

SKILL BOSS: COMPREHENSIVE ASSESSMENT

SKILL BOSS

Skill Boss 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 Evaluates over 60 Essential Manufacturing Skills Including:
Safety	Perform pre-start up inspection Demonstrate lockout/tagout procedure Confirm safety interlocks on guard are functional Confirm zero energy state of all power sources Locate and interpret safety data sheet(s)
Quality	Perform measurements using tape measure, caliper, micrometer, & dial indicator Compare measurements to GDT specifications on a print Measure & verify shaft runout falls within specified tolerance
Production Processes	Locate parts & fasteners for assembly operation using a blueprint Assemble parts using Allen wrenches, wrenches, & 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
Maintenance Awareness	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 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, & 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.

2400 Centennial Blvd.
Jeffersonville, Indiana 47130 U.S.A.



Phone: 812.288.8285 • Fax: 812.283.1584
Toll Free in USA & Canada: 800.264.8285
Email: contact@amatrol.com • www.amatrol.com

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SKILL BOSS: HANDS-ON 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, & mechanical systems.

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

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

Performing a real-world sorting & finishing process, Skill Boss 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



Robotic Pick & Place System

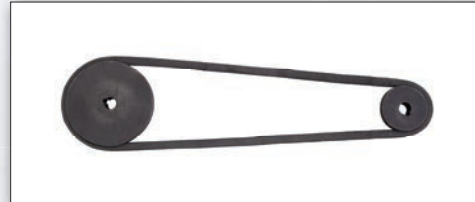
- Magnetic reed sensors
- Pneumatic cylinders
- Vacuum pick-up system
- Rotary actuator
- Limit switches
- Inductive sensor

Electro-Pneumatic System

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

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