

THREAD CHARTS - FOR SILLY OLD BUGGERS WHO BUGGER ABOUT WITH SILLY OLD CARS* AND MOTORBIKES*

These charts apply to bolts and machine screws, and nuts. Spanner sizes are for hexagonal-headed bolts and screws, and hexagonal nuts.

In the columns headed "Tap Drill" the top size shown is the recommended tapping drill; below it are shown alternatives.

If you do not have the first size drill recommended, for strength try to us a slightly smaller drill rather than a larger one.

BRITISH THREADS									UNIFIED NATIONAL THREADS										
WHITWORTH			B S F			B A			U N C					U N F					
Name (and bolt diameter)	TPI	Tap drill	Name (and bolt diameter)	TPI	Tap drill	Name (and spanner size)	Bolt diameter	TPI	Tap drill	Name (and bolt diameter)	Spanner	Bolt diameter	TPI	Tap drill	Name (and bolt diameter)	Spanner	Bolt diameter	TPI	Tap drill
1/16" W	60	3/64	3/16" BSF	32	5/32 #22 4.0mm	#0 BA	.236"	25.4	#9 5.0mm	#0 UNC		0.060"	-	-	#0 UNF		0.060"	80	3/64
3/32" W	48	5/64 #48	7/32" BSF	28	#15 4.5mm	#1 BA	.209"	28.2	#16 11/64 4.5mm	#1 UNC		0.073"	64	#53 1/16	#1 UNF		0.073"	72	#53 1/16
1/8" W	40	3/32 #42	1/4" BSF	26	13/64 #4 5.5mm	#2 BA	.185"	31.4	#22 5/32 4.0mm	#2 UNC		0.086"	56	#50 1/16	#2 UNF		0.086"	64	#50 1/16
5/32" W	32	1/8 #31 3.0mm	9/32" BSF	26	15/64 A 6.0mm	#3 BA	.161"	34.8	#29 1/8 3.5mm	#3 UNC		0.099"	48	#47 5/64	#3 UNF		0.099"	56	#45 2.0mm 5/64
3/16" W	24	9/64 #27 3.5mm	5/16" BSF	22	17/64 G 6.5mm	#4 BA	.142"	38.5	#31 1/8 3.0mm	#4 UNC		0.112"	40	#43 3/32 2.0mm	#4 UNF		0.112"	48	#42 0.094
7/32" W	24	11/64 #18	3/8" BSF	20	21/64 P 8.0mm	#5 BA	.126"	43	#37 7/64 2.5mm	#5 UNC 1/8" UNC		0.125"	40	#38 2.5mm	#5 UNF		0.125"	44	#37 2.5mm 7/64
1/4" W	20	13/64 #9 5.0 mm	7/16" BSF	18	25/64 W 10.0mm	#6 BA	.110"	47.9	#42 3/32	#6 UNC		0.138"	32	#36 7/64	#6 UNF		0.138"	40	#33 3.0mm 7/64
5/16" W	18	1/4 E	1/2" BSF	16	7/16 11.0mm	#7 BA	.098"	52.9	#46 5/64 2.0mm	#8 UNC		0.164"	32	#29 3.5mm	#8 UNF		0.164"	36	#29 3.5mm 9/64
3/8" W	16	5/16 N 8.0mm	9/16" BSF	16	1/2 12.5mm	#8 BA	.086"	59.1	#50 1/16	#10 UNC		0.190"	24	#25 9/64	#10 UNF		0.190"	32	#21 4.0mm 5/32
7/16" W	14	3/8 U 9.5mm	5/8" BSF	14	9/16 14.0mm	#9 BA	.075"	65.1	#53 1/16	#12 UNC		0.216"	24	#16 4.5mm	#12 UNF		0.216"	28	#14 4.5mm 3/16
1/2" W	12	27/64 Z 10.5mm	11/16" BSF	14	5/8 15.5mm	#10 BA	.067"	72.6	#54 3/64	1/4" UNC	7/16" 3/8"	0.125"	20	13/64 #17 5.0 mm	1/4" UNF	7/16"	0.125"	28	7/32 5.5mm #3
9/16" W	12	15/32 31/64 12.0mm	3/4" BSF	12	43/64 17.0mm					5/16" UNC	1/2"	0.3125"	18	1/4 F 8.0mm	5/16" UNF	1/2"	0.3125"	24	I 7.0mm 17/64
5/8" W	11	17/32 13.5 mm								3/8" UNC	9/16"	0.375"	16	5/16 8.0 mm N	3/8" UNF	9/16"	0.375"	24	8.5 Q 21/64
11/16" W	11	19/32 15.0 mm								7/16" UNC	5/8"	0.4375"	14	23/64 T 9.0 mm	7/16" UNF	5/8"	0.4375"	20	25/64 W 10.0mm
3/4" W	10	21/32 17.0 mm								1/2" UNC	3/4"	0.750"	13	27/64 Z 10.5mm	1/2" UNF	3/4"	0.750"	20	7/16 11.5mm
										9/16" UNC	13/16"	0.562"	12	31/64 12.0mm	9/16" UNF	15/16"	0.562"	18	1/2 12.5mm
										5/8" UNC	15/16"	0.625"	11	17/32 13.5mm	5/8" UNF	1"	0.625"	18	14.5mm 9/16
										11/16" UNC	1"	0.688"	11	19/32 15.0mm	3/4" UNF	1 1/8"	0.750"	16	11/16 17.5mm
										3/4" UNC	1 1/8"	0.750"	10	21/32 16.5mm					

TPI is short for Threads per Inch

* English and American vehicles, not Continental

The dimensions of UNC and Whitworth threads are so similar that they will screw together (with the exception of 1/2" Whitworth with 1/2" UNC).

However for maximum strength do not use Whitworth bolts in UNC nuts, castings etc, and vice versa .

Whitworth and BSF bolts have larger heads than their equivalents in UNC and UNF and that applies to their nuts as well.

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If you find any mistakes on this chart please contact me on +64 274 77 8888 or marsden@mbr.co.nz. Marsden Robinson V16/11/2022