

# **TORCHMATE®** **GROWTH SERIES™**

MINI CATALOG



**LINCOLN®**  
**ELECTRIC**

**Cutting  
Systems**

North America 775.673.2200 | South America +1.775.624.9029 | Brazil +55.19.3115.2711



# LEARN MORE ABOUT TORCHMATE ON OUR YOUTUBE CHANNEL



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# TORCHMATE® GS 4x4

POWERED BY **ACCUMOVE® 2**

The Growth Series™ 4x4 CNC plasma table is designed for small metal shops, sheet metal companies, hobbyists, and the off-road and racing industries. The Growth Series CNC machine can be used to design and cut everything from intricate and professional quality metal parts—to chassis or suspension components—to signs and lettering.

## TORCHMATE GROWTH SERIES STANDARD FEATURES

- Visual Machine Designer Software
- Accumove 2 Motion Control
- Next Generation Digital Height Control
- Torch Breakaway
- Real Time Cut Speed Control
- Windows® Configured | Ethernet Connected
- Touch Friendly Interface
- Wireless Operation
- Highly Accurate Ohmic Sensing
- Adjustable Kerf in Real Time
- Computerized Plate Alignment
- Array Creation
- Basic Shape Library
- Integrated Height Control Box
- Lifetime Unlimited Phone Tech Support

## TORCHMATE GROWTH SERIES OPTIONAL FEATURES

- Water Table
- Torchmate CAD/CAM Lite
- Torchmate CAD/CAM Full
- BobCAD
- Plate Marker
- Router Attachment

### Machine Size:

60 3/4" X 60 1/4"

### Cutting Area:

4' x 4' (Can be re-indexed to cut materials larger)

### Table Type :

Tabletop

### Construction:

Five piece fabricated steel & aluminum construction  
34 sealed ball bearings for linear motion

### Electronics/Motion System :

2.5 amp micro-stepping motor drives  
396 oz. in. motors

### Traverse Speed:

Up to 175 ipm

### Cut Speed:

Up to 175 ipm

### Warranty:

1 year warranty on electronics, parts, and software



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*Pictured with optional water table*

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# TORCHMATE® GS 2x4

POWERED BY **ACCUMOVE® 2**

Torchmate's exclusive 2x4 Growth Series™ CNC plasma table offers a unique size opportunity not available from other manufactures. Ideal for small metal shops, The 2x4 Growth Series CNC machine can be used to design and cut intricate and professional-quality metal parts, or components. The two foot width fits nicely within most existing work space, making it the ideal machine for small fabrication shops.

## TORCHMATE GROWTH SERIES STANDARD FEATURES

- Visual Machine Designer Software
- Accumove 2 Motion Control
- Next Generation Digital Height Control
- Torch Breakaway
- Real Time Cut Speed Control
- Windows® Configured | Ethernet Connected
- Touch Friendly Interface
- Wireless Operation
- Highly Accurate Ohmic Sensing
- Adjustable Kerf in Real Time
- Computerized Plate Alignment
- Array Creation
- Basic Shape Library
- Integrated Height Control Box
- Lifetime Unlimited Tech Support

## TORCHMATE GROWTH SERIES OPTIONAL FEATURES

- Water Table
- Torchmate CAD/CAM Lite
- Torchmate CAD/CAM Full
- BobCAD
- Plate Marker
- Router Attachment

### Machine Size:

36 3/4" X 60 1/4"

### Cutting Area:

2' x 4' (Can be re-indexed to cut materials larger)

### Table Type :

Tabletop

### Construction:

Five piece fabricated steel & Aluminum construction  
26 sealed ball bearings for linear motion

### Electronics/Motion System :

2.5 amp micro-stepping motor drives  
390 oz. in. motors

### Traverse Speed:

Up to 200 ipm

### Cut Speed:

Up to 200 ipm

### Warranty:

1 year warranty on electronics, parts, and software



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# TORCHMATE® GS 2x2

POWERED BY **ACCUMOVE® 2**

The Torchmate 2x2 Growth Series™ CNC plasma table offers a portable design that can be transported easily to jobsites, used for prototype work or featured as an educational tool at career and technical schools. The Growth Series CNC machine's small size lends itself well to entry level CNC cutting for the home-based shop, and offers robust performance in a small package.

## TORCHMATE GROWTH SERIES STANDARD FEATURES

- Visual Machine Designer Software
- ACCUMOVE 2 Motion Control
- Next Generation Automated Height Control
- Torch Breakaway
- Real Time Cut Speed Control
- Windows® Configured | Ethernet Connected
- Touch Friendly Interface
- Wireless Operation
- Highly Accurate Ohmic Sensing
- Adjustable Kerf in Real Time
- Computerized Plate Alignment
- Array Creation
- Basic Shape Library
- Integrated Height Control Box
- Lifetime Unlimited Tech Support

## TORCHMATE GROWTH SERIES OPTIONAL FEATURES

- Water Table
- Torchmate CAD/CAM Lite
- Torchmate CAD/CAM Full
- BobCAD
- Plate Marker
- Router Attachment

### Machine Size:

36 3/4" X 36 1/4"

### Cutting Area:

2' x 2' (Can be re-indexed to cut materials larger)

### Table Type :

Tabletop

### Construction:

Five piece fabricated steel & aluminum construction  
26 sealed ball bearings for linear motion

### Electronics/Motion System :

2.5 amp micro-stepping motor drives  
390 oz. in. motors

### Traverse Speed:

Up to 200 ipm

### Cut Speed:

Up to 200 ipm

### Warranty:

1 year warranty on electronics, parts, and software



*Pictured with optional water table*

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# ACCUMOVE® 2 MOTION CONTROL

ACCUMOVE 2 motion control technology is standard with our Growth Series™ CNC machine product line.

ACCUMOVE 2 motion control benefits from the same technology that goes into our most advanced motion control systems.

The Torchmate® CNC state of the art stepper motor control provides shorter cycle times through increased acceleration and deceleration, improved motion planning, a more fluid movement, and more consistent tip velocity. In addition, ACCUMOVE 2 includes our next generation digital height control, which simplifies configuration for quicker setup and easier troubleshooting.

The most noticeable improvement to the Torchmate driver software is Visual Machine Designer (VMD). This modern, touch friendly software, designed for the ACCUMOVE control systems, now includes a basic shape library to get your Torchmate Growth Series cutting as quick as possible.

## ACCUMOVE 2 vs PREVIOUS MOTION CONTROL

FEATURES	ACCUMOVE 2	OLD HEIGHT CONTROL	OLD MOTION CONTROL
Arc-Voltage Sensing	✓	✓	-
Real-Time Cut Speed	✓	-	✓
Automated Height Control	✓	✓	-
Windows® Configured	✓	-	✓
Torch Breakaway	✓	✓	-
Cuts Exported Torchmate CAD Files	✓	-	✓
Controls Lead-Screw Lifter Station	✓	✓	-
Touch Friendly Interface	✓	-	-
Wireless Operation	✓	-	-
Advanced Cut Quality Algorithms	✓	-	-
Highly Accurate Ohmic Sensing	✓	-	-
Multi-tasking	✓	-	-
Adjustable Kerf Width in Real Time	✓	-	-
Computerized Plate Alignment	✓	-	-
Basic Shape Library	✓	-	-
Array Creation	✓	-	-
Integrated Height Controller	✓	-	-

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## **ACCUMOVE® 2 MOTION CONTROL**

### **What is ACCUMOVE 2?**

ACCUMOVE 2 is the proprietary CNC controller designed specifically for the Torchmate® Growth Series™ plasma cutting machine. The software within this controller uses motion control technology developed by Lincoln Electric® engineers collaborating all over the globe. Accumove 2 has replaced the third-party components formerly used by the Torchmate Growth Series product line, ensuring complete support by Lincoln Electric.

Because of Lincoln Electric's deep commitment to automation, ACCUMOVE 2 benefits from product features passed down from our most advanced motion control systems, something no other competitor can offer. Our in-house manufacturing not only gives us an advantage in innovation, but also allows us to pass our manufacturing savings to you.

### **What is Visual Machine Designer?**

Visual Machine Designer (VMD) is the proprietary software used with the ACCUMOVE 2 controller. It is multi-lingual and touch friendly. The following features of VMD enable your ACCUMOVE 2 to increase productivity:

- Multi-tasking allows you to create and prepare new jobs while the machine is cutting.
- The shape library consists of 28 commonly-used parameter-controlled shapes, eliminating the need to design them in CAD.
- Array creation allows ACCUMOVE 2 to duplicate a part without modifying the CAD file.
- Job queue prioritizes and sequences multiple jobs with forward-looking automation.
- The computerized plate alignment feature saves time and reduces scrap. Accumove 2 registers the corners of the material through a torch jog move and realigns the design to match the metal being cut.

### **Is digital height control a standard feature?**

Yes, ACCUMOVE 2 features our next generation integrated digital height control. Its new Dynamic Cornering™ anticipates and prevents torch dive in corners and handles material irregularities, making "Corner Lockout" obsolete. Ohmic sensing enables true-zero height programming, which results in optimized piercing, fewer touch-offs, and faster completion times. Integrated height control simplifies configuration and troubleshooting, and makes operation more efficient.

### **What is Dynamic Cornering?**

Dynamic Cornering is an advanced algorithm that controls torch height in corners and curves. Many older systems used "Corner Lockout" to disable the height control along curved cut paths to prevent torch dive. Dynamic Cornering keeps height control active—not disabled—and compensates for warped material and complex curves.

### **Does Accumove 2 allow wireless control?**

Yes, you can now operate your Torchmate Growth Series with Accumove 2 via an Android™- or Windows®-based tablet. We are currently developing the application for use on the iPhone® and iPad®\*.

### **What is Ohmic sensing?**

Ohmic sensing accurately sets the zero-point datum for your height control. ACCUMOVE 2 electronically senses the completed circuit when the torch cap touches the metal. This method sets the zero height precisely compared with the older torque-sensing techniques. By over torquing the motor to estimate the zero point, the pressure can flex the material, causing inaccuracies. Ohmic sensing avoids flexing and additional motor stresses with a zero-pressure contact point.

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# EDUCATION PACKAGES

## ***PLASMA EDUCATIONAL PACKAGE***

- 4X4 table top CNC system with cable carrier
- Waterbed table for fume control and material support
- ACCUMOVE 2 next generation height control (machine torch required)
- Full Torchmate CAD/CAM shape creation software: includes nesting, scanning, tool-pathing, kerf compensation, and importing of 32 Different file formats
- Unlimited student Torchmate CAD EDU educational licenses with 1 master license
- VMD software accepts all DXF files and straight G-code
- Clip art DXF package with printed directory and disc of over 6,000 files including theme designs, borders, fonts, numbers, floral, animals, and more
- Prominent STOP button halts machine motion
- Computer shelf for laptop or tablet
- Completely assembled machine, with welded base and slats
- Machine is tested before shipping
- Free, unlimited phone and email tech support via a trained, dedicated, and professional support staff



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# TORCHMATE® EDU

POWERED BY **ACCUMOVE® 2**

Lincoln Electric Cutting Systems offers its state-of-the-art, Torchmate® metal cutting machinery to shop classes in schools across the country, giving teachers a real world tool to teach design and manufacturing skills to the next generation of airplane builders, automobile manufacturers, and engineers. Versatile, technologically advanced, and backed by the most comprehensive technical support in the industry, Torchmate CNC machines are the perfect fit for high school and community college vocational training classes.

## TORCHMATE GROWTH SERIES STANDARD FEATURES

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### Cut Speed:

Up to 175 ipm

### Warranty:

1 year warranty on electronics, parts, and software



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#### CUSTOMER ASSISTANCE POLICY

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

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