INDUSTRIAL EDUCATION SOLUTIONS
"This system was developed to bring alignment between Industry and Education to directly tie into the FANUC CERT program, foundational skills in robotics, vision, and integrated solutions."

- Paul Aiello  
  Director of Education  
  FANUC America Corporation

"The success of our training programs has allowed us the opportunity to share the best practices to help other training programs develop the same student outcomes."

- Anthony Nighswander  
  President  
  APT Manufacturing Solutions

"Our goal is to integrate Rockwell products with robots to bridge the learning gap. We piece parts together into one great learning system where students can not only learn the technology, but can also understand how to apply it as a system and understand the steps. That's what our customers really want!"

- Michael Cook  
  Director  
  University Partnership Rockwell Automation

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FANUC EDUCATION GRANT

The FANUC America Corporation Certified Education Training (CERT) Program certifies instructors at educational institutions to train their students to program FANUC robots. To accompany the FANUC CERT Program, new school locations receive (1) CERT Instructor Training and Tool Kit and (1) CERT School Comprehensive Educational Package.

All CERT Program Robots include the Advanced CERT Software Configuration for education, which includes: MH - Advanced Ethernet I/P Scanner, Advanced Dual Check Safety (DCS), 4D Graphics, Motion Package, PC Remote Pendant, Collision Guard Pack, Interface Panel, Maintenance Package, Menu Utility, Remote iPendant, ROBODRILL Interface. AT – Torch Guard, Torch Mate, Collision Guard, 4D Graphics, Payload ID, Touch Sensing and TAST (Through Arm Seam Tracking), Auto Error Recovery, Bump Box, Constant Path, Password Protection, Panel Wizard, KAREL, Menu Utility, Lincoln or Miller Weld Library.

The Industry Value of the Advanced CERT Software Configuration is $15,240.

The (MH or AT) CERT Instructor Training and Tool Kit provides your designated instructor training materials and includes the following deliverables:

1. (1) online seat to take CERT Cart Safety Features web course
2. (1) online seat to take Robot Operations web course
3. (1) online seat to take HandlingTool or ArcTool Operation and Programming web course
4. (1) online seat to take HandlingPRO or WeldPRO web course
5. (1) seat to take a live HandlingTool or ArcTool Operation and Programming class at a FANUC facility
6. (1) ROBOGUIDE Simulation Software license
7. (1) FANUC Robot Operations Manual
8. (1) FANUC HandlingTool or ArcTool Operations and Programming Manual
9. (1) FANUC HandlingPRO (ROBOGUIDE Simulation) Manual

The Industry Value of the CERT Instructor Training and Tool Kit is $15,500.

The (MH or AT) CERT School Comprehensive Educational Package provides students training tools and ensures your instructor has the necessary tools to effectively teach their students. This package includes the following deliverables:

1. (25) concurrent-user seat to take Robot Operations web course
2. (25) concurrent-user seat to take HandlingTool or ArcTool Operation and Programming web course
3. (25) concurrent-user seat to take HandlingPRO or WeldPRO web course
4. (25) ROBOGUIDE Simulation Software license

Industry Value of the CERT School Comprehensive Educational Package is $290,610 (MH) / $403,240 (AT)

To become a certified (MH or AT) CERT instructor, the designated instructor must:
1. Successfully complete the CERT Cart Safety Features web course
2. Successfully complete the Robot Operations web course
3. Successfully complete the HandlingTool or ArcTool Operation and Programming web course
4. Successfully complete the HandlingPRO or WeldPRO web course
5. Attend the live HandlingTool or ArcTool Operation and Programming class at a FANUC facility
6. Pass the online Certified Education Robot Training Test via FANUC eLearn
7. PASS the NOCTI FANUC (FCR-01) EXAM - Test Fee required through NOCTI (MH only)
8. Provide an outline of their robotic syllabus/curriculum
9. Provide a video to FANUC of a module/chapter being presented to an audience or faculty staff

SOFTWARE

Rockwell Automation EDU Toolkit Bundle with 1 year subscription included:

- (1) Studio 5000 Logix Designer
- (1) Studio 5000 View Designer
- Plus 100+ more

CURRICULUM

1-year e-learning subscription (see reseller for details):

- CompactLogix 5000 System Fundamentals
- Basic Ladder Logic Programming
- Ladder Logic Project Development
- Plus many more

FANUC America Corporation
3900 W. Hamlin Road
Rochester Hills, MI  48309-3253
Telephone: (248) 377-7000
Customer Service Center: (888)-FANUC-US
www.fanucamerica.com
WE BELIEVE IN EDUCATION....

APT Manufacturing Solutions is an automated equipment builder and precision machine shop equipped with over 30 manual and CNC machines, laser cutting and fabrication equipment, mechanical engineering with 3D solid modeling, and controls engineering with PLC and robot programming. At APT, education and training is weaved into the core of our every move. We recognized years ago that educating the next generation is vital to our success, and the success of manufacturing in America, we have made it one of our primary strategic objectives.

“Our passion is to equip and teach the next generation of workforce to advance manufacturing, technology, innovation, and leadership.”

High School Training: Years ago, we founded a state-of-the-art high school training center where we opened our doors to high school students from surrounding schools to learn the nuts and bolts of manufacturing. We lead them through coursework and hands-on learning designed to open their eyes to the opportunities they have in industry after school. Courses include:

- OSHA safety 10 hour
- Tools of the trade
- Drafting and 3D Modeling
- Machining
- Welding and Fabrication
- Industrial Wiring and Panel Building
- Basic PLC logic and Control Systems
- Robot handling and programming

Apprenticeship Program: Students who graduate from these programs must enroll in apprenticeship program to continue employment, where they go through a two- or four-year program, fully paid, working during the day and continuing school at a community college at night. This has proven to be a phenomenal approach to education, developed over time based on need for workforce development. The key to this is the partnership that has come between industry and education. We believe this partnership is vital to changing industry and solving the workforce development problem as America moves forward.

“We don’t build education trainers…we build industrial equipment with industrial curriculum for the education market.”

It was through this partnership with education, as well as our relationship with FANUC Education, and are sold exclusively through the FANUC Education Reseller Network. They carry the industry training curriculum of key manufacturers like FANUC America, Rockwell Automation, and Miller Welding. These partnerships are critical to maintaining high-caliber trainers that model industry standards.
## Advantages of Our Industrial Training Equipment

<table>
<thead>
<tr>
<th>Feature</th>
<th>OUR TRAINERS</th>
<th>OTHER TRAINERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainers built for manufacturing training</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Equipment built with exact same standards as industrial equipment</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Curriculum with labs to apply knowledge</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Curriculum comes directly from manufacturer; not rewritten</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Labs are derived from industry practices, like live panel building utilizing industry standard wiring practices</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Certificates upon completion of classwork or modules</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Certifications directly from industry leaders like FANUC, Rockwell, and Miller Welding that carry over to the first day on the job</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Rockwell MicroLogix basic PLC</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Rockwell CompactLogix advanced PLC integration with Studio 5000</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Advanced courses in FANUC TPP, iRVision, Advanced TPP, DCS</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Advanced courses in integration of area scan, RFID, wireless I/O</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
CERT CART

FANUC’s CERT Cart is an entry level cart that teaches students basic Tool Handling Skills as well as iRVision Pick and Place.

Instructors benefit from both FANUC’s online and instructor led training, which are the same skills taught at the FANUC Robotics training facility. As an educator attending training, you’ll be sitting beside industry programmers and learning the same course material that is being used in industry to apply in your classroom.

This is real world equipment, not a watered-down version. FANUC America provides this training opportunity to instructors as part of its CERT program allowing the industrial certification to be passed on to students.

Project-Based Learning (PBL) Kits

Battery Package

I/O Simulation Box

Pill Kit

ROBODRILL

Add high performance to your CNC education program. All ROBODRILLS for education are equipped with an automatic side door; for the added benefit of easily integrating with a FANUC MTEC (Machine Tending Educational Cell) for teaching real industry focused automation concepts.

Because of its versatility, the FANUC ROBODRILL can be used in many different fields. The machine has been successfully used for high volume production in the automotive and electronic sectors, medical tools and implants, watch and jewelry industry, and for mold and tool making. The high reliability and the long life of the ROBODRILL are guaranteed due to the robust and uncomplicated construction of the machine.

Due to the high-speed cutting with FANUC 31i-B series of controls it is very easy to quickly machine precision parts with high accuracy. Because of the stiff machine construction, the ROBODRILL provides efficient and accurate machining operations like face milling, end milling and drilling. The possibility to machine multiple face operations makes it the best application for machining automotive parts.

The combination of the 10.4” screen, quick screen and the full keyboard makes it possible to input data with minimal time and effort.

An additional standard PCMCIA card slot is located next to the screen and makes it very simple to use CF cards.

The main benefits of the ROBODRILL are:
- Fast and reliable tool change mechanism
- Tool change time 1.4s chip to chip (When 2kg/tool is specified)
- Revolving Turret with up to 14 tools
- Latest FANUC servo motor technology
- .004mm bi-directional repeatability

Acceleration and deceleration will be optimized as the control will read 30 blocks ahead in the AICCII mode. In this way, the part can be machine extremely fast and precise.
Students have the opportunity to learn real world advanced automation integration

Preconfigured with load and unload program templates for simple build with no complex programming needed

3-axis mill and 2-axis lathe simulation

- FANUC ROBODRILL Interface between robot and CNC simulator for integration training
- 120 VAC power connection to MTEC-SIM with on-board air compressor for self-contained cell operation
- Fits through 36” door
- Optional iRVision 2D for error proofing and guidance
- Built-in Kennedy toolbox for storage

MTEC-SIM Features

- Modular robot cart
- Welded steel construction
- Fits through standard doorway
- Single 2-jaw EOAT for mill blank and lathe blank
- Fold-up work table for laptop, textbook, etc.
- Safety area scanner for fenceless robot operation or safety interlocked guarding around robot work area
- 3-color beacon operation indicator light
- Swivel casters with brakes and rotation lock

FANUC ROBOTICS

- FANUC LR Mate 200iD/7L long arm 6-axis robot
- FANUC R30iB Mate Plus robot controller
- 2D iRVision optional

FANUC CNC

- FANUC’s CNC simulator is designed specifically for educational purposes, ensuring affordable access to the latest FANUC CNC platform in a compact and portable package, easily integrated into any classroom.
- Switchable mill and lathe system in one simulator
- 3-axis milling / 2-axis turning system + 1 spindle
- Conversational programming and 3D simulation (MGI)
- Inch / metric switchable
- 32 tool offset pairs
- Work piece coordinators G52-G59 + 48 additional on mill
Students familiar with CNC and/or robots have the opportunity to learn real world advanced automation integration

Fenceless or fully-guarded safe work envelope

Preconfigured with load and unload program templates for simple build with no complex programming needed

Drawer load for blank parts is safe and can be configured for other parts in the future

- FANUC ROBODRILL Interface between robot and CNC for seamless integration
- 120 VAC power connection to MTEC
- Fits through 36” door (without ROBODRILL) and includes four side pick up and transport
- Optional iRVision 2D for error proofing and guidance
- Optional built-in Kennedy toolbox for convenience

FANUC ROBOTICS

- Fold-up work table for laptop, textbook, etc.
- Safety area scanner for fenceless robot operation or safety interlocked access door to robot work area
- 3-color beacon operation indicator light
- Swivel casters with brakes and rotation lock
- Part locating template for NIMS mill block or dual conveyor in/out for parts blanks
- Single 2-jaw EOAT for NIMS mill block (3/4” x 2 1/2” x 3 1/2” aluminum, 50 pcs included)

FANUC CNC

- Standard CNC 31i-B5
- Smart Trouble Shooting Function
- Memory card slot plus USB port
- Built-in interlock function for safety
- Enables robot operation and system status display on the robot operation screen
- Custom PMC to create, read, and write ladder programs

FANUC ROBOTICS

- FANUC LR Mate 200iD/7L long arm 6-axis robot
- FANUC R30iB Mate Plus robot controller
- 2D iRVision optional

FANUC’s new R30iB Mate Plus robot controllers feature the new iPendant with enhanced screen resolution and processing capability. The new user interface, iHMI, can display guides for setup and programming, as well as tutorials from the main home page which as a design common to FANUC CNCs, enabling easier use of robots.

FANUC CNC

- Standard CNC 31i-B5
- Smart Trouble Shooting Function
- Memory card slot plus USB port
- Built-in interlock function for safety
- Enables robot operation and system status display on the robot operation screen
- Custom PMC to create, read, and write ladder programs

MTEC Features

- Fold-up work table for laptop, textbook, etc.
- Safety area scanner for fenceless robot operation or safety interlocked access door to robot work area
- 3-color beacon operation indicator light
- Swivel casters with brakes and rotation lock
- Part locating template for NIMS mill block or dual conveyor in/out for parts blanks
- Single 2-jaw EOAT for NIMS mill block (3/4” x 2 1/2” x 3 1/2” aluminum, 50 pcs included)

MTEC - Machine Tending Educational Cell
The FANUC ARC Mate 50iD/7L is a high-speed ARC welding robot that is equipped with added reach. Its standard IP67 rating gives it the versatility to work in a variety of different harsh manufacturing environments including dusty and wet areas. With 6 axes, this robot can carry up to 7kg while creating precise arc welds.

With FANUC’s ArcTool software, learning on the ARC Mate 50iD/7L will provide students with the knowledge and confidence to operate a variety of FANUC ARC Mate Series Robots and support employer’s need to develop more efficient and profitable welding processes.
CONTROLS INTEGRATION

Controls integration is the key to connected systems, IIoT, and industry 4.0. In order to continue to advance in manufacturing technology, we must continue to train connected systems, hardware and software, and integration of control systems.

APT equipment is designed specifically to teach advanced electrical hardware, software development, and integration of control systems. We are using the same equipment and software that is being used in the majority of industrial equipment; not what is cheapest or has free software. We are using the latest technology and hardware.

We have partnered with FANUC America and Rockwell Automation to provide Gift-In-Kind donations, where applicable, to schools who want to get involved on this advanced manufacturing training.

APT provides all programs, drawings, templates, and design documentation unlocked and free of charge. The school has access to every part of the controls system and access to any passwords and security setup within the equipment to develop and teach curriculum that best suits the industry in their region.

Our design allows for students and instructors to have fully functional industrial grade safety systems that allow the system to run at greater speeds than typical education system should be allowed to run. The safety systems also allow for students and instructors to work closely with the equipment and remain safe. Our fanceless versions of equipment allow personnel to approach the equipment and the equipment will slow down or stop accordingly and then resume once it is safe.

The Connected Smart Manufacturing System (CSM), the most advanced controls training system on the market, incorporates:

- RFID
- IO Link
- Wireless Ethernet
- Smart Sensor / Device Technology
- Explicit and implicit messaging between equipment
- Enhanced Diagnostics
- Part traceability
- And many other control components and integration pieces.

AN IN-DEPTH LOOK AT THE OPERATOR INTERFACE

The HMI is broken into 5 color coded tabs with enhanced diagnostics on the system. 3D graphics are put on the different screens just as we would in the industry.

SYSTEM - These screens are used for general machine setup. A majority of the functions available on the systems require security requirements to access them. Several functions on the System HMI screens include: VFD frequency setup; Recipe Management System, Inspection Limits, I/O Link Setup, Login, and System Security Settings.

OPERATIONS - These screens are used for general machine operation and functionality. 3D model images are used to aid with the intuitiveness and ease of use. Status Indicators, Mode Control, and Manual Operations, along with Operational and Fault Messages are displayed on these screens.

ROBOT - This screen displays all communication and I/O interface between the system PLC and robot. Users may also manually control the functions of the robot and call a specific robot program to run from this screen.

I/O - On this screen users can see all I/O within the system, its present status on/off to run diagnostics and aid in troubleshooting.

PRODUCTION - From these screens the user can view and capture production data to be used for business analytics. Recipe management and the production scheduler allow the users to edit the parameters and schedule all products the system can run.
PLC/HMI TRAINER

Rockwell Automation (Allen Bradley) CompactLogix control panel electrical project kit

- Rockwell CompactLogix 5380 controller with integrated Motion (5069-L306ERM) with 16 24VDC digital inputs & 16 24VDC digital outputs
- Rockwell AB 10” PanelView 5000 Graphic Terminal (PanelView S310)
- 5 Port Stratix Ethernet Switch
- Dual Ethernet Access Ports and Cable Glands for external device connections
- Pre-loaded with structured program template
- Also sold in kit form along with Rockwell curriculum
- Endless possibilities - can connect to almost any device!
- PLC robot integration program template installed

INCLUDES:
- NEMA 12 steel industrial enclosure
- 120V, 24 VCD power supply
- 120V 10’ power cord
- 5 port ethernet switch
- Wireless ethernet bolt
- 4 pushbuttons
- 1 selector switch

PLC: Compact Logix 5000 Series
- 32 task
- Dual IP mode (2 diff network connections)
- DLR, start and linear topologies supported
- 16 ethernet node connections max
- 32 socket connections max
- 2 CIP drive axis connections (position loop/servo control)
- Ladder structured text, function block diagram
- Sequential function chart programming interfaces
- 0.6 MB user memory
- 8 local I/O Modules max

HMI: Panelview 5000
- 10.4” SVGA TFT color touch display
- 1:1 aspect ratio
- 800 x 600 pixel resolution
- 1GB RAM / 1 GB user memory

OPTIONS:
- Student build kit
- Discrete I/O kit to FANUC LR Mate peripheral I/O board for robots without ethernet
- Mobile workbench - adjustable height with power
- Replenishment parts kit
- Panel rebuild master kit

INCLUDES:
- NEMA 12 steel industrial enclosure
- 120V, 24 VCD power supply
- 120V 10’ power cord
- 5 port ethernet switch
- Wireless ethernet bolt
- 4 pushbuttons
- 1 selector switch

PLC/HMI Trainer ready to use as standalone OR integrate to any FANUC robot

Includes Rockwell software and e-learn subscription

Features:
- Rockwell's latest products and technology

Ask about your custom needs.
Prices may vary.
INDUSTRIAL MATERIAL HANDLING TRAINER
AM-CERT - Advanced Manufacturing Cert Cell

Train on Industrial Equipment for Advanced Manufacturing
Take your training to the next level!

Fully integrated Rockwell PLC with FANUC robot for advanced material handling

Product Dimensions:
Open: 10’ deep x 10’ wide x 88” high
Folded: 72” deep x 54” Wide x 88” high

Rockwell PLC • FANUC Robot • FANUC iRVision • Swivellink® Conveyor
Robotics • PLC • Safety • Pneumatics • I/O • Vision

AM-CERT Features

• Folding perimeter fencing
• Access panel for conveyor through the perimeter fence
• Slide out programming laptop desk with 110 VAC power supply
• Fold down pick and place tables
• SMC pneumatics, filter/regulator
• SMC valve bank wired to robot I/O
• SMC two-jaw robot gripper with open/close sensors and Piab vacuum with vacuum switch
• Available ATI automatic tool change with separate gripper and vacuum tool
• Portable with pallet jack or forklift

FANUC
• FANUC M10/D or M20iA 6-axis robot
• FANUC R30iB Plus robot controller
• 2D iRVision

FANUC’s new R30iB Plus robot controllers feature the new iPendant with enhanced screen resolution and processing capability. The new user interface, iHMI, can display guides for setup and programming, as well as tutorials from the main home page which is a design common to FANUC CNCs, enabling easier use of robots.

Product Options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM-CERT-10</td>
<td>Material Handling CERT Cell with M10 Robot</td>
</tr>
<tr>
<td>AM-CERT-20</td>
<td>Material Handling CERT Cell with M20 Robot</td>
</tr>
<tr>
<td>Option 1</td>
<td>Swivellink® Conveyor</td>
</tr>
<tr>
<td>Option 2</td>
<td>Area Scanner 270° Protection</td>
</tr>
<tr>
<td>Option 3</td>
<td>Automatic Tool Change</td>
</tr>
<tr>
<td>Option 4</td>
<td>Safety PLC Option</td>
</tr>
<tr>
<td>Option 5</td>
<td>Transformer 208V, 220V, or 240V 3-Phase Power</td>
</tr>
</tbody>
</table>
SMART MANUFACTURING TRAINING SYSTEM

CSM™ - Connected Smart Manufacturing

CUSTOMIZABLE CONFIGURATIONS

<table>
<thead>
<tr>
<th>OP10</th>
<th>OP20</th>
<th>OP30</th>
<th>OP40</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROBODRILL MTEC</td>
<td>Laser Etching</td>
<td>Assembly</td>
<td>Packaging</td>
</tr>
<tr>
<td>MTEC-SIM</td>
<td>Serialization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BUY INDIVIDUALLY OR AS A COMPLETE SYSTEM
This system is truly like no other Industrial System for Education Institutions. Your students will use FANUC/Rockwell products on a factory system to understand a fully integrated line. Each cart can also be detached for individual learning.

Integration from:
- FANUC CNC Machine Making Product
- OP-10 Machine Tending the CNC
- OP-20 Laser Marking the product
- OP-30 Assembly of the product
- OP-40 Packaging the product in boxes

FANUC Robotics
- FANUC 30iB Robot Controller
- FANUC LR Mate 200iD 4S 6 axis robot
- 2D iRVision Optional

FANUC’s new R-30iB Plus Robot Controllers feature the new iPendant with enhanced screen resolution and processing capability. The new user interface, iHMI, can display guides for setup and programming, as well as tutorials from the main home page which has a design common to FANUC CNCs, enabling easier use of robots.

Using the programming guide, even first-time robot users can create a program for a simple handling task and execute it in just 30 minutes! Easier usage also improves efficiency by facilitating system setup and maintenance.

FANUC ROBODRILL - CNC

CONNECTING SMART MANUFACTURING
- High-Performance Vertical Machining Center α-D14MiB(5) / α-D21MiB(5)
- Model M, perfect for milling and drilling tasks requiring maximum precision, versatility and reliability.
  - Optimal acceleration and deceleration control
  - Rigid Design
  - Easy maintenance and operation
  - Extremely Fast .9 second tool change
  - High Precision Control
  - Designed for easy automation

Rockwell Automation Controls
- Rockwell CompactLogix or GuardLogix PLC cell control
- Rockwell PanelView 10” touch screen interface with cell function screens
- Safety interlocked entry door
- 16 remote accessible configurable I/O points
- 3 color beacon light
- Main power disconnects
- Program access port on outside of panel
- Area scan safety for robot work area
ROBOT ACCESSORIES

**Robot End-of-Arm Tool**
- Schunk CoAct collaborative EOAT
- Parallel gripper kit with 2 jaws for 3” blocks
- Ready to connect to FANUC CRX

**Parts Presentation Kit with 3” Foam Dice Blocks**
- Fixed grid, 12 location diamond template with six (6) 3” foam dice cubes
- Pegboard reconfigurable template with 50 locator pegs and six(6) 3” foam dice cubes

**Mobile Cart**
- 27 1/2” wide x 47 1/4” long
- Optional wings fold to fit through standard 36” door
- Out-of-the-box solution for robots and COBOTS

**Mobile Cart Optional Add-ons**

**Mobile Base**
- Heavy duty welded steel construction
- Standard gray powder coated finish
- Total locking swivel and wheel brakes
- Industrial swivel leveling feet for stability
- Non-slip pads on each leveling foot
- Accommodates all Swivellink COBOT pedestals
- Mounting hardware included
- Large footprint for stability
- Base can be locked in 30° increments

**Pedestals**
- Range from 24” to 48” tall in 6” increments
- Holes for leveling and anchoring
- Steel welded construction
- Powder coat finish

We have built and stocked many sizes of COBOT and robot pedestals for your classroom needs.

When mounting these robots we recommend guarding (see next page). *Always be safe when operating a robot.*
ACCESSORIES

Swivellink® 4-1/2”W X 36”L Variable Speed Conveyor
- Swivellink® belt conveyor with variable speed capability (conveyor mounted speed control)
- 4-1/2” wide bed, 4-1/4” wide belt, 36” overall length conveyor
- Hard stop each end of conveyor
- Optical sensor at idle end of conveyor on adjustable mount
- Optical sensor at drive end of conveyor on adjustable mount
- Sensor cables and motor control forward / reverse terminated in small junction box
- 120 VAC Power cable

Free Standing Conveyor
- Free standing conveyor base with adjustable height stands
- Locking swivel casters for portability
- Adjustable side rails

Magnetically Mounted Tabletop Conveyor
- Conveyor base with switchable magnetic mounts
- Side rails, one side fixed, opposite side adjustable

Safety Fencing
Create a “Lab Environment Work Cell” for Robots
This is industrial guarding “STRONGUARD ®” used in industry for perimeter guarding around robot cells. We offer this to education for students to safely run the robot and additional students see over the top of the guarding for instructional purposes. All the standard guarding is 53” tall for visibility. We offer a few kits that we feel would be best used for these robots:
- 5’ x 5’ for SCARA or FANUC LR Mate
- 7’ x 7’ for FANUC M10
- 10’ x 10’ for FANUC M20

The safety mesh is 2” x 2” black coated, the post and frames are made of steel and are powder coated Safety Yellow. We offer several safety options that include:
- Gated entry with latch and interlock switch.
- Light curtain, three-sided guarding with one open side.
- Area scanner kit with narrower side panels.

Swivellink® belt conveyor with variable speed capability (conveyor mounted speed control)
4-1/2” wide bed, 4-1/4” wide belt, 36” overall length conveyor
Hard stop each end of conveyor
Optical sensor at idle end of conveyor on adjustable mount
Optical sensor at drive end of conveyor on adjustable mount
Sensor cables and motor control forward / reverse terminated in small junction box
120 VAC Power cable

Free standing conveyor base with adjustable height stands
Locking swivel casters for portability
Adjustable side rails

Conveyor base with switchable magnetic mounts
Side rails, one side fixed, opposite side adjustable

Ask about your custom needs. Prices may vary.
Let us design your classroom with industry-recognized equipment and curriculum

APT’s Design Team is comprised of field experts with years of experience. Engineering • Automation • Management • Material Handling • Mechanical • Design

Our design team will talk to you to get an understanding of your initiatives and goals. We will then design a classroom with automation and robotics equipment and curriculum to make your students a valuable candidate to employers.

We will align education solutions with your budget requirements, with consideration for local industry relatability, software licensing requirements and maintenance costs.

Considerations

• Long-term plan
• Variety of learning options
• Environmental and lighting requirements
• Utility requirements and locations
• Enough space for equipment and collaboration
• Plan for future growth
• Understanding local industry needs
Contact your authorized FANUC educational reseller for more information

fanucamerica.com/education
aptmfg.com/education

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