NEW

Model 90

5-Axis CNC router

The Model 90 is a new 5-axis CNC router from Thermwood. It targets high speed trimming of three-dimensional parts, and incorporates many new technical developments.

The Model 90 was designed using state-of-the-art technology. Mechanical structures of the Model 90's were designed using finite element analysis, a sophisticated CAD technology that intensely analyzes strength, stiffness, deformation and dynamics of the machine structure. It was used to increase the strength, stiffness and performance of the Model 90.

All the weldments are stress relieved to increase strength and provide long term stability. Advanced high-performance AC digital brushless motors power all axes. The Model 90 is precision laser calibrated which allows the control to compensate for even the tiniest mechanical variation, assuring the best possible accuracy, something that is vital if you are using a CAD system to program.

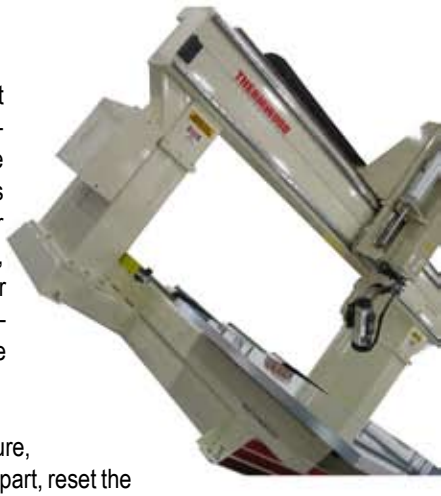
The Model 90's Z axis structure is designed for high speed motions. Zero backlash harmonic drive units power the rotary axes in the 5-axis head.

From a speed standpoint, Model 90 cycle times are dramatically faster, approximately 40% faster than on a traditional 5-axis CNC routers.

The Model 90 is equipped with dual 5 foot by 5 foot solid aluminum tables with full horizontal table coverage side to side and front to back. Each table is equipped with threaded inserts for fixture positioning and mounting. A quick change vacuum system that mounts in front of each table is also available for part holding fixtures.

A dual-end 7 HP programmable variable speed spindle is standard on the Model 90. Automatic tool changers along with larger horsepower spindles are also available.

Impact Resistant Head



The Model 90 includes an Impact Resistant Head, a solution to a common problem that occurs during the programming and set-up of five axis machines. At some time or another you will run the head into the fixture, causing it to go out of alignment or possibly even damage it. With Thermwood's Impact Resistance Head, the problem is all but gone.

When the head is crashed into the fixture, just move the machine away from the part, reset the e-stop and you are ready to continue with no permanent damage and, seldom, if ever, a requirement for realignment.

Regardless of how you develop your programs or how careful you are, some time or another, you will crash the head. How the machine handles this is the difference between a non-event and perhaps days of downtime, should the head require repair or replacement.

The Impact Resistant Head is patented and only available from Thermwood.

Your CNC router is only as flexible as your CNC control. Thermwood is the only major CNC router manufacturer that designs and builds its own CNC control, a control so advanced it is used by aerospace, defense and even NASA for some of their most demanding applications. This control is designed from its very core to operate a CNC router, which means you can do more and it's easier.

Thermwood SuperControl

Thermwood's CNC control offers full five axis simultaneous motion which allows for more efficient program motions. The system is equipped with five-axis tool length compensation and individual compensation for each gantry motor of a moving gantry configuration machine.

Thermwood's control has huge program storage capacity and uses the hard disk as virtual memory. It can easily process large CAD/CAM programs, tens of gigabytes, in size and execute them with no delays, no stopping.

The control keeps track of machine use and alerts you when lubrication or maintenance is needed. It shows you step by step videos of how to adjust, maintain and repair your machine. And, in addition to Thermwood's professional phone support and on-site service, you can connect your control to Thermwood's technical service center with the push of a button, establishing an audio, video and data link. We call this feature Virtual Service. You see and talk to the service technician, right on the control screen, and he sees and talks to you, but he also sees deep into your system to provide help with everything from tooling and programming questions to machine configuration and performance. In fact, virtually everything a service technician can do in your shop can also be done via Virtual Service. Virtual Service simply makes getting help easy, fast and highly effective.

Thermwood offers an Advanced Support Program that keeps your machine's control updated with the latest software features and provides an ongoing warranty on the control. As part of the program, Thermwood customers receive discounts on part purchases and have ongoing Virtual Service support.

Because Thermwood controls all the technology, you have single source responsibility. No longer must you tolerate the machine builder and control manufacturer blaming each other when you have a problem. Thermwood stands behind and supports the entire system.

Creating CNC programs for five-axis trimming can be challenging, especially when CAD data is not available. In these instances, Thermwood offers a powerful Hand Held Programmer which you can use, right at the machine, to trace the part and create the program. You can create lines, arcs, circles and even splines, quickly and easily. The Hand Held Programmer is easy to use and intuitive, so virtually anyone can learn to develop programs with it.

Programming

If CAD data is available for your part, it can be used to generate the trimming program. The Model 90 can run programs generated by your existing CAD/CAM system, or Thermwood can supply full five-axis CAD/CAM systems capable of designing your part and creating the trimming program.

All in all, the model 90 represents a new generation of trimming machine, a machine with a large part envelope and high speed, accurate and stable motions. A machine you can't break because of a simple error. This could be the perfect machine for you. Thermwood has a complete demonstration facility where you are invited to come and see it in operation, trimming your part. Contact us and schedule a visit!

THERMWOOD
First in CNC Routers

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