

Australian Woodsmith®

DRILL BIT SPEED CHART

Operating speeds (RPM)

Accessory	Softwood	Hardwood	Acrylic	Brass	Aluminium	Steel	Shop Notes
Twist drill bits*							
1mm - 5mm	3000	3000	2500	3000	3000	3000	Lubricate when cutting steel. Use centre punch on all holes to prevent drill from wandering.
6mm - 10mm	3000	1500	2000	1200	2500	1000	
11mm - 16mm	1500	750	1500	750	1500	600	
17mm - 25mm	750	500	NR	400	1000	350	
Brad point bits*							
3mm	1800	1200	1500				Raise smaller bits often to clear shavings and prevent heat buildup.
6mm	1800	1000	1500				
10mm	1800	750	1500				
13mm	1800	750	1000				
16mm	1800	500	750				
Forstner bits							
6mm - 9mm	2400	700	NR				Raise smaller bits often to clear shavings and prevent heat buildup. Make several shallow passes with larger bits. Allow to cool between passes.
12mm - 16mm	2400	500	250				
20mm - 25mm	1500	500	250				
28mm - 32mm	1000	250	250				
35mm - 50mm	500	250	NR				
Sawtooth bits							
54mm - 100mm	250	250	NR				Use Forstner speeds with smaller bits.
Spade bits*							
6mm - 12mm	2000	1500	NR	NR	NR	NR	Clamp work to table to improve quality of hole.
16mm - 25mm	1750	1500	NR	NR	NR	NR	
32mm - 38mm	1500	1000	NR	NR	NR	NR	
Spade bits with spurs							
9mm - 25mm	2000	1800	500	NR	NR	NR	Best bit for acrylic. Clamp work securely.
Hole saws*							
25mm - 38mm	500	350	NR	250	250	250	Do not use with brass or aluminium thicker than 1.5mm. Avoid dense hardwoods.
40mm - 51mm	500	250	NR	150	250	100	
54mm - 64mm	250-500	100	NR	150	250	100	
75mm - 100mm	100	NR	NR	100	100	100	
Countersinks							
2-flute	1400	1400	NR	NR	NR	NR	Raise and lower frequently for quicker cutting.
5-flute	1000	750	750	250	250	250	
Plug cutters							
All sizes	1000	500					Cut to full depth.
Circle cutters							
38mm - 75mm	500	250	250				Drill one side, then flip material over to finish cut.
80mm - 150mm	250	250	250				

This chart should be used as a guide and supplementary only to the speeds recommended by your drill press manufacturer and the bits etc. that you are using.

- Notes:
- Always wear a face shield for optimum protection.
 - Reduce speed when drilling into end grain.
 - Drilling faster than recommended can cause overheating.
 - Speeds slower than those recommended may cause poor-quality holes.

NR = Not Recommended with this material *Backup material to prevent chipout