



CLASSMATE<sup>®</sup> M

**LINCOLN<sup>®</sup>**  
**ELECTRIC**

**Automation**

LEA-022323TM1-04

CLASSMATE SOLUTIONS

LINCOLN ELECTRIC AUTOMATION SOLUTIONS FOR EDUCATION





# CLASSMATE

**Why choose the ClassMate systems?**

# SOLUTIONS

# The Lincoln Electric Company

## ABOUT LINCOLN ELECTRIC

Lincoln Electric is the world leader in the engineering, design, and manufacturing of advanced arc welding solutions, automated joining, assembly and cutting systems, plasma and oxy-fuel cutting equipment, and has a leading global position in brazing and soldering alloys. Lincoln is recognized as the Welding Expert™ for its leading materials science, software development, automation engineering, and application expertise, which advance customers' fabrication capabilities to help them build a better world. Headquartered in Cleveland, Ohio, Lincoln operates 71 manufacturing and automation system integration locations across 21 countries and maintains a worldwide network of distributors and sales offices serving customers in over 160 countries. For more information about Lincoln Electric and its products and services, visit the Company's website at <https://www.lincolnelectric.com>.

# Lincoln Electric Automation and Education

Providing solutions for industry-leading global partners and educators

## THE FUTURE IS AUTOMATION

The welding landscape is rapidly changing: Retiring welders and a shortage of young people entering the field create an immediate need for welding automation. ClassMate® systems help prepare students for the future job market alongside a welding or robotics curriculum.

Here at Lincoln Electric Automation™, we keep a pulse on the way automation is revolutionizing manufacturing. Our ClassMate systems give students exposure to new robotic welding technology used in workplaces worldwide.

## THE VALUE OF EDUCATION

We emphasize the value of education to the community and aim to provide affordable, high-quality products for education centers around the globe. Hands-on, career-focused experiences in the classroom are invaluable for students and their futures in the workforce.

## LEARN WITH LINCOLN ELECTRIC AUTOMATION

We are The Welding Experts® and we are thrilled to be a part of your welding and robotics curriculum. If you are a distributor or school faculty member interested in one of our ClassMate systems, please contact us at [educationalsales@lincolnelectric.com](mailto:educationalsales@lincolnelectric.com). Be sure to ask us about our automation programming and welding courses taught in-house at our Cleveland headquarters!







# CLASSMATE M

## Your Go-To ClassMate System

As our most popular and versatile product in this line, ClassMate® M systems can be found in high schools, technical schools, colleges, and universities around the world. The ClassMate M system offers high mobility with its compact design. If you are introducing a welding or robotic curriculum to your classroom, this model will be an essential tool for student success.

### Product Details

- Mobile cart, small footprint
- FANUC® ARC Mate® 50iD/7L robot
- FANUC® R-30iB Mate Plus Controller with iPendant® tablet
- Power Wave® R450 robotic power source
- AutoDrive® 4R100 wire drive
- FANUC® Thick Plate weld software package
- Robotic 3-in-1 welding fixture
- X Tractor® Mini fume extractor
- Hand shields, Qty 10
- Complete system documentation [digital copies]
- 2 instructor seats in Lincoln Electric Automation courses
- Free shipping

### Options Available

- Virtual Educational FANUC® WeldPRO™ package
- Ed-Start package
- Gripper package



*Your students will thrive  
in the classroom with a  
ClassMate system!*









# CLASSMATE COBOT

## Your Collaborative ClassMate System

ClassMate Cobot systems operate at collaborative speeds and have force sensors in all 6 axes, providing a safe environment for a human operator to work alongside. Their versatility and mobility are comparable to the ClassMate M model, making them great for high school or university classrooms.

### Product Details

- FANUC® CRX-10iA/L cobot or ABB® GoFa-5 cobot (based on chosen model)
- Power Wave® R450 robotic welding power source
- AutoDrive® 4R100 wire feeder
- MAGNUM® PRO air-cooled robotic welding torch
- Fault reset palmstation
- Fixed and mobile welding table
- The Cooper™ App
- Hand Shields (PPE - Welding Arc)
- Free Shipping

### Options Available

- Ed-Start package\*
- Wire reel assembly kit
- Virtual Educational FANUC® WeldPRO™ package\*
- X-Tractor® Mini with EN-20 Nozzle 120/1/60
- Tooling table clamp kit

\*Only available on ClassMate CRX Welding Cobot

*The cobot takes your welding and robotics classrooms into the future of automation!*



**ClassMate CRX Welding Cobot**



**ClassMate GoFa Welding Cobot**









# CLASSMATE PRO

## Your Industrial ClassMate System

The ClassMate® Pro system finds itself most often in technical schools, universities, and community colleges training immediate workforce students. Ideal for facilities with a designated welding shop, the ClassMate Pro system is large and stationary. It is the only ClassMate model available with a positioner, which rotates parts while welding.

### Product Details

- Stationary system, lagged to the floor
- FANUC® ARC Mate® 100iD/12 robot
- FANUC® R-30iB Plus Controller with iPendant® tablet
- Power Wave® R450 robotic power source
- AutoDrive® 4R100 wire drive
- FANUC® Thick Plate weld software package
- Robotic 3-in-1 welding fixture
- Fume hood
- Hand shields, Qty 10
- Complete system documentation (digital copies)
- 2 instructor seats in Lincoln Electric Automation courses
- Free shipping

### Options Available

- Virtual Educational FANUC® WeldPRO™ package
- Ed-Start package
- FANUC® 500kg headstock
- Prism® Compact fume extraction unit



*ClassMate systems  
offer students the  
closest experience  
to real-life industry  
applications!*



*\*Option available with positioner*





**CLASSMATE™ LASER**

**ELECTRIC**

**!LIGHT**

**!DANGER**

**230 VOLTS**



# CLASSMATE LASER

## Your Experimental ClassMate System

The ClassMate® Laser system is geared towards both research institutions and facilities teaching advanced robotics manufacturing curriculums. Laser automation is growing exponentially in various industries and this system empowers you to conduct innovative research and development projects. We have designed this model to be affordable and accessible for education while still having the full-fledged capabilities of an industrial model.

### Product Details

- Mobile cart, small footprint
- Laser welding solution – advanced tech
- FANUC® ARC Mate® 50iD/7L robot
- FANUC® R-30iB Mate Plus Controller with iPendant® tablet
- nLIGHT® 1kW fiber laser oscillator
- Laser Mech® FiberMINI® 2.0 processing head
- SMC® Thermo-chiller, compact type
- Camera and 32" monitor
- Robotic 3-in-1 welding fixture
- X Tractor® Mini fume extractor
- 2 instructor seats in Lincoln Electric Automation courses
- Free shipping

### Options Available

- Cold-wire feed
- Cutting package
- Ed-Start package



*The ClassMate Laser system brings industrial-quality laser technology to the classroom in a compact, cost-effective, and easy-to-use way!*





# OPTION DETAILS

## Virtual Educational FANUC® WeldPRO™ Package

- Gives all students more “hands-on” time with the robot utilizing a digital teach pendant
- Introduces offline programming
- 15 PC WeldPRO licenses
- WeldPRO 3D model
- Single instructor seat in WeldPRO virtual training with live instructor

## Ed-Start Package

- On-site application technician startup assistance
- 1-on-1 training and support for instructors
- Recommended for all first-time robotic welding customers
- Welding Gear Ready-Pak® personal protective equipment, Qty 2
- Welding coupons to practice a variety of welds and programming techniques

## Gripper Package

- Able to swap between weld torch and gripper end-of-arm tooling
- Ideal for dual-purpose curriculums
- Manual tool changer
- WeldPRO CAD model

## Headstock (ClassMate Pro system ONLY)

- Allows for robotically controlled rotation of part
- Provides students with a wider range of real-world applications
- Single-axis positioner
  - 500 kg
  - Range 740°
  - Speed 130°/sec

## Cutting Package (ClassMate Laser system ONLY)

- Adds cutting capabilities to the laser system



# CHOOSE YOUR CLASSMATE SYSTEM

Which ClassMate model will work best for your facility? Answer the following questions to help you choose:

Do you want a versatile system to introduce welding and robotics into your curriculum?

If so, the **CLASSMATE M** system is for you!



Do you want to teach human/robot collaborative programming?

If so, the **CLASSMATE COBOT** system is for you!



Do you want to conduct welds with lifelike operator training?

Do you have a permanent spot to house a robotic welding system?

If so, the **CLASSMATE PRO** system is for you!

Does your curriculum focus on advanced manufacturing and technologies?

Are you seeking to accelerate your training program with state-of-the-art automated welding and cutting processes?

If so, the **CLASSMATE LASER** system is for you!







The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits

#### CUSTOMER ASSISTANCE POLICY

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment, or to provide engineering advice in relation to a specific situation or application. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the definition of specifications, and 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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