



Rennie Tool Company & Freebird Interiors

Solid Carbide 8 Piece Router Set Cutting Data

The recommended chip load & feed rate data provided below is a recommended starting point and may not accommodate all circumstances.

As a rough rule of thumb we usually advise the depth of cut as 1 x cutting diameter. However, in some circumstances a smaller or larger depth of cut may be optimal.

Always start out at the lower feed rate and work your way up from there until optimal cutting conditions and speed is acquired



We would recommend running at 18,000 RPM for most single, 2 flute and 3 flutes up OR down cut router bits

To work out your feed rate –

Chip load (mm) x RPM x number of flutes = mm per minute feed rate

Example –

6mm x 22mm 2 flute up cut router bit – cutting MDF

0.15mm (Chip load) x 18,000 (RPM) x 2 (number of flutes) = 5400 mm per minute feed rate



5mm x 32mm 2 Flute Solid Carbide Straight Router Cutter

Suitable for cutting a wide variety of materials – MDF, plywood, multilayered board, solid wood, sandwich panels and PVC etc

RPM – 18,000

Material	Chip Load (mm)
Size	5mm
Hardwood	.130-.180
Soft Plywood	.130-.180
MDF / Particle Board	.150-.230
High Pressure Laminate	.112-.192
Solid Surface	.146-.222

To work out your feed rate –

Chip load (mm) x RPM x number of flutes = mm per minute feed rate

Example –

5mm x 22mm 2 flute straight router bit – cutting MDF

0.15mm (Chip load) x 18,000 (RPM) x 2 (number of flutes) = 5400 mm per minute feed rate



8mm x 22mm 2 Flute Up Down Compression Router Cutter

Ideal for cutting most types of wood including MDF, plywoods, hardwoods, and softwoods

Gives a great finish at the top and bottom of the cut

RPM – 18000

Material	Chip Load
Size	8mm
MDF/Laminate	0.21
Plywood	0.125
Wood	0.125

To work out your feed rate –

Chip load (mm) x RPM x number of flutes = mm per minute feed rate

Example –

8mm x 22mm 2 flute compression router bit – cutting MDF

0.21mm (Chip load) x 18,000 (RPM) x 2 (number of flutes) = 7560 mm per minute feed rate



12mm x 42mm 2 Flute Solid Carbide Down Cut Router

These router bits are great for production settings and excellent for creating grooves and dado cuts in plywood and composite materials.

The “down-cut” cuts from the surface down, leaving a smooth edge at the surface.

Material	Chip Load (mm)
Size	12mm
Hardwood	.172-264
Soft Plywood	.172-264
MDF / Particle Board	.250-360
High Pressure Laminate	.236-.345
Solid Surface	.213-.267

To work out your feed rate –

Chip load (mm) x RPM x number of flutes = mm per minute feed rate

Example –

12mm x 42mm 2 flute down cut router bit – cutting MDF

0.250mm (Chip load) x 18,000 (RPM) x 2 (number of flutes) = 9000 mm per minute feed rate



25mm TCT Bottom Cleaning Router Cutter

Ideal for cutting most types of wood including MDF, plywoods, hardwoods, and softwoods

For routing perfectly clean cavities and resurfacing projects

Material	Chip Load (mm)
Size	25mm
MDF/Laminate	0.044
Plywood	0.025
Soft Wood	0.05
Hard Wood	0.02

To work out your feed rate –

Chip load (mm) x RPM x number of flutes = mm per minute feed rate

Example –

25mm 2 flute Bottom Cleaning router bit – cutting MDF

0.044mm (Chip load) x 18,000 (RPM) x 2 (number of flutes) = 1584 mm per minute feed rate



22mm x 90 Degree TCT V Groove Router Cutter

These great for grooving and engraving in all types of wood

Material	Chip load (mm)
Hardwood	0.058
Softwood	0.058
Plywood	0.058
MDF	0.12

To work out your feed rate –

Chip load (mm) x RPM x number of flutes = mm per minute feed rate

Example –

16mm x 90 degree TCT V groove router bit – cutting MDF

0.012mm (Chip load) x 18,000 (RPM) x 2 (number of flutes) = 4320 mm per minute feed rate



4mm x 27mm Flute TCT Spear Point Drill Bit For Through Holes

Ideal for drilling through holes on a wide variety of materials including all woods – MDF, Chipboard, Plywood, Natural Timbers Etc

Recommended Feeds And Speeds –

6000 RPM

1500 mm/min feed rate

5mm x 41mm Flute TCT Dowel Drill Bit For Blind Holes

Ideal for drilling blind holes on a wide variety of materials including all woods – MDF, Chipboard, Plywood, Natural Timbers Etc

Recommended Feeds And Speeds –

6000 RPM

1650 mm/min feed rate



15mm x 27mm Flute TCT Dowel Drill Bit For Blind Holes –

Ideal for drilling blind holes on a wide variety of materials including all woods – MDF, Chipboard, Plywood, Natural Timbers Etc

Recommended Feeds And Speeds –

6000 RPM

3000 mm/min feed rate

mm/min feed rate