



**SHANGHAI OKSEALING
MATERIAL CO., LTD**

Rev.2209-XY-R

RING TYPE JOINTS

**Specially designed for
petroleum industry, where
high pressure applications
need for a high integrity seal**



(Semi)Metallic Gasket

Ring Type Joint

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Ring Type Joint

Description

All Ring Type Joints are forged pieces after heat treatment, and then processed by high-precision CNC. Ring Type Joints are widely used in high-pressure system pipelines such as petroleum industry and offshore drilling platforms.



The materials used to produce ring type joints are completely traceable, and the dimensions meet the requirements of standards. Each ring type joint will be marked with the manufacturer's name, ring number, material and standard, and even the order number to enhance the traceability.



IDENTIFICATION

- Manufacturer's I.D
- Ring Number
- Material
- Standard

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Materials

Gasket materials suitable for service conditions shall be selected. We always recommend that the hardness of the gasket material is softer than that of the mating flange. The following table lists the materials of conventional Ring Type Joint and their specified maximum hardness and operating temperature.

Material	Max. Hardness		Operating Temperature	
	BRINELL HB	ROCKWELL HRB	Min.(°C)	Max.(°C)
Soft Iron	90	56	-40	500
Low Carbon Steel	120	68	-40	500
4-6 chrome 1/2Mo (F5)	130	72	-40	650
SS304	160	83	-250	550
SS316	160	83	-100	550
Duplex31803	250	99	-40	300
Monel400	200	92	-125	600
Inconel625	200	93	-50	450
Inconel825	195	92	-100	450
Hastelloy C276	240	100	-200	450
Titanium Gr2	215	96	-250	350

Note: The hardness of the product depends on the material and heat treatment. If you need special hardness, please contact our technicians.

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Selections

<div><div>R Type Oval XY-R-O</div><div></div><div><p>The gasket section is oval, which is based on the linear contact between the gasket arc surface and the flange groove to achieve the sealing effect. It is applicable to the flange with oval or flat bottom groove.</p></div></div>	<div><div>R Type Octagonal XY-R-E</div><div></div><div><p>The gasket section is octagonal, which is based on the four bevels of the gasket contacting with the flange groove to achieve the sealing effect. Applicable to flanges with flat bottom groove. Compared with elliptical ring gasket, octagonal ring gasket has better sealing effect.</p></div></div>	<div><div>RX Type XY-R-R</div><div></div><div><p>The gasket is an improved R-type gasket, and the section design can use the internal pressure of the pipeline to improve the sealing performance. It is applicable to oil drilling platforms.</p></div></div>
<div><div>BX Type XY-R-B</div><div></div><div><p>The gasket section is square, with bevels on four sides and a pressure balance hole in the middle. After the gasket is correctly installed, the flange is allowed to face to face without pressure contact. This gasket is designed to seal systems with pressures up to 20000 Psi.</p></div></div>	<div><div>NORSOK L-005 IX Type XY-R-X</div><div></div><div><p>The gasket is specially used for NORSOK standard compact flange, which is mostly used for petroleum, petrochemical and offshore platforms. The special section design ensures good sealing performance under high bolt stress.</p></div></div>	

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Availability

Surface Finish

In order to achieve the expected sealing performance, we recommend that the surface finish of R series and RX series Ring Type Joints should not be greater than 1.6μm. The surface finish of BX series Ring Type Joint is not greater than 0.8μm.

Surface treatment

For soft iron and low carbon steel, the surface will be coated with oil or galvanized for rust prevention, and the galvanized thickness is generally about 13μm.

For gaskets used in highly corrosive environments, the surface can be sprayed with fluorine to provide the corrosion resistance of the gasket.

Standards

The table on the right shows the common Ring Type Joints standards, and the stock is always equipped with these standard rough parts. When the customer needs gaskets urgently during on-site emergency repair, we can respond quickly. In addition, non-standard gaskets can also be produced according to drawings and dimensions.

Standards	
HG20612	HG20633
SH/T3403	ASME B16.20
API 6A	NORSOK L-005
DIN2696	

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Installation

In order to make the gasket have better sealing performance and longer service life, it is not only necessary to correctly select the type and material of the gasket, but also to install and maintain the gasket correctly.



Below guidelines are designed to assist the end user in install a gasket.

Gasket	<ul style="list-style-type: none">● Use a new gasket● Check the gasket is in good condition and the size is correct for the flange● Do not apply any joint compound, grease or lubricant to gaskets and flanges
Flange	<ul style="list-style-type: none">● Remove the old gasket and check that the flange faces are clean and free from indentations and scoring● Check the flange faces are parallel or the flanges allows to be pulled parallel and concentric without excessive bolt loads
Bolting	<ul style="list-style-type: none">● Clean every bolts and nuts. Apply bolt lubrication to threads an faces.● When installing the bolt and nut, make sure the back face of the flange is flat. If necessary, use a file or wire brush to clean the surface● If possible use washers to transfer the bolt loads
Installation	<ul style="list-style-type: none">● Ensure that the gasket is installed centrally● It is recommended that using torque wrench to tighten bolts● Tighten bolts in a star-like crossing pattern。①Tighten nuts by finger ②Tighten to 30% load ③Tighten to 60% load ④Tighten to full load ⑤Make a final tightening sequence