

ENGR. DATA FOR D•F® BRAND 1022 CARBON STEEL SCREWS

WARNING: You must specify or purchase D•F brand screws if you are referencing the data on this page. **Otherwise, buyer beware!**
WARNING: Do not use sq dr impact wrenches or hex impacting drivers to install screws. These tools produce too much torque - they can shear off the head of a screw or over torque an installed screw. An over torqued installed screw could fatigue over time and result in potential fastener failure. Dynamic Fastener recommends always and only using a screwgun with a clutch, such as the DeWalt DCF622, DW267, DW268, or DW269 to install screws.

ULTIMATE AVERAGE PULLOUT VALUES IN METAL (POUNDS)

FASTENER		STEEL GAUGE											
SIZE	POINT	26	24	22	20	18	16	14	12	3/16"	1/4"	3/8"	1/2"
#6	T2	134	179	275	296	471	629	962					
#8	T2	168	177	283	298	491	800	978					
#10	T17	218	261	444	480	585							
	T1	195	249	308	357	565	961	1,163					
	T2	148	244	283	368	547	853	1,023	1,436				
	T3	142	204	288	299	499	760	1,041	1,388				
#12	T17	203	283	388	495	670							
	T1	165	288	376	390	649	1,179	1,619	1,991				
	T3	143	172	259	341	551	838	941	1,630	2,780			
	T4					495	742	1,059	1,587	3,245	4,013		
	T5					487	792	1,027	1,746	3,796	4,208		
#14	T1	224	313	545	562	800	1,113	1,547					
	T2	244	268	355	420	615	1,134	1,385	1,785				
	T3	161	225	296	346	613	1,034	1,297	1,602	3,382			
	T4						863	1,181	1,642	3,415	5,304		
Fenderheads	T5									5,547	5,593	6,244	
#17	AB	253	324	410	442	553	940	1,144	1,843	3,672	4,249		
		← Drill 3/16" hole →				← Drill 1/4" hole →							
#18	T1	275	415	614			1,469						
5/16-12	T3						1,007	1,425	2,218	4,616	6,486		
5/16-18	T3						830	1,147	1,565	3,633	4,629		

ULTIMATE SHEAR VALUES (POUNDS)

FASTENER		STEEL GAUGE											
DIA.	POINT	26-26	24-24	22-22	20-20	18-18	16-16	14-14	12-12	3/8-3/8	1/2-1/2		
#6	T2	290	351	531	758	845							
#8	T2	296	391	550	740	1,060							
#10	T1	416	523	742	884	1,373							
	T2	303	440	629	830	1,206							
	T3				728	1,263	1,592	1,674					
#12	T1	414	649	987	1018	1,452							
	T3				769	1,358	1,774	2,332	2,478				
	T4								2,074	2,207			
	T5								2,198	2,207	2,364		
#14	T1	544	684	1,143	1,244	1,764							
	T3				930	1,442	1,889	2,697	2,890				
1/4-20	T5								3,362	3,448	3,759		
#18	T1	493	648	1,021									
5/16-12	T3						2,399	3,638	4,482	4,675			
5/16-18	T3						2,057	3,120	5,297	6,493			

All tests were conducted under laboratory conditions. Ultimate values are listed. The user or specifier must determine and apply appropriate safety factors. Unless otherwise provided, a 4-to-1 safety factor is commonly used. Because actual applications vary and are uncontrollable by Dynamic Fastener, we assume no liability for the use of this data.

ULTIMATE AVERAGE PULLOUT VALUES IN WOOD (POUNDS)

OUR CODE	FASTENER	PLYWOOD		2x4 PINE	
		1/2"	3/4"	1"	1 1/2"
CS AS	8-15 T-17 S/S	212	551	662	
MW	9-14	381	534	736	1,047
MW	9-14 S/S	362	500	894	1,272
MW	10-16 Hi-Lo	393	552	763	1,289
CS AC	10-12 T-17	358	572	837	921 (1 1/4")
CS AS	10-12 T-17 S/S	329	637	969	1,299
CS AC	12-11 T-17	341	610	1,027	1,240
CS AS	12-11 T-17 S/S	444	623	766	1,321
MW	12-16 Hi-Lo	422	626	855	956 (1 1/4")
AC	14-10 T-17	449	641	870	1,538

NOTE: Pullout values in wood will vary drastically more than pullout values in steel because of the vast inconsistencies of wood. These pullout values should be used as only a guideline. A job site pull test is required for any fastener in any application if you need to know the exact pullout values for your specific project. Users must determine and apply appropriate safety factors.

FASTENER VALUES

FASTENER	TENSILE (LBS. MIN)	TENSILE (AVG. LBS. ULTIMATE)	SHEAR (AVG. LBS. ULTIMATE)	TORQUE (MIN. IN-LBS.) (ULTIMATE IN-LBS.)	
	6-20	1,284	1,656	983	25
8-18	1,544	2,466	1,319	42	74
10-16	1,936	3,298	1,929	61	114
12-14	2,778	4,216	2,741	92	215
12-24 T4	3,020	3,999	2,365	100	206
12-24 T5	3,188	4,535	2,289	150	215
14-14	4,060	4,769	3,834	150	253
14-20 T5 Fenderheads	4,225	5,940	3,651	150	338
17-14	5,300	6,437	5,188	180	569

NOMINAL SCREW SIZES

Thread Diameter	Decimal Equivalent
#6	.140
#7	.150
#8	.160
#9	.180
#10	.190
#11	.200
#12	.210
#13	.230
1/4	.240
#14	.250
#17	.285
#18	.304

SHEET STEEL GAUGES

	Common Sheet Steel Gauges	Decimal Equivalent
LIGHT	29	.014
	26	.018
	24	.024
	22	.030
	20	.036
MEDIUM	18	.048
	16	.060
	14	.075
	12	.105
	10	.134