

## ABOUT US

The Merica is the only true global supplier of industrial gaskets. The company maintains a major market position in all pressure ranges of static sealing devices used throughout the world, most notably in the oil and gas industry's upstream and downstream operations.

Our global expertise, combined with local availability, ensures that our customers benefit from first class products, together with outstanding customer service and technical support. We provide a comprehensive range of semi-metallic gaskets, sheet gasket materials, pump and valve seals and metallic gaskets to a wide range of oil and gas, industrial, pulp and paper, and automotive customers. Specialist markets include refining petrochemicals, power generation, food, pharmaceutical, marine, offshore and water treatment markets.

## PRODUCT SELECTION

Increasing environmental and economic pressures require that the most suitable product be used in every application. This brochure is intended to aid the process of product selection. If you require more detailed information to ensure compatibility, please consult Merica's Technical Department who will be pleased to assist.

## RING JOINT GASKETS

### PROPERTIES AND CHARACTERISTICS

Ring joint gaskets are designed for high pressure applications. They are available in a variety of forms to suit different flange formats. It 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 surface of contact between the gaskets and flange have to be carefully processed. The small sealing area and high contact pressure results in excellent sealability.



### General characteristic:

- RTJs are metallic sealing rings suitable for high pressure and high temperature applications.
- RTJs are supplied in different profiles.
- RTJ are always used in combination with special flanges which ensure good and reliable sealing with the correct choice of material and profile.

### APPLICATION

- Refineries
- Power plants
- Petrochemical industry
- Pipelines
- Valves
- Pressure vessels



## RING JOINT STYLES

### Type R Oval



- » The original ring joint design
- » Can be used on standard flat bottomed groove flanges and older round bottomed groove flanges
- » Can be used for ASME B16.5 flange class 150 to 2500 and API 6B to Class 5000
- » Soft iron and carbon steel gaskets are zinc plated to prevent corrosion
- » All rings are marked with the ring number, material and the date of manufacture and API designation.

### Type R Octagonal



- » An improvement on the original oval design
- » Can be used on standard flat bottomed groove flanges
- » Available for use on ASME B16.5 flange class 150 to 2500, ASME B16.47 Series A flanges and API 6B to Class 5000
- » Soft iron and carbon steel gaskets are zinc plated to prevent corrosion
- » All rings are marked with the ring number, material and the date of manufacture and API designation.

### Type BX



- » Suitable for use on API 6BX Flanges up to Class 20000
- » During installation the ring is compressed inwards to provide additional sealing stress
- » Pressure energised; as the internal pressure increases the sealing force increases
- » Type BX rings are supplied with pressure relief holes to avoid compressing fluid beneath the gasket
- » Can be drilled with additional hole to create a gasket suitable for subsea installation Type "SBX"

### Type RX



- » Interchangeable with Type R gaskets
- » Pressure energised; as the internal pressure increases the sealing force increases
- » The outer sealing faces make initial contact with the slightly smaller flange groove allowing the gasket to impart additional sealing force
- » Can be drilled with additional hole to create a gasket suitable for subsea installation Type "SRX"
- » Suitable for use on ASME B16.5, API 6B to Class 5000 and ASME B16.47 Series A flanges

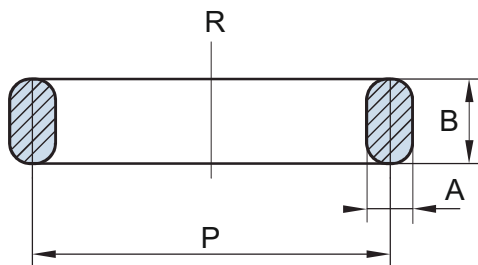
## MATERIALS

Standard materials such as soft iron, Low CS and the range of SS are available as well as other materials which are available on request.

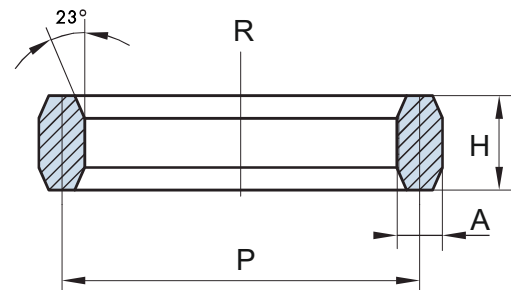
STANDARD MATERIALS RECOMMENDED BY THE ASME B16.20				
ASME/ASTM	DIN EN 10 027-2 Material No.	Maximum HB	Maximum HV	Material Code
Soft iron	1.1003	90	56	D
Low CS	1.0038	120	68	S
4-6 Cr ½ Mo	1.7362	130	72	F5
AISI 410	1.4000	170	86	S 410
AISI 304	1.4301	160	83	S 304
AISI 316	1.4401	160	83	S 316
AISI 321	1.4541	160	83	S 321
AISI 347	1.4550	160	83	S 347

## DIMENSIONS

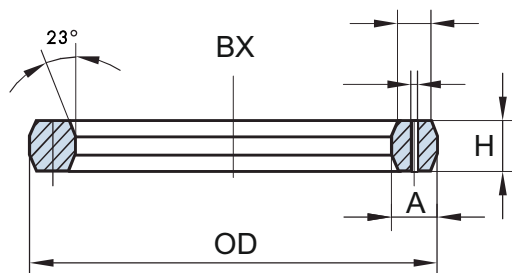
STANDARDS FOR RING JOINT GASKETS USED WITH FLANGES		
Ring Joint Gaskets Style	Ring Joint Gaskets Standard	Flange Standard
R	ASME B 16.20 API 6A	ASME B 16.5 ASME B 16.47 series A
RX	ASME B 16.20 API 6A	API 6B
BX	API 6A	API 6BX



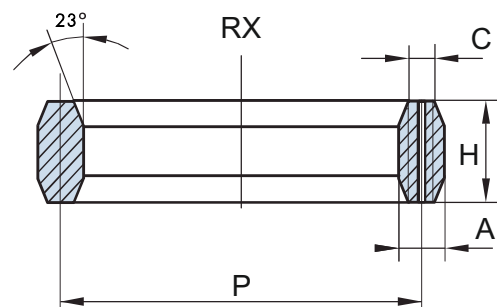
Style R  
Oval section



Style R  
Octagonal section



Style BX



Style RX

# STYLE R

The Ring Type Joint was initially developed for high pressure/temperature applications found in the petroleum industry and is primarily used in the oil field on drilling and completion equipment. However, today this product range can also be found on valves and pipework assemblies, along with some high integrity pressure vessel joints.

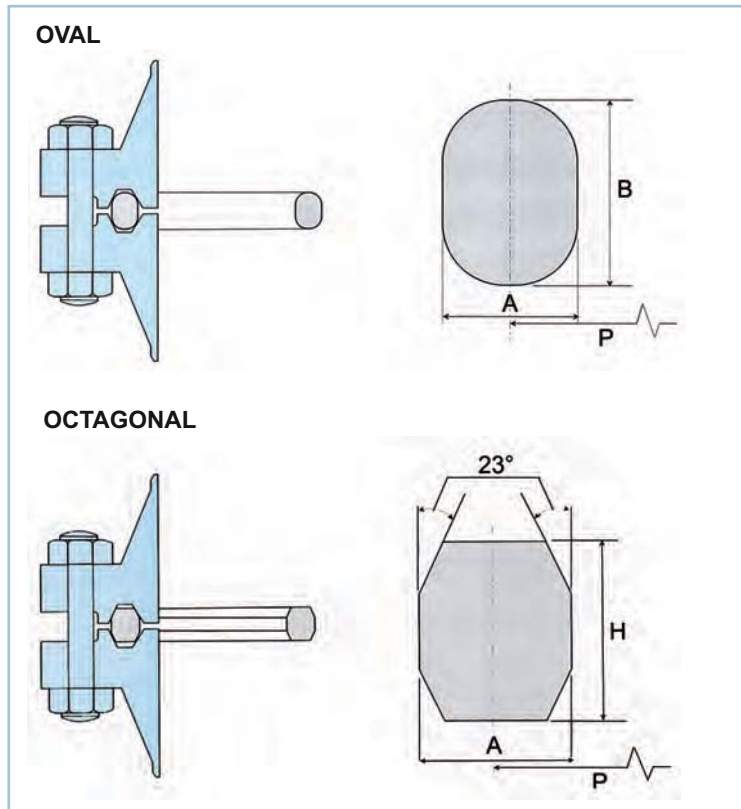
Standard Style R Ring Type Joints are manufactured in accordance with both API 6A and ASME B16.20 size/ratings. Available in both oval and octagonal configurations, both types are interchangeable on the modern octagonal type grooved flanges.

*As with all solid metal Ring Type Joints including Style R, it is recommended to replace the ring when flange connection is broken.*



Style R

## DIMENSIONAL DATA – STYLE R



### TOLERANCES: (INCHES)

A (width of ring)	±0.008
B, H (height of ring)	±0.020
P (average pitch diameter of ring)	±0.007
23° (angle)	±1/2°

*Flexitallic Style R Ring Type Joints can be manufactured in accordance with all relevant standards to suit the following flange designations:*

- API 6A
- ASME/ANSI B16.5
- MSS SP44 (ASME B16.47 SERIES A)
- BS 1560

Dimensions in mm

RING NO.	PRESSURE CLASS RATINGS						PITCH DIAMETER OF RING P	WIDTH OF RING A	HEIGHT OF RING		APPROX. DISTANCE BETWEEN MADE UP FLANGES	GASKET WEIGHTS, lbs.		
	ANSI, BS & MSS				API (PSI)				OVAL	OCTAGONAL		OVAL	OCTAGONAL	
	150	300/600	900	1500	2500	2000/3000			5000	B		H		
NOMINAL PIPE SIZE (INCHES)														
R11	-	1/2	-	-	-	-	-	34.13	6.35	11.1	9.5	-	.111	.104
R12	-	-	1/2	1/2	-	-	-	39.69	7.95	14.3	12.7	-	.216	.20
R13	-	3/4	-	-	1/2	-	-	42.86	7.95	14.3	12.7	-	.234	.216
R14	-	-	3/4	3/4	-	-	-	44.45	7.95	14.3	12.7	-	.242	.224
R15	1	-	-	-	-	-	-	47.63	7.95	14.3	12.7	-	.260	.24
R16	-	1	1	1	3/4	-	-	50.80	7.95	14.3	12.7	-	.278	.256
R17	1 1/4	-	-	-	-	-	-	57.15	7.95	14.3	12.7	-	.311	.288
R18	-	1 1/4	1 1/4	1 1/4	1	-	-	60.33	7.95	14.3	12.7	-	.328	.304
R19	1 1/2	-	-	-	-	-	-	65.09	7.95	14.3	12.7	-	.354	.328
R20*	-	1 1/2	1 1/2	1 1/2	-	-	-	68.28	7.95	14.3	12.7	4.1	.372	.344
R21	-	-	-	-	1 1/4	-	-	72.23	11.11	17.5	15.9	-	.660	.643
R22	2	-	-	-	-	-	-	82.55	7.95	14.3	12.7	-	.450	.415
R23*	-	2	-	-	1 1/2	2 1/16**	-	82.55	11.11	17.5	15.9	4.8	.755	.734
R24*	-	-	2	2	-	2 1/16	2	95.25	11.11	17.5	15.9	4.8	.870	.846
R25	2 1/2	-	-	-	-	-	-	101.60	7.95	14.3	12.7	-	.553	.510
R26*	-	2 1/2	-	-	2	2 9/16	-	101.60	11.11	17.5	15.9	4.8	.930	.904
R27*	-	-	2 1/2	2 1/2	-	(2 9/16)	2 9/16	107.95	11.11	17.5	15.9	4.8	1.050	.96
R28	-	-	-	-	2 1/2	-	-	111.13	12.70	19.1	17.5	-	1.255	1.23
R29	3	-	-	-	-	-	-	114.30	7.95	14.3	12.7	-	.622	.575
R30†	-	3	-	-	-	-	-	117.48	11.11	17.5	15.9	-	1.075	1.047
R31*	-	3	3	-	-	3 1/8	-	123.83	11.11	17.5	15.9	4.8	1.130	1.10
R32	-	-	-	-	3	-	-	127.00	12.70	19.1	17.5	-	1.435	1.405
R33	3 1/2	-	-	-	-	-	-	131.76	7.95	14.3	12.7	-	.718	.664
R34	-	3 1/2	-	-	-	-	-	131.76	11.11	17.5	15.9	-	1.200	1.17
R35*	-	-	-	3	-	-	3 1/8	136.53	11.11	17.5	15.9	4.8	1.250	1.21
R36	4	-	-	-	-	-	-	149.23	7.95	14.3	12.7	-	.813	.735
R37*	-	4	4	-	-	4 1/16	-	149.23	11.11	17.5	15.9	4.8	1.360	1.33
R38	-	-	-	-	4	-	-	157.16	15.88	22.4	20.6	-	2.56	2.52
R39*	-	-	-	4	-	-	4 1/16	161.93	11.11	17.5	15.9	4.8	1.480	1.44
R40	5	-	-	-	-	-	-	171.45	7.95	14.3	12.7	-	.935	.865
R41*	-	5	5	-	-	-	-	180.98	11.11	17.5	15.9	4.8	1.66	1.61
R42	-	-	-	-	5	-	-	190.50	19.05	25.4	23.9	-	4.21	4.16
R43	6	-	-	-	-	-	-	193.68	7.95	14.3	12.7	-	1.055	.975
R44*	-	-	-	5	-	-	-	193.68	11.11	17.5	15.9	4.8	1.77	1.73
R45*	-	6	6	-	-	7 1/16	-	211.14	11.11	17.5	15.9	4.8	1.93	1.88
R46*	-	-	-	6	-	-	7 1/16	211.14	12.70	19.1	17.5	4.8	2.39	2.33
R47*	-	-	-	-	6	-	-	228.60	19.05	25.4	23.9	4.1	5.06	4.99
R48	8	-	-	-	-	-	-	247.65	7.95	14.3	12.7	-	1.350	1.24
R49*	-	8	8	-	-	9	-	269.88	11.11	17.5	15.9	4.8	2.47	2.40
R50*	-	-	-	8	-	-	9	269.88	15.88	22.4	20.6	4.1	4.40	4.32
R51	-	-	-	-	8	-	-	279.40	22.23	28.6	27.0	-	8.05	8.17
R52	10	-	-	-	-	-	-	304.80	7.95	14.3	12.7	-	1.66	1.53
R53*	-	10	10	-	-	11	-	323.85	11.11	17.5	15.9	4.8	3.00	2.88
R54*	-	-	-	10	-	-	11	323.85	15.88	22.4	20.6	4.1	5.29	5.18
R55	-	-	-	-	10	-	-	342.90	28.58	36.5	34.9	-	16.23	17.04
R56	12	-	-	-	-	-	-	381.00	7.95	14.3	12.7	-	2.07	1.92
R57*	-	12	12	-	-	13 5/8	-	381.00	11.11	17.5	15.9	4.8	3.48	3.38

\* Nominal Pipe Sizes marked\*\* apply to class rating 2000 only.  
 Nominal Pipe Sizes in brackets apply to class rating 3000 only.  
 † Ring no. R30 is suitable for lapped flanges only.

# STYLE R

Dimensions in mm

RING NO.	PRESSURE CLASS RATINGS							PITCH DIAMETER OF RING P	WIDTH OF RING A	HEIGHT OF RING		APPROX. DISTANCE BETWEEN MADE UP FLANGES	GASKET WEIGHTS, lbs.	
	ANSI, BS & MSS					API (PSI)				OVAL	OCTAGONAL		OVAL	OCTAGONAL
	150	300/600	900	1500	2500	2000/3000	5000			B	H			
	NOMINAL PIPE SIZE (INCHES)													
R58	-	-	-	12	-	-	-	381.00	22.23	28.6	27.0	-	11.00	11.13
R59	14	-	-	-	-	-	-	396.88	7.95	14.3	12.7	-	2.16	2.00
R60	-	-	-	-	12	-	-	406.40	31.75	39.7	38.1	-	23.10	23.50
R61	-	14	-	-	-	-	-	419.10	11.11	17.5	15.9	-	3.83	3.73
R62	-	-	14	-	-	-	-	419.10	15.88	22.2	20.6	-	6.84	6.71
R63*	-	-	-	14	-	-	-	419.10	25.40	33.3	31.8	5.6	16.20	16.67
R64	16	-	-	-	-	-	-	454.03	7.95	14.3	12.7	-	2.47	2.29
R65*	-	16	-	-	-	16 3/4**	-	469.90	11.11	17.5	15.9	4.8	4.30	4.18
R66*	-	-	16	-	-	(16)	-	469.90	15.88	22.2	20.6	4.1	7.67	7.53
R67	-	-	-	16	-	-	-	469.90	28.58	36.5	34.9	-	22.30	23.40
R68	18	-	-	-	-	-	-	517.53	7.95	14.3	12.7	-	2.82	2.60
R69*	-	18	-	-	-	-	-	533.40	11.11	17.5	15.9	4.8	4.87	4.74
R70*	-	-	18	-	-	(18)	-	533.40	19.05	25.4	23.9	4.8	11.80	11.64
R71	-	-	-	18	-	-	-	533.40	28.58	36.5	34.9	-	25.20	26.50
R72	20	-	-	-	-	-	-	558.80	7.95	14.3	12.7	-	3.04	2.81
R73*	-	20	-	-	-	21 1/4**	-	584.20	12.7	19.1	17.5	3.3	6.60	6.47
R74*	-	-	20	-	-	(20 3/4)	-	584.20	19.05	25.4	23.9	4.8	12.95	12.75
R75	-	-	-	20	-	-	-	584.20	31.75	39.7	38.1	-	33.30	35.30
R76	24	-	-	-	-	-	-	673.10	7.95	14.3	12.7	-	3.66	3.38
R77	-	24	-	-	-	-	-	692.15	15.88	22.4	20.6	-	11.30	11.10
R78	-	-	24	-	-	-	-	692.15	25.4	33.3	31.8	-	27.10	27.58
R79	-	-	-	24	-	-	-	692.15	34.93	44.5	41.3	-	48.70	49.75
R80	22	-	-	-	-	-	-	615.95	7.95	-	12.7	-	-	3.11
R81	-	22	-	-	-	-	-	635.00	14.29	-	19.1	-	-	8.55
R82*	-	-	-	-	-	-	-	57.14	11.11	-	15.9	4.8	-	.508
R84*	-	-	-	-	-	-	-	63.50	11.11	-	15.9	4.8	-	.564
R85*	-	-	-	-	-	-	-	79.38	12.70	-	17.5	3.3	-	.978
R86*	-	-	-	-	-	-	-	90.50	15.88	-	20.6	4.1	-	1.447
R87*	-	-	-	-	-	-	-	100.03	15.88	-	20.6	4.1	-	1.597
R88*	-	-	-	-	-	-	-	122.83	19.05	-	23.9	4.8	-	2.735
R89*	-	-	-	-	-	-	-	114.30	19.05	-	23.9	4.8	-	2.528
R90*	-	-	-	-	-	-	-	155.58	22.23	-	26.9	4.8	-	4.55
R91*	-	-	-	-	-	-	-	260.25	31.75	-	38.1	4.1	-	15.05
R92	-	-	-	-	-	-	-	228.60	11.11	17.5	15.9	-	2.07	2.02
R93	-	26	-	16.33	-	-	-	749.30	19.05	-	23.9	-	-	-
R94	-	28	-	-	-	-	-	800.10	19.05	-	23.9	-	-	17.44
R95	-	30	-	-	-	-	-	857.25	19.05	-	23.9	-	-	18.69
R96	-	32	-	-	-	-	-	914.40	22.23	-	27.0	-	-	26.65
R97	-	34	-	-	-	-	-	965.20	22.23	-	27.0	-	-	28.13
R98	-	36	-	-	-	-	-	1022.35	22.23	-	27.0	-	-	29.79
R99*	-	-	-	-	-	-	-	234.95	11.11	-	15.9	4.8	-	2.08
R100	-	-	26	-	-	-	-	749.30	28.58	-	34.9	-	-	-
R101	-	-	28	-	-	-	-	800.10	31.75	-	38.1	-	-	-
R102	-	-	30	-	-	-	-	857.25	31.75	-	38.1	-	-	-
R103	-	-	32	-	-	-	-	914.40	31.75	-	38.1	-	-	-
R104	-	-	34	-	-	-	-	965.20	34.93	-	41.3	-	-	-
R105	-	-	36	-	-	-	-	1022.35	34.93	-	41.3	-	-	-

\* Nominal Pipe Sizes marked\*\* apply to class rating 2000 only.  
 † Ring no. R30 is standard for 24" pipe flanges

Dimensions in inches

RING NO.	PRESSURE CLASS RATINGS							PITCH DIAMETER OF RING P	WIDTH OF RING A	HEIGHT OF RING		APPROX. DISTANCE BETWEEN MADE UP FLANGES	GASKET WEIGHTS, lbs.	
	ANSI, BS & MSS					API (PSI)				OVAL	OCTAGONAL		OVAL	OCTAGONAL
	150	300/600	900	1500	2500	2000/3000	5000			B	H			
NOMINAL PIPE SIZE (INCHES)														
R11	-	1/2	-	-	-	-	-	1.344	0.250	0.44	0.38	-	.111	.104
R12	-	-	1/2	1/2	-	-	-	1.563	0.313	0.56	0.50	-	.216	.20
R13	-	3/4	-	-	1/2	-	-	1.688	0.313	0.56	0.50	-	.234	.216
R14	-	-	3/4	3/4	-	-	-	1.750	0.313	0.56	0.50	-	.242	.224
R15	1	-	-	-	-	-	-	1.875	0.313	0.56	0.50	-	.260	.24
R16	-	1	1	1	3/4	-	-	2.000	0.313	0.56	0.50	-	.278	.256
R17	1 1/4	-	-	-	-	-	-	2.250	0.313	0.56	0.50	-	.311	.288
R18	-	1 1/4	1 1/4	1 1/4	1	-	-	2.375	0.313	0.56	0.50	-	.328	.304
R19	1 1/2	-	-	-	-	-	-	2.563	0.313	0.56	0.50	-	.354	.328
R20*	-	1 1/2	1 1/2	1 1/2	-	-	-	2.688	0.313	0.56	0.50	0.16	.372	.344
R21	-	-	-	-	1 1/4	-	-	2.844	0.438	0.69	0.63	-	.660	.643
R22	2	-	-	-	-	-	-	3.250	0.313	0.56	0.50	-	.450	.415
R23*	-	2	-	-	1 1/2	2 1/16**	-	3.250	0.438	0.69	0.63	0.19	.755	.734
R24*	-	-	2	2	-	2 1/16	2	3.750	0.438	0.69	0.63	0.19	.870	.846
R25	2 1/2	-	-	-	-	-	-	4.000	0.313	0.56	0.50	-	.553	.510
R26*	-	2 1/2	-	-	2	2 9/16	-	4.000	0.438	0.69	0.63	0.19	.930	.904
R27*	-	-	2 1/2	2 1/2	-	(2 9/16)	2 9/16	4.250	0.438	0.69	0.63	0.19	1.050	.96
R28	-	-	-	-	2 1/2	-	-	4.375	0.500	0.75	0.69	-	1.255	1.23
R29	3	-	-	-	-	-	-	4.500	0.313	0.56	0.50	-	.622	.575
R30†	-	3	-	-	-	-	-	4.625	0.438	0.69	0.63	-	1.075	1.047
R31*	-	3	3	-	-	3 1/8	-	4.875	0.438	0.69	0.63	0.19	1.130	1.10
R32	-	-	-	-	3	-	-	5.000	0.500	0.75	0.69	-	1.435	1.405
R33	3 1/2	-	-	-	-	-	-	5.188	0.313	0.56	0.50	-	.718	.664
R34	-	3 1/2	-	-	-	-	-	5.188	0.438	0.69	0.63	-	1.200	1.17
R35*	-	-	-	3	-	-	3 1/8	5.375	0.438	0.69	0.63	0.19	1.250	1.21
R36	4	-	-	-	-	-	-	5.875	0.313	0.56	0.50	-	.813	.735
R37*	-	4	4	-	-	4 1/16	-	5.875	0.438	0.69	0.63	0.19	1.360	1.33
R38	-	-	-	-	4	-	-	6.188	0.625	0.88	0.81	-	2.56	2.52
R39*	-	-	-	4	-	-	4 1/16	6.375	0.438	0.69	0.63	0.19	1.480	1.44
R40	5	-	-	-	-	-	-	6.750	0.313	0.56	0.50	-	.935	.865
R41*	-	5	5	-	-	-	-	7.125	0.438	0.69	0.63	0.19	1.66	1.61
R42	-	-	-	-	5	-	-	7.500	0.750	1.00	0.94	-	4.21	4.16
R43	6	-	-	-	-	-	-	7.625	0.313	0.56	0.50	-	1.055	.975
R44*	-	-	-	5	-	-	-	7.625	0.438	0.69	0.63	0.19	1.77	1.73
R45*	-	6	6	-	-	7 1/16	-	8.313	0.438	0.69	0.63	0.19	1.93	1.88
R46*	-	-	-	6	-	-	7 1/16	8.313	0.500	0.75	0.69	0.13	2.39	2.33
R47*	-	-	-	-	6	-	-	9.000	0.750	1.00	0.94	0.16	5.06	4.99
R48	8	-	-	-	-	-	-	9.750	0.313	0.56	0.50	-	1.350	1.24
R49*	-	8	8	-	-	9	-	10.625	0.438	0.69	0.63	0.19	2.40	
R50*	-	-	-	8	-	-	9	10.625	0.625	0.88	0.81	0.16	4.40	4.32
R51	-	-	-	-	8	-	-	11.000	0.875	1.13	1.06	-	8.05	8.17
R52	10	-	-	-	-	-	-	12.000	0.313	0.56	0.50	-	1.66	1.53
R53*	-	10	10	-	-	11	-	12.750	0.438	0.69	0.63	0.19	3.00	2.88
R54*	-	-	-	10	-	-	11	12.750	0.625	0.88	0.81	0.16	5.29	5.18
R55	-	-	-	-	10	-	-	13.500	1.125	1.44	1.38	-	16.23	17.04
R56	12	-	-	-	-	-	-	15.000	0.313	0.56	0.69	-	2.07	1.92
R57*	-	12	12	-	-	13 5/8	-	15.000	0.438	0.69	0.63	0.19	3.48	3.38

\* Nominal Pipe Sizes marked\*\* apply to class rating 2000 only.  
 Nominal Pipe Sizes in brackets apply to class rating 3000 only.  
 † Ring no. R30 is suitable for lapped flanges only.



# STYLE R

Dimensions in inches

RING NO.	PRESSURE CLASS RATINGS							PITCH DIAMETER OF RING P	WIDTH OF RING A	HEIGHT OF RING		APPROX. DISTANCE BETWEEN MADE UP FLANGES	GASKET WEIGHTS, lbs.	
	ANSI, BS & MSS				API (PSI)		OVAL			OCTAGONAL	OVAL		OCTAGONAL	
	150	300/600	900	1500	2500	2000/3000	5000			B	H			
NOMINAL PIPE SIZE (INCHES)														
R58	-	-	-	12	-	-	-	15.000	0.875	1.13	1.06	-	11.00	11.13
R59	14	-	-	-	-	-	-	15.625	0.313	0.56	0.50	-	2.16	2.00
R60	-	-	-	-	12	-	-	16.000	1.250	1.56	1.50	-	23.10	23.50
R61	-	14	-	-	-	-	-	16.500	0.438	0.69	0.63	-	3.83	3.73
R62	-	-	14	-	-	-	-	16.500	0.625	0.88	0.81	-	6.84	6.71
R63*	-	-	-	14	-	-	-	16.500	1.000	1.31	1.25	0.22	16.20	16.67
R64	16	-	-	-	-	-	-	17.875	0.313	0.56	0.50	-	2.47	2.29
R65*	-	16	-	-	-	16 3/4**	-	18.500	0.438	0.69	0.63	0.19	4.30	4.18
R66*	-	-	16	-	-	(16)	-	18.500	0.625	0.88	0.81	0.16	7.67	7.53
R67	-	-	-	16	-	-	-	18.500	1.125	1.44	1.38	-	22.30	23.40
R68	18	-	-	-	-	-	-	20.375	0.313	0.56	0.50	-	2.82	2.60
R69*	-	18	-	-	-	-	-	21.000	0.438	0.69	0.63	0.19	4.87	4.74
R70*	-	-	18	-	-	(18)	-	21.000	0.750	1.00	0.94	0.19	11.80	11.64
R71	-	-	-	18	-	-	-	21.000	1.125	1.44	1.38	-	25.20	26.50
R72	20	-	-	-	-	-	-	22.000	0.313	0.56	0.50	-	3.04	2.81
R73*	-	20	-	-	-	21 1/4**	-	23.000	0.500	0.75	0.69	0.13	6.60	6.47
R74*	-	-	20	-	-	(20 3/4)	-	23.000	0.750	1.00	0.94	0.19	12.95	12.75
R75	-	-	-	20	-	-	-	23.000	1.250	1.56	1.50	-	33.30	35.30
R76	24	-	-	-	-	-	-	26.500	0.313	0.56	0.50	-	3.66	3.38
R77	-	24	-	-	-	-	-	27.250	0.625	0.88	0.81	-	11.30	11.10
R78	-	-	24	-	-	-	-	27.250	1.000	1.31	1.25	-	27.10	27.58
R79	-	-	-	24	-	-	-	27.250	1.375	1.75	1.63	0.19	48.70	49.75
R80	22	-	-	-	-	-	-	24.250	0.313	-	0.50	-	-	3.11
R81	-	22	-	-	-	-	-	25.000	0.563	-	0.75	-	-	8.55
R82*	-	-	-	-	-	-	-	2.250	0.438	-	0.63	0.19	-	.508
R84*	-	-	-	-	-	-	-	2.500	0.438	-	0.63	0.19	-	.564
R85*	-	-	-	-	-	-	-	3.125	0.500	-	0.69	0.13	-	.978
R86*	-	-	-	-	-	-	-	3.563	0.625	-	0.81	0.16	-	1.447
R87*	-	-	-	-	-	-	-	3.938	0.625	-	0.81	0.16	-	1.597
R88*	-	-	-	-	-	-	-	4.875	0.750	-	0.94	0.19	-	2.735
R89*	-	-	-	-	-	-	-	4.500	0.750	-	0.94	0.19	-	2.528
R90*	-	-	-	-	-	-	-	6.125	0.875	-	1.06	0.19	-	4.55
R91*	-	-	-	-	-	-	-	10.250	1.250	-	1.50	0.16	-	15.05
R92	-	-	-	-	-	-	-	9.000	0.438	0.69	0.63	-	2.07	2.02
R93	-	26	-	16.33	-	-	-	29.500	0.750	-	0.94	-	-	-
R94	-	28	-	-	-	-	-	31.500	0.750	-	0.94	-	-	17.44
R95	-	30	-	-	-	-	-	33.750	0.750	-	0.94	-	-	18.69
R96	-	32	-	-	-	-	-	36.000	0.875	-	1.06	-	-	26.65
R97	-	34	-	-	-	-	-	38.000	0.875	-	1.06	-	-	28.13
R98	-	36	-	-	-	-	-	40.250	0.875	-	1.06	-	-	29.79
R99*	-	-	-	-	-	-	-	9.250	0.438	-	0.63	0.19	-	2.08
R100	-	-	26	-	-	-	-	29.500	1.125	-	1.38	-	-	-
R101	-	-	28	-	-	-	-	31.500	1.250	-	1.50	-	-	-
R102	-	-	30	-	-	-	-	33.750	1.250	-	1.50	-	-	-
R103	-	-	32	-	-	-	-	36.000	1.250	-	1.50	-	-	-
R104	-	-	34	-	-	-	-	38.000	1.375	-	1.63	-	-	-
R105	-	-	36	-	-	-	-	40.250	1.375	-	1.63	-	-	-

\* Nominal Pipe Sizes marked\*\* apply to class rating 2000 only.  
Nominal Pipe Sizes

The Style RX is an adaptation of the standard Style R which energizes on assembly. The RX is designed to fit the same groove design as a standard Style R, making the joints interchangeable.

Consideration should be given to the difference in finished make-up distance.

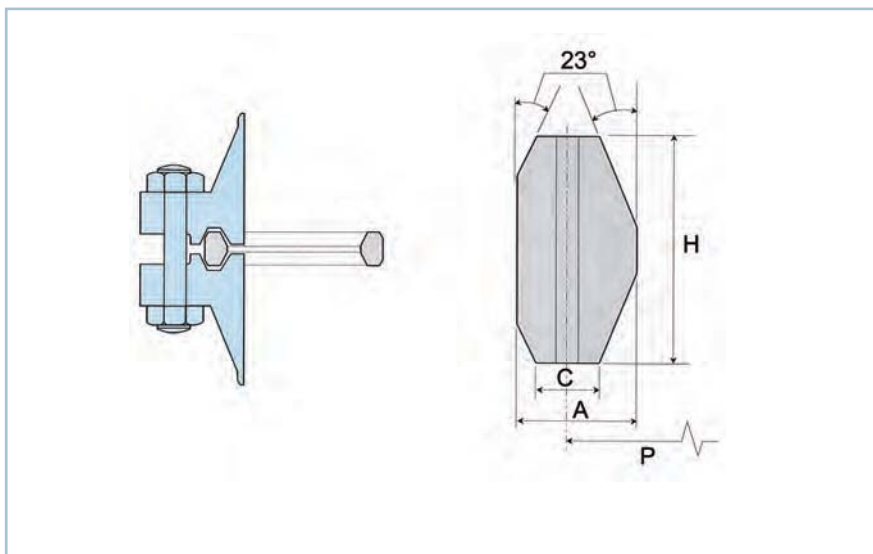
The modified design uses an energizing on assembly effect which improves the efficiency of the seal.

Designs are also available for Subsea applications.



*Style RX*

#### DIMENSIONAL DATA – STYLE RX



#### TOLERANCES: (INCHES)

A* (width of ring)	+0.008,-0.000
H* (height of ring)	+0.008,-0.000
OD (od of ring)	+0.020,-0.000
23° (angle)	± 1/2°

\*A plus tolerance of 0.008 inches for width 'A' and height 'H' is permitted, provided the variation in width or height does not exceed 0.004 inches throughout its entire circumference.

#### NOTE 1:

The pressure passage hole illustrated in the Ring Type Joint cross section ensures equalization of pressure which may be trapped in the grooves, it is in rings RX82 through RX91 only. Center line of hole shall be located at mid point of dimension "c" (width of flat). Hole diameter shall be as follows:

- 0.06 inches for rings RX82 through RX85;
- 0.09 inches for rings RX86 and RX87;
- 0.12 inches for rings RX88 through RX91.

# STYLE RX

Dimensions in mm

NO.	PRESSURE CLASS RATING (PSI)			PITCH DIAMETER OF RING P	OUTSIDE DIAMETER OF RING OD	WIDTH OF RING A	HEIGHT OF RING H	WEIGHT, lbs.
	2000	3000	5000					
NOMINAL PIPE SIZE (INCHES)								
RX20	-	-	-	68.26	76.20	8.73	19.05	0.527
RX20†	-	-	2 1/16	68.26	76.20	8.73	19.05	0.527
RX23	2 1/16	-	-	82.55	93.27	11.91	25.40	1.15
RX24	-	2 1/16	2 1/16	95.25	105.97	11.91	25.40	1.33
RX25†	-	-	3 1/8	101.60	109.54	8.73	19.05	1.42
RX26	2 9/16	-	-	101.60	111.92	11.91	25.40	1.50
RX27	-	2 9/16	2 9/16	107.95	118.27	11.91	25.40	1.73
RX31	3 1/8	3 1/8	-	123.83	134.54	11.91	25.40	1.91
RX35	-	-	3 1/8	136.53	147.24	11.91	25.40	2.09
RX37	4 1/16	4 1/16	-	149.23	159.94	11.91	25.40	2.27
RX39	-	-	4 1/16	161.93	172.64	11.91	25.40	2.54
RX41	-	-	-	180.98	191.69	11.91	25.40	2.72
RX44	-	-	-	193.68	204.39	11.91	25.40	2.96
RX45	7 1/16	7 1/16	-	211.14	221.84	11.91	25.40	3.66
RX46	-	-	7 1/16	211.14	222.25	13.49	28.58	8.56
RX47	-	-	-	228.60	245.27	19.84	41.28	3.79
RX49	9	9	-	269.88	280.59	11.91	25.40	5.36
RX50	-	-	9	269.88	283.37	16.67	31.75	4.56
RX53	11	11	-	323.85	334.57	11.91	25.40	6.45
RX54	-	-	11	323.85	337.34	16.67	31.75	5.36
RX57	13 5/8	13 5/8	-	381.00	391.72	11.91	25.40	26.40
RX63	-	-	-	419.10	441.72	26.99	50.80	6.63
RX65	16 3/4	-	-	469.90	480.62	11.91	25.40	9.39
RX66	-	16 3/4	-	469.90	457.99	16.67	31.75	7.52
RX69	-	-	-	533.40	544.12	11.91	25.40	20.14
RX70	-	-	-	533.40	550.07	19.84	41.28	11.63
RX73	21 1/4	-	-	584.20	596.11	13.49	31.75	22.10
RX74	-	20 3/4	-	584.20	600.87	19.84	41.28	0.790
RX82	-	-	-	57.15	67.87	11.91	25.40	0.880
RX84	-	-	-	63.50	74.22	11.91	25.40	0.880
RX85	-	-	-	79.38	90.09	13.49	25.40	1.79
RX86	-	-	-	90.49	103.58	15.08	28.58	1.98
RX87	-	-	-	100.01	113.11	15.08	28.58	3.22
RX88	-	-	-	123.83	139.30	17.46	31.75	2.98
RX89	-	-	-	114.30	129.78	18.26	31.75	6.82
RX90	-	-	-	155.58	174.63	19.84	44.45	17.10
RX91	-	-	-	260.35	286.94	30.16	45.24	3.31
* RX99	-	-	-	234.95	245.67	11.91	25.40	-
RX201†	-	-	1 3/8	46.04	51.46	5.74	11.30	-
* RX205†	-	-	1 13/16	57.15	62.31	5.56	11.10	-
* RX210†	-	-	2 9/16	88.90	97.63	9.53	19.05	-
* RX215	-	-	4 1/16	130.18	140.89	11.91	25.40	-
* RX215†	-	-	4 1/16 x 4 1/4	130.18	140.89	11.91	25.40	-

\* API allows more liberal tolerances on RX 201-215

† Denotes API Ring Type Joint gaskets for segments

Dimensions in inches

NO.	PRESSURE CLASS RATING (PSI)			PITCH DIAMETER OF RING P	OUTSIDE DIAMETER OF RING OD	WIDTH OF RING A	HEIGHT OF RING H	WEIGHT, lbs.
	2000	3000	5000					
NOMINAL PIPE SIZE (INCHES)								
RX20	-	-	-	2.688	3.000	0.344	0.750	0.527
RX20†	-	-	2 1/16	2.688	3.000	0.344	0.750	0.527
RX23	2 1/16	-	-	3.250	3.672	0.469	1.000	1.15
RX24	-	2 1/16	2 1/16	3.750	4.172	0.469	1.000	1.33
RX25†	-	-	3 1/8	4.000	4.313	0.344	0.750	1.42
RX26	2 9/16	-	-	4.000	4.406	0.469	1.000	1.50
RX27	-	2 9/16	2 9/16	4.250	4.656	0.469	1.000	1.73
RX31	3 1/8	3 1/8	-	4.875	5.297	0.469	1.000	1.91
RX35	-	-	3 1/8	5.375	5.797	0.469	1.000	2.09
RX37	4 1/16	4 1/16	-	5.875	6.297	0.469	1.000	2.27
RX39	-	-	4 1/16	6.375	6.797	0.469	1.000	2.54
RX41	-	-	-	7.125	7.547	0.469	1.000	2.72
RX44	-	-	-	7.625	8.047	0.469	1.000	2.96
RX45	7 1/16	7 1/16	-	8.313	8.734	0.469	1.000	3.66
RX46	-	-	7 1/16	8.313	8.750	0.531	1.125	8.56
RX47	-	-	-	9.000	9.656	0.781	1.625	3.79
RX49	9	9	-	10.625	11.047	0.469	1.000	5.36
RX50	-	-	9	10.625	11.156	0.656	1.250	4.56
RX53	11	11	-	12.750	13.172	0.469	1.000	6.45
RX54	-	-	11	12.750	13.281	0.656	1.250	5.36
RX57	13 5/8	13 5/8	-	15.000	15.422	0.469	1.000	26.40
RX63	-	-	-	16.500	17.391	1.063	2.000	6.63
RX65	16 3/4	-	-	18.500	18.922	0.469	1.000	9.39
RX66	-	16 3/4	-	18.500	50.031	0.656	1.250	7.52
RX69	-	-	-	21.000	21.422	0.469	1.000	20.14
RX70	-	-	-	21.000	21.656	0.781	1.625	11.63
RX73	21 1/4	-	-	23.000	23.469	0.531	1.250	22.10
RX74	-	20 3/4	-	23.000	23.656	0.781	1.625	0.790
RX82	-	-	-	2.250	2.672	0.469	1.000	0.880
RX84	-	-	-	2.500	2.922	0.469	1.000	0.880
RX85	-	-	-	3.125	3.547	0.531	1.000	1.79
RX86	-	-	-	3.563	4.078	0.594	1.125	1.98
RX87	-	-	-	3.938	4.453	0.594	1.125	3.22
RX88	-	-	-	4.875	5.484	0.688	1.250	2.98
RX89	-	-	-	4.500	5.109	0.719	1.250	6.82
RX90	-	-	-	6.125	6.875	0.781	1.750	17.10
RX91	-	-	-	10.250	11.297	1.188	1.781	3.31
* RX99	-	-	-	9.250	9.672	0.469	1.000	-
RX201†	-	-	1 3/8	1.813	2.026	0.226	0.445	-
* RX205†	-	-	1 13/16	2.250	2.453	0.219	0.437	-
* RX210†	-	-	2 9/16	3.500	3.844	0.375	0.750	-
* RX215	-	-	4 1/16	5.125	5.547	0.469	1.000	-
* RX215†	-	-	4 1/16 x 4 1/4	5.125	5.547	0.469	1.000	-

\* API allows more liberal tolerances on RX 201-215

† Denotes API Ring Type Joint gaskets for segmented flanges for dual completions to API Standard 6A.

# STYLE BX

The Style BX energized Ring Type Joints, manufactured in accordance with API 6A, are designed for use on pressurized systems up to 20,000 psi.

When correctly fitted, the style BX gasket allows virtual face to face contact of the flange faces which means that the gasket is fully trapped on both the inner and outer diameters.

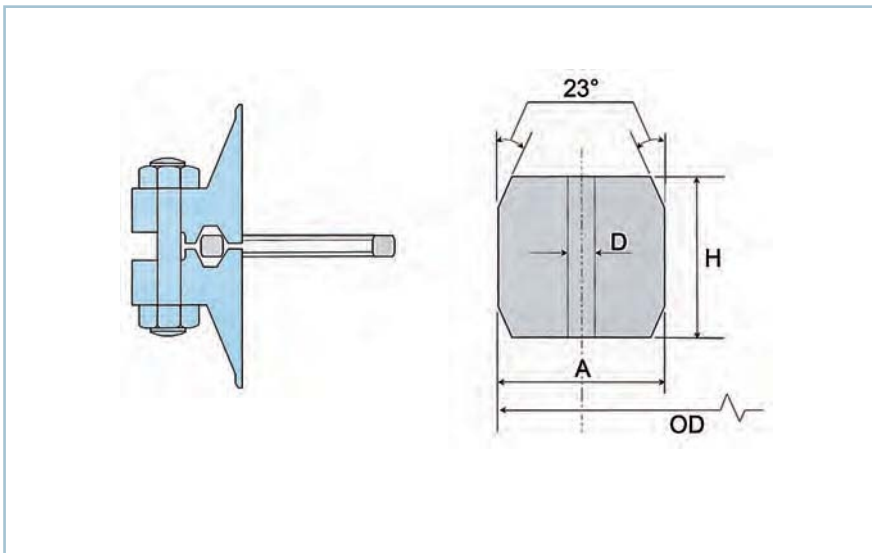
All BX gaskets incorporate a pressure balance hole to ensure equalization of pressure which may be trapped in the grooves.

Designs are also available for Subsea applications.



Style BX

## DIMENSIONAL DATA – STYLE BX



### TOLERANCES: (INCHES)

A* (width of ring)	+0.008,-0.000
D (hole size)	± 0.02
H* (height of ring)	+0.008,-0.000
OD (od of ring)	+0.000,-0.005
23° (angle)	± 1/4°

One pressure passage hole required per ring on center line \*A plus tolerance of 0.008 inches for width 'A' and height 'H' is permitted, provided the variation in width or height does not exceed 0.004 inches throughout its entire circumference.

### NOTE 1:

Radius of the ring shall be 8% to 12% of the ring height 'H'.

Dimensions in mm

RING NO.	PRESSURE CLASS RATING (PSI)				OUTSIDE DIAMETER OF RING OD	HEIGHT OF RING H	WIDTH OF RING A	HOLE SIZE D	GASKET WEIGHT, lbs. FOR API 6BX FLANGES
	5000	10000	15000	20000					
	NOMINAL PIPE SIZE (INCHES)								
BX150	-	-	-	-	72.19	9.30	9.30	1.59	0.295
BX151	-	1 13/16	1 13/16	1 13/16	76.40	9.63	9.63	1.59	0.337
BX152	-	2 1/16	2 1/16	2 1/16	84.68	10.24	10.24	1.59	0.425
BX153	-	2 9/16	2 9/16	2 9/16	100.94	11.38	11.38	1.59	0.632
BX154	-	3 1/16	3 1/16	3 1/16	116.84	12.40	12.40	1.59	0.875
BX155	-	4 1/16	4 1/16	4 1/16	147.96	14.22	14.22	1.59	1.22
BX156	-	7 1/16	7 1/16	7 1/16	237.92	18.62	18.62	3.18	4.14
BX157	-	9	9	9	294.46	20.98	20.98	3.18	6.55
BX158	-	11	11	11	352.04	23.14	23.14	3.18	9.60
BX159	-	13 5/8	13 5/8	13 5/8	426.72	25.70	25.70	3.18	14.41
BX160	13 5/8	-	-	-	402.59	23.83	13.74	3.18	6.75
BX161	16 3/4	-	-	-	491.41	28.07	16.21	3.18	-
BX162	16 3/4	16 3/4	16 3/4	-	475.49	14.22	14.22	1.59	-
BX163	18 3/4	-	-	-	556.16	30.10	17.37	3.18	-
BX164	-	18 3/4	18 3/4	-	570.56	30.10	24.59	3.18	-
BX165	21 1/4	-	-	-	624.71	32.03	18.49	3.18	-
BX166	-	21 1/4	-	-	640.03	32.03	26.14	3.18	-
BX167*	-	-	-	-	759.36	35.87	13.11	1.59	-
BX168†	-	-	-	-	765.25	35.87	16.05	1.59	-
BX169**	-	-	-	-	173.51	15.85	12.93	1.59	-
BX170	-	-	-	-	218.03	14.22	14.22	1.59	-
BX171	-	-	-	-	267.44	14.22	14.22	1.59	-
BX172	-	-	-	-	333.07	14.22	14.22	1.59	-
BX303††	-	-	-	-	852.75	37.95	16.97	1.59	-

\* BX167 is suitable for 26 3/4 Nominal Pipe Size 2,000 psi rating.  
 \*\* BX169 is suitable for 5 3/4 Nominal Pipe Size 10,000 psi rating.  
 † BX168 is suitable for 26 3/4 Nominal Pipe Size 3,000 psi rating.  
 †† BX303 is suitable for 30 Nominal Pipe Size 2,000 and 3,000 psi ratings.

Designs are also available for Subsea applications.

# STYLE BX

Dimensions in inches

RING NO.	PRESSURE CLASS RATING (PSI)				OUTSIDE DIAMETER OF RING OD	HEIGHT OF RING H	WIDTH OF RING A	HOLE SIZE D	GASKET WEIGHT, lbs. FOR API 6BX FLANGES
	5000	10000	15000	20000					
	NOMINAL PIPE SIZE (INCHES)								
BX150	–	–	–	–	2.842	0.366	0.366	0.06	0.295
BX151	–	1 13/16	1 13/16	1 13/16	3.008	0.379	0.379	0.06	0.337
BX152	–	2 1/16	2 1/16	2 1/16	3.334	0.403	0.403	0.06	0.425
BX153	–	2 9/16	2 9/16	2 9/16	3.974	0.448	0.448	0.06	0.632
BX154	–	3 1/16	3 1/16	3 1/16	4.600	0.488	0.488	0.06	0.875
BX155	–	4 1/16	4 1/16	4 1/16	5.825	0.560	0.560	0.06	1.22
BX156	–	7 1/16	7 1/16	7 1/16	9.367	0.733	0.733	0.12	4.14
BX157	–	9	9	9	11.593	0.826	0.826	0.12	6.55
BX158	–	11	11	11	13.860	0.911	0.911	0.12	9.60
BX159	–	13 5/8	13 5/8	13 5/8	16.800	1.012	1.012	0.12	14.41
BX160	13 5/8	–	–	–	15.850	0.938	0.541	0.12	6.75
BX161	16 3/4	–	–	–	19.347	1.105	0.638	0.12	–
BX162	16 3/4	16 3/4	16 3/4	–	18.720	0.560	0.560	0.06	–
BX163	18 3/4	–	–	–	21.896	1.185	0.684	0.12	–
BX164	–	18 3/4	18 3/4	–	22.463	1.185	0.968	0.12	–
BX165	21 1/4	–	–	–	24.595	1.261	0.728	0.12	–
BX166	–	21 1/4	–	–	25.198	1.261	1.029	0.12	–
BX167*	–	–	–	–	29.896	1.412	0.516	0.06	–
BX168†	–	–	–	–	30.128	1.412	0.632	0.06	–
BX169**	–	–	–	–	6.831	0.624	0.509	0.06	–
BX170	–	–	–	–	8.584	0.560	0.560	0.06	–
BX171	–	–	–	–	10.529	0.560	0.560	0.06	–
BX172	–	–	–	–	13.113	0.560	0.560	0.06	–
BX303††	–	–	–	–	33.573	1.494	0.668	0.06	–

\* BX167 is suitable for 26 3/4 Nominal Pipe Size 2,000 psi rating.  
 \*\* BX169 is suitable for 5 3/4 Nominal Pipe Size 10,000 psi rating.  
 † BX168 is suitable for 26 3/4 Nominal Pipe Size 3,000 psi rating.  
 †† BX303 is suitable for 30 Nominal Pipe Size 2,000 and 3,000 psi ratings.



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