



CNC Router *Retrofits*

10.5 HP High Frequency Router

The 10.5HP High Frequency Spindle is available on the Model 40, 42, 53, 67 and 70 machines. This spindle cannot be mounted on a turret assembly.

The 10.5 HP High Frequency Spindle is a direct driven spindle with a speed range up to 24,000 RPM. The High Frequency Spindle is cooled with an electric fan for quieter running and contains ceramic bearings for longer life. The spindle motor is greased for life, for less maintenance. The 10.5 HP spindle provides the user with a heavy duty, precision spindle which provides high performance and reliability. The enlarged shaft and the precision bearings in conjunction with a reliable electrical design enable the motor to cope with stringent requirements and give it a good overload capability. It comes standard with ISO 30 tool holding system and is suited to heavy duty routing applications. It is driven by a solid state frequency converter which includes programmable speed control.

The 10.5 HP spindle has a collet capacity of up to 3/4". Cutter bits used with this spindle should not exceed 3 1/8" in length and the cutting diameter should not exceed 3". Spindle speed should not exceed 18,000 RPM for tool diameters above 2 inches. All cutters used should be balanced up to 24,000 RPM.

All 10.5 HP High Frequency Spindles not only utilize the ISO30 taper for vertical routing but also a variety of aggregate tooling heads. Aggregate tooling consists of a tool body as well as a rotating spindle. A taper on the aggregate head fits the spindle taper while a locator pin keeps the aggregate body from spinning. These aggregate heads allow the operator to route or drill horizontally, and saw. Adding the optional Programmable "C-Axis" allows the tool body to rotate under servo control. This allows horizontal routing or drilling at angles, sawing in different angles, etc. While not in use, the aggregate tool body is stored in a tool holder located off the back of the table. Aggregate tooling adds a high level of machining flexibility.

Upgrades are configured on a case by case basis, depending on the type of tooling and machine you are currently operating. For a quote contact Thermwood's Retrofit Division.

800•221•3865 Ext. 251

Programmable “C-Axis”



An optional “C-Axis” can be added, which rotates the aggregate tool body under servo control. This allows horizontal routing or drilling at angles, as well as sawing in different angles.

There are three and possibly four parts to an Aggregate Tool as used on a Thermwood CNC Router. The tool itself, the tool holder, the software macros needed to make it work and possibly a special dust collection hood. The Aggregate Tools are separated into two categories. The most common tools are considered standard tools. Highly specialized or seldom used heads are considered “special-order” tools.

It is necessary that a qualified Thermwood technicians install aggregate tooling. The macros and software speed limits must be developed and installed properly to prevent overspeed conditions that can damage the machine and present a danger to personnel.



Provides 360° of Programmable Rotation for Aggregate Tooling



Aggerate Tooling

Note: Available with ISO and HSK inputs



Low Profile Horizontal Drill

- Accepts 10 mm “Weldon Shank” Style Tooling
- 3,600 RPM



2 Position Horizontal Router

- 3/4” Max. Collet Capacity
- 14,000 RPM



Adjustable Angle Router/ Saw

- 0° to 90° Manual Adjustment
- 1/2” Max. Collet Capacity
- 14,000 RPM
- 5 3/4” Max. Blade Diameter with 30mm arbor
- Max. Blade THickness 1.5 to 5 mm



Horizontal Router/Saw

- 3/4” Max. Collet Capacity
- 5 3/4” Max. Blade Diameter with 30 mm Arbor
- Max. Blade THickness 1.5 to 5 mm 8,000 RPM