

HEXAGON HEAD IDENTIFIER

This page is intended to give information about the correct spanner/socket to use for the corresponding hexagon head size of bolt/screw. Fasteners are always quoted as per the thread size not the head size of the item. Therefore there is no such thing as a universal spanner.

The thread diameter is in the top box; the bottom size is the spanner needed

Metric

M3	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24
5.5	7	8	10	11	13	17	19	22	24	27	30	32	36

Spanners to fit BA hexagon heads are sold as the Thread size; so a spanner marked 2BA will fit a 2BA hexagon head. The middle box gives the imperial measurement; bottom box gives the spanner size required.

BA

10BA	9BA	8BA	7BA	6BA	5BA	4BA	3BA	2BA	1BA	0BA
0.117"	0.131"	0.152"	0.172"	0.193"	0.220"	0.248"	0.282"	0.324"	0.365"	0.413"
10BA	9BA	8BA	7BA	6BA	5BA	4BA	3BA	2BA	1BA	0BA

Spanners marked for a BSW size fit the next size up of BSF & BSCycle bolt; even though head sizes have now been unified the spanners are still marked up for BSW. The bottom box shows the actual imperial measurement of the hexagon head across the flats. A spanner marked 1/4" BSW will fit a 5/16" BSF/ BSCycle /BSW thread.

BSCycle, BSF, BSW.

3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"
0.324"	0.445"	0.525"	0.600"	0.710"	0.820"	0.920"	1.010"
1/8"WH	3/16"WH	1/4"WH	5/16"WH	3/8"WH	7/16"WH	1/2"WH	9/16"WH

Spanners for Unified fasteners are measured fractionally for the hexagon head they are to fit, quite simply they are marked AF and correspond to the Across Flat size of the hexagon bolt/screw.

UNC, UNF

1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"
0.438"	0.500"	0.563"	0.625"	0.750"	0.812"	0.938"
7/16"AF	1/2"AF	9/16"AF	5/8"AF	3/4"AF	7/8"AF	15/16"AF

The Metric and Unified systems of head sizes are more easily understandable and straightforward to get to grips with initially. The British standard sizes are a throwback to pre WW2 when Whitworth head sizes were 1 size bigger than the corresponding BSCycle & BSF threads. That is why spanners and sockets are marked for the thread form they correspond to.