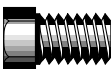
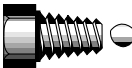
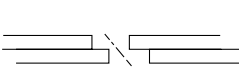
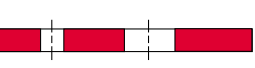


Tool Selection

Criteria

- Type of Fastener/Component
- Joint Integrity
- Torque Required
- Tool Orientation and Operator Reference
- Productivity
- Access

Type of Fastener/Component

Fastener/Component		Recommended Tool Type
Machine Screw/Nut		Shut Off/Impulse/Direct Drive
Thread Rolling/Forming		Shut Off/HLT/Impulse
Self Tapping		Non Shut Off/HLT/Direct Drive
Self Tapping in Plastic/ Thin Materials		Shut Off/HLT
Self Drilling		Non Shut Off/HLT/Direct Drive
Wood Screws		Non Shut Off/Direct Drive
Screws with Adhesive		HLT/Non Shut Off/Impulse
Self Lock Nuts		HLT/Non Shut Off/Impulse
Misaligned Holes		HLT
Variable Size Holes		HLT
Fragile Components		HLT/Low Voltage Screwdrivers

Joint Integrity

Average					Excellent
Direct Drive Impact	Non Shut Off	Impulse	Shut Off HLT	Shut Off and FAS	DC Brushless Systems

Tool Selection

Fastener Torque Values

For non metric threads please use the following data as a guide.

Recommended Maximum Torque Values – UNC Threads

THREAD SIZE	QUALITY P		QUALITY S		QUALITY T	
	Nm	lbf ft	Nm	lbf ft	Nm	lbf ft
1/4"	5.43	4.00	10.3	7.60	11.1	8.19
5/16"	11.2	8.26	21.3	15.71	23.0	16.96
3/8"	19.9	14.68	37.9	27.95	40.9	30.17
7/16"	31.9	23.53	60.7	44.77	65.5	48.31
1/2"	48.8	36.00	92.7	68.37	100	73.76
9/16"	70.4	51.92	134	98.83	144	106
5/8"	97.4	71.84	185	136.45	200	147.5
3/4"	178	131.3	338	249.3	364	268.5
7/8"	279	205.8	530	391	572	422
1"	418	308.3	795	586	858	633
1 1/8"	593	437.4	1126	830	1216	897
1 1/4"	837	617.3	1591	1173	1717	1266
1 3/8"	1096	808.4	2083	1536	2248	1658
1 1/2"	1456	1074	2767	2041	2987	2203

Recommended Maximum Torque Values – UNF Threads

THREAD SIZE	QUALITY P		QUALITY S		QUALITY T	
	Nm	lbf ft	Nm	lbf ft	Nm	lbf ft
1/4"	6.28	4.63	11.9	8.78	12.9	9.51
5/16"	12.5	9.22	23.8	17.55	25.7	18.96
3/8"	22.7	16.74	43.2	31.9	46.6	34.4
7/16"	35.9	26.5	68.2	50.3	73.6	54.3
1/2"	55.4	40.9	105	77.4	114	84.0
9/16"	79.0	58.3	150	111	162	119
5/8"	111	81.9	210	155	227	167
3/4"	195	144	370	273	399	294
7/8"	309	228	587	433	634	468
1"	459	339	873	644	942	695
1 1/8"	667	492	1267	934	1368	1009
1 1/4"	925	682	1757	1296	1896	1398
1 3/8"	1252	923	2378	1754	2567	1893
1 1/2"	1642	1211	3119	2300	3367	2482

Quality P = approximately ISO 4.6

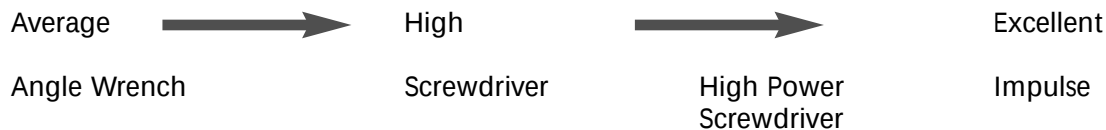
Quality S/T = approximately ISO 8.8

Quality S = ANSI Grade 5

Tool Orientation and Operator Preference



Productivity



Access

