YASKAWA

STEM ROBOTICS

STEM Platform

Material Handling

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

FACILITY REQUIREMENTS

Electrical: 220/240 or 110/120 single phase, 1 kVA

Air: maximum consumption 2 CFM @ 60-90 psi

YMEC

Components provided by Yaskawa Motoman Education Consortium

COGNEX

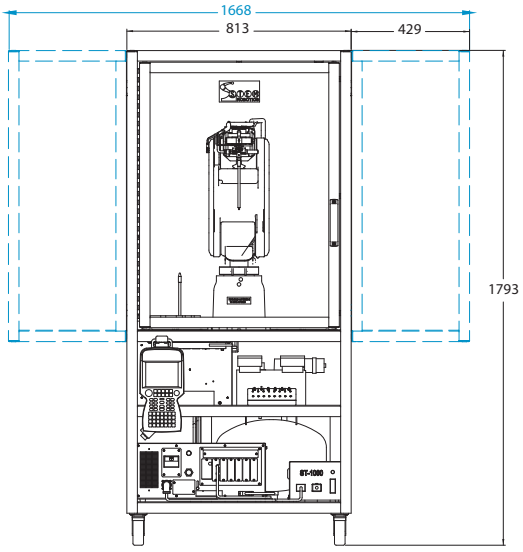
SCHUNK

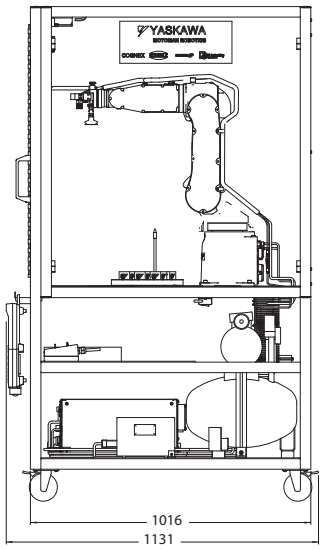
SCHMALZ

QC Industries LLC

COMPONENT	DESCRIPTION
Industrial-designed extruded aluminum cart	• Standard 34" width provides easy access through standard 36" doorway • 6 mm (1/4") thick composite work top is suitable for mounting class-specific peripheral equipment • Clear poly-carbonate side panels • Door safety interlock • Controller shelf and storage shelf • Integral, low noise air compressor • Industrial grade casters with integral brakes
MH5F or MHJF robot	Play speed is limited to 25% for safety.
FS100 robot controller	Configured for 220/240 VAC single-phase power with 110/220 VAC step-up transformer.
Gripper package	Pneumatic and vacuum grippers, control interface.
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 FS100 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.
Instructor Kit	Software and hardware teaching aids. Includes offline programming and online operator's curriculum, I/O control box, teach pointer, TCP tool, block nest and set of ten blocks.

STEM Platform – Gen II





OPTIONAL EXTENSIONS SHOWN
WITH BLUE DASHED LINES

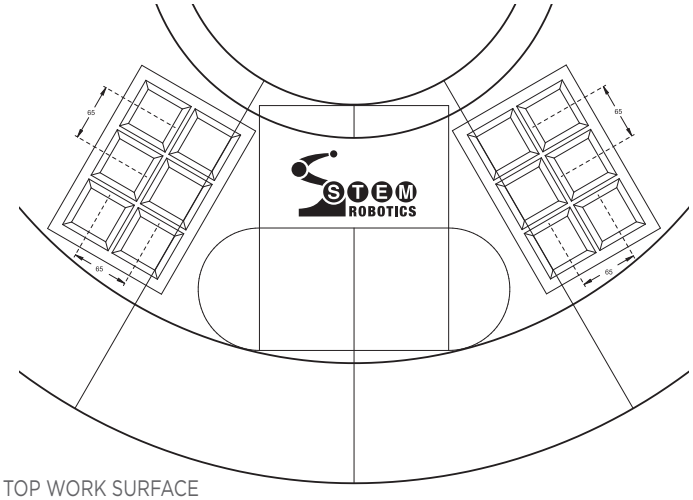
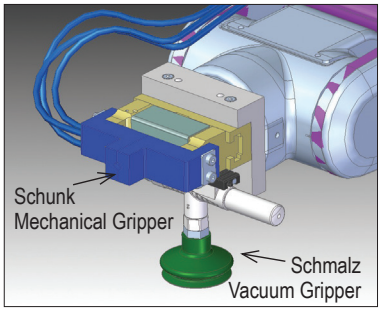
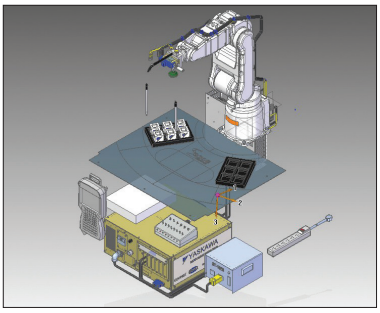


TABLE TOP WORK SURFACE

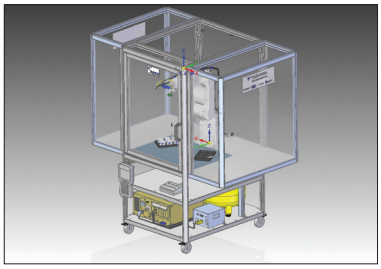


GRIPPER DETAIL



ROBOT PACKAGE

CELL ASSEMBLY WITH OPTIONAL
COGNEX VISION SYSTEM



CELL ASSEMBLY WITH
EXTENDED ENCLOSURE

OPTIONS

Extensions allow best use of MH5F and MHJ work envelopes. Extensions can be easily removed to transport through 36″ doorway.

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.

Conveyor kit – Free-standing conveyor, end-of-travel sensor and control interface.

Air compressor kit – Rated to provide compressed air for standard gripper package. Included if purchased as a cell assembly.

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