



Cutting
Systems

TORCHMATE®
4400 | 4800 | 4510



SITE PREP GUIDE

December 14th, 2022

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Lincoln Electric Cutting Systems

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UNPACKING YOUR NEW MACHINE

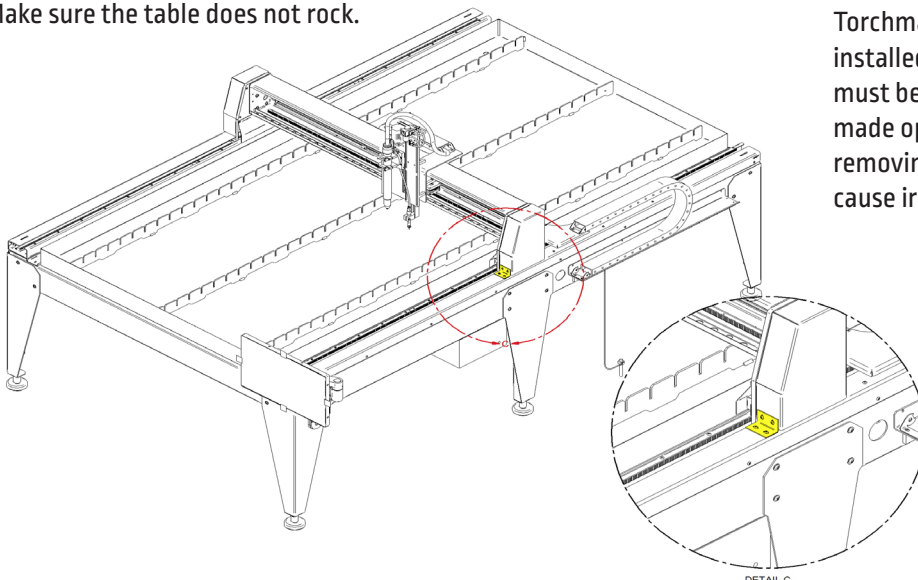
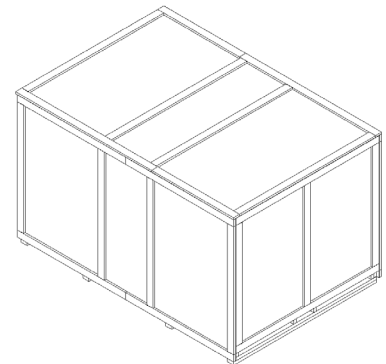
Your new Torchmate® 4400, 4800, or 4510 CNC machine is delivered assembled, but you will need to remove the shipping material and gantry locks before operation. Verify all items have been shipped without damage before you accept the order from the shipping company. Notify Lincoln Electric® 775-673-2200 to report any shipping damages. Your machine was fully tested at the factory and a cut metal sample can be found in the waterbed of the machine.

Qty.	Description	Part Number
1	Lincoln Electric 4400 Torchmate CNC Table with FlexCut™ 80 Plasma Unit	LECS-080-4400-00
1	Lincoln Electric 4400 Torchmate CNC Table with FlexCut™ 125 Plasma Unit	LECS-125-4400-00
1	Lincoln Electric 4800 Torchmate CNC Table with FlexCut™ 80 Plasma Unit	LECS-080-4800-00
1	Lincoln Electric 4800 Torchmate CNC Table with FlexCut™ 125 Plasma Unit	LECS-125-4800-00
1	Lincoln Electric 4510 Torchmate CNC Table with FlexCut™ 80 Plasma Unit	LECS-080-4510-00
1	Lincoln Electric 4510 Torchmate CNC Table with FlexCut™ 125 Plasma Unit	LECS-125-4510-00
1	Touchscreen Monitor and Computer (installed)	
1	LC100M Consumable Starter Kit FlexCut 80	BK12849-SK
1	LC125M Consumable Starter Kit FlexCut 125	BK14300-SK
	TM-CAD/CAM and Security dongle preinstalled	
	Black/Silver Instructional Flash Drive	

To uncrate your new Torchmate 4400/4800/4510, pry the top of the crate off or remove the ghost frame, remove the sides and set it aside. Remove the shrink wrap and inspect the machine for damage. If damaged, do not accept the shipment!

Upon acceptance of the shipment, cut the plastic straps holding the plasma power supply to the crate. The plasma power supply weighs (75 lbs+) and requires a team lift to move it. Set the plasma power supply aside until final machine placement.

A forklift is required to place the machine in its operational position. Do not lift the machine from the gantry or cable carrier side. Place forks in locations marked "fork here" being careful not to hit the motion controller with the forks. Once the machine is in position level the table using the adjustable feet. It is required to utilize extended forks (60" or greater) to unload and maneuver the 4510. Make sure the table does not rock.



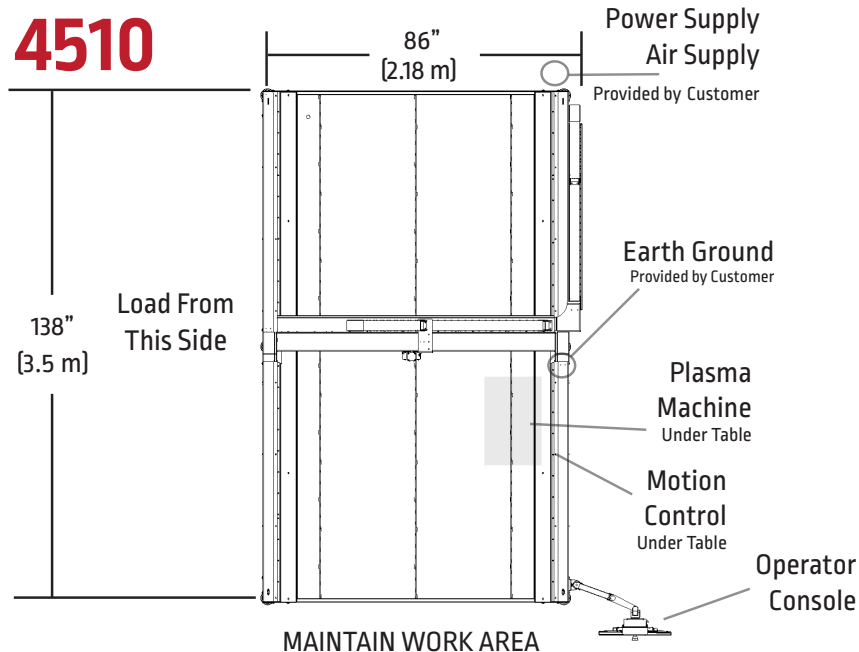
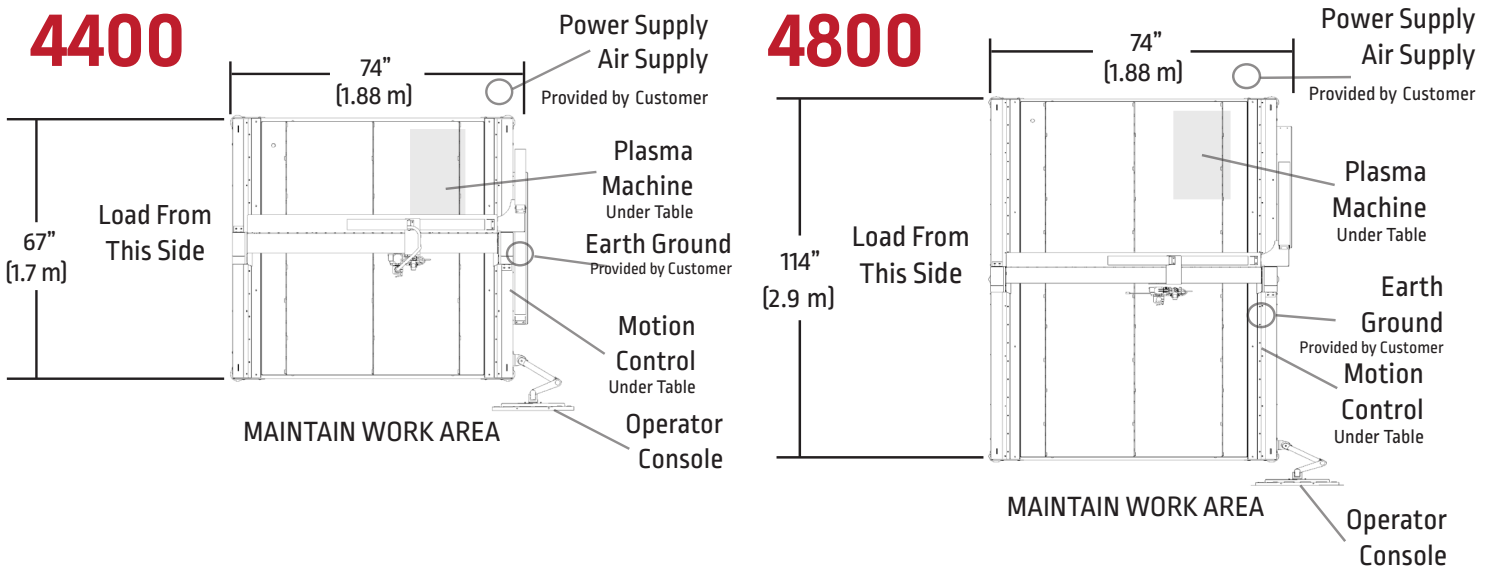
Torchmate 4x00 models are shipped with factory installed gantry locks. The yellow locking devices must be removed before the machine can be made operational. **DO NOT** replace the bolts after removing the yellow locking devices as this will cause irreversible damage to the gantry.

**Do Not Fork Lift From
Cable Carrier Side Of
Machine!**

When installing a Lincoln Electric CNC Cutting System in your shop, there are many factors that will influence the potential productivity, ease of use of the machine and the safety of the operator. The main factors to prepare for include: the physical layout and placement of the machine in the shop, the availability of power, an EMI ground, compressed air and other gasses, and ventilation.

Please Note:

- When preparing to install the Lincoln Electric CNC Cutting System, provide sufficient space. Three feet of work space (914 mm) should be obstacle free around the machine.
- Forklift load material opposite the cable carrier only. Utilize the back of the machine to park the gantry while loading material.
- A dedicated earth ground must be provided by the customer and installed per the National Electric Code, and in a location to reduce or eliminate a potential trip hazard, such as under the machine frame.
- The power lead included is limited to 10 feet.



The 4x00 machines require an earth ground rod to ensure personnel safety, and to suppress the high-frequency noise created by the plasma power supply. A star ground point on the table will connect directly to the earth ground rod via a 6 AWG stranded wire or other stranded, grounding cable. Consult with a qualified electrician to verify your connections.

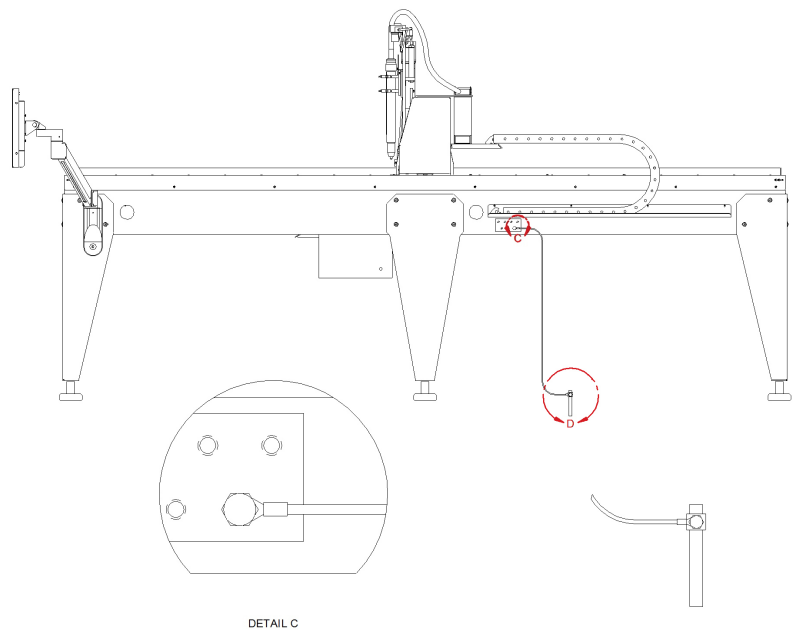
Please Note:

- Use 6 AWG stranded wire to connect the star ground on the table to the customer supplied dedicated earth ground.
- For proper operation of your CNC cutting tables you are required to run a 6 AWG cable from the “star” ground to a dedicated earth-ground rod.
- Ground rod installations are covered by NEC Section 250.
- The earth ground is not included with the machine.

Step 1:

Place the plasma unit into the appropriate location.

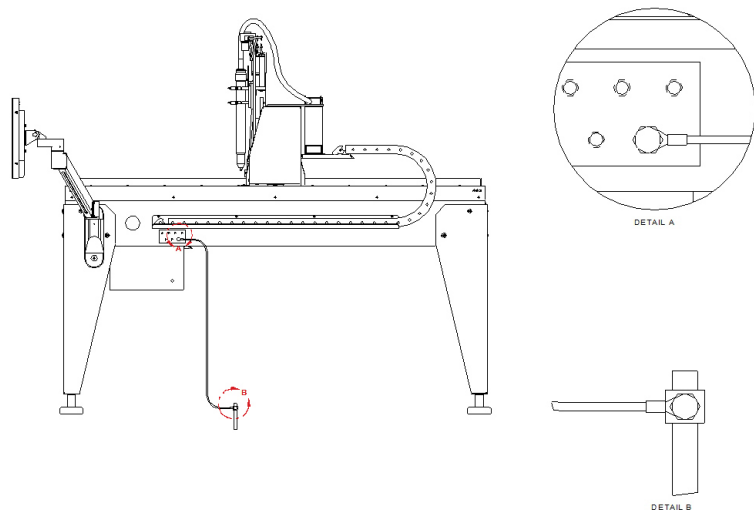
Re-install the power lead and the table ground into the front of the machine.



Step 2:

The FlexCut plasma unit is shipped with a factory ground attached to the star ground. In addition, a work ground is attached to the star ground to connect to your material to be cut.

If the work piece is painted or dirty, it may be necessary to expose the bare metal to make a good electrical connection.



Please refer to the FlexCut operators manual for complete installation and operation guidelines. Only a qualified electrician should connect the input leads to the Torchmate 4400/4800/4510 CNC unit and FlexCut Plasma unit. Connections should be made in accordance with all local and national electrical codes. Failure to do so may result in bodily injury or death.

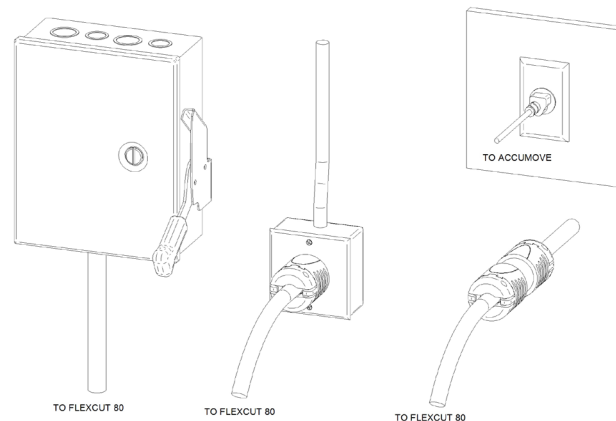
The 4x00 table has a single 120v NEMA 5-15P plug that powers the table and computer/monitor.

The FlexCut 80 is rated for 208 VAC through 575 VAC input voltages, single or three phase and 50 or 60 Hz. The FlexCut 125 is rated for 380 VAC through 575 VAC input voltage, three phase only and 50 or 60 Hz. Before connecting the machine to power, be sure the input supply voltage, phase and frequency all match those listed on the machine rating plate.

The FlexCut 80 automatically senses and adjusts to work with any input voltage, phase or frequency listed on the rating plate. No reconnect switch settings are required. The power supply cord is supplied without an attachment plug to accommodate single phase or three phase installations.

Warning:

The FlexCut on/off switch is not intended as a service disconnect for this equipment. Only a qualified electrician should connect the input leads to the Torchmate 4400/4800/4510.



The Torchmate 4400/4800/4510 CNC machine requires clean, dry, oil-free compressed air or nitrogen. A high pressure regulator **MUST** be used with a compressor or high pressure cylinder.

Supply pressure must be between 87-110 psi [6-7.6 bar] with flow rated rates of at least 300 SCFH or 140 SLPM.

AIR SUPPLY PRESSURE SHOULD NEVER EXCEED 110 PSI OR DAMAGE TO THE MACHINE MAY OCCUR!

A standard nominal 5 micron in-line filter is recommended, but for optimal performance, select a pre-filter with a 3 micron absolute rating. Air must be supplied to the plasma with 3/8" inside diameter tubing and 1/4 NPT quick disconnect coupler. Air lines should be run as to not create a trip hazard. We recommend using the TMS-214-0000-00 approved air filtration assembly, available from www.torchmatestore.com

Water should be installed in the table pan before operation. Rust inhibitors such as non-sodium nitrite based products may be used as a corrosion inhibitor in CNC plasma water tables. Operators are encouraged to use Lincoln Electric® PlateGuard™. Visit www.torchmatestore.com to purchase.

Water Capacity

- 4400 models hold approximately 60 gallons or 230 liters.
- 4800 models hold approximately 107 gallons or 405 liters.
- 4510 models hold approximately 140 gallons or 530 liters.

CHOOSE YOUR POWER



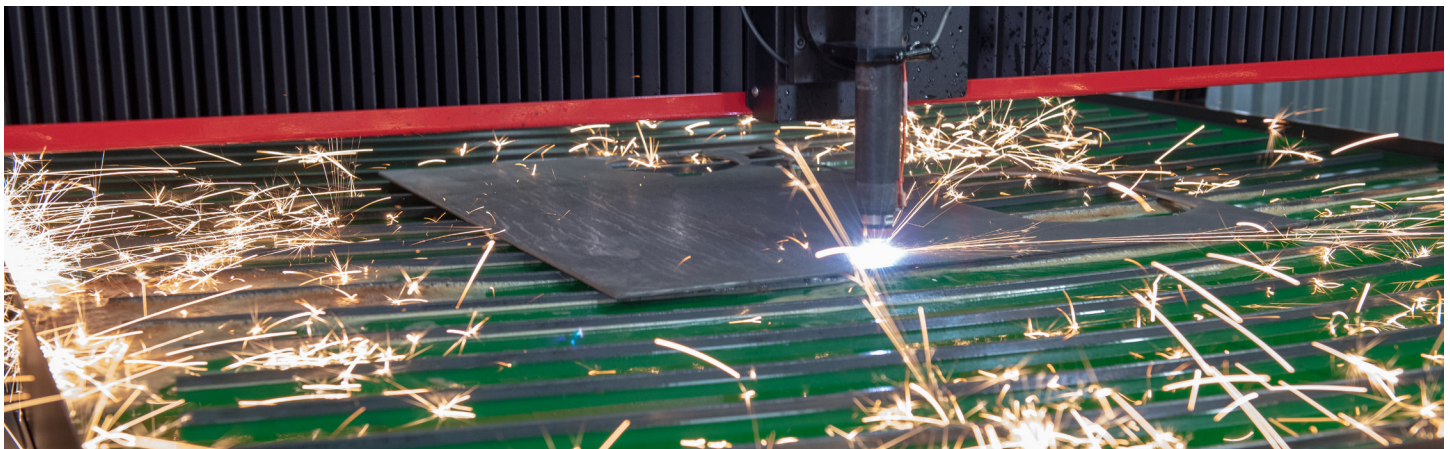
FLEXCUT® 80



FLEXCUT® 125

Product Name	Input Power Voltage / Phase / Hz	Input Amperage	Rated Input Current/Voltage/Duty Cycle	Air Pressure Required	Production Cutting Capacity	
FlexCut 80	208 / 230 / 400 / 460 / 575V 3PH 50 / 60Hz	208V - 41A / 230V - 37A / 400 - 21A / 460V - 18A / 575V - 14A	60A / 140V / 100% 80A / 140V / 80%	87-109 PSI (6.0 - 7.5 Bar)	Mild Steel	3/4" (20 mm)
	230 1PH 50 / 60Hz	230V - 62A	60A / 140V / 100% 80A / 140V / 80%	5 SCFM min @ 90 PSI (140 SLPM min @ 6.2 bar)	Stainless	5/8" (16 mm)
	200-208 1PH 50 / 60Hz	208V - 71A	60A / 140V / 100% 80A / 140V / 80%		Aluminum	5/8" (16 mm)
FlexCut 125	308 / 400 / 415 / 460 / 575V 3PH 50 / 60Hz	380 / 400 / 415V - 40A 460V - 33A 575V - 28A	125 A / 125V / 100%	90-120 PSI (6.2 - 8.2 Bar)	Mild Steel	1.0" (25mm)
				9.2 SCFM min @ 90 PSI (260 SLPM min @ 6.21 bar)	Stainless	3/4" (20 mm)
					Aluminum	1.0" (25 mm)

For more specific information regarding FlexCut power requirements, please see the specific users manual



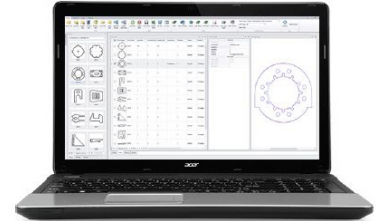
Dependent on COVID-19 restrictions - please call for details

ONLINE

Torchmate Academy Machine and CAD Training

Online

- Three months of access
- Uses video, slides and quizzes.
- Importing and manipulating DXF files
- Nesting and layers
- Multi-tool set-up
- VMD operations
- Machine maintenance



INHOUSE

3-Day Basic Torchmate Operations Training

Reno and Regional Locations

<https://torchmate.com/seminars>

- Introduce the CAD software
- Overview basic functions and tools
- Create and cut multiple projects
- Hands-on machine operations
- Overview plasma power supplies
- Determining Cut Quality

2-Day Advanced Torchmate Operations Training

Reno and Regional Locations

<https://torchmate.com/seminars>

- In-Depth image manipulation
- Advanced Node Editing
- Generating Angles
- Slot and tab generation
- Post-cutting fabrication designing
- Call our training department for more information

ONSITE

3-Day Onsite Plasma System Training

Machine Commissioning and Operational Training

- Inspect owners installation of the cutting table.
- Verify all connections including ground, gas supply, electrical connections and power supply
- Verify machine meets factory specifications.
- Power on system and perform factory acceptance test cut.
- Consumable training and re-order information
- Plasma power supply operation, settings and adjustments
- Introduction to Visual Machine Designer
- Import and cut customer example file
- Job Set Up and Nesting
- Cut customer file
- Machine maintenance
- TMCAD overview and workflow
- Torchmate Academy Included
- Acceptance sign off



The previous scope of work defines the various options for CAD training, onsite machine commissioning, and operations training for the different Torchmate 4x00 series table configurations. Please note that CAD training is not included in onsite machine commissioning and operations training options. Torchmate is not able to provide third-party CAD training. Any work outside the agreed scope will be billed separately for time and material via an approved Lincoln Electric Cutting Systems extra work order. Lincoln Electric Cutting Systems defines a workday as a typical 8 hour day with a 1-hour lunch break. Overtime hours requires approval.

Torchmate 4400/4800/4510 customer agrees to the following;

- Complete installation of Torchmate 4x00 series table prior to Lincoln Electric Cutting Systems arrival on site.
- Test and training sample material on-site and ready for use (Please provide the size and type of plate you will cut.)
- Identify and make available, no more than 3 system operators for training.
- Completion of the following check off sheet provided to Lincoln Electric Cutting Systems in advance of visit.

-
1. ____ - Machine bed in operational location and leveled.
 2. ____ - Confirm you have adequate clean and dry air pressure supplied to the plasma cutter.
 3. ____ - Plasma supply located in an environmentally controlled room.
 4. ____ - Connect all electrical cables to plasma power supply
 5. ____ - AC power connected to Torchmate 4400/4800/4510 machine
 6. ____ - Grounding rod is placed and tested with ground cables connected to busbar.
 7. ____ - Water Table filled to within 1/4" of the top of the material support slats.
 8. ____ - All required gases onsite with regulators. (Gas regulators are not included) (Optional)

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- **The Lincoln Electric FlexCut 125 requires 3 phase 50 / 60 Hz input, FlexCut 80 requires 1 or 3 phase 50 / 60 Hz input.**
 - **The FlexCut 80 power cord is supplied without an attachment plug to accommodate single phase or three phase installations.**
 - **All systems must have time-delay fuses at the disconnect switch to handle the momentary influx of current when the system starts to cut.**
 - **The magnetic inrush current of the power supply will cause fast acting fuses to blow.**
 - **The recommended time-delay fuses for power supplies can be found in the Primary Power Connection section of the appropriate manual.**

TORCHMATE 4400/4800/4510 Customer Name

Signature

Lincoln Electric Cutting Systems Field Tech Name

Signature

Lincoln Electric Cutting Systems provides a number of technical support opportunities with the purchase of your new 4400, 4800, or 4510 Torchmate CNC cutting machine. The following is a brief outline of available options. Onsite visits are available at an additional cost, call 775-673-2200 for additional information.

- **Phone Support**

Phone support is available Monday – Friday 7:00am-4:00pm Pacific Time. Lincoln Electric will make every effort to handle phone calls in a timely manner, but due to the nature of machine diagnoses and the varied capabilities of machine operators, we cannot guarantee hold times for phone-in technical support. Technical support includes machine assembly, troubleshooting, configuration, and quality-related issues. Operational training is not included in phone technical support.

- **E-mail**

Lincoln Electric will return e-mail to the support@Torchmate.com e-mail address within 24 hours Monday-Friday.

- **Webinars**

Lincoln Electric provides live webinars from time to time to assist customers in the optimization and operation of CNC systems. Please subscribe to our newsletter for dates and times. <http://torchmate.com/webinars>

- **Torchmate Training**

Lincoln Electric provides a number of training opportunities at our Reno, Nevada campus. Please call 775-673-2200 for details or visit <http://torchmate.com/training>

- **Torchmate Academy**

Torchmate Academy is a high definition, detailed video walkthrough covering every aspect of your Torchmate table including setup, operation, detailed Torchmate CAD videos, and maintenance. Call [775] 673-2200 or visit the website to learn more.

<http://torchmate.com/academy>

- **Torchmate YouTube Channel:**

Lincoln Electric provides a wide selection of how to tutorials on our YouTube page. <https://www.youtube.com/user/torchmatedotcom>

- **Torchmate Store**

A variety of consumables, parts, and accessories can easily be purchased online through the Torchmate store. Visit <https://www.torchmatestore.com/> to learn more.

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric Cutting Systems for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric Cutting Systems is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric Cutting Systems is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric Cutting Systems is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric Cutting Systems affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.torchmate.com for any updated information.