

RING JOINT GASKETS(RTJ)

RING JOINT GASKETS(RTJ) are designed for high pressure applications. They are available in a variety of forms to suit different flange formats. RTJs can be used for very high and/or fluctuating pressures up to 1500 bar, depending on the profile selected. Material selection determines use for high temperatures up to 1000°C and in aggressive media. To ensure proper sealing the surfaces of contact between the gaskets and flange have to be carefully processed. The small sealing area and high contact pressure results in excellent seal ability.



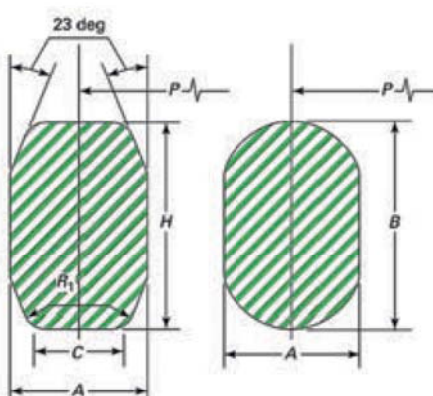
Typical Ring Joint Gaskets Materials

Material	Designation	Max. Hardness Rockwell B	Max. Hardness Brinell
Soft Iron	D	56	90
Low Carbon Steel	S	68	120
4-6 Chrome	F-5 Identification designates ASTM Specification	72	130
Stainless Steel 304	SS -304	83	160
Stainless Steel 316	SS -316		
Stainless Steel 321	SS -321		
Stainless Steel 347	SS -347		
Stainless Steel 410	SS -410	86	170
Alloy 625	INC 625	89	180
Ally 825	INC 825	92	195

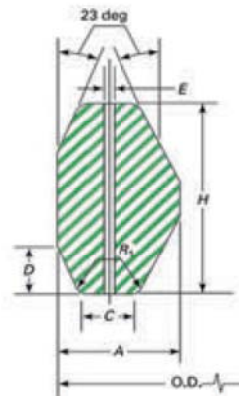


STANDARDS FOR RING JOINT GASKETS USED WITH FLANGES		
RTJ Style	RTJ Standards	Flange Standard
R	ASME B 16.20 API 6A	ASME B16.5, ASME B1647 Series
RX	ASME B16.20 API 6A	A API 6B
BX	API 6A	API 6BX

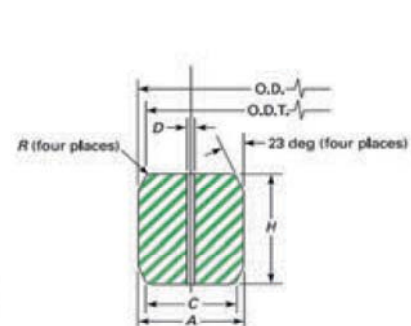
Type R Ring Gasket Dimensions and Tolerances



Type RX Ring Gasket Dimensions and Tolerances



Type BX Ring Gasket Dimensions and Tolerances



Nominal Pipe Size (NPS)	SIZE DESIGNATIONS FOR OVAL OR OCTAGONAL RINGS							
	FLANGE PRESSURE CLASS							
	150	300-600	900	1500	2500	API 6A (psi)		
½"		R-11	R-12	R-12	R-13	2000	3000	5000
¾"		R-13	R-14	R-14	R-16			
1.0"	R-15	R-16	R-16	R-16	R-18			
1 ¼"	R-17	R-18	R-18	R-18	R-21			
1 ½"	R-19	R-20	R-20	R-20	R-23			
2.0"	R-22	R-23	R-24	R-24	R-26			
2 1/16"						R-23		R-24
2 ½"	R-25	R-26	R-27	R-27	R-28			
2 9/16"						R-26		R-27
3.0"	R-29	R-31	R-31	R-35	R-32			
3 1/8"							R-31	R-35
3 ½"	R-33	R-34	R-34					
4.0"	R-36	R-37	R-37	R-39	R-38			
4 1/16"							R-37	R-39
5.0"	R-40	R-41	R-41	R-44	R-42			
5 1/8"							R-41	R-44
6.0"	R-43	R-45	R-45	R-46	R-47			
7 1/16"							R-45	R-46
8.0"	R-48	R-49	R-49	R-50	R-51			
9.0"							R-49	R-50
10.0"	R-52	R-53	R-53	R-54	R-55			
11.0"							R-53	R-54
12.0"	R-56	R-57	R-57	R-58	R-60			
13 5/8"							R-57	
14.0"	R-59	R-61	R-62	R-63				
16.0"	R-64	R-65	R-66	R-67				
16 ¾"							R-65	
18.0"	R-68	R-69	R-70	R-71				
20.0"	R-72	R-73	R-74	R-75				
20 ¾"								R-74
21 ¼"							R-73	
22.0"	R-80	R-81						
24.0"	R-76	R-77	R-78	R-79				
26.0"		R-93	R-100					
28.0"		R-94	R-101					
30.0"		R-95	R-102					
32.0"		R-96	R-103					
34.0"		R-97	R-104					
36.0"		R-98	R-105					

RING JOINT GASKETS(RTJ)

RX RING DESIGNATIONS FOR API 6B FLANGES				
API Ring Number	SIZE OF CHART FLANGE			
	2000 psi	2900 psi	3000 psi	5000 psi
RX-20	1 ½"		1 ½"	1 ½"
RX-23	2 1/16"			
RX-24			2.0"	2.0"
RX-26	2 ½"			
RX-27			2 ½"	2 ½"
RX-31	3.0"		3.0"	
RX-35				3.0"
RX-37	4.0"		4.0"	
RX-39				4.0"
RX-41	5.0"		5.0"	
RX-44				5.0"
RX-45	6.0"		6.0"	
RX-46				6.0"
RX-47				8.0"*
RX-49	8.0"		8.0"	
RX-50				8.0"
RX-53	10.0"		10.0"	
RX-54				
RX-57	12.0"		12.0"	
RX-63				14.0"
RX-65	16.0"			
RX-66			16.0"	
RX-69	18.0"			
RX-70			18.0"	
RX-73	20.0"			
RX-74			20.0"	
RX-82		1.0"		
RX-84		1 ½"		
RX-85		2.0"		
RX-86		2 ½"		
RX-87		3.0"		
RX-88		4.0"		
RX-89		3 ½"		
RX-90		5.0"		
RX-91		10.0"		
RX-99	8.0"*		8.0" *	

*Crossover flange Connections

Ring joint gaskets come in two basic types, an Oval cross section and an Octagonal cross section. The octagonal cross section has a higher sealing efficiency than the oval and would be the preferred gasket. However, only the oval cross section can be used in the old type round bottom groove. The newer flat bottom groove design will accept either the oval or the octagonal cross section. RTJ assemblies seal by an initial line contact or an edging action as the compressive forces are applied. Dimensions for standard ring joint gaskets and grooves are covered in ASME B16.20 and API 6A, API 17D and ASME B16.5/B16.20.

BX RING DESIGNATIONS FOR API 6BX FLANGES						
API Ring Number	SIZE OF CHART FLANGE (Inches)					
	2000 psi	3000 psi	5000 psi	10000 psi	15000 psi	20000 psi
BX-150				1 11/16"	1 11/16"	
BX-151				1 13/16"	1 13/16"	1 13/16"
BX-152				2 1/16"	2 1/16"	2 1/16"
BX-153				2 9/16"	2 9/16"	2 9/16"
BX-154				3 1/16"	3 1/16"	3 1/16"
BX-155				4 1/16"	4 1/16"	4 1/16"
BX-156				7 1/16"	7 1/16"	7 1/16"
BX-157				9.0"	9.0"	9.0"
BX-158				11.0"	11.0"	11.0"
BX-159				13 5/8"	13 5/8"	13 5/8"
BX-160			13 5/8"			
BX-161						
BX-162			16 ¾"	16 ¾"		
BX-163			18 ¾"			
BX-164				18 ¾"	18 ¾"	
BX-165			21 ¼"			
BX-166				21 ¼"		
BX-167	26 ¾"					
BX-168		26 ¾"				
BX-169				5 1/8"	5 1/8"	
BX-170				6 5/8"	6 5/8"	
BX-171				8 9/16"	8 9/16"	
BX-172				11 5/32"	11 5/32"	
BX-303	30.0"	30.0"				

RX Ring Gaskets are similar in shape to the standard octagonal ring joint gasket but their cross section is designed to take advantage of the contained fluid pressure in effecting a seal. They are made to API 6A and interchangeable with standard Octagonal rings for oil field drilling and production applications in API 6B flanges. RX is used at pressures up to 15,000 psi (103MPa). Standard sizes are stocked in low carbon steel, 304 and 316.

BX Ring Gaskets differs from the standard oval or octagonal shape since it is square in cross section and tapers in each corner. They can only be used in API 6BX flanges. BX is used at pressures up to 15,000 psi. Standard sizes are stocked in low carbon steel, 304 and 316.