

Upto 80%  
Made in India Parts



## PCB Prototyping



### High Speed Spindle

Spindles from Teknomotor, Italy rated for Continuous Operations - Suitable for soft materials like plastics, acrylic, wood, mdf etc.



### Innovative Materials

World's first Composite Superstructure CNC with Lifetime Warranty on the material. No Sagging, hogging, rust or corrosion



### Rated for 24/7 Ops

Run long operations with confidence. High quality Spindles, Steppers and Electronics enable high productivity.

Call / WhatsApp /  
Telegram

+91 90190 54837



Our Location

Bangalore,  
Karnataka  
India



# Technical Specifications

|  |   |
|--|---|
| Machine Type                                     | 3 Axis  |
| Working Area X x Y                               | 3 Axis  |
| Z Axis Travel                                    | 500 x 400 MM  |
| Footprint - Machine                              | 100 MM (Customizable)   |
| Footprint - Control Box                          | 900 x 900 MM  |
| Chassis - Composite Superstructure               | Carbon Fiber / Fiber Glass Superstructure - Desktop/Tabletop  |
| Controller Type                                  | Arduino Controller <ul style="list-style-type: none"><li>Machine can be operated through a USB connection with any Windows Laptop/Desktop with Windows 10 or 11.</li><li>PC Optimization Settings and Open source Software (GSender / UGS) will be provided as links to download and install.</li></ul> |
| Max Travel Speed (X, Y & Z)                      | 4 Meters / Minute   |
| Spindle - Country of Origin                      | Teknomotor, Italy   |
| Spindle - Power                                  | 0.73 KW / 1 HP  |
| Spindle - MAX RPM                                | 24,000  |
| Spindle - Tool Change type                       | MTC - Manual Tool Change  |
| Spindle - Collet                                 | ER20  |
| Spindle Maximum Run-out (Certified)              | <20 Microns   |
| Spindle Maximum Run-out (Tested)                 | <10 Microns   |
| Dill Holes Per Minute - Stepper                  | Between 30-40 - Depends on Spindle retract height & Movement between each hole.   |
| Dill Holes Per Minute - Servo - Upgrade Required | Between 80-100 - Depends on spindle retract height and movement between each hole.  |
| Applications                                     | High power PCB, Analog PCB, Digital PCB   |
| Drive - All Axis                                 | Hiwin/THK/Other Rolled Ball Screw - 16 MM   |
| Guides - All Axis                                | Hiwin/THK/Other 20 MM Linear Guide & Block  |

|                                       |  |
|---------------------------------------|--|
| Drive Motors                          | NEMA 24 & 23 - Stepper Motor (Made in India)   |
| Certified Repeat Positioning Accuracy | <50 Microns  |
| Tested Repeat Positioning Accuracy    | Between 15-25 Microns / 0.015 to 0.025 MM  |
| Spindle Control                       | Manual Spindle Control - VFD   |
| Stock / Material Fixturing Support    | Aluminium Extruded T Slot Stock Mounting Profiles  |
| Movement                              | Simultaneous 3 Axis Motion – Full Interpolation  |
| Machine Movement Type                 | Moving Bed / Fixed Gantry System   |
| Ship Configuration                    | Ships Fully Assembled with selected accessories  |
| Continuous Operations Capable         | Yes, Certified for 24/7 Operations   |
| Warranty                              | 1 Year Warranty – All Parts Covered  |
| Extended Warranty                     | Optional - Up to 10 Additional Years. Available in increments of 1/2/3/4/5 Years   |
| Maintenance Contracts                 | Optional - Up to 10 Additional Years. Available in increments of 1/2/3/4/5 Years   |
| Superstructure Warranty               | Lifetime Warranty on all composite parts installed on the machines. Warranty applicable under normal operating conditions. |
| Certification                         | ISO 9001 & CE Certified  |
| CAM Support                           | Fully compliant with GCODE / MCODE (GRBL) - Solidworks, Catia, Fusion etc.   |
| Tool Sensor                           | Z-Axis Touch / Non-Touch Sensor - Optional for Purchase  |
| Materials Supported                   | PCB (all types), ABS, Polycarbonate, Acrylic, carbon fiber, fiber glass, aramid, Wood, MDF, Epoxy, Graphite                |
| Calibrated By                         | All of our measurements are made with Mitutoyo calibrated instruments  |
| Diode Laser Compatibility             | Yes - With Arduino Controller option Only  |
| Power Input                           | Single Phase Input – 220V / 110V   |

|                             |  |
|-----------------------------|--|
| Current Requirement         | 16 Amp Plug Point Required   |
| Bellow Implementation       | Optional   |
| Minimum Track Width         | 0.100 MM   |
| Fully Transparent Enclosure | Optional   |
| Number of Layers Supported  | Single / Dual Layer PCB  |
| File Formats Supported      | Excellon / GERBER / GCODE  |
| Control PC                  | Optional - Laptop or Desktop with Monitor, Keyboard & Mouse - Original Windows 10/11 |
| Software Provided           | FlatCAM (Convert Excellon/Gerber to GCODE) & Gsender/UGS (Machine Control)           |
| Cooling System              | Air Cooled Spindle   |

## ZERO Chinese Parts



**PCBProto 5040**  
**3 AXIS CNC**

# Highlights

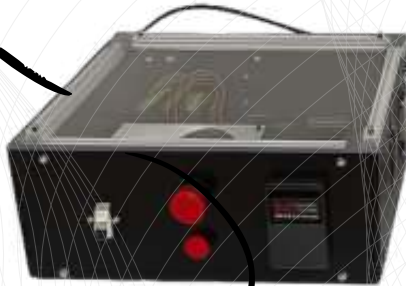


HIWIN / THK  
16MM BALL SCREW  
20 MM LINEAR GUIDES

NEMA 23 & 24  
STEPPERS  
MADE IN INDIA

24,000 RPM  
1HP SPINDLE  
TEKNOMOTOR, ITALY

SINGLE PHASE INPUT  
ONLY



MACHINE CONTROL  
BOX

ALL MADE IN INDIA  
COMPONENTS - DRIVERS, POWER  
SUPPLY, VFD, SWITCHES, FAN,  
ETC.



EXTRUDED  
ALUMINIUM  
TSLOT  
PROFILES

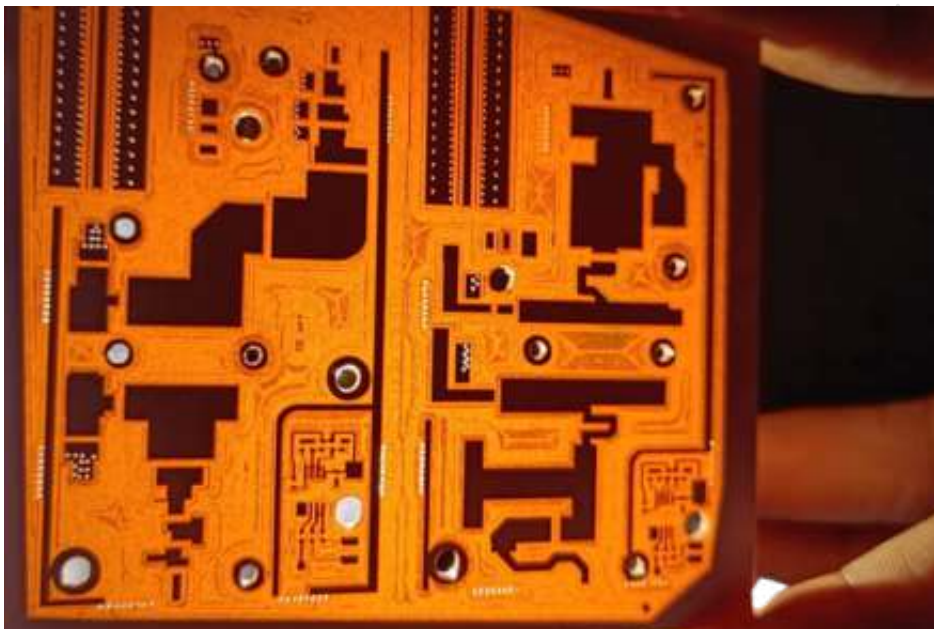
## USE YOUR LAPTOP/PC

REQUIRES A USB 2.0 PORT &  
OPEN SOURCE SOFTWARES

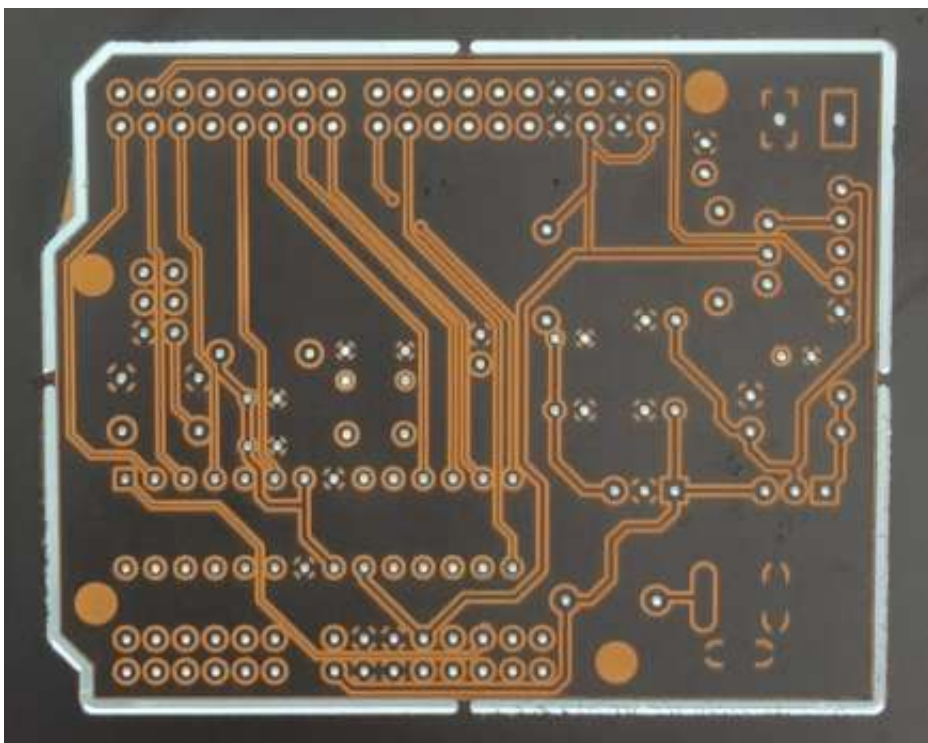
OTHER CONTROLLERS ALSO  
AVAILABLE

PIONEERING COMPOSITE  
SUPERSTRUCTURE WITH  
LIFETIME WARRANTY

**OTHER CONTROLLER OPTIONS ALSO AVAILABLE**



[Video 1](#)



[Video 2](#)

HOW TO MAKE  
DOUBLE SIDED  
PCB'S

**AKRIT**  
PRECISION SYSTEM



#TUTORIALS

[Tutorial Video -  
PCB Making](#)

# ACCESSORIES INCLUDED WITH THE MACHINE

## Cutting Bits

PCB Drilling Bits - Collection - 10 Pcs

- Drill Dia 0.3MM to 1.2 MM
- Shaft Dia - 3.175 MM

PCB Engraving Bits - 2 Pcs

- 0.1 MM Tip
- Shaft Dia - 4 MM
- Angle - 30 Degrees

Endmill - Routing Operations - 1 Pcs

- 2 MM Dia Flat End Corn EndMill

## Collets for Spindle

ER 16 Collet (Based on Spindle) - 3 PCS

---3MM Dia

---4MM Dia

---6MM Dia

## Others

-- T Nuts (For Securing the Material) - 10 Pcs

-- Spanner Compatible with spindle Nut

-- Connector Cable - 1 Piece

-- Stock Mounting Bolts & Nuts - 8 Pcs

-- Composite Stock Holders - 4 Pcs

- Machine is shipped fully built in a plug & play condition
- Installation is not required - If requested additional costs will apply
- If shipped with a control pc, it is shipped fully configured in plug & play condition

# LASERS

Make Your Machine 2-in-1 Laser & Spindle



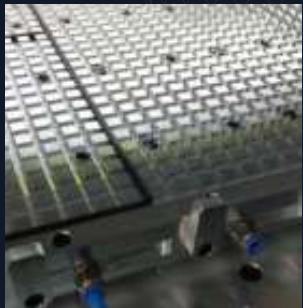
\*with Arduino Controller Only

# CLAMPING



**OPTIONS,  
UPGRADES &  
ACCESSORIES**

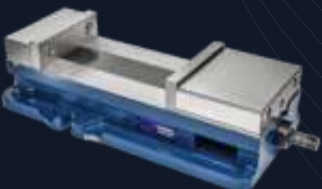
# OTHER ACCESSORIES



Probes



Mist / Flood Cooling



Bellows

# SPINDLE OPTIONS



Rectangular - Air Cooled  
Runout - ~10 Microns  
Single Bearing  
18000 RPM  
1.1 KW  
ER 20  
MTC

Teknomotor, Made in Italy



Rectangular - Air Cooled  
Runout - ~10 Microns  
Double Bearing  
18000 RPM  
1.1 KW  
ER 20  
MTC

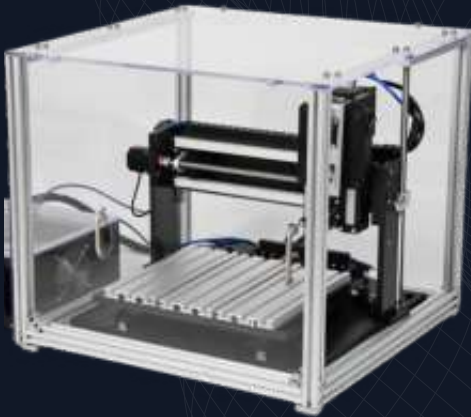
Teknomotor, Made in Italy

## INDUS SPINDLES



Round - Air / Water Cooled  
Runout - <20 Microns \*  
40,000 RPM  
ER 11  
1 KW  
MTC / QTC  
Indus, Made in India

## ENCLOSURES



**OPTIONS,  
UPGRADES &  
ACCESSORIES**

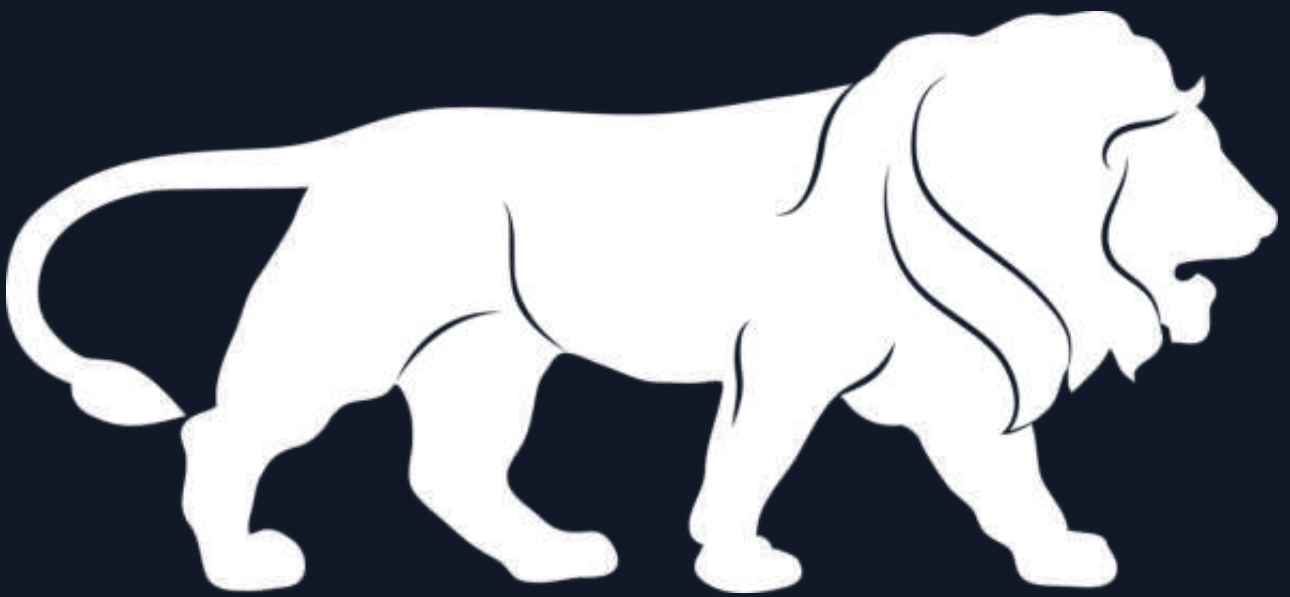
## SERVOS



**& OTHERS**

Made in USA | Comprehensive 3 Years Warranty

PROUDLY  
MADE IN INDIA



ENGINEER BEAUTIFUL