



*Available in the popular '8 by 4' format, the Spandex Tornado F2 has all the attributes of its big brother - the F3. Cutting, carving or engraving; woods, metals or acrylics; the Tornado F2 will power its way through the biggest workloads in the fastest times imaginable.*

But it's not all brawn. Far from it. The Tornado F2 is an intelligent router with state of the art Digital Signal Processing controlling its every move. An easy-to-use joystick and display panel enables the operator to drive the router and interact with its remote PC workstation too. To say the Tornado F2 is feature rich would be an understatement. An auto tool length sensor comes as standard and every Tornado F2 comes ready to accept the Auto Tool Change option with its ten tool capacity. If you're looking for a router that offers speed, accuracy, productivity and strength, look no further than the Tornado F2 from Spandex.

## SPANDEX TORNADO F2

# High Speed Router/Engraver

### OUTLINE SPECIFICATION

**Overall Dimensions:**

Length 3400mm, Width 1750mm, Height 1650mm

**Active Routing Area:**

2560mm x 1385mm

**Cutting Speed:**

X & Y Axis speed 1 - 400mm/sec; Z Axis 1 - 60mm/sec

**Positioning Speed:**

Maximum positioning speed 400mm/sec

**Maximum material width:**

1600mm

**Maximum material thickness:**

110mm

**Cutting depth adjustment:**

Automatic tool length sensor

**Drive system:**

Servo controlled Recirculating Ball Leadscrew drives on all axis

**Router motor:**

HSD 8KW variable speed spindle 6,000 - 24,000 rpm  
7 kW Variable Speed Spindle, 6,000 - 21,000 RPM

**\*Automatic Tool Changer:** (Optional)

Hide-away tool rack with 10 tool capacity, includes:  
5 ISO 30 tool holders  
5 ISO 30 tool collets

\*Compressed air of 100psi required for ATC

**Material hold down:**

Vacuum table with manual clamping facility

**Operator Interface:**

Simple to use joystick / control panel uses Digital Signal Processing technology to operate the router and interact with remote PC workstation

**Software Upgradeable:**

Flash updateable firmware

**Repeatability & Resolution:**

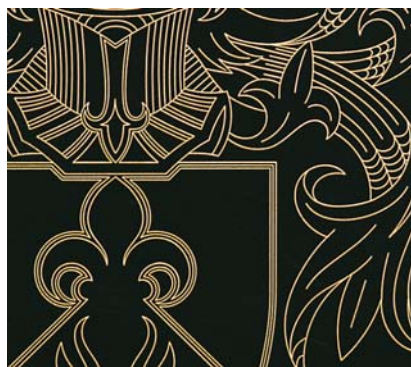
Leadscrew repeatability .0013mm  
Leadscrew distance accuracy +/- .05mm  
Software Resolution .003mm

**Software:**

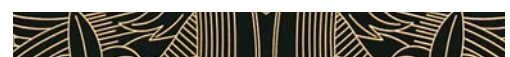
Open Architecture: supports HPGL and G-Code

**Power requirements:**

2 x 380v 20amp three phase supply



[www.spandex.com](http://www.spandex.com)



Tel. 0800 772633 • Fax. 01454 616777



#### Tornado F2 Optional Accessories

- Material thickness sensor
- Bristle foot attachment
- Spindle pen holder
- Signal booster

## SPANDEX **TORNADO** SPEED...

### **Powerful 400 Watt servo motors**

Delivering awesome production speeds (up to 400mm/sec) with unerring accuracy across all axis. High speed cutting reduces production costs, extends tool bit life and increases profitability for your business. Other benefits of powerful servo motors include minimal wear and low maintenance.

### **Automatic Tool Change option**

Fully automated multi-tool cutting allows complex jobs to be completed much faster than manual tool changing and leaves the operator free to attend to other tasks. The Tornado F2 Auto Tool Change option has an 10 tool capacity.

## SPANDEX **TORNADO** ACCURACY...

### **Recirculating ball lead screw drive on all axis**

Simply the best drive system on the market. No expense has been spared on the precision-engineered components that deliver the highest levels of accuracy at the very fastest speeds in the industry. Other benefits of this drive system include minimal wear and low maintenance.

### **Dual drive on Y axis**

Two recirculating ball lead screw drives and two 400 Watt motors power the gantry up and down the bed and ensures that it remains perfectly square in all cutting situations.

### **Square linear guide bearings on all axis**

Simply the best bearing system on the market, providing the rigidity required for fast and accurate cutting. Other benefits include extended bearing life with minimal maintenance.

### **Fully welded and planed box section steel table**

The only way to ensure flat, straight, rigid support for truly accurate routing and engraving.

## SPANDEX **TORNADO** PRODUCTIVITY...

### **Powerful vacuum hold down & clamping system**

The fast and easy set up your jobs. A powerful vacuum pump provides all the bed suction you'll ever need to hold down everything from full sheets to the smallest components in the jobs you do. No need to waste time and money on sacrificial beds or boards.

### **Automatic Tool length sensor**

No need for conventional step height gauges or tool length devices. The Tornado will automatically set the tool depth for your job using its unique built-in tool length sensor to give you consistently accurate "cut to mask" routing every time.

### **Automatic Tool Change option**

Fully automated multi-tool cutting allows complex jobs to be completed much faster than manual tool changing and leaves the operator free to attend to other tasks. The Tornado F2 Auto Tool Change option has an 10 tool capacity.

## SPANDEX **TORNADO** STRENGTH...

### **Heavy-duty welded aluminium gantry**

This potent combination of integral strength and minimal weight results in high acceleration speeds and 'chatter-free' cutting.

### **Fully welded and planed box section steel table**

The only way to ensure flat, straight, rigid support for truly accurate routing and engraving.

### **High strength steel bed**

This strong and stable bed construction eliminates the possibility of future warping or distortion.

### **PVC working surface**

High quality PVC slats provide an excellent grip surface whilst protecting the finish of materials being routed or engraved.