

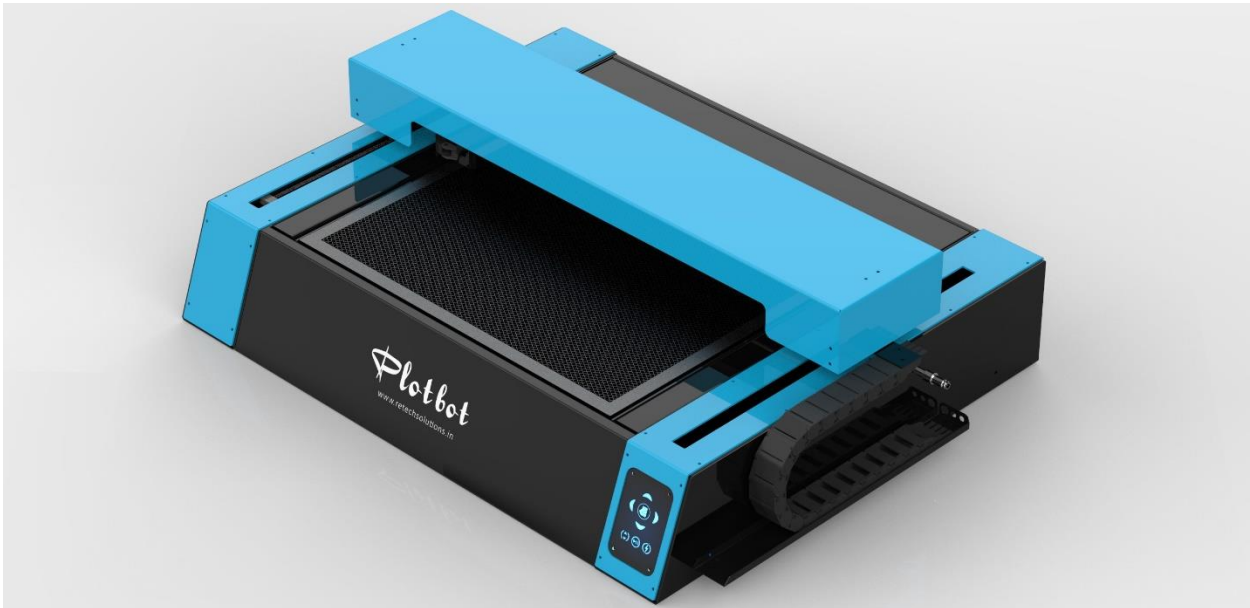
Originated from



**RETECH**  
**SOLUTIONS PVT LTD**  
ISO 9001 : 2015 Certified Company

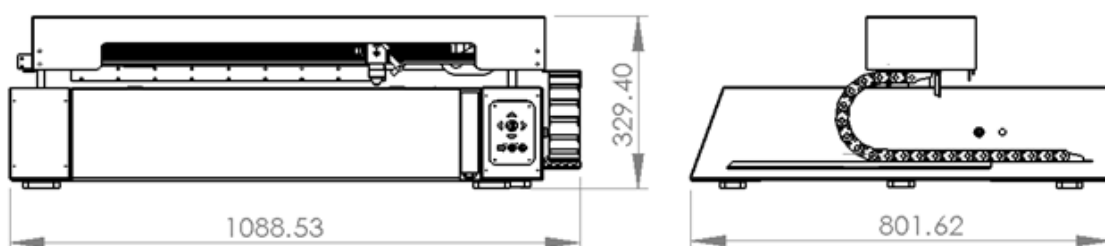
## Plotbot Plus

Plotbot Plus is a multipurpose laser engraver developed from scratch and equipped with 40W CO2 laser tube, Plotbot can easily engrave and cut many things, and help to make surprises in daily life. For instance, making Customized Gifts, Engineering Laser Cut Components for the technical needs, greeting cards for families, or engrave any kind of photos on the wood for decoration, etc.

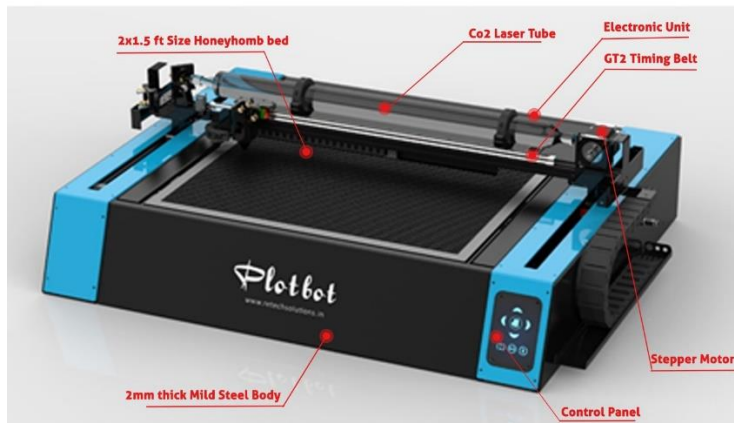


## Capability

1. Equipped with A 40W CO2 laser tube, Plotbot Plus is an independent XYZ Plotter with efficiency to move 500mm/s with very precise accuracy. Usually, it cuts upto 6mm of acrylic and upto 5mm of MDF sheets.
2. The main board has the capability to run both the motors, but also very easy to use. Moreover, any can also control the speed and power of the motor and laser.
3. High-precision: Accurate up to 0.1 mm, carefully engraves every detail in an image.
4. Engraving area: 610mm×458mm (2×1.5 ft) with the compact machine size.



Units are in mm.



## Features:

- > 2x1.5 ft workspace
- > 40 W CO2 laser tube
- > Interactive software support
- > Supports any image formats
- > Supports SVG & DXF formats
- > Speed upto 500 mm/s

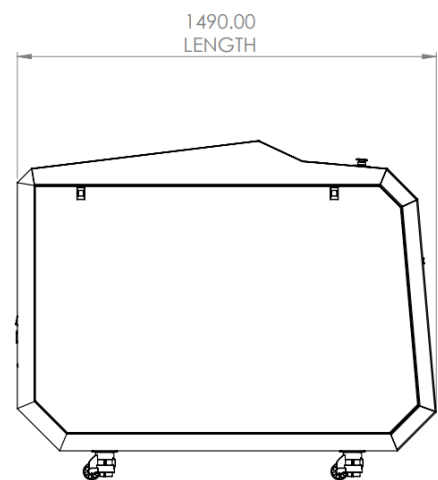
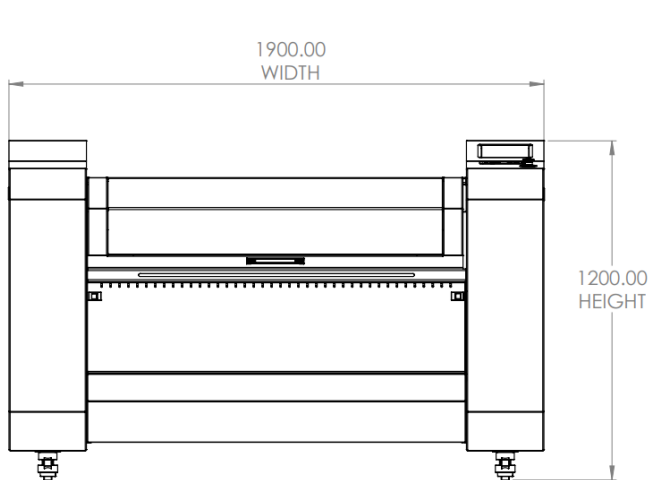
<i>Product / Model</i>	Plotbot Plus
<i>Category</i>	XY Independent 2D Plotter with height adjustment bed
<i>Working Area</i>	2 x 1.5 Feet (610mm x 458mm)
<i>Laser Power</i>	40 W
<i>Laser Type</i>	CO2, Sealed Laser Tube, Wavelength 10.6um
<i>Laser Cooling System</i>	Water Cooling
<i>Motor type</i>	3x NEMA23 and 2x NEMA17 Stepper motors
<i>Power Adjustment</i>	0-100% PWM Control, Adjustable in Software
<i>Engraving Speed</i>	0-300 mm/sec
<i>Cutting Speed</i>	0-15 mm/sec
<i>Working Voltage</i>	AC220V±10% 50Hz
<i>Power SMPS</i>	24V 15A
<i>Running Environment</i>	Temperature: 0-40°C. Humidity: 5%-95% (free of condensed water)
<i>Supported Format</i>	BMP, JPEG, SVG, TIF, PNG, DXF

## Plotbot Pro

Plotbot Pro is a multipurpose laser cutting machine developed from scratch and equipped with 100W CO2 laser tube, Plotbot Pro can easily engrave and cut many things, and help to make surprises in daily life. For instance, making Acrylic Sign Boards, Customized Gifts, Engineering Laser Cut Components for the technical needs, greeting cards for families, or engrave any kind of photos on the wood for decoration, etc.



Z Axis | 7" Touchscreen | Wifi | Mobile Control | Rotary Attachment



Units are in mm.

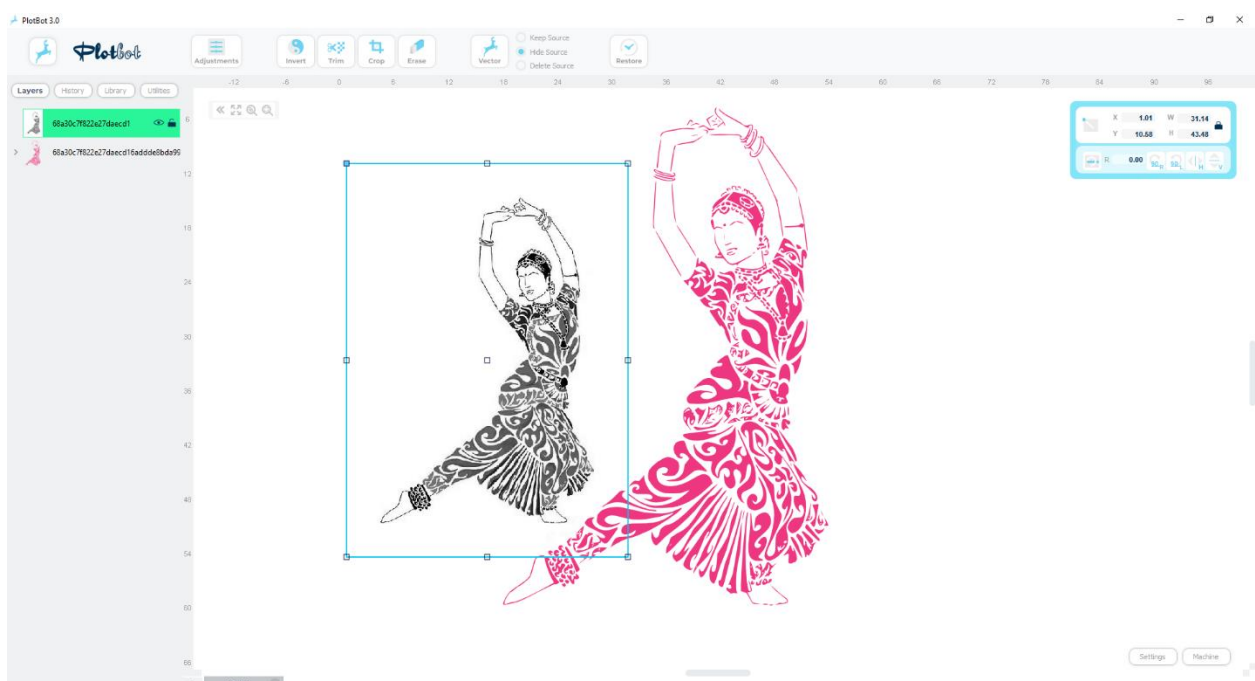
## Capability

1. Equipped with A 100W CO2 laser tube, Plotbot Pro is an independent XYZ Plotter with efficiency to move 1000mm/s with very precise accuracy. Usually, it cuts upto 12mm of acrylic and upto 8mm of MDF sheets.
2. The main board has the capability to run both the motors, but also very easy to use. Moreover, any can also control the speed and power of the motor and laser.
3. High-precision: Accurate up to 0.1 mm, carefully engraves every detail in an image.
4. Engraving area: 1300mm×920mm (4×3 ft) with the enormous working area
5. Touch Screen: 7inch touch screen with an attractive UI and custom controls.

<i>Product / Model</i>	Plotbot Pro
<i>Category</i>	XY Independent 2D Plotter with height adjustment bed
<i>Working Area</i>	4 x 3 Feet (1300mm x 920 mm)
<i>Laser Power</i>	100 W
<i>Laser Type</i>	CO2, Sealed Laser Tube, Wavelength 10.6um
<i>Laser Cooling System</i>	Water Cooling
<i>Motor type</i>	1x NEMA23 Servo motor and 3x NEMA23 Stepper motors
<i>Power Adjustment</i>	0-100% PWM Control, Adjustable in Software
<i>Engraving Speed</i>	0-1000 mm/sec
<i>Cutting Speed</i>	0-150 mm/sec
<i>Working Voltage</i>	AC220V±10% 50Hz
<i>Power SMPS</i>	24V 15A
<i>Running Environment</i>	Temperature: 0-40°C. Humidity: 5%-95% (free of condensed water)
<i>Supported Format</i>	BMP, JPEG, SVG, TIF, PNG, DXF

## Plotbot Software

Plotbot is a software tool used for generating information from an image or vector graphics. The software is capable of transforming images into various forms as the user required. Also, we simplified the operation and setting procedure to save more time. Therefore, it is so user-friendly that everyone can use to control Plotbot machines for years now. It is fully developed from scratch in our R&D center in Chennai. User can download the software from our website [www.retechlasers.com](http://www.retechlasers.com) and going through “Downloads” page! User can mail us to [plotbot.retech@gmail.com](mailto:plotbot.retech@gmail.com) to get any the recent software updates.



## Limitations

Plotbot is especially designed to communicate with the machine rather creating complex graphic contents. So, suggest using graphic software tools such Photoshop or CorelDraw to create advanced graphics!

1. Plotbot software in the current form (Plotbot v4.0) supports most of the image formats, SVG files. DXF file support is partially provided for simple graphics! Multi-line text editing is not supported yet!
2. Graphics support for older generation (4<sup>th</sup> gen or older) computers are limited and some cases not possible to keep track!
3. Plotbot software is fully tested on Intel 4<sup>th</sup> generation PCs and beyond and not fully on AMD processor-based computers! So, we suggest using recommended configuration for better results.

4. Software may need reconnecting machine if the machine is not fully grounded or when using inappropriate USB cables!
5. Unit system followed in the software currently limited to millimeters scale only.
6. Images from other platforms will be imported in 300 DPI and can be resized in Plotbot software to the required size.
7. Vector graphics can be imported mostly in the form of SVG files and any variations in the size can be adjusted in the Plotbot software.

#### Engraving settings panel

Infill Settings

Engraving Speed

300

Laser Power

30

ScanLines/inch

264

Pulse Per Pixel

0

Travel Speed

30

Frequency

2000

End To End

☒

Draw Pattern

TD-Both

Reverse Offset


-0.15


Band Selection

☒

Properties

Custom





#### Cutting settings panel

Outline Settings

Cutting Speed

12

Laser Power

90

Travel Speed

10

Frequency

2000

No. of Passes


1


Z Distance

0.5

Properties

Custom





**Note:** Speed and power setting may vary with different materials. Some of the common settings can be found in the setting document.



**1. What is the *maximum size* of articles it can work upon and if you have larger size models?**

It depends on the type of machine. As for now, we have our biggest workspace of 4x3ft in our Plotbot Pro.

**2. Who will *install and give a demo* in Gurgaon (for example) and also what about *after sales service*?**

Our machine is a plug and play type machine. There are also videos for initial guidance in our YouTube channel called "Retech Solutions" too. For bigger machines like Plotbot Pro, direct installation is suggested.

**3. What is the *maximum depth* it can engrave on wood?**

Ideal depth is 2mm. The Depth depends on the type of machine Plotbot Basic, Plotbot Plus and Plotbot Pro and also the materials used.

**4. Does it come with *driver and software* for installation and operation?**

We can assist the software installation through TeamViewer/Anydesk. We can support for any issues regarding software through online.

**5. What will be the recurring cost of consumables, if any?**

The Plotbot basic machine can consume up to 6 W maximum and Plotbot Plus can consume up to 500 W maximum and Plotbot Pro consumes around 1.5 KW. Other than these only the cost of the material processed is included.

**6. What about *AMC* after the warranty period?**

There is an AMC plan which the customer can get from our marketing executives or from our official website.

**7. Do you have any *office/dealer/service station* in Delhi (for example)?**

Sorry, we don't have one in Delhi (for example). Currently, we are located only in Chennai.

**8. Is this machine *made in India* or do you have any collaboration with China (for example)?**

No, this machine is fully made in India except that the laser module is imported from outside of this nation. The design and manufacturing are done by a young engineering team and also the software is written from scratch in India.



## Safety

- **Smoke:** The laser cutting process involves with the production of various smoke depends upon the material. Check the material usage before you try a new kind other than suggested. Plastics may produce toxic gases while cutting. So, take proper ventilation setup or use industrial blowers instead.
- **Earthing:** The workplace **MUST** be free from any voltage potentials and **MUST** be properly grounded to Earth! Without this, the electronics may be failed within the machine and **warranty can't be applied** for those cases!
- **Goggles:** Use safety goggles to protect your eyes during laser engraving.

## Warnings

As laser energy gains higher density, make sure corresponding protection measures are taken while using.

- Keep **away from children** and other people who are not familiar with laser usage.
- DO NOT directly irradiate eye or skin by the laser beam or in the path of the laser beam. DO NOT irradiate others by the laser.
- When the laser is used, take **necessary protection measures** and DO NOT enter into the workspace of the machine.
- When certain materials are cut by the laser, it is possible for them to produce toxic smoke, take ventilation measures.
- Avoid using **power cables and USB cables** from local suppliers. Use always the cable come with the machine and machine should be operated freely from any potential differences. So **earthing** is mandatory for the building and machine too! Always cross-check this when you need to relocate your machine.
- Always ensure the proper air flow from the nozzle of the laser head. When cutting MDF sheets there is a possibility of **catching fire** if the air flow is insufficient. In those cases, check the power cable and plug of the air compressor.

## Recommended system configuration

Processor	: Intel i3 and above (Must be at least <b>4th generation</b> – 2011 version)
Operating system	: Windows 10 or higher ( <b>64 bit</b> )
Ram	: 4 GB or higher
Motherboard	: Must have USB 3.0 port (To avoid frequent USB connection issues)
Rom	: 128GB SSD or 1TB HDD above

**Caution:** Don't use USB cables from local shops and always use the tested USB cable provided during installation! USB cable length should not exceed 3m and should be capable of USB3.0 support!

In case if you are using AMD processor-based computers, please check with software team prior the installation process!

## Disclaimer

- We provide one year warranty for machine spares. **No onsite warranty is committed** from our side and any technical assistance in the customer place requires transport allowances from the customer for the technician's visit.
- Transportation **allowances** for the technician's visit from our service center in Tambaram, Chennai are as follows (in the year 2023 and it may be revised on time):
  - for upto 40km distances: 500 rupees
  - for upto 150km distances: 1000 rupees
  - for upto 250km distances: 1500 rupees
  - for upto 500km distances: 2000 rupees
  - for upto 1000km distances: 2500 rupees
  - extra charges applicable for the distances beyond 1000kms
- **NO WARRANTY** for extra accessories: chiller, blower, air compressor and laser tube. In most cases we don't see any issue with the mentioned accessories. If any problem occurs, our team will try our

best to resolve those instead of recommending a new one. Power lost laser tubes should be replaced and can't be repaired and not covered under any warranty!

- For intense working hours (more than 8 hours a day), the **laser tube may lose its power** in a short period. As it is the consumable, it has to be replaced once in around 4 months for 40W laser tube version and around 8-10 months for 100W laser tube version for the heavy usage. This is purely based on the customer experience so far. As these tubes are imported from China it may take time to replace the tubes based on the stock availability.
- For intense working hours (more than 8 hours a day), the **timing belts** used in the machine **may get elongated** in a short span. Belt can be replaced only for three times in the warranty period and for further replacements charges may apply.
- As an aspiring company, we are limited with a small team size and it may take time to allocate and process the service requests. If any problem occurs with the machine, it will be solved by the **service** person within a week for the places within Tamilnadu. For other states, it usually takes some more time and accordingly the service will be done in FIFO.
- For minor issues it will be solved through online with team viewer or video calls. For major issues complaint will be raised and service person will help to sort out the issue.
- **Working hours** 9AM-6PM for week days, Sunday will be a holiday. We will provide the best support in our working hours only.
- The software supports provided for Photoshop, CorelDraw and Photograv are only for the initial guidance of the customer. The issues associated with the **proprietary software** can't be addressed by our technical team. In case any issues you face in that software should be communicated to the respective software authorized vendors! We recommend to buy that software instead of using a pirated one!
- Any **physical damage** to the components or electronic items can't be covered under any warranty. Making sure the working environment cleanliness is fully upto the customers responsibility and the company cannot entertain any damage due to mishandling or damages due to insects or acts of animals like **rat**. As these kinds of machines need some open spaces to operate, we cannot fully cover the whole body. Making sure the workspace less hazardous will help here!

## Machine Verification Form

Product ID	
Machine Model	
Dispatch Date	
Motherboard version	
Focal distance from nozzle (in mm)	
Reverse offset for pixel engraving (in mm)	
<b>Verifications</b>	
Max Laser Power (100%) voltage (V)	
Laser cut dimension, path closing & perpendicularity	
Laser beam & red dot path and focus in all corners	
Limit switches placements	
X and Y axes full range movement	
Bed alignment and full depth movement	
X & Y axes speed control	
Belt tightness	
Full keypad functionality	
Motor driver current limits	
Earthing & cable testing	
<b>Verifications done by:</b>	

### Service Entries:

(Must be filled by the technician for every visit)

[illegible]

### Service Entries:

(Must be filled by the technician for every visit)

[illegible]

**Customer Installation Feedback Form:**

(A copy of this must be sent to the company back to claim the warranty)

Customer Name	
Registered Address & Phone Number	
Product ID	
Machine Model	
Delivery Date	
Installation Method	<input type="checkbox"/> Direct visit to the company & got training <input type="checkbox"/> Online support from the company <input type="checkbox"/> Engineer support at the customer Place
Support Engineer's Name	
Installation charges (if any)	
Software training	
Hardware full testing	
<b>Visual verifications by the customer (tick or remark)</b>	
Any physical damages	
Software installation	
Full functionality check	
Earthing & cable testing	
<b>Declaration:</b> Machine received in good condition and the full functionality is tested. I have gone through the company's norms and user guide provided. I hereby declare to taking the responsibility of handling the machine properly.  Date: Place: <span style="float: right;"><b>Signature</b></span>	





**For guidance or feedback**  
**[feedback@retechlasers.com](mailto:feedback@retechlasers.com)**