

# Flexitallic®

## FLEXITALLIC TECHNICAL RECOMMENDATIONS FOR CORRECT GASKET ASSEMBLY, BOLTING AND COMPRESSION

### FLANGE INSPECTION

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1. Ensure flange faces are clean and free from imperfections. These could be detrimental to the sealing performance.
2. Carefully remove any solid residue from the flanges, using scrapers, wire brush or cloth.

### SURFACE FINISH RECOMMENDATIONS

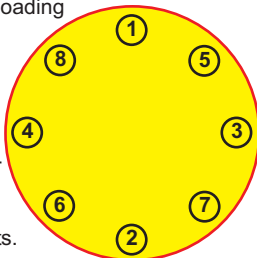
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SHEET JOINTING	3.2 TO 12.5 micro meter Ra is dependent on gasket thickness (125 to 500 micro inch RMS)
SPIRAL WOUND GASKETS	Preferred Finish 3.2 to 6.3 micro meter Ra (125 to 250 micro inch RMS ) on all pressure classes and critical applications
FLEXICARB RG & NR	3.2 to 6.3 micro meter Ra (125 to 250 micro inch RMS)
JACKETED GASKETS	2.5 to 125 micro meter Ra (100 to 125 micro inch (RMS)
SOLID METAL GASKETS	1.6 micro meter Max Ra (63 micro inch RMS max)

### BOLTING RECOMMENDATIONS

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1. When utilizing Torque wrenches the use of suitable lubricants on the stud threads and nut bearing faces is recommended, e.g. Molybdenum di-sulphide or Nickel powder anti-seize compounds.
2. We recommend a 4 stage tightening method as follows:
  - 1) Tighten the bolts at 30% of the final loading using the diametrical sequence.
  - 2) 60% of final load following diametrical sequence.
  - 3) 100% of final load following diametrical sequence.
  - 4) 100% of final torque on adjacent bolts.



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Tables on **RESULTANT BOLT STRESS** and **REQUIRED GASKET COMPRESSION** are given on reverse side.

# TORQUE DATA

Final Bolt Stress should be in the region of 40/50,000 psi

## TORQUE DATA FOR ALLOY STEEL STUDS (B7 AND B16 MATERIAL)

NOMINAL DIAMETER OF BOLT (in)	NUMBER OF THREADS (Per in)	STRESS 45,000 PSI		
		TORQUE Nm	TORQUE Ft/Lb	COMPRESSION Lb
1/4	20	8	6	1215
5/16	18	16	12	2025
3/8	16	24	18	3060
7/16	14	41	30	4185
1/2	13	61	45	5670
9/16	12	92	68	7290
5/8	11	122	90	9090
3/4	10	203	150	13590
7/8	9	325	240	18855
1	8	499	368	24795
1-1/8	8	722	533	32760
1-1/4	8	1016	750	41805
1-3/8	8	1382	1020	51975
1-1/2	8	1626	1200	63225
1-5/8	8	2236	1650	75600
1-3/4	8	3049	2250	89100
1-7/8	8	4065	3000	103680
2	8	4472	3300	119340
2-1/4	8	6463	4770	154035
2-1/2	8	8943	6600	193140
2-3/4	8	12032	8880	236655
3	8	15691	11580	284580

## REQUIRED GASKET COMPRESSION

Spiral Wound Gaskets with internal or external rings, i.e. Styles 'CG' and 'CGI' should be fully compressed to the ring thickness. This will not damage the gasket or affect the sealing performance and the ring is provided as a compression limiting stop.

For optimum performance Flexitallic Spiral Wound Gaskets should be compressed to these thicknesses.

INITIAL GASKET THICKNESS	RECOMMENDED COMPRESSED THICKNESS
1.6 mm (0.0625 in)	1.3/1.4 mm (0.050/0.055 in)
2.5 mm (0.100 in)	1.9/2.0 mm (0.075/0.080 in)
3.2 mm (0.125 in)	2.3/2.5 mm (0.090/0.100 in)
4.4 mm (0.175 in)	3.2/3.4 mm (0.125/0.135 in)
6.4 mm (0.250 in)	4.6/5.1 mm (0.180/0.200 in)
7.2 mm (0.285 in)	5.1/5.6 mm (0.200/0.220 in)

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For further information, help and advice contact the Flexitallic Technical Services Department.

USA  
**Flexitallic L.P.**  
 6915 Highway 225  
 Deer Park  
 Texas 77536 USA  
 Tel: +1 281 604 2400  
 Fax: +1 281 604 2415

*Flexitallic*  
 Member of The Flexitallic Group



UK  
**Flexitallic Ltd.**  
 Scandinavia Mill  
 Hunsworth Lane  
 Cleckheaton BD19 4LN, England  
 Tel: +44 1274 851 273  
 Fax: +44 1274 851 386