







OIL & GAS - Petrochemical PIPE FLANGE TORQUE TOOL GUIDE

Stud Diameter		Residual Stress Load				Socket a/f Size		Torque Tool Selection Guide				
		25000 Lbs / In ²	40000 Lbs / In ²	45000 Lbs / In ²	50000 Lbs / In ²			High Torque - Hydraulic		RAD - Air		
Dec	Fraction	Ft Lbs	Ft Lbs	Ft Lbs	Ft Lbs							
0.500	1/2	29	46	52	58	22.2	7/8					
0.625	5/8	57	91	102	113	26.9	1-1/16"					
0.750	3/4	100	160	180	199	31.8	1 1/4					
0.875	7/8	160	255	287	319	36.5	1 7/16					
1.000	1	238	380	428	475	34.9	1 3/8	RT-1				RAD 350
1.125	1 1/8	348	556	626	695	46.0	1 13/16					RAD 700
1.250	1 1/4	487	779	877	974	50.8	2					RAD 1000
1.375	1 3/8	660	1056	1188	1320	55.6	2 3/16	RT-3				RAD 1400
1.500	1 1/2	869	1390	1563	1737	60.3	2 3/8					RAD 2000
1.625	1 5/8	1117	1787	2010	2233	65.1	2 9/16	RT-5				RAD 2500
1.750	1 3/4	1408	2252	2534	2815	69.9	2 3/4					RAD 3400
1.875	1 7/8	1750	2799	3149	3499	74.6	2 15/16					RAD 5000
2.000	2	2138	3421	3849	4276	79.4	3 1/8	RT-10				
2.250	2 1/4	3077	4922	5538	6153	88.9	3 1/2					
2.500	2 1/2	4258	6813	7665	8516	98.4	3 7/8					
2.750	2 3/4	5722	9155	10299	11444	108.0	4 1/4					
3.000	3	7149	11942	13435	14297	117.5	4 5/8	RT-25				
3.250	3 1/4	9544	15270	17179	19088	127.0	5					
3.500	3 1/2	11981	19168	21565	23961	136.5	5 3/8					
3.750	3 3/4	14786	23658	26615	29572	146.1	5 3/4					

Note: The above table has been composed based on using B7 Studs, Dow Corning Molykote Cu - 7439 lubricant with friction value of $\mu = 0.15$ - Torque Values are in Ft Lbs.

Note: TJ Tools only offer this information as a guide only. Used at own risk. Any critical torque values should be nominated by an engineer relevant to your application and environment. TJ Tools only offer this data relayed from other sources as a guide not a engineering document. No responsibility is excepted for any data entry errors. Factors such as type of lubricant, stud material, flange rating, Gasket choice, tightening technique, preparation, flange condition, and sequence all are factors in outcomes. A/F sizes and torque values will vary between manufactures based on gasket, lubricate etc. Torque requirements for break out may increase by 100 % - www.tjtools.com.au

