

# METAL RING JOINT GASKETS



**FLUID CONTAINMENT  
SPECIALISTS SINCE 1967**

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## Thomson Metal Ring Joint Gaskets

Commonly used in the oil, petroleum and chemical process industries, ring joint gaskets provide an exceptional seal where high mechanical and thermal performance is required. Ring joint gaskets are manufactured in a variety of configurations (RX, BX, R Oval and Octagonal) and materials for API wellhead assemblies and high pressure ASME piping systems. Custom profile gaskets and lens rings are also available upon request.

### Materials & Dimensions

Metal gaskets should be selected to suit the specific service conditions. In addition to this, the material hardness should be lower than that of the flange metal in order to ensure the gasket deforms under compression and not the groove of the sealing surface. Descriptions of common materials and hardness values are as follows:

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*	72	130
304 Stainless Steel	S304	83	160
316 Stainless Steel	S316	83	160
347 Stainless Steel	S347	83	160
410 Stainless Steel	S410	86	170

### Styles



#### Style R

Style R is the original ring joint gasket design which can be used in modern flanges having the standard ring joint flat bottom groove as well as older flanges with the round bottom groove style. The octagonal version was introduced to provide increased contact area resulting in higher sealing efficiency.



#### Style BX & RX

Pressure energized ring joint gaskets with unique self sealing action. Internal pressure during service increases loading on the gasket thereby improving the gaskets sealing performance.

### Quality



A.R. Thomson Group Inc. is committed to safety, reliability, repeatability, traceability and to providing quality products and services to our customers through a policy of “continuous improvement.” This is demonstrated by our commitment to new product development, the integration of technologies into our manufacturing processes, the development and implementation of training programs for our employees, and our competitiveness in the global marketplace.



## Size Designations for Oval or Octagonal Rings

Nominal Pipe Size	Pressure Class				
	150	300-600	900	1 500	2 500
1/2		R-11	R-12	R-12	R-13
3/4		R-13	R-14	R-14	R-16
1	R-15	R-16	R-16	R-16	R-18
1-1/4	R-17	R-18	R-18	R-18	R-21
1-1/2	R-19	R-20	R-20	R-20	R-23
2	R-22	R-23	R-24	R-24	R-26
2-1/2	R-25	R-26	R-27	R-27	R-28
3	R-29	R-31	R-31	R-35	R-32
3-1/2	R-33	R-34			
4	R-36	R-37	R-37	R-39	R-38
5	R-40	R-41	R-41	R-44	R-42
6	R-43	R-45	R-45	R-46	R-47
8	R-48	R-49	R-49	R-50	R-51
10	R-52	R-53	R-53	R-54	R-55
12	R-56	R-57	R-57	R-58	R-60
14	R-59	R-61	R-62	R-63	
16	R-64	R-65	R-66	R-67	
18	R-68	R-69	R-70	R-71	
20	R-72	R-73	R-74	R-75	
24	R-76	R-77	R-78	R-79	
26*		R-93	R-100		
28*		R-94	R-101		
30*		R-95	R-102		
32*		R-96	R-103		
34*		R-97	R-104		
36*		R-98	R-105		

\*ASME B16.47 Series A

## BX Gaskets for API 6BX Flanges

API Ring Number	Pressure Class					
	2 000	3 000	5 000	10 000	15 000	20 000
BX150	-	-	-	1-11/16	1-11/16	-
BX151	-	-	-	1-13/16	1-13/16	1-13/16
BX152	-	-	-	2-1/16	2-1/16	2-1/16
BX153	-	-	-	2-9/16	2-9/16	2-9/16
BX154	-	-	-	3-1/16	3-1/16	3-1/16
BX155	-	-	-	4-1/16	4-1/16	4-1/16
BX156	-	-	-	7-1/16	7-1/16	7-1/16
BX157	-	-	-	9	9	9
BX158	-	-	-	11	11	11
BX159	-	-	-	13-5/8	13-5/8	13-5/8
BX160	-	-	13-5/8	-	-	-
BX161	-	-	16-3/4	-	-	-
BX162	-	-	16-3/4	16-3/4	16-3/4	-
BX163	-	-	18-3/4	-	-	-
BX164	-	-	-	18-3/4	18-3/4	-
BX165	-	-	21-1/4	-	-	-
BX166	-	-	-	21-1/4	-	-
BX167	26-3/4	-	-	-	-	-
BX168	-	26-3/4	-	-	-	-
BX169	-	-	-	5-1/8	-	-
BX170	-	-	-	6-5/8	6-5/8	-
BX171	-	-	-	8-9/16	8-9/16	-
BX172	-	-	-	11-5/32	11-5/32	-
BX303	30	30	-	-	-	-

## RX Gaskets for API 6B Flanges

API Ring Number	Pressure Class			
	720, 960 & 2 500*	2 900*	3 000	5 000
RX20	1-1/2		1-1/2	1-1/2
RX23	2			
RX24			2	2
RX25				3-1/8
RX26	2-1/2			
RX27			2-1/2	2-1/2
RX31	3		3	
RX35				3
RX37	4		4	
RX39				4
RX41	5		5	
RX44				5
RX45	6		6	
RX46				6
RX47				8**
RX49	8		8	
RX50				8
RX53	10		10	
RX54				10
RX57	12		12	
RX63				14
RX65	16			
RX66			16	
RX69	18			
RX70			18	
RX73	20			
RX74			20	
RX82		1		
RX84		1-1/2		
RX85		2		
RX86		2-1/2		
RX87		3		
RX88		4		
RX89		3-1/2		
RX90		5		
RX91		10		
RX99	8**		8**	
RX201				1-3/8
RX205				1-13/16
RX210				2-9/16
RX215				4-1/16

\* Class 720, 960, & 2900 flanges to API 6B are obsolete. Data are for information only.

\*\* Crossover flange connection

# Manufacturer of Gaskets, Packing, Mechanical Seals, Valves & Fittings

Serving the Oil & Gas, Petrochemical, Pulp & Paper, Mining, Municipal, power generation and many other industries.

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LOCATIONS

55+

YEARS OF  
EXPERIENCE



SERVICE



The A.R. Thomson Group Inc. was established in 1967 as a regional manufacturer & distributor of gaskets and other fluid containment products. With the rapid growth of oil and gas production, petrochemical, oil refining and pulp and paper industries, our manufacturing facilities expanded to meet increased demand for these products. Since 1967, we have developed our expertise and know-how to become the leader in solving fluid containment problems. No matter what your containment needs are, we can help.