

# **TECH***S***SKILLS INTERNATIONAL**

The *Leading Edge* in Authentic Industrial Controls Training

**ELECTRIC MOTOR CONTROL • HVAC CONTROLS • FLUID POWER CONTROLS •  
MECHANICAL CONTROLS • AUTOMATION & DIGITAL CONTROLS**

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## **ELECTRO-PNEUMATICS FOR CONTROL TECHNICIANS**



PNEUMATIC TRAINING SYSTEM SHOWN ON OPTIONAL MOBILE BENCH

The **TSI Electro-Pneumatics for Control Technicians** course provides competency-based, hands-on training for installing, adjusting, testing, and troubleshooting the electrical and electronic controls for plant pneumatic systems.

### **THE TSI LEADING EDGE ADVANTAGES**

1. TSI is the leader in providing authentic training solutions. TSI training hardware is authentic and exactly duplicates the equipment, tools and technical job requirements the student will encounter on the job. This didactic ensures the student transitions smoothly from the classroom to the work place.
2. TSI E-learning courseware presents technical information including; operating theory, installation, testing, and troubleshooting industrial electro-pneumatic systems. Connecting, testing, and troubleshooting procedures are driven by authentic Job Work Orders. TSI E-learning content is deliverable via print media, standard school/industrial computer networks and all current tablet formats.
3. TSI training hardware provides a safe learning environment for the student. TSI training systems are UL Listed and meet the requirements of:
  - UL 508A
  - NEC 409
  - NFPA 70
  - OSHA
4. Certification of performance to the recognized standards above is available upon completion of this course.

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The training system consists of a NEMA 1 equipment enclosure and removable component draw-out panels.

## Operator's Control Panel



Illuminated pushbutton controls for  
EXTEND-STOP-RETRACT  
Selector switch for JOG and RUN  
Selector switch for HAND-OFF-AUTO  
START - STOP  
Conveyor ON - OFF control  
Emergency STOP control  
PLC HMI touch-screen is compatible with  
the following PLCs:  
Allen Bradley  
Mitsubishi  
Siemens  
Automation Direct

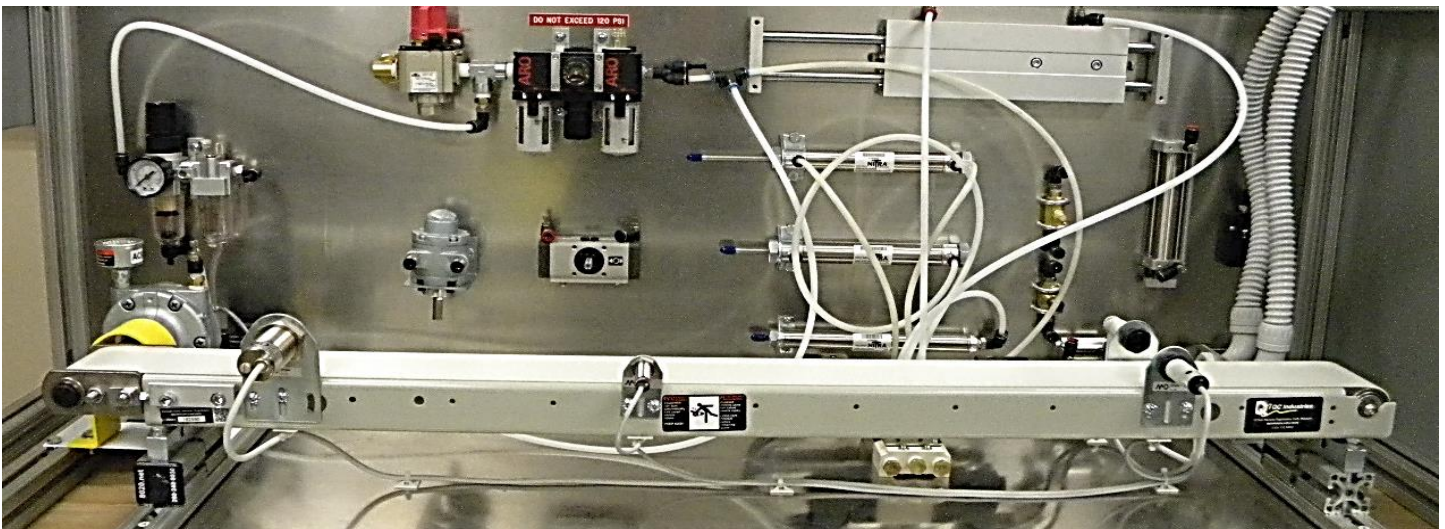
## E-LEARNING COURSE CONTENT

1. Intro to Pneumatic Fluid Power
2. Air Compressors
3. Compressor Maintenance
4. Compressor Troubleshooting
5. Plumbing the System
6. Measure Pressure and Flow
7. Conditioning Compressed Air
8. Cylinders and Rotary Actuators
9. 2-way Control Valves
10. 3, 4, 5-way Direction Control Valves
11. Valve Actuators
12. Air Motors
13. Electro-Pneumatic Circuits
14. Electronic Control Components  
(photoelectric, inductive, capacitive)

## Control Enclosure



24-volt DC circuit control voltage  
120-volt AC operating voltage  
Lockout/tagout disconnect switch  
PLC Drawout Panels available for:  
Allen Bradley, Siemens,  
Mitsubishi, Automation Direct Click



## Pneumatic and Control Components include:

Air Motor drive, pneumatic thruster, double acting cylinders, single-acting cylinders, rotary actuator, FRL with shut-off and lockout, 3-way solenoid valves, four-way solenoid valves, valve manifold, air motor, belt conveyor, capacitive proximity switch, magnetic proximity switch, photo electric switch, shuttle valve, quick exhaust valve, needle valves, flow control valves, check valves, filter-regulator, and a programmable logic controller.

## ELECTRO-PNEUMATICS FOR INDUSTRIAL CONTROL TECHNICIANS