

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					
1500 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"	3/4"	4	1-1/4"	192	230	215	307	676	Versa-1
<b>3/4"</b>	<b>3/4"</b>	<b>4</b>	<b>1-1/4"</b>	<b>192</b>	<b>230</b>	<b>215</b>	<b>307</b>	<b>676</b>	<b>Versa-1</b>
1"	7/8"	4	1-7/16"	309	371	346	495	1088	Versa-1
<b>1-1/4"</b>	<b>7/8"</b>	<b>4</b>	<b>1-7/16"</b>	<b>309</b>	<b>371</b>	<b>346</b>	<b>495</b>	<b>1088</b>	<b>Versa-1</b>
1-1/2"	1"	4	1-5/8"	464	556	519	742	1632	Versa-1
<b>2"</b>	<b>7/8"</b>	<b>8</b>	<b>1-7/16"</b>	<b>309</b>	<b>371</b>	<b>346</b>	<b>495</b>	<b>1088</b>	<b>Versa-1</b>
2-1/2"	1"	8	1-5/8"	464	556	519	742	1632	Versa-1
<b>3"</b>	<b>1-1/8"</b>	<b>8</b>	<b>1-13/16"</b>	<b>680</b>	<b>817</b>	<b>762</b>	<b>1089</b>	<b>2395</b>	<b>Stealth-2</b>
N/A	N/A	N/A	N/A						
<b>4"</b>	<b>1-1/4"</b>	<b>8</b>	<b>2"</b>	<b>956</b>	<b>1148</b>	<b>1071</b>	<b>1530</b>	<b>3366</b>	<b>Stealth-2</b>
5"	1-1/2"	8	2-3/8"	1712	2055	1918	2740	6028	Stealth-4
<b>6"</b>	<b>1-3/8"</b>	<b>12</b>	<b>2-3/16"</b>	<b>1298</b>	<b>1557</b>	<b>1454</b>	<b>2077</b>	<b>4569</b>	<b>Stealth-4</b>
8"	1-5/8"	12	2-9/16"	2207	2648	2472	3531	7768	Stealth-4
<b>10"</b>	<b>1-7/8"</b>	<b>12</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>
12"	2"	16	3-1/8"	4240	5088	4749	6785	14926	Stealth-8
<b>14"</b>	<b>2-1/4"</b>	<b>16</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>
16"	2-1/2"	16	3-7/8"	7689	9227	8612	12302	27065	Stealth-14
<b>18"</b>	<b>2-3/4"</b>	<b>16</b>	<b>4-1/4"</b>	<b>10329</b>	<b>12395</b>	<b>11569</b>	<b>16527</b>	<b>36359</b>	<b>Stealth-22</b>
20"	3"	16	4-5/8"	13514	16217	15136	21623	45570	Stealth-36
<b>24"</b>	<b>3-1/2"</b>	<b>16</b>	<b>5-3/8"</b>	<b>21720</b>	<b>26064</b>	<b>24327</b>	<b>34752</b>	<b>76455</b>	<b>Stealth-36</b>

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