

American National Standard Flange SPECIFICATIONS				Torque Chart for ASTM A193 Grade B7 Studs In Ft./Lbs At <b>70% Of Yield</b> Add .04 to the u to = K factor					
300 lb				Moly Lube u=0.085 K=0.125	Nickel Lube u=0.110 K=0.150	Copper Lube u=0.100 K=0.140	Machine Oil u=0.160 K=.200	Dry Torque u=0.400 K=0.440	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"	192	230	215	307	676	Versa-1
2"	5/8"	4	1-1/16"						
2-1/2"	3/4"	4	1-1/4"	192	230	215	307	676	Versa-1
3"	3/4"	4	1-1/4"	192	230	215	307	676	Versa-1
3-1/2"	3/4"	8	1-1/4"	192	230	215	307	676	Versa-1
4"	3/4"	8	1-1/4"	192	230	215	307	676	Versa-1
5"	3/4"	8	1-1/4"	192	230	215	307	676	Versa-1
6"	3/4"	8	1-1/4"	192	230	215	307	676	Versa-1
8"	7/8"	8	1-7/16"	309	371	346	495	1088	Versa-1
10"	1"	12	1-5/8"	464	556	519	742	1632	Versa-1
12"	1-1/8"	12	1-13/16"	680	817	762	1089	2395	Stealth-2
14"	1-1/8"	12	1-13/16"	680	817	762	1089	2395	Stealth-2
16"	1-1/4"	16	2"	956	1148	1071	1530	3366	Stealth-2
18"	1-1/4"	16	2"	956	1148	1071	1530	3366	Stealth-2
20"	1-1/4"	20	2"	956	1148	1071	1530	3366	Stealth-2
24"	1-1/2"	20	2-3/8"	1712	2055	1918	2740	6028	Stealth-4
26"	1-5/8"	24	2-9/16"	2207	2648	2472	3531	7768	Stealth-4
28"	1-5/8"	28	2-9/16"	2207	2648	2472	3531	7768	Stealth-4
30"	1-3/4"	28	2-3/4"	2788	3346	3123	4461	9815	Stealth-4
32"	1-7/8"	28	2-15/16"	3464	4157	3879	5542	12193	Stealth-8
34"	1-7/8"	32	2-15/16"	3464	4157	3879	5542	12193	Stealth-8
36"	2"	32	3-1/8"	4240	5088	4749	6785	14926	Stealth-8
38"	1-1/2"	32	2-3/8"	1712	2055	1918	2740	6028	Stealth-4

<b>40"</b>	<b>1-5/8"</b>	<b>32</b>	<b>2-9/16"</b>	<b>2207</b>	<b>2648</b>	<b>2472</b>	<b>3531</b>	<b>7768</b>	<b>Stealth-4</b>
42"	1-5/8"	32	2-9/16"	2207	2648	2472	3531	7768	Stealth-4
<b>44"</b>	<b>1-3/4"</b>	<b>32</b>	<b>2-3/4"</b>	<b>2788</b>	<b>3346</b>	<b>3123</b>	<b>4461</b>	<b>9815</b>	<b>Stealth-4</b>
46"	1-7/8"	28	2-15/16"	3464	4157	3879	5542	12193	Stealth-8
<b>48"</b>	<b>1-7/8"</b>	<b>32</b>	<b>2-15/16"</b>	<b>3464</b>	<b>4157</b>	<b>3879</b>	<b>5542</b>	<b>12193</b>	<b>Stealth-8</b>
50"	2"	32	3-1/8"	4240	5088	4749	6785	14926	Stealth-8
<b>52"</b>	<b>2"</b>	<b>32</b>	<b>3-1/8"</b>	<b>4240</b>	<b>5088</b>	<b>4749</b>	<b>6785</b>	<b>14926</b>	<b>Stealth-8</b>
54"	2-1/4"	28	3-1/2"	6125	7350	6860	9800	21560	Stealth-14
<b>56"</b>	<b>2-1/4"</b>	<b>28</b>	<b>3-1/2"</b>	<b>6125</b>	<b>7350</b>	<b>6860</b>	<b>9800</b>	<b>21560</b>	<b>Stealth-14</b>
58"	2-1/4"	32	3-1/2"	6125	7350	6860	9800	21560	Stealth-14
<b>60"</b>	<b>2-1/4"</b>	<b>32</b>	<b>3-1/2"</b>	<b>6125</b>	<b>7350</b>	<b>6860</b>	<b>9800</b>	<b>21560</b>	<b>Stealth-14</b>

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