



CHESTER MACHINE TOOLS

CHESTER LUMI 530/640

CO2 Laser Cutting and Engraving machine

Laser cutting machine designed for use in Educational establishments.

There is a wide range of models of various sizes to suit your applications.

All our Laser machines have a high level of safety built in. The robust high speed motor will work at a speed up to 1000mm/s whilst producing very low sound levels and vibration.

To allow for the production of long workpieces the back door has been designed for ease of access. Material can be accommodated easily and quickly without restrictions.

All our laser machines have autofocus including red dot positioning. This enables the operator to setup workpieces accurately before processing. Real-time red-dot positioning provides for time saving setup and production.

Safety features

1. Emergency Stop Switches
2. Visible Alarm Lights
3. Water protection switches
4. All wiring grounded
5. Switch Off Heat Detector – safety feature
6. 5x open flap protection
7. All panels fitted with safety glass



600x400mm power = 60/80W
900x600mm power = 80/100W
1300x900mm power = 100/130W
1600x1000mm power = 130/150W



Specifications

Model	530	640
Laser type	Sealed carbon dioxide glass laser tube	
Laser power	55W	60-80W
Work area	500 x 300mm	600 x 400mm
Processing platform	Honeycomb	Honeycomb platform + Aluminium knife platform
Platform lifting	No	Yes
Platform lifting height	N/A	155mm
Maximum cutting thickness	20mm (Acrylic)	
Maximum working speed	1-600mm/s	Up to 1000mm/s
Positioning accuracy	<0.025mm	0.01mm
Lifting stroke of laser head	<30mm	N/A
Material thickness	<22mm	150mm
Resolution (DPI)	100-500 DPI (user set)	Up to 1000 DPI (standard head)
Focus mode	Auto focus, Manual focus	
Power off continued carving	Supported	Supported
Motion control system	High-speed stepper + closed-loop motor	High-speed stepper + closed-loop motor
Exhaust system	Air pump + fan + 5m duct	Industrial grade air pump + Exhaust fan + 5M exhaust duct
Cooling system	Built in water cooling system with 3.2 Litre water tank	Industrial grade water cooling system integrated
Connection method	Support USB, Network cable and WIFI connection	
Support system	Windows XP/2000/8/10, macOS	
Support software	Ps, Ai, CorelDraw, AutoCAD, Solidworks etc..	N/A
Support formats	JPG, DXF, Ai, DST, PNG, BMP, TIF, SVG etc..	Bitmap format JPG, PHG, BPM Vector format LCP, DXF, PLT, SVG
Power supply voltage	220V/110V AC 50Hz/60Hz	220V
Laser service life	>4000-6000h	N/A
CNC software system	LightMaker or Lightburn (pc), LightMaker (mobile)	
Machine working noise	<60db	<60db
CCD camera pixel	4K 16MP	N/A
Processing technology	N/A	Cutting, tracing, shallow carving, deep carving
Operate control method	5inch LCD touch screen/Mobile phone app/PC software	
Device internal storage	N/A	256MB
Safety protection	Interlock switch with open cover to stop, emergency button, safety key, working status indicator	N/A
Cooling method	Built-in water cooling system - water tank and water chiller	N/A
Focus method	Support material autofocus	N/A
Machine size	1080 x 585 x 320mm	1160 x 950 x 1180mm
Machine weight	60kg	~300KG

Water cooling system	530 only
Working voltage	DC 240V air cooling + aluminium coil
Water tank capacity	4.5L
Maximum pressure	5M
Water flow	11000L/h or external dedicated CW3000 laser chiller (optional)

Built-in air pump	530 only
Voltage	AC220V/110V 16W
Displacement	50L/min
Noise	<48dB
Air pressure	>0.05Mpa

Suction system (external conjoined) side down ventilation	530 only
Rated voltage	DC 24V/62W
Air volume	280 m³/h
Noise	<50dB
Voltage	AC 220V/110V 120W
Filtration system	A piece of cotton + Silent fan + 6 industrial grade activated carbon

Safety specifications: Comply with US FDA laser safety standards, and EU CE laser safety standards, Administrator mode, working cabin cover opening protection function: water cooling protection system, temperature control automatic alarm system, leakage and short circuit protection system, emergency stop protection system, closed Type optical system, toughened glass observation window, working status indicator light.