# RING TYPE JOINT (RTJ) GASKETS

Ring joint gaskets are precision machined metal ring joints primarily used in high pressure oilfield applications, as well as on refining and processing plants, designed to be used in RTJ groove flanges and are produced to dimensions as per API-6A and ASME B16.20.

#### **RTJ Gasket Profiles**

#### **Oval and Octagonal**

Oval and Octagonal section Ring type Joints type grooves. These standard shapes are used to seal pressures up to 5,000 psi in accordance with API 6A.



The Octagonal cross section has a higher sealing efficiency than the oval cross section and is therefore preferred.



The oval section ring joints were originally designed for the now obsolete round bottom groove. Both the Oval and the Octagonal cross sections are interchangeable on the flat bottom groove design.



#### **BX RTJ**

BX Ring Type Joints are designed for pressures up to 20,000 psi, suitable only for use with API type BX flanges and grooves. The gasket has a square cross section with bevelled corners. The average diameter of the ring joint is slightly greater than that of joint is seated, it stays precompressed by the outside diameter, creating high seating stress.



### **DETAILS**

- Ring Type Joints concentrate the bolt load over a small area producing high sealing stresses.
- As the Ring Type Joint Material should always be softer than the mating falnges, the high seating stress causes "plasticflow" of the ring joint in the flange faces creating the seal.
- RTJ Gaskets can be produced from a variety of material's to suit the process application and flange grade.
- Used on high pressure lines up to 20,000 PSI, RTJ's are an extremely reliable and robust sealing mechanism.
- Standard R type available R11 (1/2") to R105 (36") in Oval or Octagonal Section.
- BX, SBX & RX type available for Sub Sea application.
- RTJ Gasket

## **RX RTJ**

RX Ring Type Joints are designed for pressures up to 5,000 psi, they are pressure pressure to increase sealability. The outside sealing surface of the ring joint makes the pressure rises the contact pressure between sometimes referred to as a pressure activated ring joint due to the shape of the gasket. High seating pressures are created increasing the sealability. The outside sealing surface of the ring joint makes the initial contact pressure between ring joint and flange also increases. This is sometimes refer to as a pressure activated ring joint due to the shape of the gasket. High seating pressures are created increasing the sealability. This design characteristic makes the RX more resistant to vibrations, pressure surges and shocks that occur during oil well drilling.







# RTJ MATERIAL REFERANCE CHART

MATERIAL	RING IDENTIFICATION	ASTM	WERKSTOFF NO.	AISI/SAE	OTHER	MAX HARDNESS BHN
Soft Iron	D		1.1003 / 1.0335			90
LCS	S		1.1003 / 1.0335			120
4140	4140	UNS G41400	1.7225	4140		210
SS316	S316	S31600	1.4401	316		160/135
SS316L	S316L	S31603	1.4404	316L		160/135
SS316 Ti	S316Ti	S31635	1.4571	316Ti		160
SS304	S304	S30400	1.4301	304		160
SS304L	S304L	S30403	1.4306	304L		160
SS321	S321	S32100	1.4541	321		160
SS347	S347	S34700	1.455	347		160
SS410	S410	S41000	1.4006	410		170
SS309	S309	S30900	1.4828	309		170
SS310	S310	S31088	1.4841	310		170
F5	F5	UNS K42544	1.7362		5Cr 1/2Mo	130
INCONEL 625	INC 625	NO6625	2.4856			200
INCONEL 600	INC 600	NO6600	2.4816			200
INCONEL 718	INC 718	NO7718				34-39 HRC*
INCOLOY 825	INC 825	NO8825	2.4858			160
INCOLOY 800	INC 800	NO8800	1.4958			180
MONEL 400	MONEL 400	NO4400	2.436			150
F51	F51	S31803	1.4462	- DUPLEX	2205/DUPLEX	230
F53	F53	S32750	1.441	-	SUPER DUPLEX	230
F55	F55	S32760	1.4501		DUPLEX	230
F60	F60	S32205			DUPLEX	230
Titanium	Ti	R 50400	3.7035			215
S254	S254	S31254	1.4547		F44/6 Mo	180
C276	C276	N10276	2.4819		Hastelloy	210
Alloy 28	Alloy 28	NO8028	1.4563		Sanicro 28	190







