

Framebuilder 53 | CNC Machining Centers

3 Axis



THERMWOOD

3 Axis Framebuilder

MADE IN USA 

The FrameBuilder Series combine all the elements needed to machine nested upholstered frame parts from sheet stock.

The moving gantry, fixed table with the roller hold down on this 3 Axis CNC router is designed for the routing and stack machining. This system is suited for machining of large sheet material such as fiberboard (MDF), particleboard and plywood.

Thermwood CNC Machining Centers



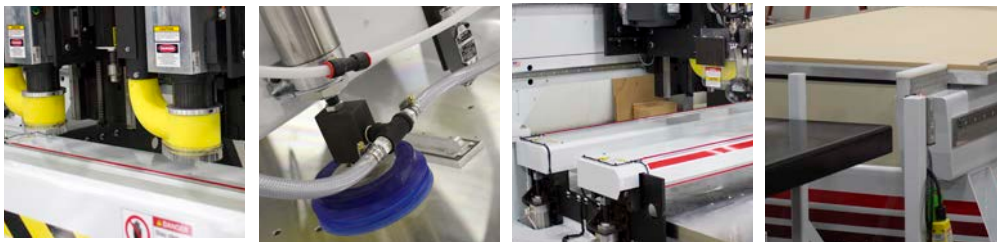
Standard Features

- 18 HP (13 kw) HSD Spindle (3,000-24,000 RPM)
- SuperControl
- Fixed Solid Aluminum table with Moving Gantry
- Roller Hold Down System
- At-the-Head Tool Changer(Optional)
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- Control Networking
- Control Nesting
- Machine Training and Installation

Framebuilder
5' x 10' (1.5 x 3.0m) Table
Optional At-the-Head Tool
Changer

Table Sizes Available

- 5' x 10' (1.5m x 3.0m) Table
- 5' x 12' (1.5m x 3.6m) Table
- 5' x 16' (1.5m x 4.8m) Table
- 5' x 20' (1.5m x 6.0m) Table



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Framebuilder

5' x 10' (1.5 m x 3.0m) Table with
Optional Load/Unload
Lift Table
Dual 18 HP (9 kw) Spindles
Electric Drills

Roller Hold Down



Roller Hold Down is key to machining upholstered frames which present special hold-down problems. The rough surface and tendency to warp make them difficult or impossible to hold with vacuum. In many frame applications, nests are random, so conventional vacuum fixtures cannot be used. The only answer is a roller hold-down, a system first developed by Thermwood.

Rollers in front and behind the cutting head pinch the material to the table. It even works on stacked material and warped sheets. We provide a patented system that uses simple rollers under the table to counteract roller forces, eliminating the hold-down load on the critical linear bearings. With high-speed production, typical of frame machining, this means less bearing wear, longer life and fewer problems. We also cover our rollers and provide an emergency stop strip along these covers.

The Framebuilder system is a fixed table machine which makes automatic load and unload extremely simple and straightforward. The operation starts

with a scissor lift located at the front of the fixed machine table. A stack of sheet material is placed on this scissor lift and it keeps the top sheet just above the level of the machine table. When a sheet of material is needed, the gantry moves forward and lifts the top sheet using a series of vacuum cups. As the gantry moves back, it pulls the sheet onto the machine table. The operator squares up the sheet and starts the cycle.



After machining, the gantry again moves forward and drops a bar in front of the machined sheet. As the gantry again moves back, the bar pushes all the machined parts off the back of the table to a sorting table. Another sheet is loaded and the process continues.



Framebuilder

5' x 16' (1.5m x 4.8m) Table with
Optional Load/Unload
Dual 18 HP Spindles
Electric Drills

Machine Standard Features

18 HP Spindle

The 18 HP (13 kw) spindle (3,000 to 20,000 programmable RPM). Unit accepts HSK F63 toolholders, as well as Thermwood Aggregates and is equipped with an electric fan. **Standard**



Roller Hold Down

Roller Hold Down is a series of urethane covered steel rollers which are pressed to the spoilboard by air cylinders. The router travels between the rollers during the machining operation. This system works well with rough plywood or stacked sheets of material. **Standard**



Machine Options

Additional options available

Automatic Lubrication / Greaser Systems

Provides positive pressure, air/oil lubrication to the linear trackway bearings and the ball screws. This has two major benefits. First, it eliminates the lubrication points which must be serviced each shift. Second, it provides positive pressure to the bearing preventing contamination from entering the bearing. This allows the machine to function in difficult, dusty or hostile environments.



Automatic Tool Length Sensor

Provides an automatic method of measuring tool length and entering tool length offset numbers into the control. This automatically compensates for the new tool length eliminating the need to precisely locate the cutter bit. It provides a highly accurate method of adjusting tool length for pocketing or profile edges.

At-the-Head Tool Changer

This option consists of tool holder arms and five tool holders which mount in an arc around the front of the spindle and hold the tapered tool holders. When a program calls for a tool change the tool is automatically changed at the head. Available for the primary head as well as an optional secondary head.



2nd Head Spindle

A second head can be added to allow simultaneous machining of two parts. The second spindle includes a complete tool slide, second servo -controlled Z-Axis assembly and 24" space bar. (Bar style tool changer can not be used with this option. At-the-Head Tool Changer is available for both heads.)

Electric Drill

The Electric Drill is a compact, high powered drill which will provide the user with a useful tool for light and medium duty drilling.



Automatic Load and Unload

The Automatic Load and Unload system attaches to the machine gantry. There are a series of vacuum cups that are used to load the sheets of material onto the table and at the same time unloading the finished parts to a sorting table located at the back of the machine.

Lift Table

The Lift Table is a scissor lift table attached to the front of the machine. It holds the stock material just above the machine table and allows for the material to be loaded with the Automatic Load and Unload option.



SuperControl

Thermwood's SuperControl

Thermwood, the only major CNC router manufacturer that designs and builds its own CNC control, is a leader in implementing advanced control technology. The QCore SuperControl incorporates more advanced control features than any other CNC control in the industry. And, because Thermwood provides all the technology, you have single source responsibility. Thermwood stands behind and supports the entire system and when new technology is available it can easily be upgraded.



- **Full Multi-tasking Control-** Uses Microsoft® Windows® 10 professional operating system, offering the ability to operate the machine and do other tasks on the control
- **Huge File storage-** 1 TB hard drive for storage and greater file execution with no delays.
- **Direct Link-** Accepts raw design files or CNC programs, compatible with virtually all design softwares.
- **Virtual Service-** Direct, live, visual contact to Thermwood's Service Department. (Optional)
- **Tool Management-** Keeps track of tool usage and automatically replaces it when needed
- **Maintenance Alerts-** Alerts you when lubrication or maintenance is needed.
- **Videos and Manuals-** Step by step how-to-videos to adjust, maintain and repair your machine. Electronic manual, with error reporting and dynamic 3-D assembly drawings with part numbers.

QCore Options Additional options available



Bar Code Input

This option includes a bar code which attaches to the side of the control cabinet. The bar code functions just like a key sequence from the keyboard. For example, the entire key sequence needed to load a program can be scanned as a bar code much faster that it can be typed, with little possibility of error. The bar code input system allows any commonly used key sequence to be printed or scanned.

Hand Held Terminal

Powerful tool for creating CNC programs at the machine. The machine moves right with the programming so you can see the exact position. Modifications can be made quickly, errors are minimized saving time.



Software



Thermwood has a sales and support group that focuses on software products that work with and enhance the operation of Thermwood CNC routers. Their goal is to offer to Thermwood customers the most effective software products for their specific application, smoothly integrated with the control. You can be certain that software obtained from Thermwood will work properly with your Thermwood CNC router. (Thermwood machines can link with all major CAD/CAM softwares.)



Mastercam



PANELMETRIX
MDF DOOR PRODUCTION SOFTWARE

Thermwood is your best source for software products for the following reasons:

- **Thermwood understands the application:** Thermwood knows how the package works with our machines.
- **We've solved the integration problems:** The package works from the software to the computer and then to the CNC control.
- **Our integrated training:** Thermwood offers training of the software and how it works with the control.
- **Thermwood software support:** Thermwood can provide support for the software package, the control and, most important the operation of the two together.
- **Multi-package integration:** Thermwood knows how to make them work together for your application
- **Professional evaluation:** When you purchase software from Thermwood you know that it was fully evaluated and it works.

Thermwood Technical Service

Thermwood's Technical Service offers a wide range of services for our customers to be comfortable and profitable with their CNC Router System. Each Thermwood CNC router system includes formal, structured training classes including professional support material and hands-on experience.

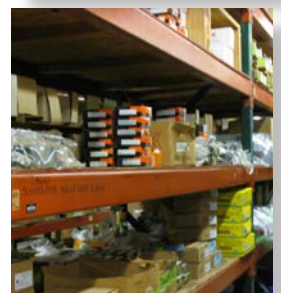
In addition to Thermwood's professional phone support and on-site service, we offer Virtual Service, which is an audio, video and data link from the machine controller and Thermwood's Service team. When the "Virtual Service" link is established, the customer can see and talk to the Thermwood service technician and the service technician can see, not only the customer, but also all of the critical parameters of the control. Through this link, the control can be diagnosed in real-time while programs are being executed and corrections can be made.

We also offer an On-line Supply Store, extensive Part Inventory, Custom Programming, an Advanced Support Program and a Retrofit and Upgrade Department.

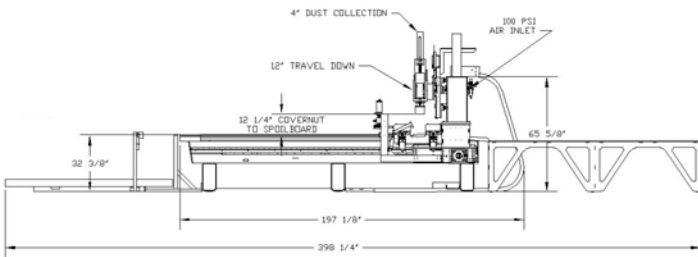
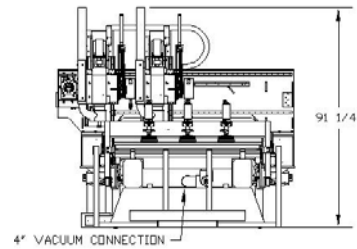
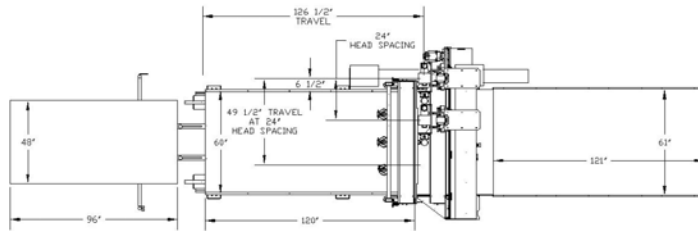
Thermwood's training, "Virtual Service", continuing control updates, and free lifetime phone support offer you support like no one else and assures continuing profits from your Thermwood investment, years into the future.

Thermwood's Service

- Free Lifetime Phone Support
- Virtual Service
- On-site Technical Service
- Custom Programming
- Hands on Training Classes
- Professional Set-up
- On-line Supply Store
- Extensive Parts Inventory
- Retrofits and Upgrades
- Advanced Support



Dimensions



Framebuiler Overall Dimensions (5' x 10' Table Shown)
 5' x 10' Table: Height 91" Width: 92" Length: 197"
 (1.5m x 3.0m Table: Height 2.3m Width: 2.3m Length: 5.0m)
 5' x 12' Table: Height 91" Width: 92" Length: 221"
 (1.5m x 3.6m Table: Height 2.3m Width: 2.3m Length: 5.6m)
 5' x 16' Table: Height 91" Width: 92" Length: 259"
 (1.5m x 4.8m Table: Height 2.3m Width: 2.3m Length: 6.6m)
 5' x 20' Table: Height 91" Width: 92" Length: 307"
 (1.5m x 6.0m Table: Height 2.3m Width: 2.3m Length: 7.8m)
 (Dimensions are approximate)

Thermwood...First in CNC Routers

Thermwood is the first company that developed and manufactured CNC router technology in the US. Starting in the late 60's, Thermwood continues to offer products and software technology for the wood, plastics and aerospace industries, involving numerous areas of machining applications.



The main facility consists of 175,000 square feet which includes both an office/showroom and an engineering and manufacturing plant. Manufacturing utilizes modern fabricating, machining, assembling and testing processes from the machine fabrication to the CNC control production.

Thermwood is an International company that strives in technology, software, support and service to best fit the needs of our customers. Thermwood...the first in CNC routers.



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