

American National Standard Flange SPECIFICATIONS				Torque Chart for ASTM A193 Grade B7 Studs In Ft./Lbs At 60% Of Yield Add .04 to the u to = K factor					
400 lb				Moly Lube u=0.085 K=.0125	Nickel Lube u=0.110 K=.150	Copper Lube u=0.100 K=.140	Machine Oil u=0.160 K=.200	Dry Torque u=0.400 K=.440	Tool Model
PIPE SIZE	BOLT DIA.	# OF BOLTS	HEAVY HEX A/F						
1/2"	1/2"	4	7/8"						
3/4"	5/8"	4	1-1/16"						
1"	5/8"	4	1-1/16"						
1-1/4"	5/8"	4	1-1/16"						
1-1/2"	3/4"	4	1-1/4"	165	197	184	263	579	Versa-1
2"	5/8"	8	1-1/16"						
2-1/2"	3/4"	8	1-1/4"	165	197	184	263	579	Versa-1
3"	3/4"	8	1-1/4"	165	197	184	263	579	Versa-1
3-1/2"	7/8"	8	1-7/16"	265	318	297	424	933	Versa-1
4"	7/8"	8	1-7/16"	265	318	297	424	933	Versa-1
5"	7/8"	8	1-7/16"	265	318	297	424	933	Versa-1
6"	7/8"	12	1-7/16"	265	318	297	424	933	Versa-1
8"	1"	12	1-5/8"	397	477	445	636	1399	Versa-1
10"	1-1/8"	16	1-13/16"	583	700	653	933	2053	Stealth-2
12"	1-1/4"	16	2"	820	984	918	1311	2885	Stealth-2
14"	1-1/4"	20	2"	820	984	918	1311	2885	Stealth-2
16"	1-3/8"	20	2-3/16"	1112	1335	1246	1780	3916	Stealth-4
18"	1-3/8"	24	2-3/16"	1112	1335	1246	1780	3916	Stealth-4
20"	1-1/2"	24	2-3/8"	1468	1761	1644	2348	5167	Stealth-4
24"	1-3/4"	24	2-3/4"	2390	2868	2677	3824	8413	Stealth-4
26"	1-3/4"	28	2-3/4"	2390	2868	2677	3824	8413	Stealth-4
28"	1-7/8"	28	2-15/16"	2939	3563	3325	4750	10451	Stealth-8
30"	2"	28	3-1/8"	3635	4362	4071	5815	12794	Stealth-8
32"	2"	28	3-1/8"	3635	4362	4071	5815	12794	Stealth-8
34"	2"	28	3-1/8"	3635	4362	4071	5815	12794	Stealth-8
36"	2"	32	3-1/8"	3635	4362	4071	5815	12794	Stealth-8
38"	1-3/4"	32	2-3/4"	2390	2868	2677	3824	8413	Stealth-4

40"	1-7/8"	32	2-15/16"	2939	3563	3325	4750	10451	Stealth-8
42"	1-7/8"	32	2-15/16"	2939	3563	3325	4750	10451	Stealth-8
44"	2"	32	3-1/8"	3635	4362	4071	5815	12794	Stealth-8
46"	2"	36	3-1/8"	3635	4362	4071	5815	12794	Stealth-8
48"	2-1/4"	28	3-1/2"	5250	6300	5880	8400	18480	Stealth-14
50"	2-1/4"	32	3-1/2"	5250	6300	5880	8400	18480	Stealth-14
52"	2-1/4"	32	3-1/2"	5250	6300	5880	8400	18480	Stealth-14
54"	2-1/2"	28	3-7/8"	6590	7909	7381	10545	23198	Stealth-14
56"	2-1/2"	32	3-7/8"	6590	7909	7381	10545	23198	Stealth-14
58"	2-1/2"	32	3-7/8"	6590	7909	7381	10545	23198	Stealth-14

This spread sheet is to be used as a guide. all results should be analyzed against actual field results to establish their validity.