



MANUFACTURING  
SKILL STANDARDS  
COUNCIL

“Certifying the Industrial Athlete of the Future”



# Certified Technician – Supply Chain Automation (CTSCA)

In collaboration with  
Material Handling Industry - MHI



2020 Edition

**Manufacturing Skill Standards Council**

901 N Washington St

Suite 600

Alexandria, VA 22314

[www.msscusa.org](http://www.msscusa.org)

©2017 MSSC

## Background

These Standards are the foundation for a Manufacturing Skill Standards Council (MSSC) certification and instructional program for Certified Technician in Supply Chain Automation (CTSCA). This industry standards-based certification for this new occupation is based upon a definition of "supply chain technician" developed by the National Center for Supply Chain Automation: *a person who installs, operates, supports, upgrades or maintains the automated material handling equipment and systems which supports the supply chain.*

The certification system based on these CTSCA Standards includes eLearning courseware and instructor training offered by Amatrol, assessments, credentials, and registry. Most importantly it now includes a new, highly innovative "Skill Boss Logistics" hands-on training and testing device invented by **Amatrol**. In addition to Amatrol, the other principal participants are the following:

- **Manufacturing Skill Standards Council (MSSC)** – The national leader in developing the first-ever national certification for front-line material handling and distribution, MSSC is also the only national certification body accredited under ISO quality standard 17024 (Personnel Certification) for both manufacturing and logistics.
- **Material Handling Industry (MHI)** – The leading national, non-profit association representing the suppliers of material handling and logistics solutions. MHI validated the standards and played a major role in developing the assessments
- **National Center for Supply Chain Automation** – Funded under a grant from the Advanced Technician Education program of the National Science Foundation, the National Center played a leadership role in proposing the CTSCA certification and recruiting corporate subject matter experts.
- **Material Handling Equipment Distributors Association (MHEDA)** – Played an active role in raising industry awareness of CTSCA.

The Standards for each of these is organized in two parts:

**WORK STANDARDS:** The key activities and performance indicators that define the specific tasks that certificants need to perform to demonstrate competency.

**WORKER STANDARDS:** The technical knowledge and skills needed to perform the work.

CTSCA Standards are organized around three *Critical Work Functions*.

1. ***Maintaining Equipment/Systems: EM***
2. ***Installing, Modifying, Troubleshooting and Repairing Equipment/Systems: ER***
3. ***Installing, Modifying, Troubleshooting, and Repairing Basic Controllers & Networks: NR***

MSSC will issue an industry-recognized, nationally portable Certification to individuals who achieve success in both written and hands-on assessments in each of these three critical work functions.

***If you are interested in obtaining a complete list of the CT-SCA standards, email [info@msscusa.org](mailto:info@msscusa.org)***

All rights reserved. Except as permitted under the United States Copyright Act, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without prior written permission of the publisher, the Manufacturing Skill Standards Council. Send permission requests to [info@msscusa.org](mailto:info@msscusa.org)

**CTSCA WORK Standards**  
**MAINTAINING EQUIPMENT/SYSTEMS**  
**Key Activities**

1. Implement and Remove Equipment/System Safety Protocols
2. Identify and operate major automated equipment/systems
3. Monitor machine/system operation
4. Ensure key parts and components are available in inventory
5. Implement preventive maintenance
6. Perform preventive maintenance
7. Establish monitoring and maintenance schedule for equipment/lubricant condition
8. Safely use hand tools to maintain equipment
9. Communicate with co-workers to promote productivity
10. Perform technical and administrative duties

**CTSCA WORK Standards**  
**INSTALLING, MODIFYING, TROUBLESHOOTING AND REPAIRING EQUIPMENT/SYSTEMS**  
**Key Activities**

1. Troubleshoot machine / mechanical system / electrical system failure
2. Prepare for repair
3. Repair machine / mechanical system / electrical system failure
4. Install, Move, or Remove equipment

**CTSCA WORK Standards**  
**INSTALLING, MODIFYING, TROUBLESHOOTING, AND REPAIRING**  
**BASIC CONTROLLERS AND NETWORKS**  
**Key Activities**

1. Install and maintain PLCs and PLC modules
2. Troubleshoot and repair PLCs with discrete I/O PLC modules
3. Modify, troubleshoot or manipulate standard PLC operating programs and test/verify them for correct operation
4. Install, maintain, and troubleshoot PLC systems with variable frequency AC drives
5. Operate and test equipment network system, scanners, and run system applications