

# Motoman GP8 Fenceless Cart for Education

The Motoman GP8 fenceless cart for education is a big solution for small spaces. Custom designed for educational use, the mobile cart includes all the components to set up an industrial robotic classroom workstation and can be packed, moved and stored easily when not in use.

The classroom safe, fenceless design with speed limiting of the robotic arm ensure a safe working environment for students to learn in. The platform and accessories provide a framework for learning that is simple, easy to use and packed with features and functionality for every robotics class.

Using the Motoman GP8, 6-axis robotic arm with an 8 kg (17.64 lbs) payload and 727 mm (28.62") reach. Students can program and learn a variety of robotic functions.

The GP8 is paired with the advanced YRC1000micro controller, a compact size controller with functions & performance optimized for transfer and assembly applications. The system can be paired with a standard programming pendant or the Yaskawa Smart Pendant.

The cart and accessories are aligned with Intelitek robotics training curriculum and Yaskawa certification.



## Features

- Mobile cart on wheels
- Fold out work surface allows for more working area, and collapsible to fit through lab door
- Fenceless design
  - Safety laser area scanner to provide safe working/learning zone
  - Allows full view and access to students
- Everything needed is on the cart including the robot, the controller, and learning elements
- Dual Gripper
  - Parallel gripper and suction gripper
  - Includes laser pointer for path tracing
- Durable work surface with precision markings for exercises like:
  - Palletizing, depalletizing
  - Pick and place
  - Tool path and spline shape tracing
- Accessories mount on surface for labs and exercises
- Easy set-up

## Flexible

## Space Saving

## Ready for the Classroom

### Cart Specifications

#### Structure

Extruded aluminum installed on castors

#### Dimensions (approx)

Width: Open - 56.3" (1430mm)  
 Folded - 32.7" (840mm)  
 Depth: 43.5" (1100mm)  
 Height: 76" (1920mm)

#### Weight

~350 lbs (approx)

#### Electrical Requirements

120vac 15amp for complete cart

### Add-on Training Options

- Conveyor with proximity sensor
- Gravity feeder
- Pick & place jigs
- Cognex vision system
- Yaskawa Smart Pendant

### GP8 Specifications

#### Structure

6 Axis articulated arm

#### Working Range

727 mm (28.6")

#### Repeatability

±0.02 mm (±0.0008")

#### Power Consumption

1 kVA

#### Payload

8 kg (17.6 lbs)

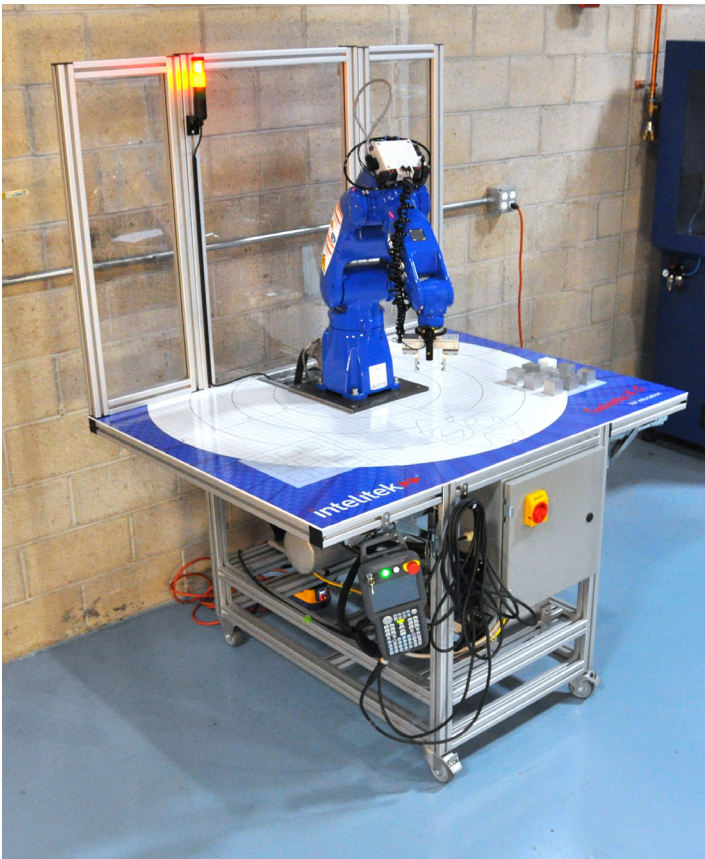
#### Controller

YRC1000micro Controller

#### Programming Pendant

Standard Pendant or Smart Pendant

# Industry 4.0 for Education



The GP8 training cart configuration is flexible and the surface is designed to host accessories for training and projects.

### Yaskawa Certification

Students who complete the Motoman Robotics curriculum are eligible to become Certified as a Motoman Operators and/ or Programmers. At the completion of each course, the course concludes with a practical exam which the student must pass before taking the Certification exam.

Candidates that successfully complete the practical exam are then eligible to take the final certification exam to be certified and receive a certificate of completion



### Cart Features:

- Laser area scanner reduces robot speed or stops robot when students approach cart
- Multi function end-effector with 40mm parallel gripper, suction gripper and laser pointer
- Durable learning surface includes:
  - Pick & place jigs and blocks
  - Tracing paths for lab exercises
  - Folding wings for compact storage
  - Mounting for project components and curriculum aids
- Stack light for system status and warnings
- Integrated with YRC-1000micro controller
- Optional accessories include:
  - Gravity feeder
  - Conveyor belt
  - Cognex vision system
  - Storage and assembly jigs
  - Exercise or experiment kits

### Robotics for Industry 4.0

Expand the GP8 training environment to embrace Industry 4.0 concepts and technology

- Smart sensors & actuators with IO-Link
- IoT Connectivity
- PLC and HMI integration
- Software simulation and digital twinning
- Data collection, analysis for predictive maintenance and efficient operations

### Ordering Information

#### Hardware

Motoman GP8 Robotic Cart Bundle (with standard pendant)	ROB-GP8-CART-L1
Motoman GP8 Robotic Cart Accessory Kit (Includes h/w accessories for curriculum)	ROB-GP8-CART-ACC
MotoMan GP8 Robotic Cart Industry 4.0 Kit (includes accessories and exersizes for Industry 4.0)	ROB-GP8-CART-L2

#### Curriculum

Motoman YRC Robotic Fundamentals	77-5005-0000
Motoman YRC Advanced Robotics	77-5006-0000

#### Yaskawa Certification

Certified Yaskawa Equipment Operator Test	77-5010-0010
Certified Yaskawa Equipment Programmer Test	77-5010-0020

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