

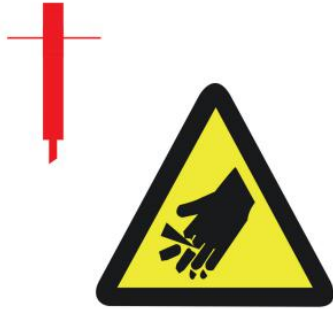
USER'S MANUAL FOR DT-1680

SERIES OF DIGITAL CUTTING MACHINE



Safety Precautions

- Do not allow small children to touch the cutter.
- To ensure the safe and correct use of your cutter, read this manual thoroughly prior to use.
- Keep the manual in a handy location for quick reference as necessary.
- The following describes important points for safe operation. Be sure to observe them strictly.



Be careful when handling the cutter blade.

- * Touching the blade with your bare hand may cause injury.
- * Do not touch the cutter blade while cutting is in progress.

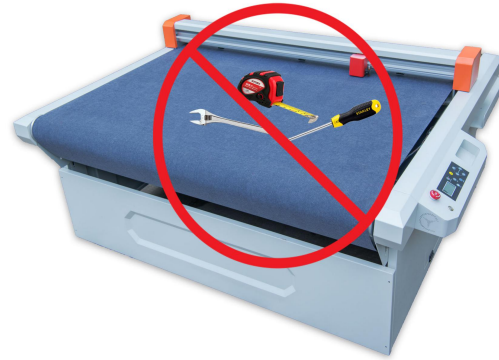


Do not touch the moving parts such as the carriage and belt while cutting or plotting is in progress.

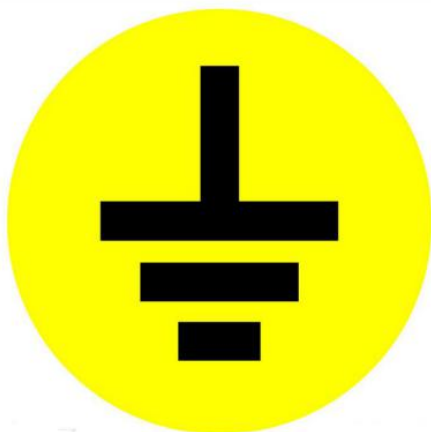
- * Such action may result in injury.



Keep your hands, hair, wearings, etc., away from the moving parts such as the carriage and belt even if the cutter is stopped, as it may suddenly start moving when data is received.
* Such action may result in injury.



Do not put sundries on table top or gantry top.
* It may cause machine failure.



Be sure to ground the earth terminal.

- * If the cutter is not grounded, the operator could suffer an electric shock in the event of current leakage.



Do not disassemble, repair, or remodel the cutter.

- * Such action may cause electric shock or a fire hazard due to current leakage.
- * Contact with the high-voltage parts within the cutter may cause electric shock.
- * If the cutter requires repairs, contact your sales representative or Gunner .



Do not connect the cutter to a non-rated power supply.

* Such action may cause electric shock or a fire hazard due to current leakage.



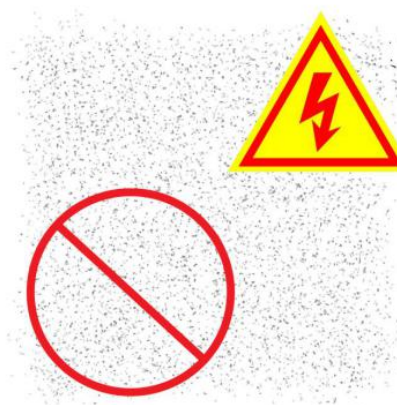
Do not use the cutter in a location where it will be exposed to water, rain or snow.

* Such action may cause electric shock or a fire hazard due to current leakage.



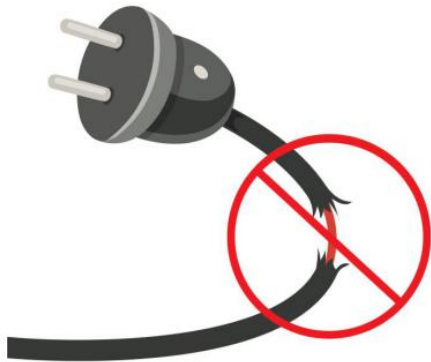
If the cutter generates smoke, overheats, emits a strange odor, or otherwise functions abnormally, do not continue using it. Turn off the power and unplug the power cord from the electrical socket.

- * Use of the cutter in such a condition may result in a fire hazard or electric shock.
- * After confirming that smoke is no longer being emitted, contact your sales representative or Gunner for repairs.
- * Never attempt to perform repairs yourself. Repair work by inexperienced personnel is extremely dangerous.



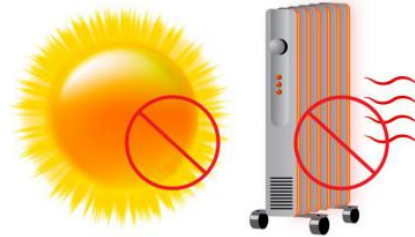
Do not allow dust or metal scraps to adhere to the power plug.

- * Such action may cause electric shock or a fire hazard due to current leakage.



Do not use the power cord if it is damaged.

- * Use of a damaged cord may result in electric shock or a fire hazard due to current leakage.
- * Replace the power cord with a new one.



Do not use or store the cutter in a location exposed to direct sunlight or the direct draft of an air conditioner or heater.

- * Such locations may impair the performance of the cutter.



When using indoor lighting such as fluorescent or other electrical lamps, provide a distance of at least one meter between the cutter and the light source.

* Close proximity of such a light source may cause the sensor to malfunction and prevent proper size detection of the media.



Do not use the cutter in an excessively dusty or humid location.

* Such locations may impair the performance of the cutter.



Do not use the cutter in a location subject to excessive mechanical vibration or electrical noise.

* Such locations may impair the performance of the cutter.



When disconnecting the power cord or interface cable, do not pull on the cord/cable.

* Such action will damage the cord/cable, resulting in a fire hazard or electric shock.



Do not attempt to lubricate the cutter mechanisms.
* Such action may cause it to break down.

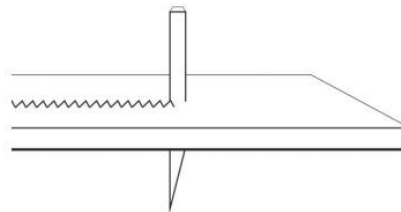


Do not clean the cutter using volatile solvents such as thinner or benzene.
* Such action may impair its performance.



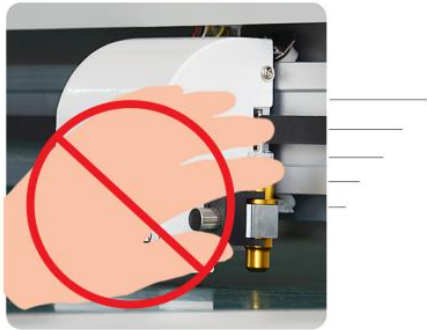
Provide sufficient space around the cutter so that it does not strike any objects in its vicinity during cutting.

* Such contact may cause misalignment in cutting or plotting.



When using the cutter, take care not to extend the blade more than necessary.

* An overly extended blade will damage the cutting mat and adversely affect the cutting quality.



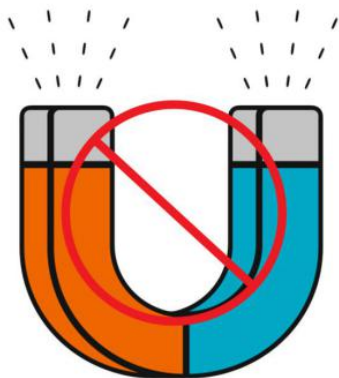
Move the tool carriage slowly when moving it manually in order to load the medium or for other reasons.

* Moving it quickly may damage the cutter.



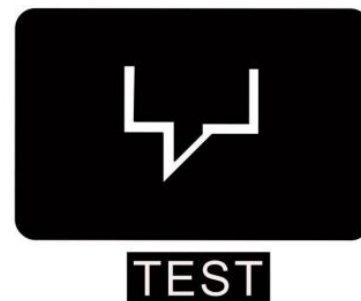
Do not place the cutter on an incline, areas subject to many vibrations, or other unstable locations.

* If the cutter falls, it may sustain damage.



Do not place magnetic cards, diskettes or similar items in the vicinity of the tool carriage.

* The magnetic force may destroy the data on the magnetic cards or diskettes.



Run a test cut when cutting media with unknown condition settings.

* Running a cut operation with incorrect setting values may cause a large overload to the blades and device or a system breakdown.

Gunner Shanghai Automation, LTD

Tel: 008621-34553068

Web: www.gunner-cnc.com

Email: daniel@gunnershanghai.com

Add: Building C, NO.35, No.1069, 799 Middle Jiasong Road, Qingpu District, Shanghai.

Preface

Thank you for choosing Datalab Auto Feeding CNC flatbed cutter. Please read this manual carefully before using to guarantee the best cutting quality and productivity.

Though the provided information is detailed and accurate to the maximum, if you find anything unclear or incorrect, or wish to make other comments or suggestions, please contact your sales representative or Datalab vendor.

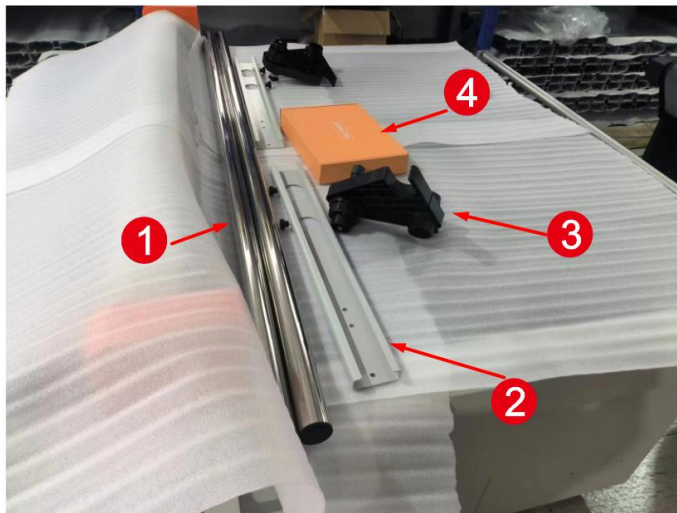
Notwithstanding the stipulations in the preceding paragraph, Datalab assumes no liability for damages resulting from either the use of the information contained herein or the use of the product.

The product specifications and other information in this manual are subject to change without notice.

Chapter I How to Install Hardware

Accessories attached to digital cutter:

1. A pair of poles
2. A pair of stands for poles
3. A pair of roller stands
4. A tool box



Inside of the tool box, there are:

Allen key x 2

Screw for stands x 4

USB code x 1

Blade holder x 1

Pen holder x 1

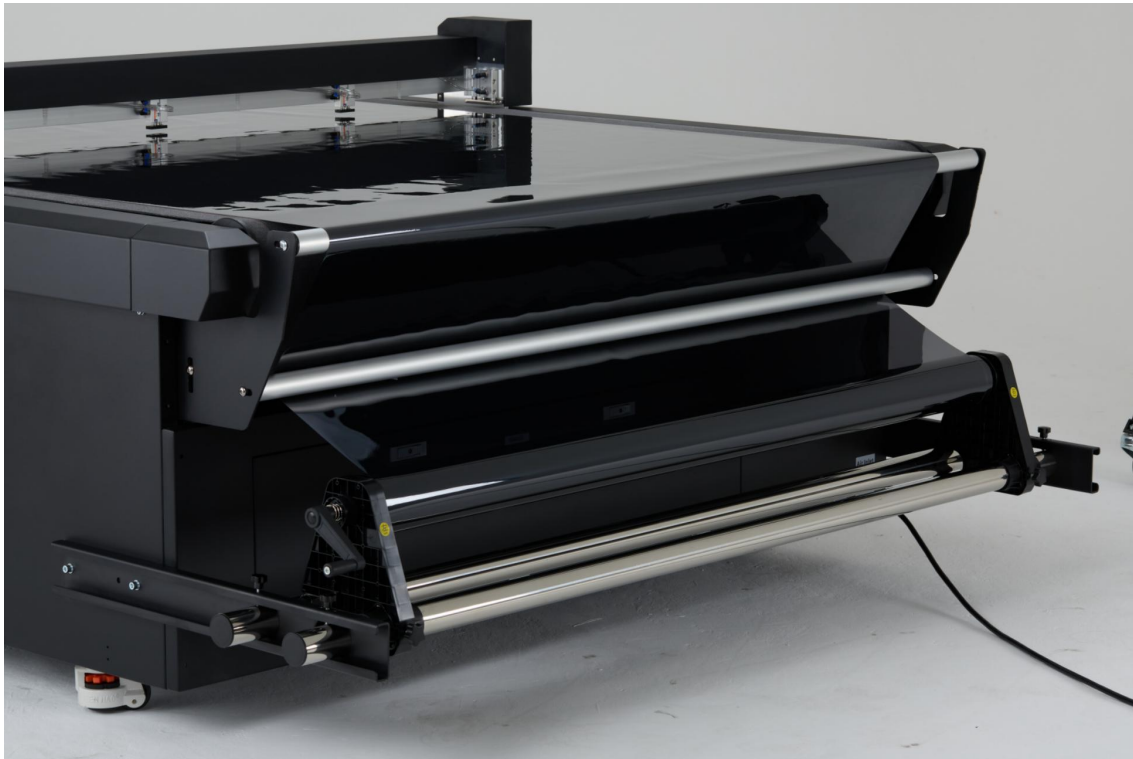
Blade kit x 1 (3 blades inside)

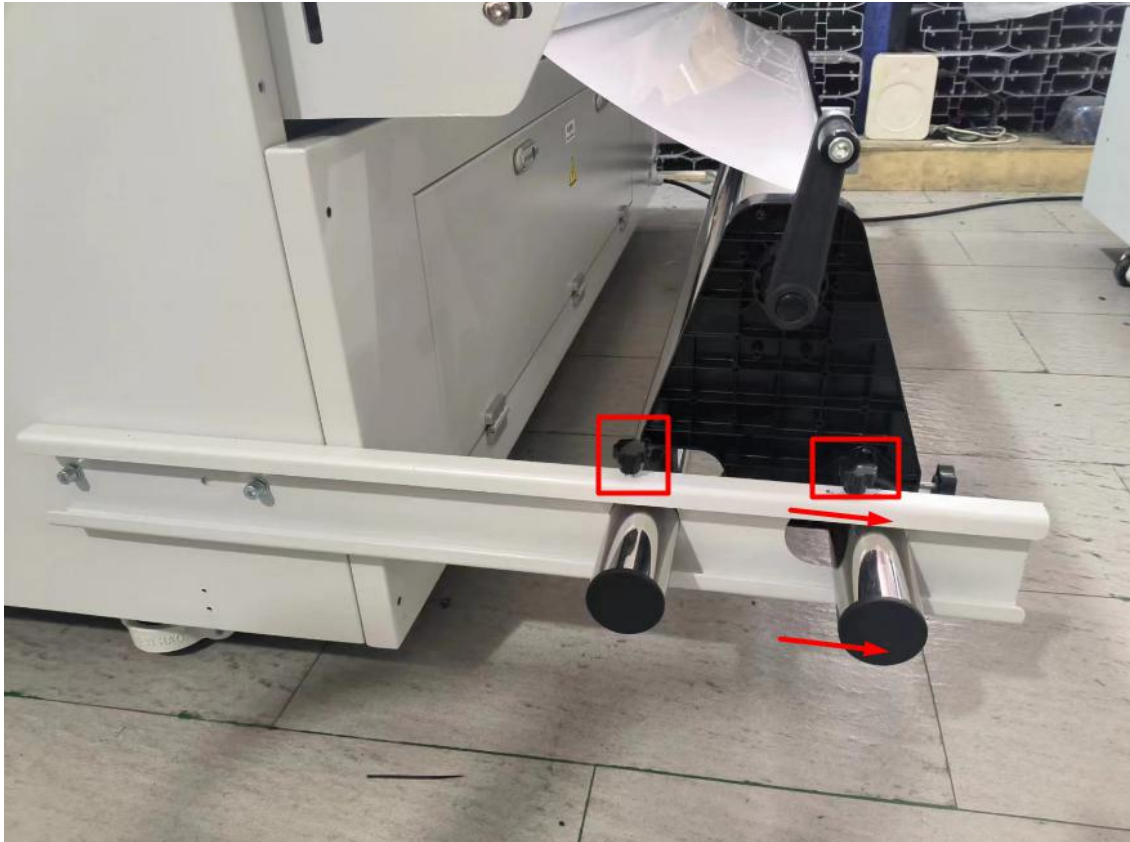


1.1 Assemble the roll media rake as picture below





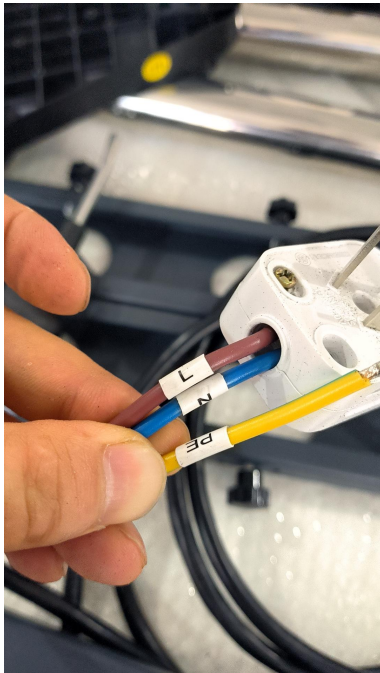




Please move the outside poles to the right and fasten the screws.

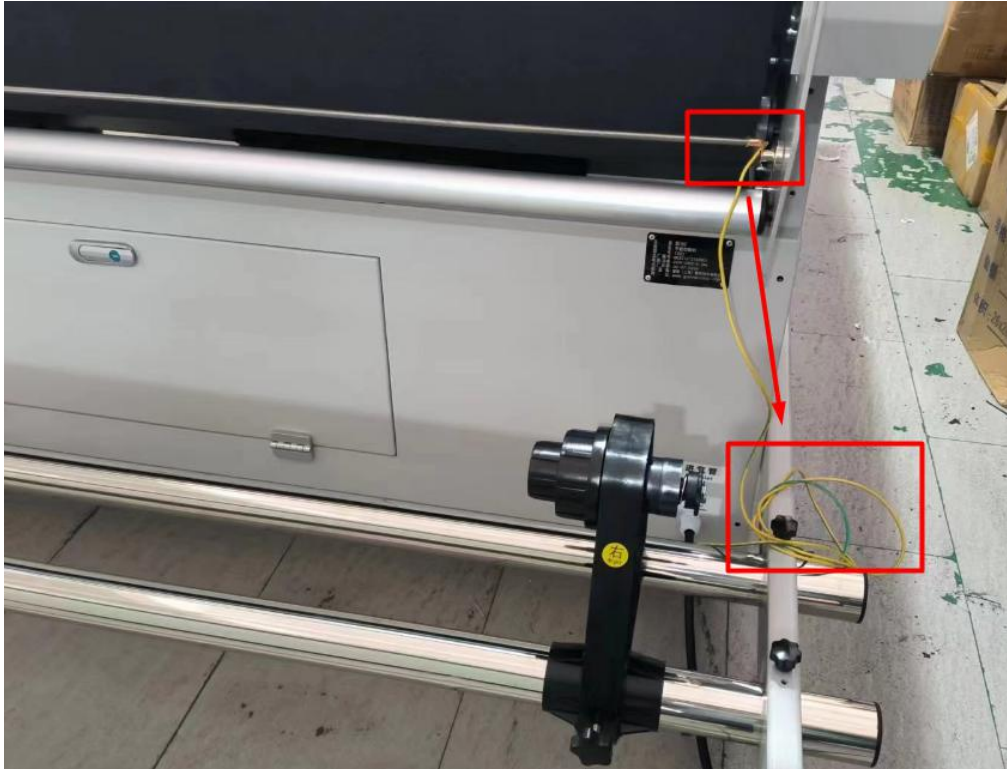
1.2 Power Input and Air Pressure

For 220v power source: Power consumption of the machine is 3.7kw; Need Socket and Plug of 16A, or connect to a dedicated C32 Air Protection Switch, and need to Ground with Earth Wire. Coming with the machine, there is a power code with length 5 meters, Red wire (L) for Live Wire, Blue(N) for Neutral Wire, and Yellow(PE) for Earth Wire.



For cutting PPF, as serious static electricity happens when tearing protective film, so Extra Earth Wire is needed, in short quality earth wire for power of machine and extra earth wire are all necessary.





Air compressor

Users shall prepare an air compressor with container volume bigger than 50L , which can output pressure 0.7Mpa, a pipe with outer diameter 8mm is needed to connect compressor and cutter.



产品信息

产品型号	1100W-40L	550W*2-50L	750W*2-50L
功 率	1100W	1100W	1500W
排气量	100L/MIN	80L/MIN	120L/MIN
气罐容量	40L	50L	50L
净 重	30.5KG	30KG	33KG
尺 寸	62*28*66CM	55*28*53CM	59*29*55CM



1.3 Specifications of PC Recommended (laptop or tabletop)

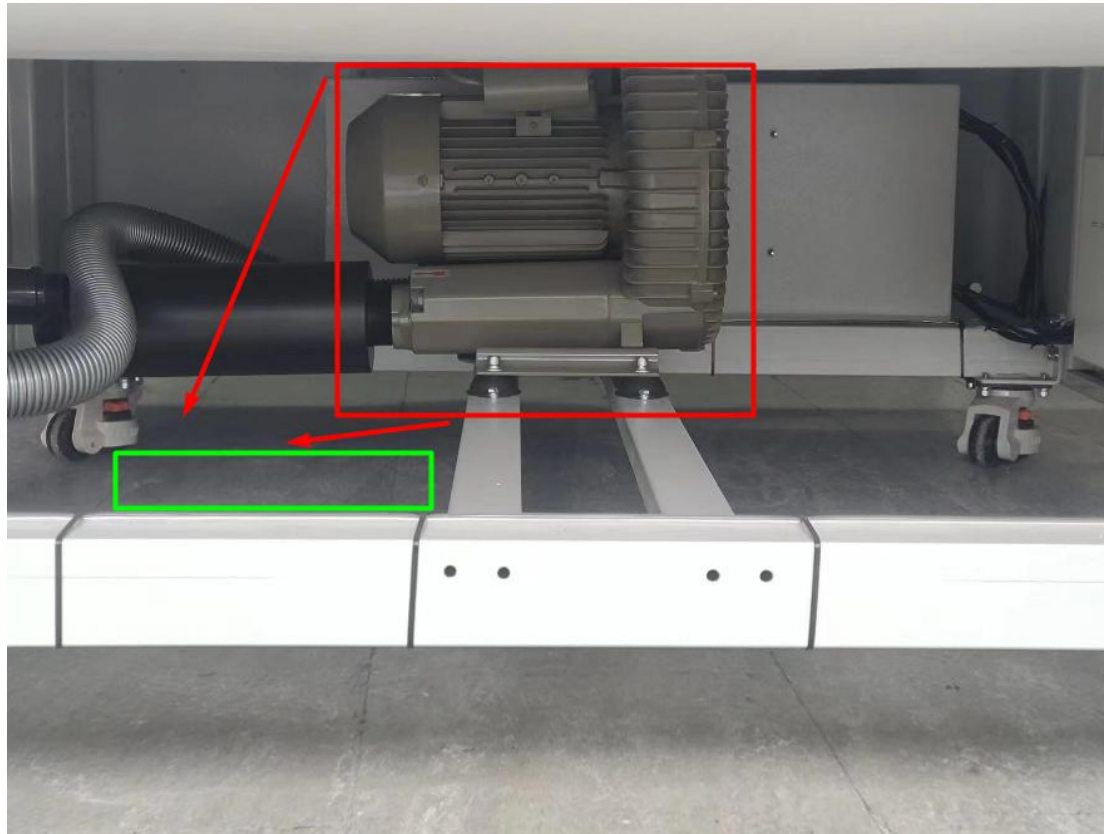
CPU:	i5-10400f
Cooling:	Copper pipes x 4
Memory:	ADATA 16G
Mainboard:	ASUS H510
Hard Disk:	SEAGATE 500G m.2 Solid State Disk
Graphics Card:	Colorfu GTX1650 4G
Cabinet:	EZVIZ 6
Power:	Power Train 600ws
Monitor:	AOC CQ32G2E

When PC is ready, please connect it to cutter with a USB cord.

When cutter is put in position, please spin the orange gear anticlockwise to lock the position of cutter.

It is suggested to open the front door of machine and put the vacuum pump on ground, so that resonance won't influence working of machine.



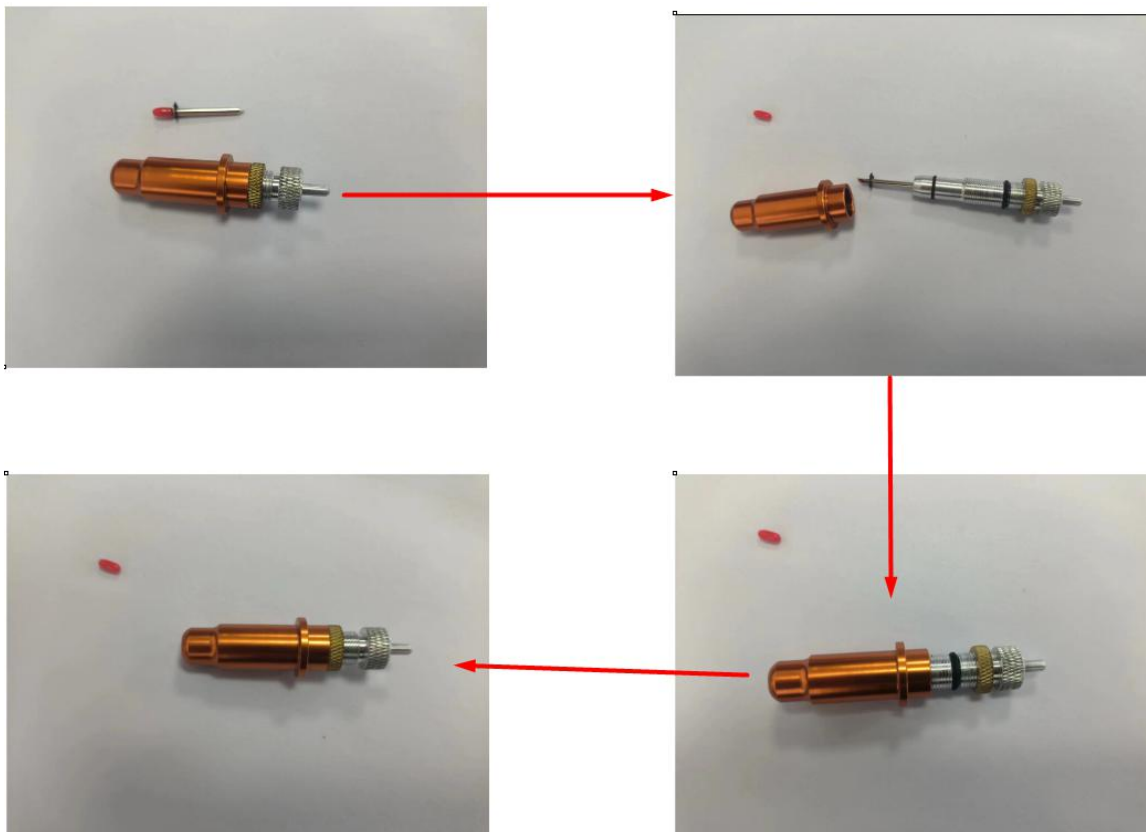


Chapter 2 How to Operate the Cutter

2.1 How to install cutter blade

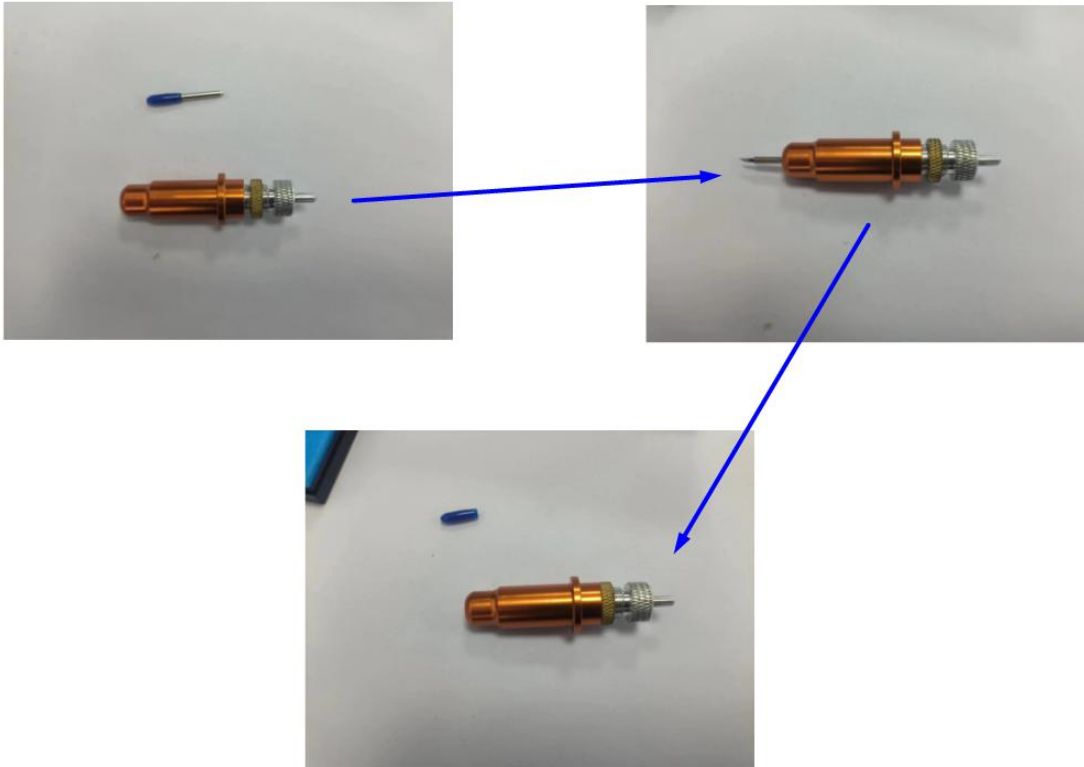
About cutter blade with clasp and red cap

Disassemble cutter holder first, then take off red cap of the cutter blade and insert it into the silver holder all the way down, then install the cover of the holder. You can adjust the length of the blade that comes out of the holder by spinning the silver knob, after that please fasten the golden knob.



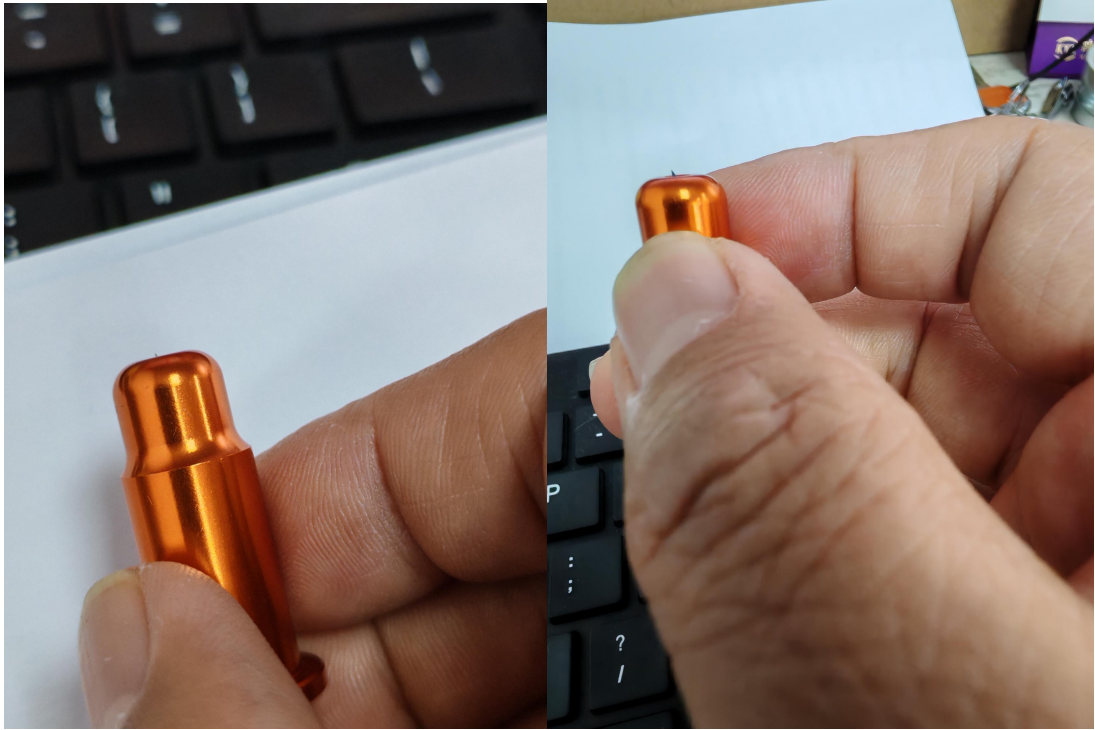
About cutter blade with blue cap

Take off blue cap of the cutter blade and insert it into the cutter holder all the way down, you can adjust the length of the blade that comes out of the holder by spinning the silver knob, after that please fasten the golden knob.



To adjust the length of the blade that comes out of the holder, please let the length bigger than thickness of media a little, normally the blade that comes out of the holder is 0.3-0.5mm, the blade tip should come out of holder as short as possible on the premise of cutting through the media.





2.2 How to install cutter holder

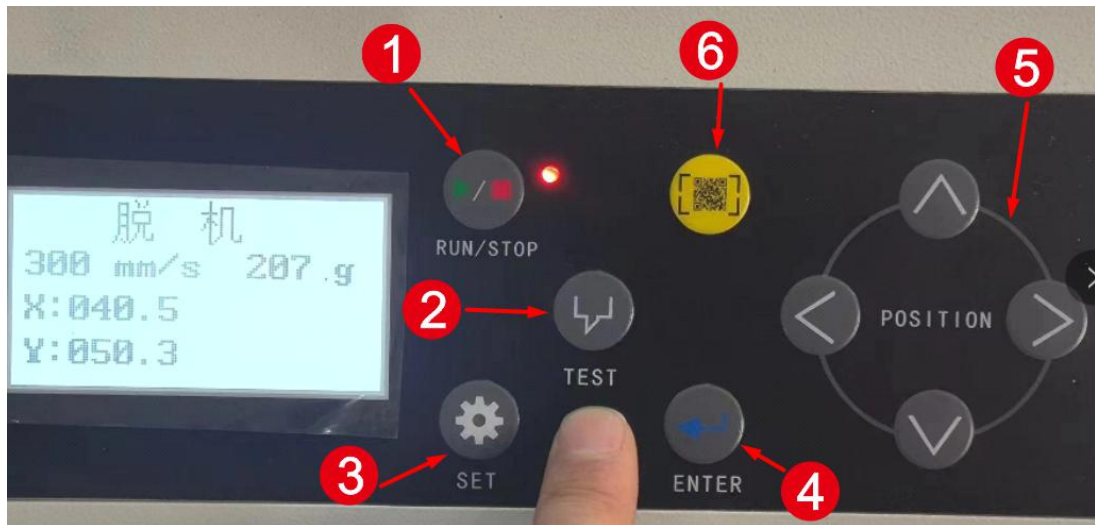
Make sure that the c-clamp is engaged on the cutter holder, and then tighten the screw.

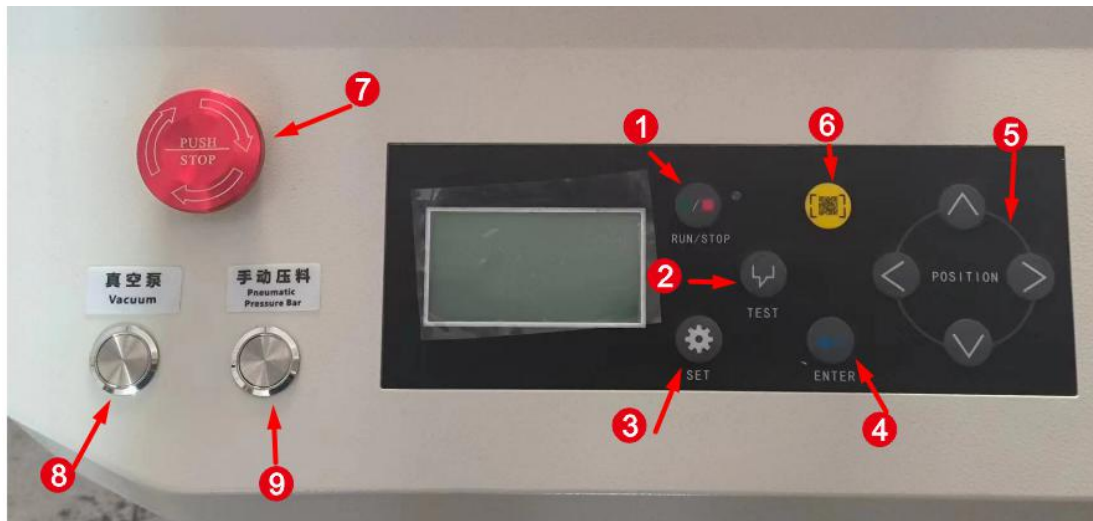


2.3 About keypad

Functions of Key

- ① For operations : ONLINE, OFFLINE, PAUSE, CONTINUE(AFTER PAUSE) -- Key combination.
- ② For test cutting.
- ③ For setting up cutting pressure, cutting speed, tip compensations and so on.
- ④ For saving parameters.
- ⑤ For moving tool carriage to different directions.
- ⑥ For QR code scanning(not used for this model of machine).
- ⑦ EMG, for emergency only.
- ⑧ For switching ON/OFF vacuum pump.
- ⑨ For feeding roll media manually, pushing the key then cylinders will come down to push the media again conveyor belt.





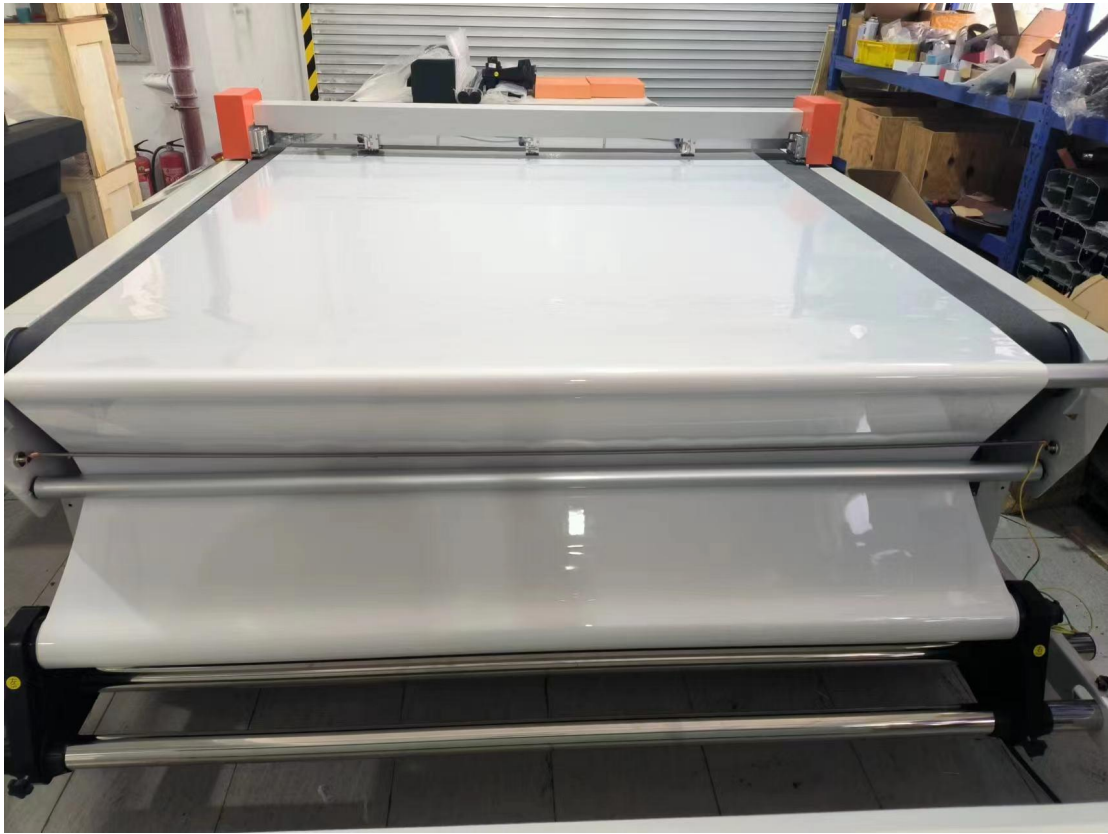
2.4 Loading Film

Put the roller of film on rake and pass it through poles as picture below, then place the film in machine table. Aligns the edge of film with the sign line of the conveyor belt.

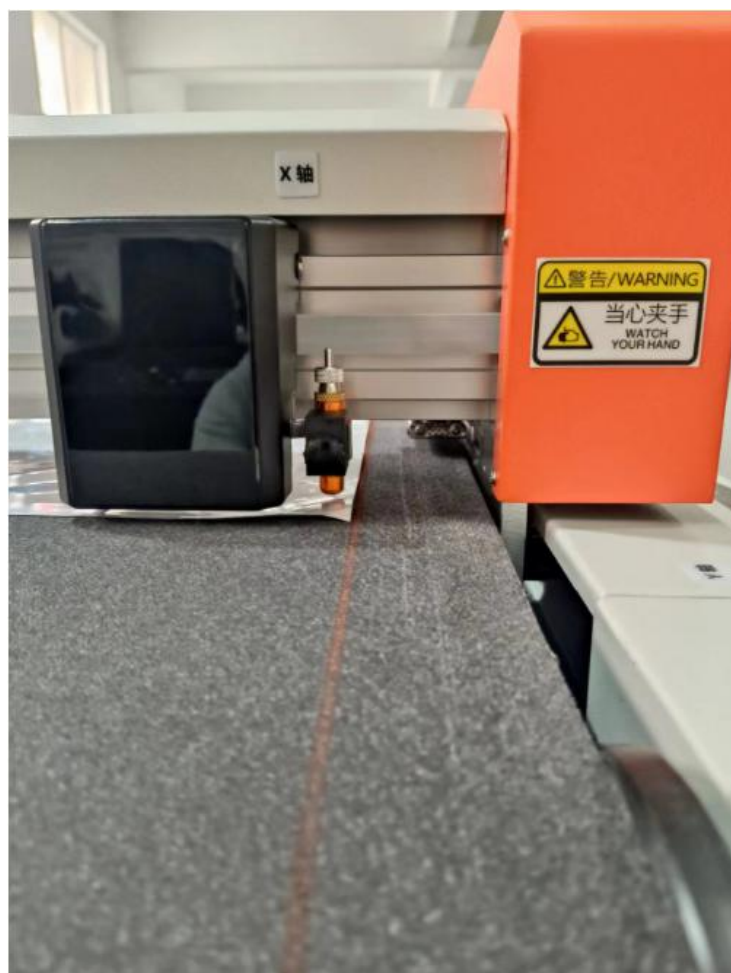


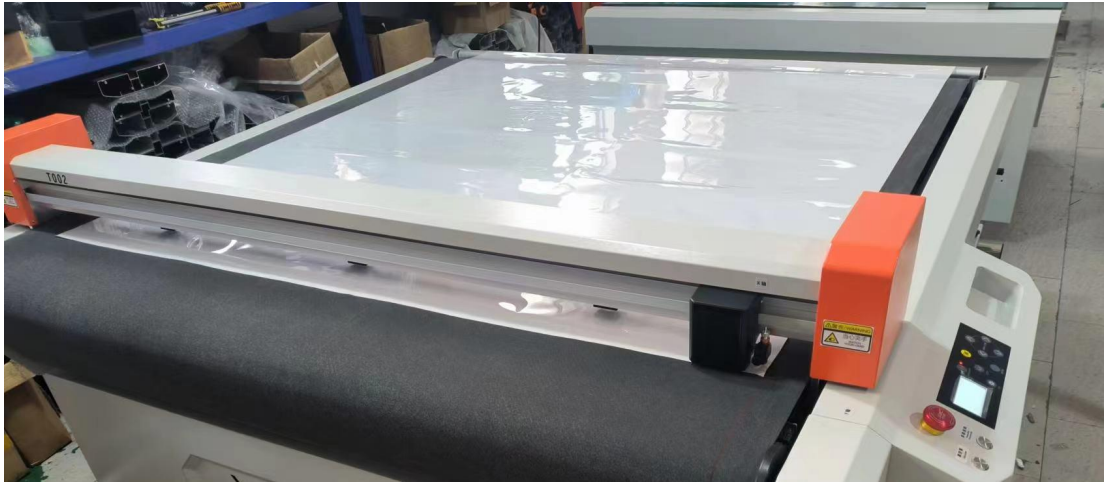








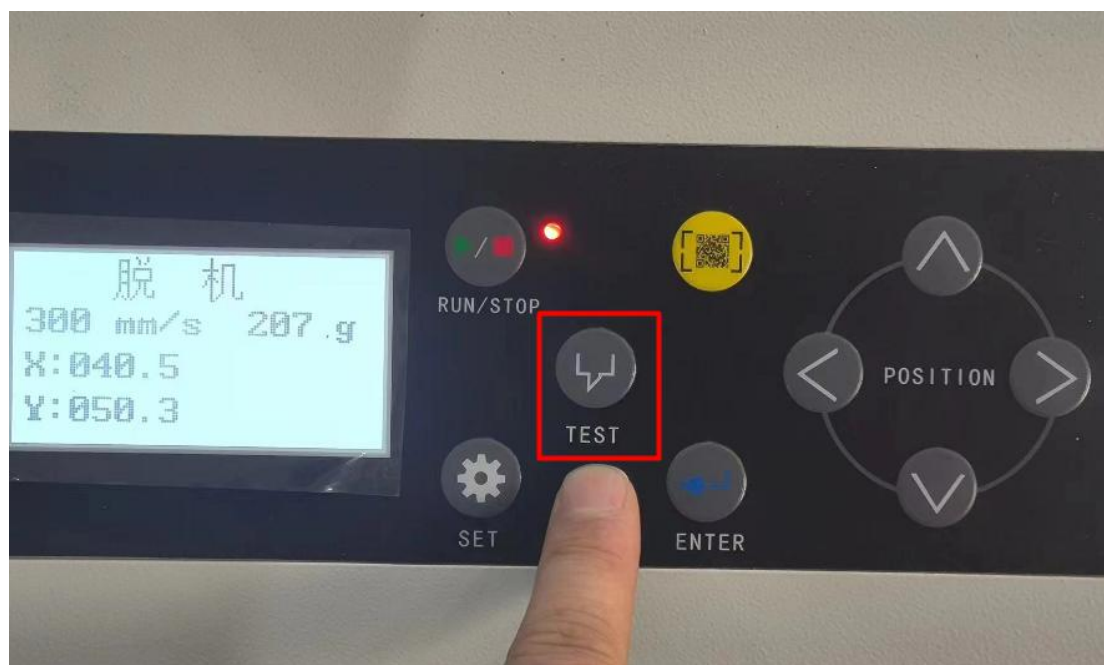


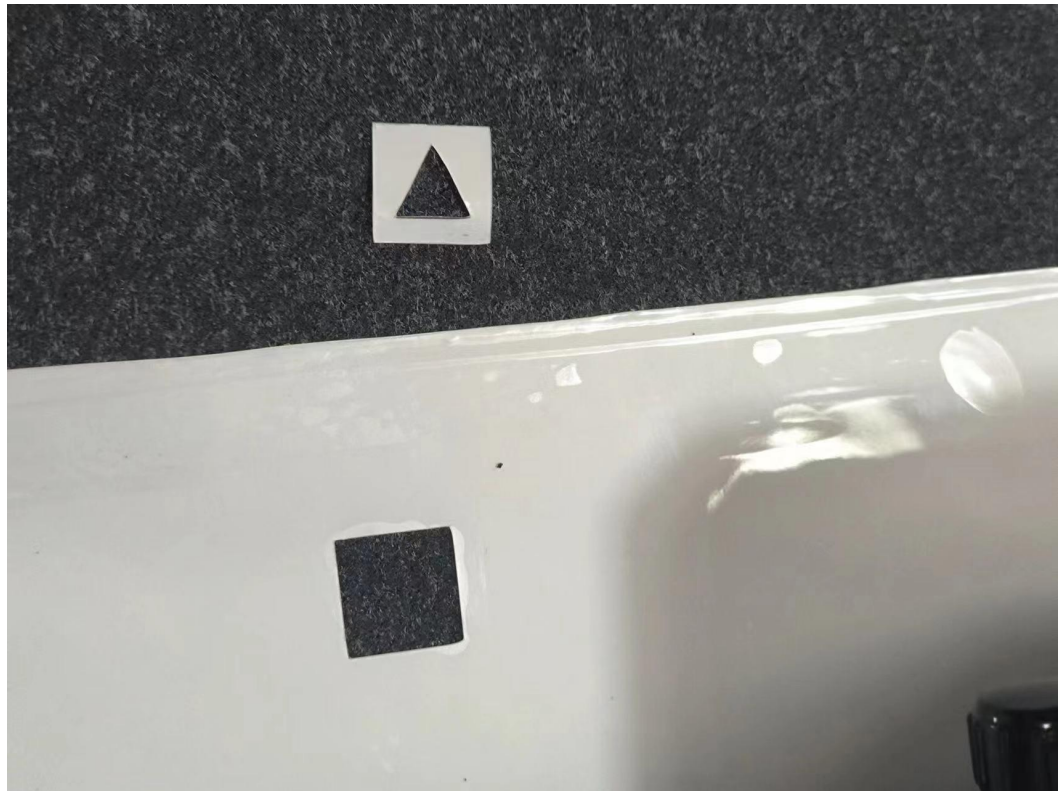
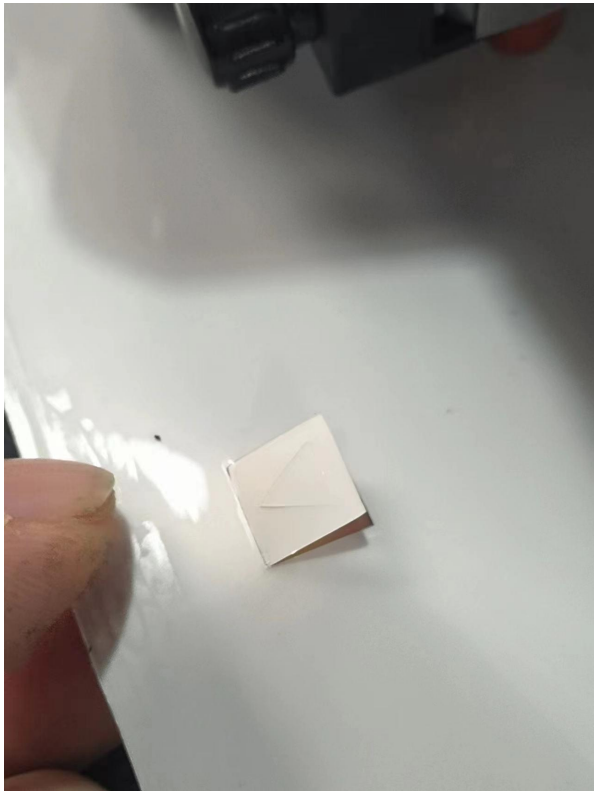


2.5 Testing Cutting Pressure

Press the direction keys to move the tool carriage onto film, then press button TEST to test cutting pressure, vacuum pump starts to work at the same time, then machine will cut a square with a triangle inside. Check if film has been cut through, press is right if yes, increase pressure if not and continue testing till film could be cutting through.

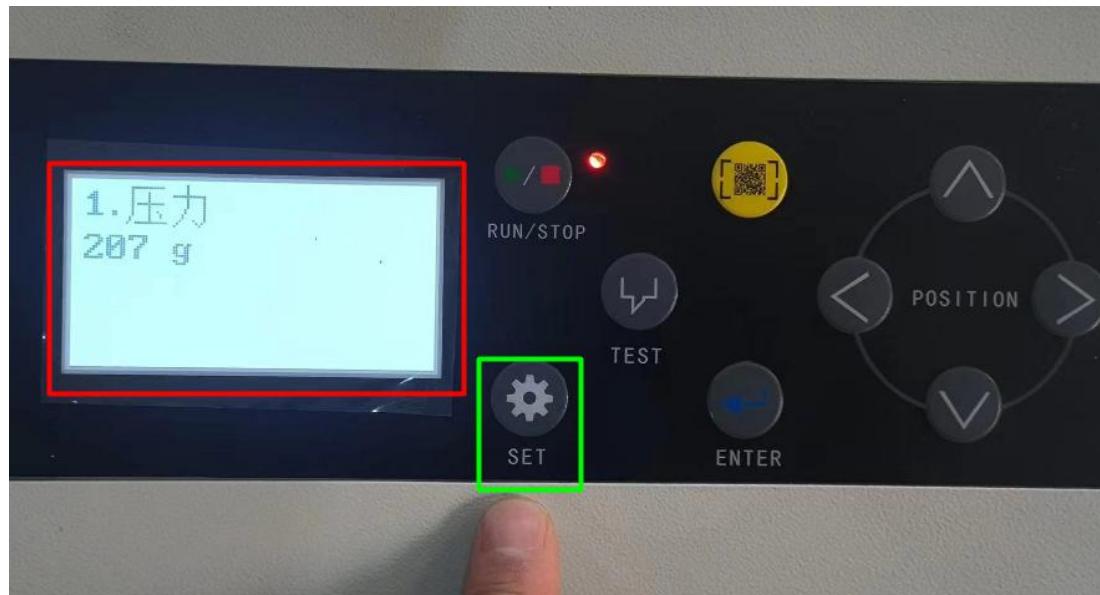
If film could not be cutting through with pressure bigger than 300g, please check length of blade tip that comes out of cutter holder, make it comes out more and continue testing following previous steps.

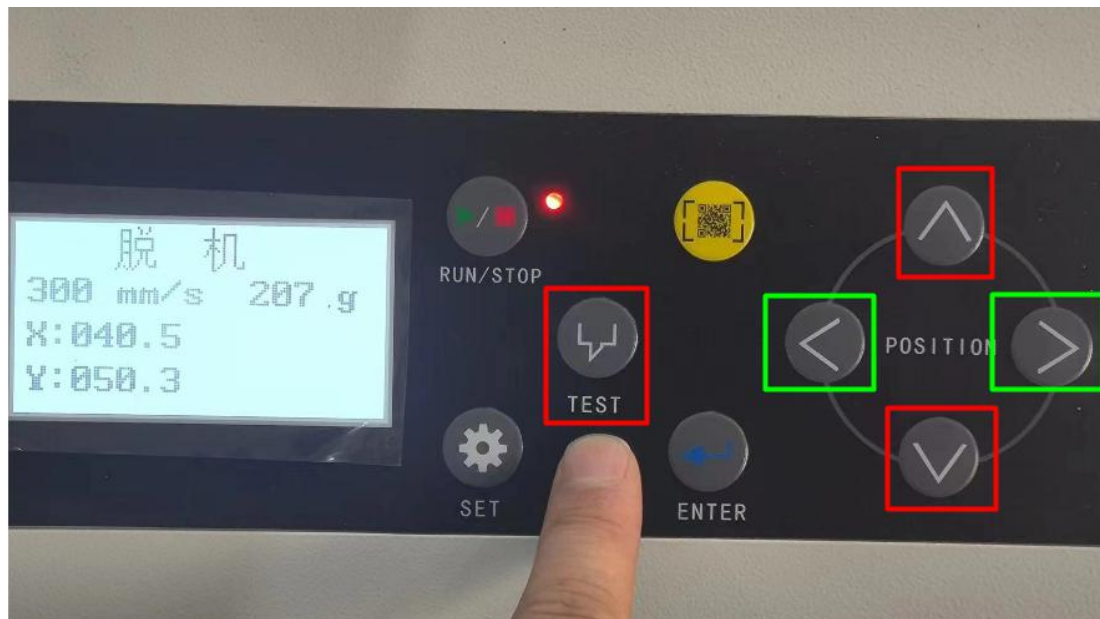




2.5 Adjusting Cutting Pressure

Press SET and you will see menu of setting, press leftward or rightward buttons to get to the cutting pressure option, then press upward or downward buttons to increase or decrease cutting pressure. Press ENTER to save parameters.





2.5 Adjusting Speed

We recommend cutting speed as 300mm/s, travel speed as 500mm/s.



2.5 Choice of cutter blade

Normally there are 3-piece of blades with clasp and red cap and 2-piece of blades with blue cap. Blade with red cap is suitable to cutting PPF, blade with blue cap is good for window tint. Knife Offset for red cap blade is 0.75, while it is 0.53 for blue cap blade. Please take a note to setup different knife offset for different blade.

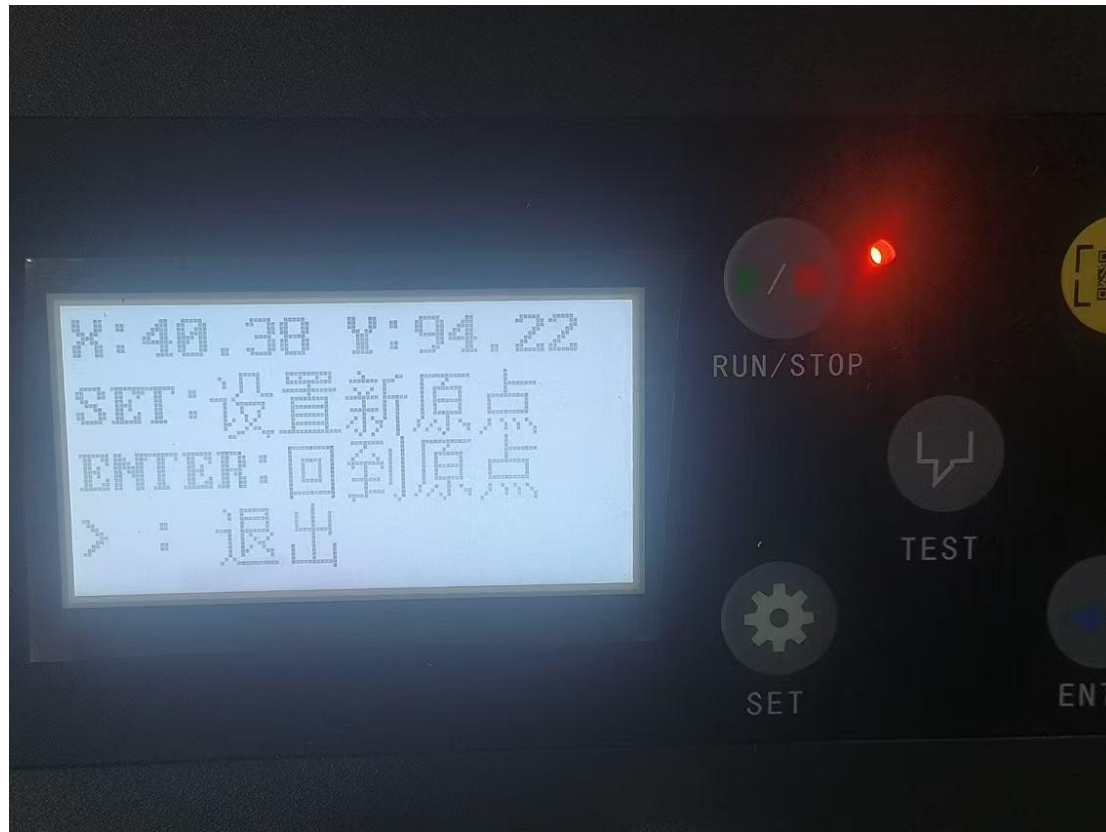


2.6 Setup Work Origin

Tool carriage moves leftward or rightward along X axis, while it is moving forward or back along Y axis. When edge of film is line up with sign line, move tool carriage inside for about 10mm, at this time the stroke X travelled is about 40mm. Work origin for X is good to be between 40mm and 45mm, while it is good to be between 50mm and 100mm for Y axis.

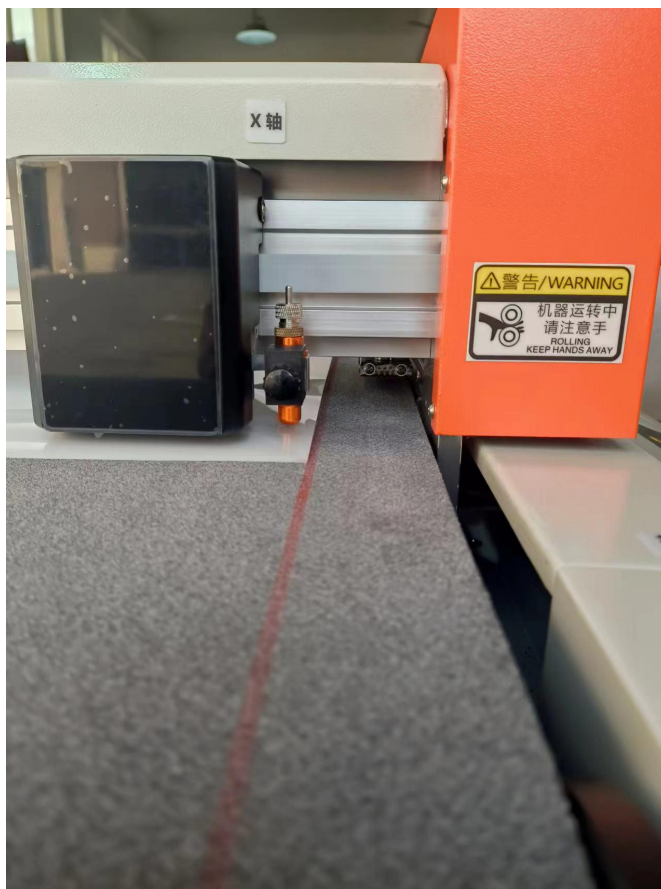
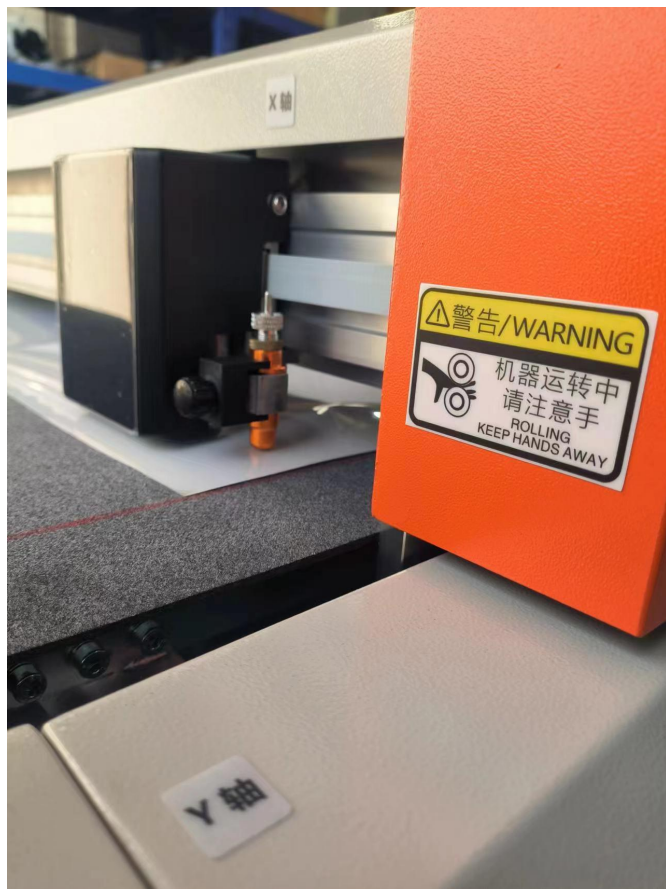


After setting up a work origin, before every cutting operation, keep pressing ENTER and a new screen will popup, press SET to setup new work origin, setting up a new work origin for each work is recommended, because it is allowed to start over from that work origin in case of power cut.



After setting up a work origin, press button RUN/STOP to make machine online.





Chapter 3 File Transfer

After setting up cutting press and work origin, turn on vacuum pump, press RUN/STOP button to make machine ONLINE.

Choose a CAD/CAM software to start cutting.

Take patter software for vehicles as an example:

Select pattern(s) and click BOTTOM LEFT ALIGNMENT

Then click CUT to popup a new screen

--> About model of cutter, select GUNNER Plate flatbed cutter

--> Select SEGMENTED AREA CUTTING

--> Set length of segment as 1000

--> Click CUT to start cutting

NOTES (for automotive aftermarket)

- 1, Aligns the edge of film with the sign line of the conveyor belt, then turn on vacuum pump, then fix the roller of film and make sure there is no horizontal tilt, so that the tensions of left side and right side are same when dragging the film.
- 2, Put cutter blade 15mm inside of material (no more than 20mm), now the position of origin should be X=40-45mm, Y=80-100mm, pressing ENTER for 3 seconds, press SET to save parameters.
- 3, Different cutting pressure, speed, length of blade come out for different materials, please take following table for reference, please be noted that thickness and ductility of different brand names are different a little.
- 4, Appropriate tip-length(length of cutter blade that comes out of cutter holder) : leaves trace on the next layer of film for half cutting; bigger than thickness of film for cutting through / perforation cutting, excessive tip-length is not suggested, please remove the protective film before cutting.
- 5, Please do not make cutting speed more than 40mm/s, or the rotation speed of blade-tip can not be quick enough to match the cutting speed, which results in low quality cutting, rough cutting edge and rounded corner.

- 6, For pattern software (automotive aftermarket), please click Bottom Left Alignment after typesetting.
- 7, Please select SEGMENT when sending cutting job and length of each segment is 1000mm.
- 8, Please check the cutting pressure and speed as shown in the LCD of cutter, make sure the value of X,Y are appropriate or not according to following table.
- 9, Model of machine to be selected: Gunner Flatbed Cutter.
- 10, Please check the barometer before operation, air pressure for the left barometer should be more than 0.6, while it is 0.2-0.3 for the right one; make sure air pressure in on power and air valve is open.
- 11, When cutter starts to work, press RUN/STOP to pause, then check cutting quality, if film is not cut through, please increase the cutting pressure and continue to cut; For half cutting, please make sure there is traces leave on the next layer of film or easy to peel off by hand, press enter to continue cutting.
- 12, After feeding the first segment and starts to cut the second segment, please take a close look at the joint, if there is any closing failure, please pause the cutting and check for the reason or get contact with professional technical support.
- 13, During feeding or film, if any wrinkle happens, please press RUN/STOP to pause, then try to smooth the wrinkles one by one, continue to cut when film is flat/even.
- 14, When cutting is going to be finished soon, please make sure there is enough residual film; please separate film from roller in advance.
- 15, When cutting is done, in order to protect conveyor belt, please cut film with a scissor but not a knife, so as to protect co

Thickness of Film	6.5	7.5	8.5	10	PPF/ Vinyl Sticker	Window Tint
Pressure for Half Cutting	180-200	200-240	260-280	300-350	Little differences as different types and brand names	Based on PPF of thickness 6.5mil
Pressure for Perforation Cutting	230-260	260-300	300-350	350-400	Increase by 30g for materials with protective film	Based on PPF of thickness 6.5mil

Cutting Speed	300-350	300-350	250-300	250-300	Decrease speed by 50mm/s for materials with protective film	Based on PPF of thickness 6.5mil
Tip Length	0.2-0.3MM	0.3-0.4MM	0.4-0.5M M	0.5-0.6M M	Increase by 0.1mm for materials with protective film	0.1-0.2mm Too long to quality cutting
Notes	Before cutting please make tip-length appropriate, setup cutting pressure according to this table and result of TEST cutting, it is suggested to increase/decrease cutting press by 5g each time to make cutting pressure appropriate, after that, please setup work origin, it is better to setup work origin at a same point(fixed position) , after that, please make machine ONLINE to receive cutting job from PC, for stable communication please use USB cord, please do not operate other software when sending cutting file, you may operate other software/programme 3 minutes later after cutting .					After typesetting, please check material width (not bigger than 1.5 meter) and length, length of material loading should be 1.5 meter longer than length designed.