

Skill Boss Manufacturing is designed to assess the hands-on skills needed by today's advanced manufacturing production areas, including assembly & machine operation. No other system boasts this many technologies in a portable platform.

Assessment Areas	Skill Boss Manufacturing Evaluates over 60 Essential Skills Including:
<b>Safety</b>	Perform pre-start up inspection Demonstrate lockout/tagout procedures Confirm safety interlocks on guard are functional Confirm zero energy state of all power sources Locate and interpret safety data sheet(s)
<b>Quality</b>	Perform measurements using tape measure, caliper, micrometer, and dial indicator Compare measurements to GDT specifications on a print Measure and verify shaft runout falls within specified tolerance
<b>Production Processes</b>	Locate parts and fasteners for assembly operation using a blueprint Assemble parts using Allen wrenches, wrenches, and screwdrivers Use torque wrench to properly tighten a fastener Navigate menus on an HMI Manually operate cylinders Perform an emergency shutdown Reset alarm and restart machine Measure cycle time
<b>Maintenance Awareness</b>	Adjust pneumatic lubricator's drip rate Adjust pressure regulator's setting Adjust actuator speed using flow control valves Install a pillow block bearing and shaft Install a flexible coupling and shaft Align and tension a belt drive Lubricate a bearing using a grease gun Drain an air filter Connect pneumatic circuit using a schematic Adjust various sensors

## PERFORMANCE-BASED ASSESSMENT & HANDS-ON TRAINING



**SKILL BOSS MANUFACTURING  
REQUIRED BY  
MSSC FOR CPT PLUS  
CERTIFICATION ASSESSMENT**



## CPT & CPT PLUS: PATHWAYS TO SUCCESSFUL CAREERS

MSSC's full Certified Production Technician (CPT) certification consists of four stackable credentials: Safety, Quality Practices & Measurement, Manufacturing Processes & Production, and Maintenance Awareness. The CPT Plus certification compliments the full CPT credential by providing employees with proof that an individual has the comprehensive technical knowledge and hands-on skills needed to be immediately productive.

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# SKILL BOSS MANUFACTURING: TRAINING & ASSESSMENT



"CPT Plus" Certification Assessment

Develop/Evaluate Individuals' Skill Sets

CPT Plus certification provides employers further proof of an individual's skill set by requiring successful demonstration of hands-on skills in electronic, electrical, fluid power, and mechanical systems.

Skill Boss Manufacturing provides the tool you need to teach or evaluate an individual's skills as they install, adjust, and trouble-shoot components on this fully functional mechatronics system, applicable to both discrete parts and process manufacturing.

Skill Boss Manufacturing, designed to meet MSSC standards, is a hands-on skill training and assessment system that integrates seamlessly into any manufacturing programs and is required for CPT Plus certification.

Performing a real-world sorting & finishing process, Skill Boss Manufacturing automatically feeds parts into the system where they are rejected or accepted to continue the process. If accepted, the parts are buffed with a polishing wheel before a 3-axis robotic pick & place system picks up the part and moves it into "finished goods" based on its material.

## Parts Feeder

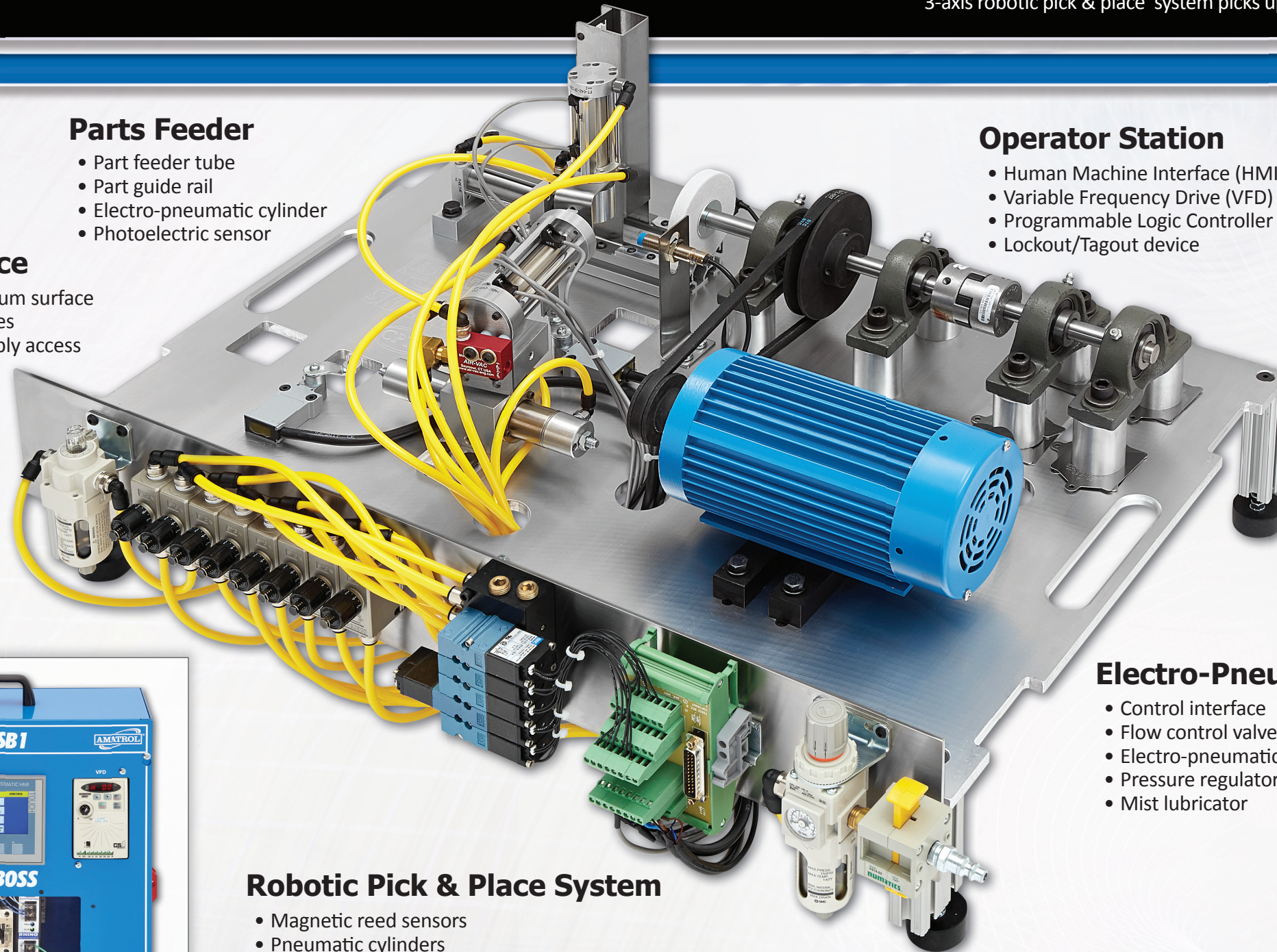
- Part feeder tube
- Part guide rail
- Electro-pneumatic cylinder
- Photoelectric sensor

## Work Surface

- Precision aluminum surface
- Machined handles
- Risers for assembly access

## Operator Station

- Human Machine Interface (HMI)
- Variable Frequency Drive (VFD)
- Programmable Logic Controller (PLC)
- Lockout/Tagout device



## Electro-Pneumatic System

- Control interface
- Flow control valves
- Electro-pneumatic DCVs
- Pressure regulator/filter combo
- Mist lubricator

## Robotic Pick & Place System

- Magnetic reed sensors
- Pneumatic cylinders
- Vacuum pick-up system
- Rotary actuator
- Limit switches
- Inductive sensor

## Mechanical Drive System

- Electric motor (0.28 kW)
- Multi-shaft drive
- Flexible coupling
- Pillow block bearings
- Bearing lubrication (oil & grease)
- Interchangeable V-belt & Chain drive
- Jack bolt alignment screws
- Polishing wheel



Included Belt & Chain Drive Components



Also Available in Siemens Model