	1384.3	1365.3	1517.7	1454.2	1403.4	1352.6	1555.8	1479.6	1428.8	1378.0	-	-	-	-
56"	1514.6	1472.2	1435.1	1422.4	1593.9	1524.0	1479.6	1428.8	1568.5	1505.0	1454.2	1403.4	1612.9	1530.4	1479.6	1428.8	-	-	-	-
58"	1579.6	1528.8	1500.3	1478.0	1655.8	1573.3	1535.2	1484.4	1619.3	1555.8	1505.0	1454.2	1663.7	1587.5	1536.7	1473.2	-	-	-	-
60"	1630.4	1586.0	1557.3	1535.2	1706.6	1630.4	1589.0	1557.3	1682.8	1619.3	1568.5	1517.7	1706.6	1630.4	1589.0	1557.3	-	-	-	-

NOTES:

- The gasket thickness tolerance is +/- 0.127 mm measured across the metallic portion of the gasket not including the filler.
- The gasket inside diameter tolerance for NPS 26 through NPS 38 is +/- 0.76 mm; for NPS 36 through NPS 60, +/- 1.27 mm.
- The gasket outside diameter tolerance for NPS 26 through NPS 60 is +/- 1.52 mm.
- Inner rings are required for all the PTFE gaskets and Class 900 gaskets, NPS 26 to NPS 48.
- The inner ring inside diameter tolerance is +/- 3.0 mm.

The above dimensions for inner ring ID have been extracted from ASME B16.20a-2000 ADDENDA to ASME B16.20-1998 and converted from inches to millimetres.

- The above dimensions for outer ring OD & gasket OD and ID have been extracted from ASME B16.20-1998 and converted from inches to millimetres.

Instrumentation Valves & Fittings



Hose & Fittings



Spiral Wound & Ring Joint Gasket



Seal & O-ring





For further information please contact our office below, or visit our website at www.gmors.com.sg

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