# TCT ROUTER BITS



## SPIRAL CUTTERS - MICRO-GRAIN SOLID CARBIDE

A range of 2 flute high quality micro-grain solid carbide cutters primarily intended for use in CNC and fixed head routing machines. These specialist cutters offer high performance routing, with fine finish and high feed rates being prime advantages over straight flute cutters. In cases where carbide tip tools perform well, spiral routers will cut smoother and generally last up to 5 times longer. This extra tool life means fewer tool changes, less setup time and longer production runs. The cutters are suitable for use at speeds of 17,000 to 25,000 rpm and with feed rates of 6 to 10 metres per minute. It should be noted that the most common reason for premature wear and tool failure is insufficient feed rates.

This cutter is single flute.

## **DOWN-CUT SPIRAL**

Part No.	A mm	inch	B mm	C shank	D mm	
T1D3000L T4D3000 T4D3175 T4D3967 T4D4000 T4D4762 T4D5000 T4D6000 T8D6000A T8D6000B T4D6350 T2D7937 T8D8000B T8D8000S T8D8000C T2D8000A	3.00     3.00     3.18     3.97     4.00     5.00     5.00     6.00     6.00     6.00     6.00     6.00     6.00     8.00     8.00	0.118 0.118 5/32 5/32 3/16 0.197 0.197 15/64 15/64 15/64 5/16 5/16 5/16	12.0 12.7 12.7 14.0 19.0 19.0 19.0 19.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0	3mm 1/4 1/4 1/4 1/4 8mm 8mm 8mm 1/2 8mm 8mm 8mm	64.0 - 50.8 50.8 50.8 50.8 50.8 76.2 76.2 76.2 76.2 76.2 76.2 76.2 76.2 76.2	
T3D9525 T2D9525 T2D1000B T2D1200C T2D1270A T2D1270C T2D1270E	9.53 9.53 10.0 12.0 12.7	3/8 3/8 25/64 15/32 1/2	31.7 31.7 32.0 38.0 31.7 38.1	3/8 1/2 1/2 1/2 1/2	76.2 76.2 88.9 76.2 88.9	

These cutters are suitable for cutting a range of materials including soft and hardwoods, MDF board, laminated plywood, also any material where resin bond glues are present, masonite, all types of particle board, synegite board, veneers, and press paper. For the kitchen and bath industries these tools perform excellently on solid surface materials, formica etc. These tools also cut aluminium very well, although slower speeds and feeds will be required.



#### DOWNCUT or UPCUT SPIRAL - which to choose?

#### DOWNCUT SPIRAL

These tools are designed primarily for the cutting action to help hold material in place while routing. Recommended for use on all hand held routers and CNC equipment where hold down or vacuum systems are inadequate. This is generally the safest way to route. Downcut spiral should be used on small parts where movement could occur and will deliver an ultra smooth cut requiring no sanding. When in doubt choose downcut spiral cutters.

CAUTION: When using downcut spiral tools, care should be used, as chips may clog or pack in the slot being routed.

#### UPCUT SPIRAL

These tools are designed to pull chips up and away from the part that is being cut and, in addition, will prevent burning when plunge cutting. Delivers a very satisfactory cut with fast chip exit and removal. Upcut spirals should only be used on equipment with good vacuum hold down or clamping devices. Any failure of the clamping will allow the part to move and will result in tool breakage. Upcut spirals should be chosen if dust or chips present problems.

## What is MICRO-GRAIN CARBIDE?

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Micro-Grain carbide is made up of higher concentrations of cobalt and binder materials not found in lesser grades of carbide. The increased amounts of binder that go into Micro-Grain make it possible to achieve a much sharper cutting edge when grinding. This sharper edge will perform very well under normal production runs and should give considerably longer life compared to standard grade tungsten carbide cutters.

## **RE-GRINDING**

A specialist service is available for solid carbide spiral cutters only - please contact us for details.