



STEM Platform

Welding

SCIENCE | TECHNOLOGY | ENGINEERING | MATHEMATICS

KEY BENEFITS

Teach robotics with the same equipment used in factories

Complete, modular packages with options for building custom platforms to fit curriculum and room layout

- Pre-engineered solution designed for education and training programs in advanced manufacturing and robotics.
- Platform can be used by schools participating in the MERIT certification program.
- Ideal for classrooms, labs and training centers.
- Lightweight and fully integrated with a suite of industrial grade academic tools that meet the requirements of secondary educational programs.

ELECTRICAL REQUIREMENTS

Robot: 220/240 or 110/120 single-phase

Power Source: 190-630 VAC single- or 3-phase; 240 VAC, 3-phase recommended for full welding current. Power source will not weld with 110 VAC

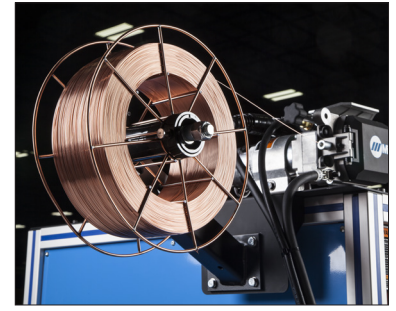
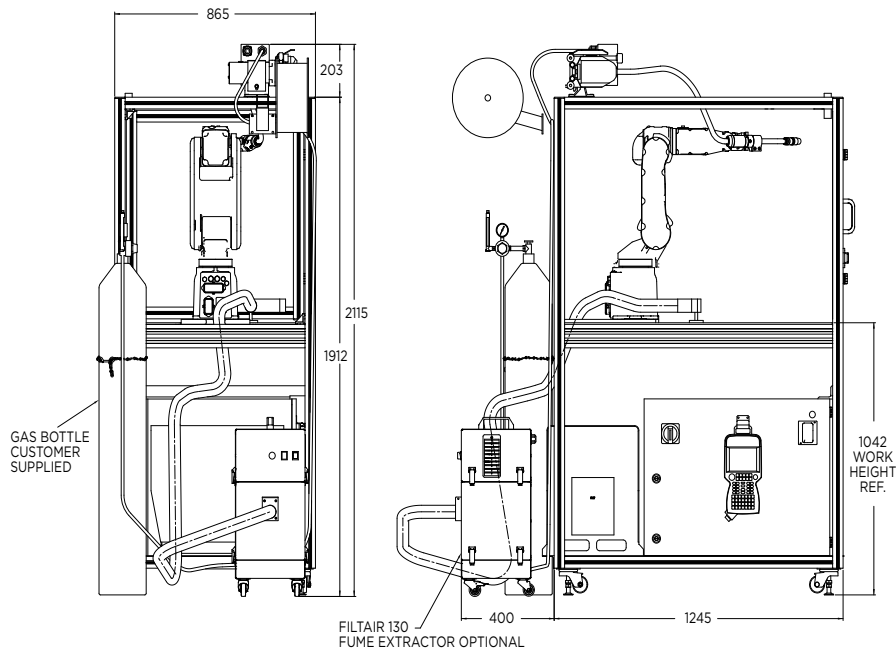
YMEC

Components provided by Yaskawa Motoman Education Consortium



COMPONENT	DESCRIPTION
Industrial-designed extruded aluminum cart	<ul style="list-style-type: none"> • Standard 34" width provides easy access through standard 36" doorway • 6 mm (1/4") thick composite work top with elevated steel work plate • Clear poly-carbonate side panels • Door safety interlock • Controller and power source base mounted • Industrial grade casters with integral leveling hardware
MH5S robot	Play speed is limited to 25% for safety.
DXM100 robot controller	Configured for 110 VAC single-phase power with 110/220 VAC step-up transformer. Digital Weld interface with Graphic Arc Files for setting weld parameters and power source program information. Touch Sensing (80 VDC) with macro jobs for seamfinding deviated workpieces.
Welding package	Miller/ITW welding package (see page 2 for details).
MotoSim® EG-VRC for Education	Comprehensive software package that provides accurate 3D simulation of robot cells and simulates a fully functional production environment.
Learning Management System (LMS)	Yaskawa Academy on-line curriculum teaching tool for programming and operation provides best-in-class robotics education for industry, integrators, colleges, engineering schools, career/vocational centers and the local workforce to enable students to become proficient in robotics.
Education software bundle	Tailored specifically for the teaching/learning environment. Includes robot operating system, motion engine, INFORM programming language and seven software tools (collision detection, Ethernet FTP, multi-tasking, macro function, job interrupt, relative job, bilingual display for English plus choice of French or Spanish).
I/O software bundle	For Ladder and HMI programming. The DXM100 Ladder Editor is a pendant-based graphical ladder rung software that allows the user to create I/O routines that run in parallel to the robot INFORM programming. The interface panel function allows the user to create up to ten HMI panels on the pendant for control; each panel features up to 32 buttons, switches, counters or status indicators.

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WELD WIRE SPOOL



CONTROLLER AND PENDANT

WELDING PACKAGE

- Miller Auto-Axcess® 300DI power source
- Miller AA40-GB four-roll drive motor with 0.035" feedrolls
- Tregaskiss air-cooled torch and mounting bracket
- Wire spool support and 30 lb spool of Hobart E-70S-6 wire, 0.035" dia.
- Gas hose and regulator/flow meter with bottle restraints (gas bottle not included)
- Weld leads, 2/0, for torch and work (elevated fixture plate)



POWER SUPPLY

OPTIONS

Portable Filtration System - Miller FILTAIR® 130 portable air filter with hose and nozzle with magnetic base. Operates on 110 VAC. Hose can be cut to length and run through robot cable opening with nozzle positioned adjacent to work.

Vision Kit - Cognex In-Sight® Micro camera and Yaskawa Motoman's Pendant Vision application software. View images and receive information about camera status. Integrates communication directly into the robot programming language.

MotoSim® Touch - Provides the ability for student to toggle between a virtual pendant or a hardware pendant

Training Credit(s) - Use for various DXM100 technical education modules. Classes are held at Yaskawa Academy, are IACET accredited and qualify for CEUs.

YASKAWA

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