FL-510-1000 (500)

BAILEIGH INDUSTRIAL®

PRECISION. PERFORMANCE. PERFECTION.

SITE REQUIREMENTS

1. Power requirement to supplied transformer: 220-230V (7.5kw), 50/60Hz w/ <2.5% phase unbalance. <4 ohms ground resistance. Whether a voltage regulator is needed or not will depend on the actual condition of voltage on site. The power supply of the equipment might be damaged by the short time high voltage. Power supply to table: AC380V±10%, 50/60Hz;
2. Ambient temperature: 40-95°F
3. Ambient humidity: 5-95% (no condensation);
4. Working environment requirements: no strong vibration, no dust, corrosive gas and liquid contamination, and no strong electromagnetic interference (EDM machines, high-frequency welding).
5. Foundation to be level within 3/8". Slab should be poured to withstand 10,000lbs of heavy equipment.
6. Minimum suggested site area 18' x 10' + access to load/unload machine
7. Constant air supply (clean & dry) of 45CFM @175PSI required when using compressed air for cutting gas.
8. Constant supply of 45CFM @175PSI required when using compressed Nitrogen (N2) for cutting gas. Stainless steel only.
9. Constant supply of 45CFM @90PSI required when using compressed Oxygen for cutting gas. Oxygen required to cut mild steel thicker than 1/8".
10. 10gallons distilled water, or antifreeze (≤ 30% glycol based)

Laser Training

The following is an outline of the topics covered in our standard Laser Table training sessions. The sessions can be tailored to fit one or more persons, and are offered at no charge with the purchase of any Baileigh Industrial Laser Table at your facility.

Setup / Installation

Table set up

Cable Connections

Control Panel Wiring

Grounding / Electrical Requirements

Maintenance of Table

Servo Drives

Slide Ways

Downdraft

Cleaning

Table Operation

Control Panel Layout

Handheld Layout

Internal Library

Parameters

Downloading Externally Generated Parts / USB Drive

Operational Controls and Troubleshooting

Laser Cutter

Laser Setup

Consumable Overview

Proper Setup for Varying Materials

Air Requirements

Internal Harness Connection

Auto Height Control

Punch Height (delay)

Pierce height(delay)

Cut height

Software

BobCAD-CAM V29

Downloading and Installation

Simple Drawing Functions

Tracing

Lead Ins / Lead Outs

Importing External Files (dxf, jpeg, etc.)

Exporting to File or USB

Nesting (Auto and Custom)

CYPCUT CONTROLLER

- Supports AI, DXF, Gerber, and other graphic data formats. Accepts the international standard G code generated by software like AutoCad, MasterCam, BobCad, etc.
- Conducts automatic optimization when opening/importing DXF and other external files including: removing repetitive lines, merging connected lines, removing tiny graphics/ artifacts, distinguishing inside and outside dies, and automatic sorting. Automatic optimization can be defined, or each function carried out manually.
- Supports common editing and typesetting functions including: zooming, rotating, alignment, copying, combining, smoothness, connecting, scaling, etc.
- Easy to set lead-in and lead-out, kerf compensation, micro-joints, bridges, over cut, lead seal gap, etc.
- Curve splitting and connection, curve smoothness, text-to-curve, component integration and exploding.
- Flexible automatic sorting and manual sorting to optimize cutting process
- Capability to browse through the cutting order interactively
- Able to set punch, pierce, and cut speed; time, power, height, and frequency independently
- Material library

Theoretical cut speeds

Material	Thickness	500W	1000W
Mild Steel	*20ga*	390	780
	14ga	157	230
	11ga	98	125
	8ga	55	86
	6ga	39	74
	3ga	27	59
	1/4"	x	50
	5/16"	x	30
	3/8"	x	23
Stainless	*20ga*	187	780
	14ga	40	216
	11ga	x	74
	8ga	x	47
	6ga	x	24
Aluminum & Brass	*20ga*	x	300
	14ga	x	120
	11ga	x	28

Maintenance schedule

	Inspection Cycle	Item	Requirements
1	Daily	Operating platform	Remove waste and clean
2	Daily	X-axis bellows	Inspect and remove debris
3	Daily	Connections	Inspect for damage and tightness
4	Daily	Lubricator	Check oil level, add if necessary
5	Daily	Laser head	Inspect nozzle, ceramic, and lens for debris/damage. Replace as needed.
6	Monthly	Chiller	Clean air filter
7	Annually	Chiller	Drain and replace anti-freeze & filters

Typical Consumable life:

Laser lens: 600 hours

Ceramic: 2000 hours

Nozzle: 600 hours

TABLE SPECIFICATIONS

Power Source: IPG YLR Series

Type: Diode-Pumped Ytterbium Fiber Laser

Laser Product Class: 4

Wavelength: 1025 – 1080nm

Modulation: 50,000Hz

Control: Cypcut, Windows 7 based Dell. Keyboard, mouse, and wireless remote control pendant included

Speed: 1,100mm/sec max travel

Acceleration: 1.1G

Repeatability: .0004”/ft

Lateral material support spacing: 1-1/4”

Gantry clearance: 3”

Central downdraft dust extraction

Automatic lubrication

Pneumatic material clamps and feed assist rollers

Manual trolley for dropout material removal

High-performance machines. Profitable solutions. Expert technical support

Our CNC Laser Table - FL-510HD-1000 has the **structural strength** to handle 5’ x 10’ sheets. **Its 1000 watt fiber laser** is ideal for production runs. It arrives **fully assembled** and **comes with software**.

- Efficient 1000 watt fiber laser
- Includes chiller, air dryer and exhaust system
- Runs on **220-volt three-phase** power.
- Control the X, Y, and Z axis movement from the **sturdy podium with large console screen and keypad**.
- Includes **easy-to-learn design software** that you can load into any basic PC (more details below).
- **Delta® brushless servo motors**, controlled by Delta® servo motion controllers, drive the gantry.
- Industrial-grade gantry travel system for the X, Y & Z axis made from **extremely rigid extruded aluminum**.
- **Gantry can move out of the way** for a full 10-foot sheet during loading, minimizing the chance of machine damage.
- **High gantry** (one of the highest in the industry) lets you clearly see its movement for better adjustment and control.
- Axes ride on heavy-duty **ground and polished square shafts**.
- Wiper dies on shafts keep welding dust out of the slide for a **smooth transfer without noisy friction**
- Our design **reduces the risk of damaging the table while loading** or pinching your forklift.
- Weigh an impressive **6600 lbs**.
- **Fully-welded boxed tubing construction** can easily support the weight of maximum capacity material.
- Steel framework will **hold its shape and stay accurate for decades**, unlike many competitors’ aluminum frames, which buckle and warp under heat.
- **Pre-built table saves you time and effort**. The alignment is already set up and correct when it arrives

MACHINE SPECIFICATIONS

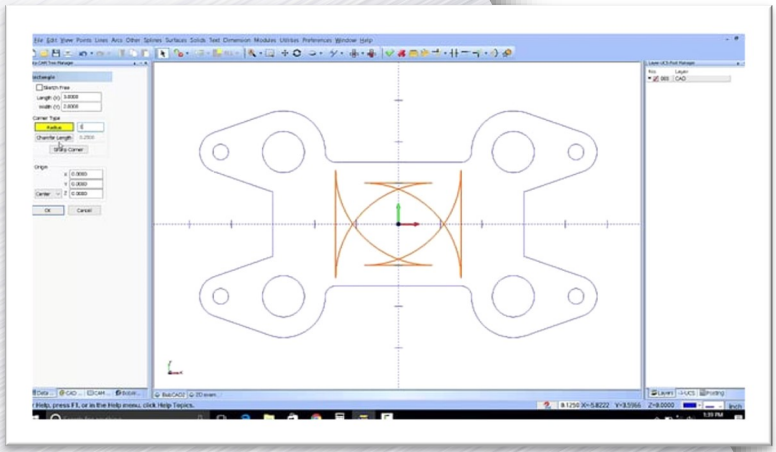
Item Number	FL-510HD-1000
Max. Material Thickness	.314"
Rated Output	1000 watts
Travel Speed	2600 Inches Per Minute
Cooling System	Water
Drive	Servo Motor
Power	220V 3-phase
Shipping Weight	6600 lbs.
Special Notes	Includes Chiller and Air Dryer
Type of Laser	Fiber
Laser Wavelength	1025—1080nm
Minimum Cutting Width	~.005"
Software	BobCAD Cam Express
Shipping Dimensions	180" x 94" x 90"

BobCAD-CAM™

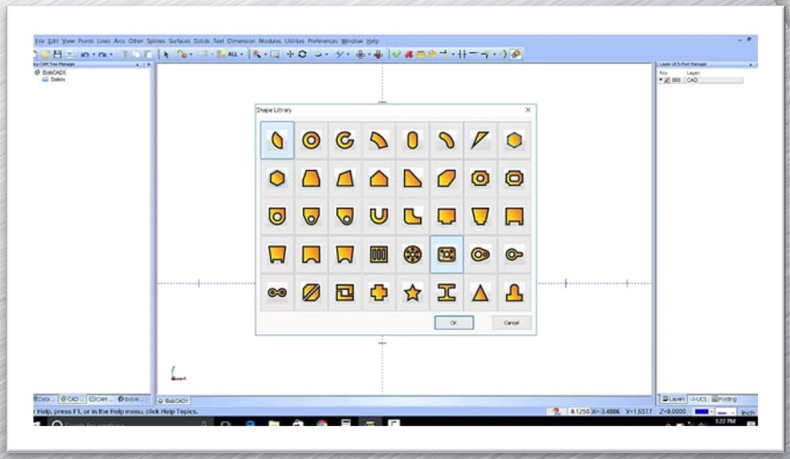
1 Full Year of standard technical support

Support will assist you on how to use specific features and functionality when you need it. if there is a problem, a support technician will review and assess the issue then help correct the problem, or instruct you how to correct the problem either verbally or by example.

- Expert technical support
- Starts from day of purchase
- Unlimited phone and email support
- Getting started videos
- Forum access
- Manuals
- Knowledge base
- FAQ (we want to build the top 10 FAQ specific to your machine)
- Software updates
- 3 customized standard post processor request
- Online remote session support
- Access to remote web support



Basic Part Walk-Through CAD Example 1



How To Use The Shape Library

1 hour of online training

Training will teach you how to use the BobCAD-CAM system and apply the learned methods to your parts.

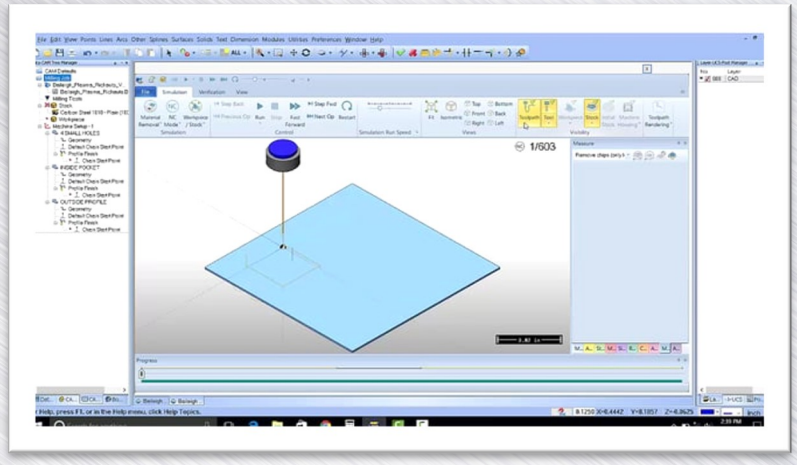
- One on one web training
- Your parts
- Your questions
- Your office
- Video recording of training session

BobCAD-CAM™

BobCAD CAM V29 Express (covers: mill/router, laser, plasma, and waterjet)

This software is best for 2D/3D CAD and 2 axis shape cutting

- DXF, DWG, IGES, AND MORE
- SHAPE LIBRARY, STRETCH, SPLINES, SNAP GRID
- HOLE PATTERNS, GEARS, CAMS, AND SPROCKETS
- PROFILLING, KURF COMP, LEAD IN/OUT, BACKPLOTTING
- POST PROCESSOR

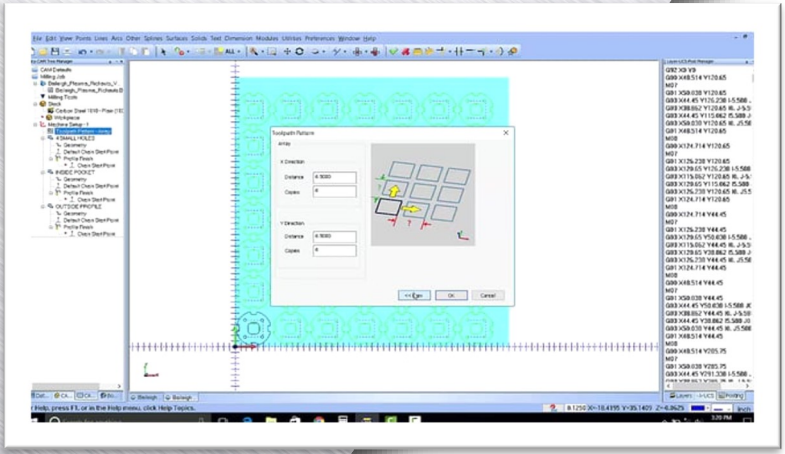


HOW TO APPLY CUT PATHS FOR PLASMA

Bob Art

This software is best for image conversions and embossing's

- EPS, AI, PDF
- JPEG, BMP, TIFF, GIF, PNG, PSD, AND MORE…
- VECTORIZE (CONVERT IMAGES)
- EMBOSSING, TEXTURE, SMOOTHING
- V CARVING
- ARRAY : NESTING



How To use Toolpath Patterns to fill a sheet

About Baileigh Industrial

Cutting-edge designs

It's no exaggeration to say that we lead the industry. Each Baileigh Industrial machine is engineered to exacting standards of endurance, convenience, and accuracy. But we don't rest on our past accomplishments, through continuous improvement, we're always looking for ways to make them better.

'Upgrades' come standard

Many of those features that other companies consider 'extras' are automatically part of the package when you buy a machine from us.

Quality parts and materials

We use only the best component parts, like Siemens® controls and Delta® inverters, to build equipment that you can depend on. On a structural level, our heavy-duty machines draw strength and stamina from frameworks made of solid steel castings.

Knowledgeable service team

Baileigh support representatives all have years of hands-on experience working with our products—figuring out solutions for applications like yours. When you call us, you'll talk to real technical specialists, not sales reps reading answers from a script!

Lifetime technical support

Whether you'd like advice on a project 10 days or 10 years after you buy a Baileigh machine, we're happy to help. There's no limit on our commitment to after-sale service. Our machines last a long time and we want you to get the most out of them.

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