

3 & 5 Axis High Performance CNC Machining Centers



THERMWOOD

CNC Machining Centers

Thermwood CNC routers are highly flexible, making them ideal for a variety of manufacturing applications. Thermwood, the technical leader, offers a wide variety machines, exclusive features, flexible options and support software, all integrated into complete pre-engineered packages, fully refined for your specific application.

Thermwood has been building CNC routers longer than anyone else. Thousands of Thermwood CNC routers are in operation in 33 countries producing everything from simple wood parts to jumbo jets and spacecraft. Thermwood the clear leader in CNC router technology with more US and international CNC router patents than anyone else.



A System configured for your application

Thermwood offers a wide variety of machines and a large selection of options that configure these machines for almost any application.



Thermwood offers a variety of router spindles, including aggregate heads for special applications. You can get a servo controlled aggregate axis and a wide variety of aggregate cutting, sawing and drilling heads for special machining requirements.

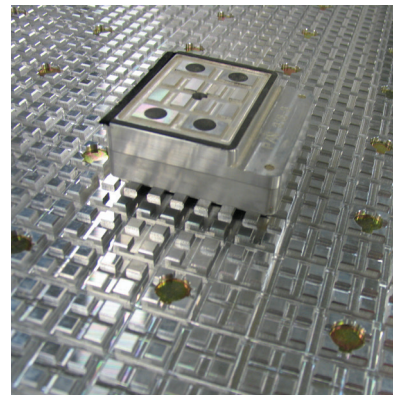
There are several systems for holding parts in place during machining including high-flow vacuum, conventional vacuum and roller hold-down. Thermwood invented many of these systems and their vast experience in this area assures

you will get a system that will reliably hold your parts.

Thermwood also offers automatic load-unload systems for certain applications.

Software is a key part of modern CNC systems. Thermwood maintains a staff of software developers and offers a variety of powerful but easy-to-use software packages. We also represent leading software products from third-party software vendors that we have configured to work seamlessly with Thermwood's systems. Thermwood provides complete training, backup and support for all the software products we sell, regardless of who originally developed them.

With Thermwood, we don't just sell you a machine that you have to make work. We configure a complete system, focused on your job, addressing all the details so you don't have to. We have the experience, technical resources and broad product offering needed to do this well.



Model 43

MADE IN USA 

3 AXIS / FIXED TABLE

Signs

Medical

Education

Composites

Wood Carving

Non-Ferrous Metals

Architectural Millwork

Marine/Boat Building

Exhibits/Store Fixtures

Furniture Manufacturing

Machining Plastic Sheets

Solid Surface Processing

High Volume Cabinet Production

Nested Based Custom Cabinets

THERMWOOD

- 12 HP (9kw) HSD Spindle (3,000-24,000 RPM)
- Fixed High Flow Table
- Moving Gantry
- SuperControl
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment



Table Sizes Available

- 49" x 97" (1.2m x 2.4m) Table
- 61" x 121" (1.5m x 3.0m) Table
- 61" x 145" (1.5m x 3.6m) Table
- 61" x 241" (1.5m x 6.1m) Table

OPTIONS

Additional options available



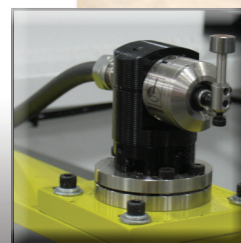
Automatic Labeler



Unload Rake



Automatic Lubrication



Automatic Tool Sensor



Pause Mats

Model 42

MADE IN USA 

3AXIS / MOVING TABLE

Non-Ferrous Metals

Machining Plastic Sheets

Architectural Millwork

Composites

Military/Defense

Wood Carving

Signs

Medical

Aerospace

Marine/Boat Building

Exhibits/Store Fixtures

Furniture Manufacturing

Solid Surface Processing

High Volume Cabinet Production

Nested Based Custom Cabinets

- 12 HP (9 kw) HSD Spindle (3,000-24,000 RPM)
- Dual Moving Aluminum High Flow Tables
- Fixed Gantry
- SuperControl
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- Bar Style Tool Changers (optional)
- Automatic Lubrication (optional)



Table Sizes Available

- Dual 5' x 5' (1.5m x 1.5m) Tables
- Dual 5' x 8' (1.5m x 2.4m) Tables
- Dual 5' x 10' (1.5m x 3.0m) Tables
- Dual 5' x 12' (1.5m x 3.6m) Tables
- Single 10' x 5' (3.0m x 1.5m) Table

OPTIONS

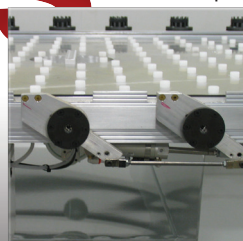
Additional options available



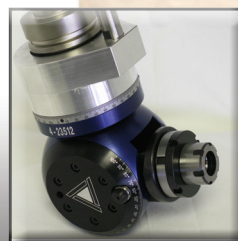
Dual Head Spindles



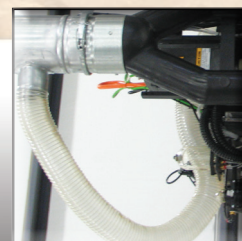
Automatic Lubrication



Automatic Pop-Up Pins



Aggregate Tooling



At-the-Head Typewriter Tool Changer

Model 45

MADE IN USA 

3 AXIS / FIXED TABLE

Nested Based Custom Cabinets

Furniture Manufacturing

Exhibits/Store Fixtures

Machining Plastic Sheets

Non-Ferrous Metals

Marine/Boat Building

Architectural Millwork

Military/Defense

Wood Carving

Education

Aerospace

Composites

Signs

Medical

Solid Surface Processing

High Volume Cabinet Production

THERMWOOD

- Dual 12 HP (9 kw) HSD Spindle (3,000- 24,000 RPM) with At-The-Head Typewriter Tool Changers (optional)
- Fixed Aluminum High Flow Table
- Moving Gantry
- SuperControl
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- Automatic Lubrication (optional)



Table Sizes Available

- 5' x 5' (1.5m x 1.5m) Table
- 5' x 10' (1.5m x 3.0m) Table
- 6' x 12' (1.8m x 3.6m) Table
- 7' x 12' (2.1m x 3.6m) Table

OPTIONS

Additional options available



Drill Bank



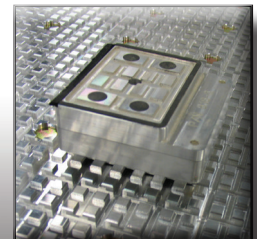
Rotary Playback Device



Aggregate Tooling



BarStyle Tool Changer



Multi-Function Nemi Pod Table

Cut Center

MADE IN USA 

3 AXIS / FIXED TABLE

THERMWOOD

- 12 HP (9kw) HSD Spindle (3,000-24,000 RPM)
- Fixed High Flow Table
- Moving Gantry
- Auto Tool Changer
- Material Flip System (optional)
- SuperControl
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment



Wood Carving

Architectural Millwork

Furniture Manufacturing

High Volume Cabinet Production

Nested Based Custom Cabinets

Table Sizes Available

- 5' x 10' (1.5m x 3.0m) Table

FEATURES

Additional options available



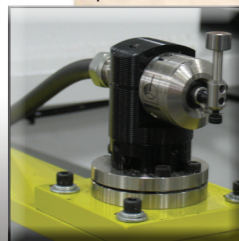
12 HP Spindle



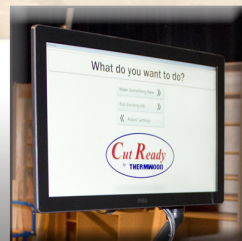
Auto Tool Changer



Personal Pause Button



Automatic Tool Sensor



Touch Screen

3 & 5 Axis Machining Centers



FrameBuilder 48 THERMWOOD

MADE IN USA 

ROLLER HOLD DOWN / LOAD / UNLOAD



- 18 HP (13 kw) HSD Spindle (3,000-24,000 RPM)
- Fixed Solid Aluminum Table
- Moving Gantry
- SuperControl
- Roller Hold Down System
- Automatic Load/Unload System
- Table Dust Collection
- Programmable Side Bars & Locator Pin
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment

Upholstered Frames

Exhibits/Store Fixtures

Marine/Boat Building

Furniture Manufacturing

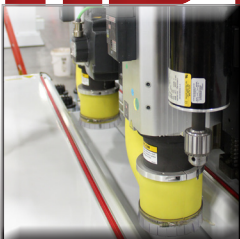
Nested Based Custom Cabinets

Table Size Available

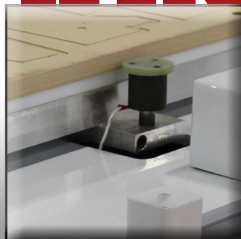
- 4' x 8' (1.2m x 2.4m) Table

OPTIONS

Additional options available



Dual Head Spindles



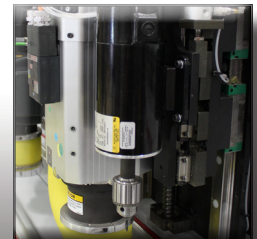
Automatic Tool Sensor



Tool Changer



Automatic Lubrication



Electric Drill

FrameBuilder 53 THERMWOOD

MADE IN USA 

ROLLER HOLD DOWN / LOAD / UNLOAD



- Dual 18 HP (13 kw) HSD Spindle (3,000-24,000 RPM) (optional)
- Fixed Solid Aluminum Table
- Moving Gantry
- SuperControl
- Automatic Load/Unload (optional)
- Roller Hold-Down
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment

Upholstered Frames
Exhibits/Store Fixtures
Marine/Boat Building
Non-Ferrous Metals
Composites
Furniture Manufacturing
Machining Plastic Sheets
Nested Based Custom Cabinets

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 4.1m) Table
- 5' x 20' (1.5m x 5.1m) Table

OPTIONS

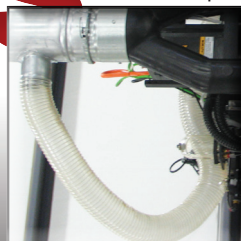
Additional options available



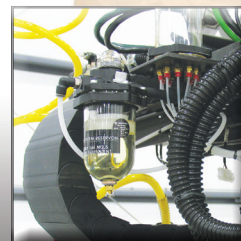
Dual Head Spindles



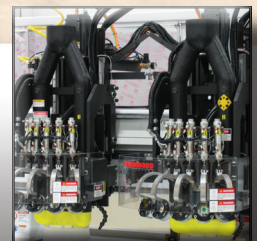
Automatic Tool Sensor



At-the-Head Typewriter Tool Changer



Automatic Lubrication



Dual Head Typewriter Tool Changers

Model 63

MADE IN USA 

3 AXIS / FIXED TABLE

Furniture Manufacturing

Wood Carving

Signs

Medical

Education

Aerospace

Composites

Military/Defense

Non-Ferrous Metals

Architectural Millwork

Marine/Boat Building

Exhibits/Store Fixtures

Machining Plastic Sheets

Solid Surface Processing

High Volume Cabinet Production

Nested Based Custom Cabinets

THERMWOOD

- Dual 12 HP (9 kw) HSD Spindle (3,000-24,000 RPM)
- Fixed Solid Aluminum Table
- Moving Gantry
- SuperControl
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- BarStyle Tool Changer
- Automatic Lubrication



Table Sizes Available

- 5' x 10' (1.5m x 3.0m) Table
- 5' x 20' (1.5m x 5.1m) Table

Table Extensions

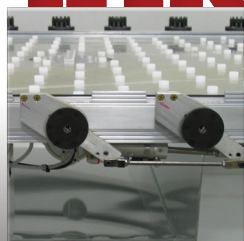
Available up to 60' (18m)

OPTIONS

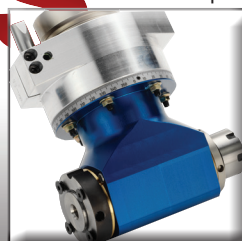
Additional options available



At-the-Head Typewriter Tool Changer



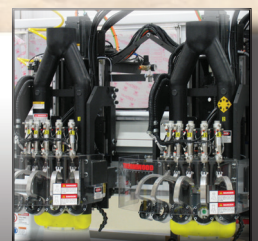
Automatic Pop-Up Pins



Aggregate Tooling



Drill Bank



Dual Head Typewriter Tool Changers

MTR

MADE IN USA 

3 AXIS / METRIC

Furniture Manufacturing

Wood Carving

Signs

Medical

Education

Aerospace

Composites

Military/Defense

Non-Ferrous Metals

Architectural Millwork

Marine/Boat Building

Exhibits/Store Fixtures

Machining Plastic Sheets

Solid Surface Processing

High Volume Cabinet Production

Nested Based Custom Cabinets

THERMWOOD

- 12 HP (9 kw) HSD Spindle (3,000-24,000 RPM)
- Fixed Aluminum High Flow Table
- Moving Gantry
- SuperControl
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- Automatic Tool Sensor
- BarStyle Tool Changer

Table Sizes Available

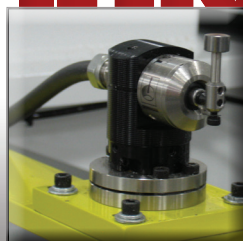
- MTR 21 (7' x 12') 2.1m x 3.6m Table
- MTR 30 (5' x 10') 1.5m x 3m Table
- MTR 36 (7' x 12') 2.1m x 3.6m Table
- MTR 60 (7' x 20') 2.1m x 6m Table
- MTR 30 Dual (5' x 10') 1.5m x 3m Table
- MTR 30 Dual (5' x 12') 1.5m x 3.6m Table

OPTIONS

Additional options available



Aggregate Tooling



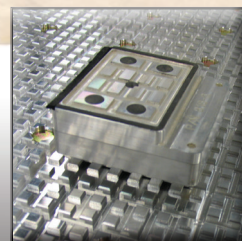
Automatic Tool Sensor



At-the-Head Typewriter Tool Changer



Drill Bank



Multi-Function Nemi Pod Table

AutoProcessor THERMWOOD

MADE IN USA 

AUTOMATIC LOAD / UNLOAD / LABELING



- 12 HP (9 kw) HSK Electro-Spindle
- Fixed Table
- Moving Gantry
- SuperControl
- Rotary Tool Changer
- Automatic Pop-Up Pins
- Automatic Tool Sensor
- Automatic Labeler
- Automatic Load
- Automatic Unload
- 6000 lb. Lift Table for Loading
- Unload Table
- Drill Bank (optional)
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment

Cabinet/Closets

Marine/Boat Building

Furniture Manufacturing

Exhibits/Store Fixtures

Machining Plastic Sheets

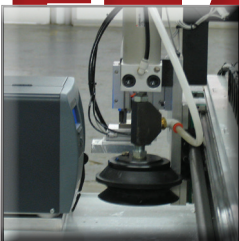
High Volume Cabinet Production

Nested Based Panel Processing

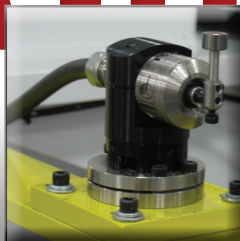
Table Sizes Available

- 5' x 10' (1.5m x 3.0m) Table
- 7' x 12' (2.1m x 3.6m) Table

FEATURES



Automatic Labeler



Automatic Tool Sensor



Automatic Load



Drill Bank



Automatic Unload

Model 77

MADE IN USA 

5 AXIS / MOVING GANTRY

Aerospace

Composites

Wind Energy

Military/Defense

Automotive Design

Non-Ferrous Metals

Marine/Boat Building

Three-Dimensional Plastic Trimming

Three-Dimensional Pattern/ Molding Making

THERMWOOD

- 12 HP (9 kw) HSD Tool Changer Spindle (3,000-24,000 RPM)
- Impact Resistant Head
- Moving Gantry
- 36" (900mm) Z standard (Available up to 60" (1500mm))
- SuperControl
- Full 5 Axis Simultaneous Motion
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- Fixed Table (optional)
- Access Doors (optional)
- Machine Cover (optional)
- Tool Center Point Programming (TCP)



Table Sizes Available

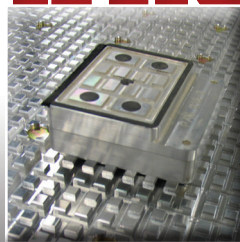
- 5' x 10' (1.5m x 3.0m) Table
- 10' x 10' (3.0m x 3.0m) Table (Table extensions may be added up to a total of 100'(18m))

OPTIONS

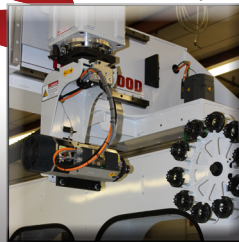
Additional options available



Chip Collection



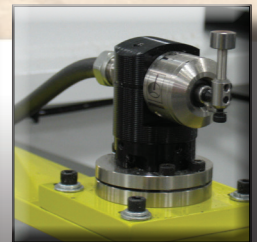
Multi-Function Nemi Pod Table



Rotary Tool Changer



Access Doors



Automatic Tool Sensor

Model 67

MADE IN USA 

5 AXIS / MOVING TABLE

Aerospace

Medical

Composites

Wind Energy

Military/Defense

Automotive Design

Non-Ferrous Metals

Marine/Boat Building

Three-Dimensional Plastic Trimming

Three-Dimensional Pattern/ Molding Making



THERMWOOD

- 7.5 HP (5.5 kw) Dual End Spindle (3,000-18,000 RPM)
- Impact Resistant Head (optional)
- Moving Solid Aluminum Table
- Fixed Gantry
- 24" (600mm) Z standard (available up to 48" (1200mm))
- SuperControl
- Full 5 Axis Simultaneous Motion
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- Automatic Tool Length Sensor (optional)
- Tool Center Point Programming (TCP)

Table Sizes Available

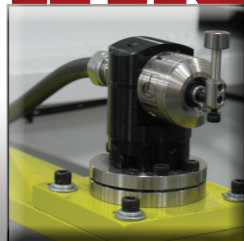
- 5' x 5' (1.5m x 1.5m) Table
- 5' x 10' (1.5m x 3.0m) Table
- 10' x 5' (3.0m x 1.5m) Table
- 5' x 12' (1.5m x 3.6m) Table
- 7' x 10' (1.8m x 3.0m) Table
- Dual 5' x 5' (1.5m x 1.5m) Tables
- Dual 5' x 10' (1.5m x 3.0m) Tables
- Dual 5' x 12' (1.5m x 3.6m) Tables

OPTIONS

Additional options available



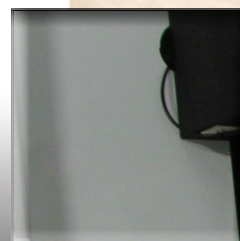
Automatic Lubrication



Automatic Tool Sensor



BarStyle Tool Changer



Remote Start/Stop



Gantry Light

Model 90

MADE IN USA 

5 AXIS / MOVING TABLE

Aerospace

Medical

Composites

Wind Energy

Military/Defense

Automotive Design

Non-Ferrous Metals

Marine/Boat Building

Three-Dimensional Plastic Trimming

Three-Dimensional Pattern/ Molding Making

THERMWOOD

- 12 HP (9 kw) HSD Tool Changer Spindle (3,000-24,000 RPM)
- Impact Resistant Head
- Moving Solid Aluminum Tables
- Fixed Gantry
- 24" (600mm) Z standard (available up to 60" (1500mm))
- SuperControl
- Full 5 Axis Simultaneous Motion
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- Tool Center Point Programming (TCP)



Table Sizes Available

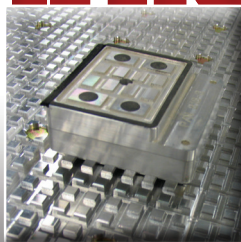
- 5' x 5' (1.5m x 1.5m) Table
- 5' x 10' (1.5m x 3.0m) Table
- 5' x 12' (1.5m x 3.6m) Table
- 10' x 5' (3.0m x 1.5m) Table
- Dual 5' x 5' (1.5m x 1.5m) Tables
- Dual 5' x 10' (1.5m x 3.0m) Tables
- Dual 5' x 12' (1.5m x 3.6m) Tables

OPTIONS

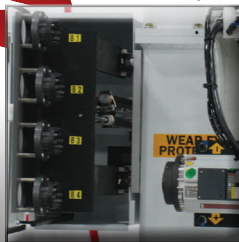
Additional options available



Chip Collection



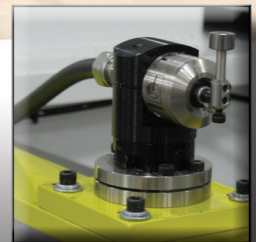
Multi-Function Nemi Pod Table



In The Leg Tool Changer



BarStyle Tool Changer



Automatic Tool Sensor

Model 70

MADE IN USA 

5 AXIS / FIXED TABLE

Aerospace

Medical

Composites

Wind Energy

Military/Defense

Automotive Design

Non-Ferrous Metals

Marine/Boat Building

Three-Dimensional Plastic Trimming

Three-Dimensional Pattern/ Molding Making



THERMWOOD

- 12 HP (9 kw) HSD Tool Changer Spindle (3,000-24,000 RPM)
- Impact Resistant Head
- Fixed Table
- Moving Gantry
- 24" (600mm) Z standard (available up to 60" (1500mm))
- SuperControl
- Chip Collection System (optional)
- Full 5 Axis Simultaneous Motion
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment
- BarStyle Tool Changer (optional)
- Automatic Tool Length Sensor (optional)
- Tool Center Point Programming (TCP)

Table Sizes Available

- 10' x 5' (3.0m x 1.5m) Table
 - 10' x 10' (3.0m x 3.0m) Table
 - 10' x 15' (3.0m x 4.6m) Table
 - 10' x 20' (3.0m x 5.1m) Table
- (Table extensions may be added up to a total of 100'(18m))

OPTIONS

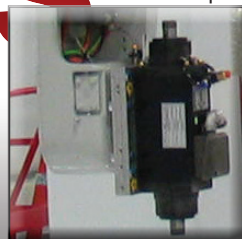
Additional options available



BarStyle Tool Changer



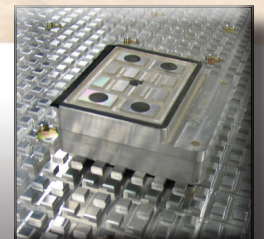
In The Leg Tool Changer



Dual End Spindle



Automatic Lubrication



Multi-Function Nemi Pod Table

LSAM

Large Scale Additive Manufacturing

MADE IN USA 

3D PRINTER / 5 AXIS



Aerospace
Composites
Wind Energy
Military/Defense
Automotive Design
Non-Ferrous Metals
Marine/Boat Building
Three-Dimensional Plastic Trimming
Three-Dimensional Pattern/ Molding Making

THERMWOOD

- 40mm LSAM Melt Core, Compression wheel with automatic tangential tracking of machine motion
- 12 HP (9 kw) HSD Spindle (3,000-24,000 RPM)
- Dual hopper polymer drier can simultaneously dry two different materials
- Siemens Intelligent Servo Drives Throughout
- 3-D Laser Compensated Axis Alignment

Sizes Available

- LSAM MT - 10' x 10' (3.0m x 3.0m)
- LSAM 1010 - 10' x 10' (3.0m x 3.0m)
- LSAM 1020 - 10' x 20' (3.0m x 6.0m)
- LSAM 1040 - 10' x 40' (3.0m x 12.0m)

FEATURES



40mm Print Head



12 HP Trimming Spindle



Dual Hooper



Access Doors



3D Printing Control

Next Generation CNC control

- your key to success



Thermwood, the only major CNC router manufacturer that designs and builds its own CNC control, is a leader in implementing advanced control technology. This control is designed from its very core with higher efficiency and productivity to operate a CNC router, which means you can do more and it's easier.

Thermwood's 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.



Thermwood CNC Mobile App

The Thermwood CNC Mobile App allows users to monitor their Thermwood CNC router(s) and the programs that run on them from anywhere on a tablet or smartphone (updated every 30 seconds).



- **Full Multi-tasking Control-** Uses Microsoft® Windows® 10 operating system, offering the ability to operate the machine in the background while doing other tasks on the control
- **Huge File storage-** 1 TB hard drive for storage and greater file execution with no delays.
- **New Hand Held Programmer-** Rugged design.
- **Better, More Accurate Motion-** Complex motion calculations and faster speeds
- **Direct Link-** accepts raw design files or CNC programs, compatible with virtually all design software, and the ability to nest hundreds of parts from different sources and programs
- **Full 5 Axis Simultaneous Motion**
- **Virtual Service-**direct , live, visual contact from the control to Thermwood's Service Department.
- **Tool Management-** keep track of how much each tool is used and automatically replaces it with a new one when it's tool life expires.
- **Maintenance Alerts-** alerts you when lubrication or maintenance is needed.
- **Videos and Manuals-** step by step videos of how to adjust and maintain and repair your machine. Electronic manual right on the machine, with error reporting and dynamic 3-D assembly drawings with part numbers.

Hand Held Programmer

The Thermwood Hand Held Programmer is the single most powerful tool available for creating, modifying, editing and refining CNC programs at the machine. The Hand Held Programmer provides a vital link between the CAD/CAM programmer and the CNC machine tool.



Features

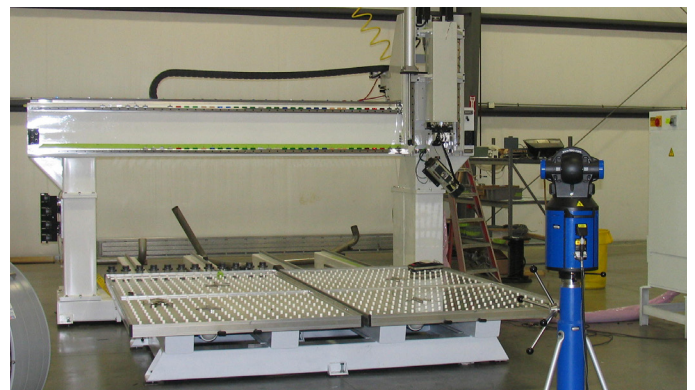
- Rugged ABS case with rubberized sure grip sides.
- Direct feed rate override % control.
- Zero feed rate % button.
- Power feed positioning at current feed rate until button is released.
- Pulse/move an axis at a set increment for fine positioning.
- Power pulse an axis for fine positioning until button is released.
- Part program lines/blocks displayed. Scroll through part program lines/blocks to view any line.
- Current feed rate is always displayed on teach screens.
- Current pulse increment is always displayed during line/motion teach.
- Add lines/blocks of code.
- Feed hold capability for controlled halting of runtime execution.



Volumetric Compensation

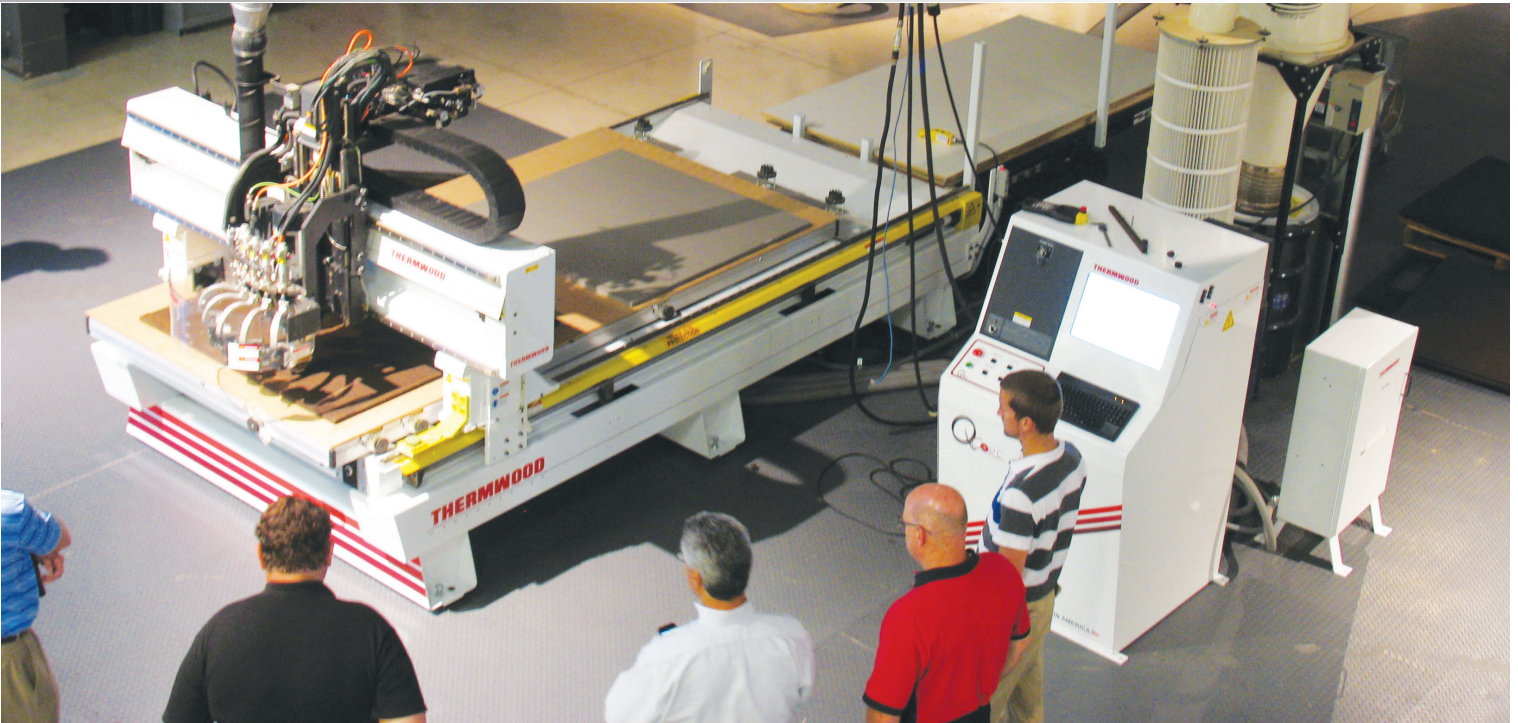


Volumetric Compensation, standard on all Thermwood CNC routers, dramatically improves the accuracy and quality of the machine. This state-of-the-art advanced technology, developed by Thermwood, is especially essential for large envelope five-axis machines. In this process, the laser measures the exact positions of the cutting head, in three dimensions within the working envelope, and compensates for any remaining error. The com-



pensation then becomes integral within the machine's control providing precise positioning of the cutting head.

Prove your application BEFORE you buy



Thermwood operates a well equipped, fully staffed demonstration lab whose purpose is to demonstrate to both you and us, that we can do your job and that you will be completely satisfied. We set up, program and run your parts, with no obligation to you, to prove out the application before we receive, or accept, a commitment.

You are invited to our Southern Indiana facility to see this process in person and discuss your needs in a friendly, easy and open environment. We also have the ability to broadcast these demonstrations live over the web, although if your job is truly custom, a personal visit is highly recommended. Most people that visit say they leave with a wealth of information beyond seeing their parts run. After all, we have been doing this longer than anyone else and are happy to share this experience with you.

With this approach, you know and we know it will work well. This is the only way to be sure you will be a completely satisfied customer. After all, you being satisfied is important to us because a large part of our business is repeat orders from satisfied customers.



Demonstration Center

- Fully staffed demonstration lab
- 3 & 5 Axis routers available for testing
- Machines equipped with a variety of options
- Variety of software available
- Live in house or web broadcast demonstrations

Software Products

for your application

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 Thermwood's Control. You can be certain that software obtained from Thermwood will work properly with your Thermwood CNC router.

eCabinet Systems

eCabinet Systems is an extensive design, costing, sales and production support software program with features and capabilities that will benefit any custom cabinet operation from a one man shop to a large production organization.

Mastercam

Mastercam Router is the CAD/CAM software that takes you to a new level of productivity. Easy to learn because Mastercam makes programming so simple, you'll be designing and cutting parts on day one.

PANELMETRIX MDF DOOR PRODUCTION SOFTWARE

Panelmetrix is a door and drawer panel generating system. The Panelmetrix program consists of various "geometry templates" to produce virtually any style of door and drawer.



Moldplus Standard consists of surface trimming and extension tools, mold design tools such as Draft Angle Analysis, Core and Cavity separation and parting surface creation.

Thermwood CNC Routers are compatible with output from most major CAD/CAM and design software programs.

Thermwood is your best source for software products

1. Thermwood understands the application.

Thermwood knows how the package works with our machines.

2. We've solved the integration problems.

Thermwood has already done this work for the packages it offers so you don't have to, from the software to the computer and then to the CNC control.

3. Thermwood software support.

Thermwood can provide support for the software package, the control and, most important the operation of the two together.

4. Our integrated training.

We teach you the intricacies of how the software and control work together.

5. Multi-package integration.

When several software packages must work together and work with Thermwood's control, we know how to integrate them for your application.

6. Professional evaluation.

When you purchase software from Thermwood you know that it was fully evaluated and it works.

Virtual Service

Virtual Service is a system provided for members of the Advanced Support Program. "Virtual Service" is a powerful audio and video link, using an internet connection, between the customer's SuperControl and the Thermwood service department.



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. It essentially gives the service technician as much information as standing in front of

the customer's control itself. Through this link, the control can be diagnosed in real-time while programs are being executed and corrections can be made. Programming errors can be found and corrected online. Customers can typically handle many mechanical problems if they are shown what to do, so videos can be launched by the Thermwood technician to be viewed by the customer.

"Virtual Service" can effectively handle most difficulties and problems that occur. It provides service in minutes instead of days or weeks, reducing both downtime and frustration.



Virtual Service Capabilities

Monitor in real-time:

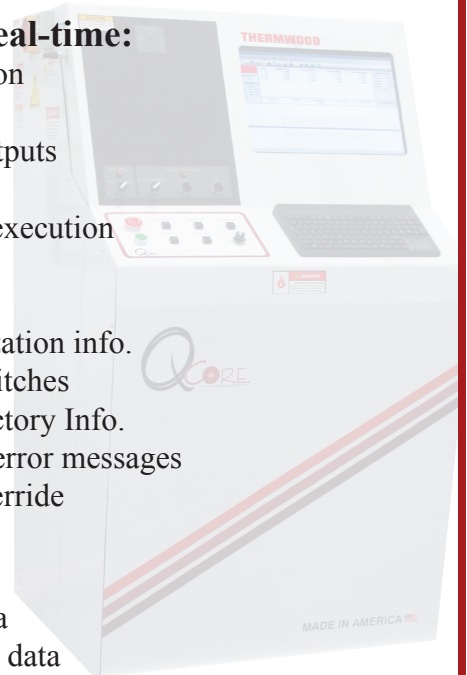
- Machine motion
- Axis positions
- Inputs and Outputs
- Servo info.
- Part program execution
- PLC info.
- AFL messages
- Axis Normalization info.
- Axis home switches
- Machine trajectory Info.
- Part Program error messages
- Feed Rate Override

View:

- Tool setup data
- Actuator setup data
- Tool changer setup data
- Fixture offset data
- Maintenance clock info.
- Machine In/Out limits

View or modify if necessary:

- Macro files
- PLC files
- Machine Setup files
- Machine Format files
- All Thermwood system files



NOTE: Internet Connection needed for the Virtual Service feature to work.

Privacy Note:

Thermwood cannot automatically link up to the customer's Control. It is a "one way service" which can only be initiated by the customers themselves when they deem it necessary. Even after a call has been connected, Thermwood does not have the ability to automatically link back to the Control. This feature has been created for the purpose of helping to prevent costly service trips and minimizing possible down time. If you have any other privacy concerns, please call and talk to the Advanced Support Administrator.

Thermwood Technical Service

Thermwood's Technical Service is second to none. We provide a wide range of services for our customers to be comfortable and profitable with their CNC Router System. Our service does not stop once the machine

has been installed. We have a variety of service features that offer you support like no one else and assures continuing profits from your Thermwood investment, years into the future.

Thermwood's Service Includes:

Machine Training:

Our machine operator/programmer courses includes formal, structured training classes including professional support material and a lot of hands-on experience in a modern, comfortable setting.



Software Training: Software training is available at Thermwood for all of the programs we represent, including eCabinet Systems, Mastercam®, and Panelmetrix®. We also offer on-line eCabinet Systems training.

FREE Lifetime Phone Support: Professional phone support on all Thermwood Routers. We offer support in both the technical and software areas.

Virtual Service: Virtual Service, which is an audio, video and data link from the machine controller and Thermwood's Service team.

On-site Technical Service:



Well trained professional Machine Technicians to perform service and preventative maintenance at your facility.

On-line Supply Store: Thermwood's Online Store offers a vast selection of collets, covernuts, router bits, wrenches, filters, oil, grease, as well as, accessories and replacement parts for your machine.

Extensive Part Inventory: Thermwood stocks the shelves with replacement parts, filters, oil, grease, tool holders and accessories for your machine. Most items are available for next day air shipment.



Custom Programming:

Thermwood offers custom CNC programming and/or production assistance for Thermwood Routers. This is a valuable resource to help get you going on a project quickly, and can also allow you to tackle more advanced projects without a lot of programming time,

Advanced Support Program: Offers ongoing system software and hardware updates, keeping the machine up to date and allows our customers to be the most competitive, most successful companies in the business.

Retrofit and Upgrade Department: The alternative to replacing an older machine is upgrading it with a new, modern, high performance control or replacing router heads or adding additional tooling, such as drill bank. The result is the performance and throughput of a new CNC router at a fraction of the cost.

Thermwood...First in CNC Routers

Thermwood is a high technology and software company located in Southern Indiana. Thermwood is currently the oldest CNC router company, started in the late 1960s, and continues to offer products for the woodworking, plastics and aerospace industries to name a few. Thermwood customers are some of the largest, most sophisticated companies in manufacturing.

Our main facility consists of 175,000 square feet which includes both an office/showroom and an engineering and manufacturing plant. Our machines are built from the ground up in the US in a modern manufacturing facility. Thermwood controls all aspects of manufacturing, building everything from the stress relieved base to the CNC control. Thermwood is a true manufacturer, not just an assembler.

Thermwood has developed a sophisticated cabinet and furniture design software and provides it to over 25,000 woodworking and cabinet shops through the largest cabinet industry cooperative in the world, a program we founded and continue to man-

age. Thermwood also maintains a web store selling thousands of router supplies, tooling and woodworking products.

Thermwood strives in technology, software, support and customer service to best fit the needs of our customers. Thermwood...first in CNC routers.



Contact Us



www.thermwood.com

P.O. Box 436, Dale, IN 47523

Phone: 800-533-6901, 812-937-4476

Fax: 812-937-7053

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