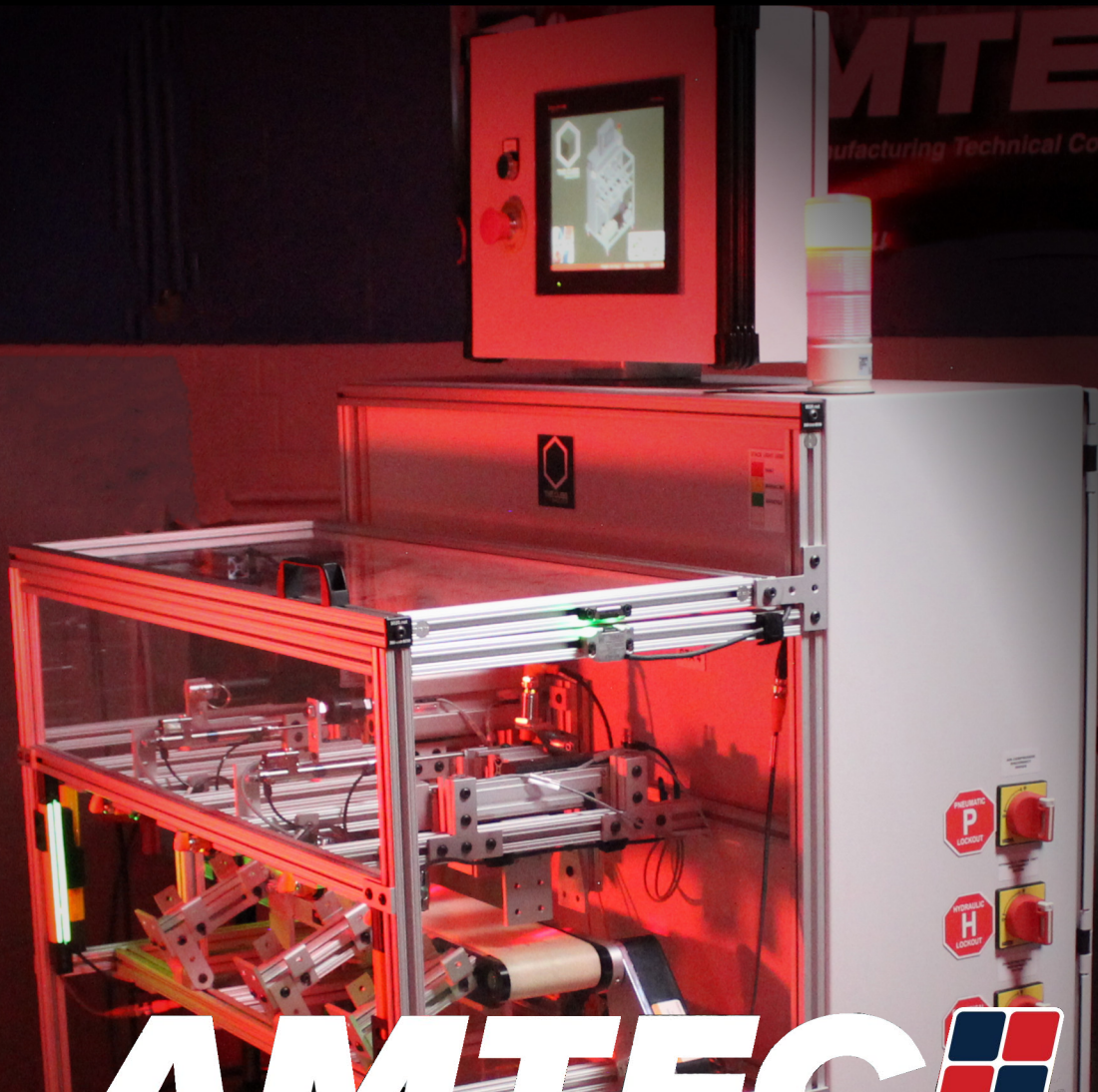


THE CUBE SIMULATOR

TECHNICAL DATA SHEET

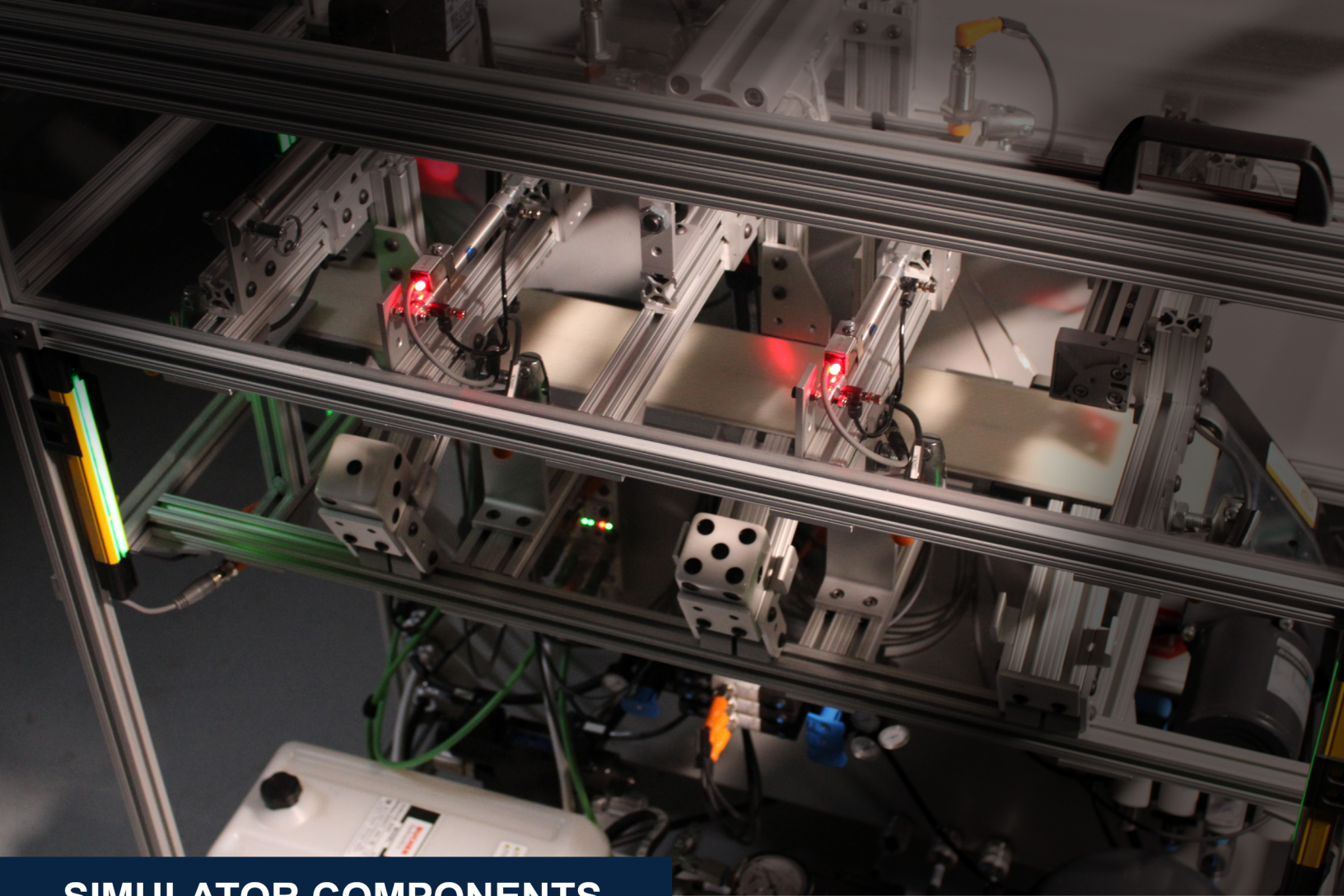


AMTEC

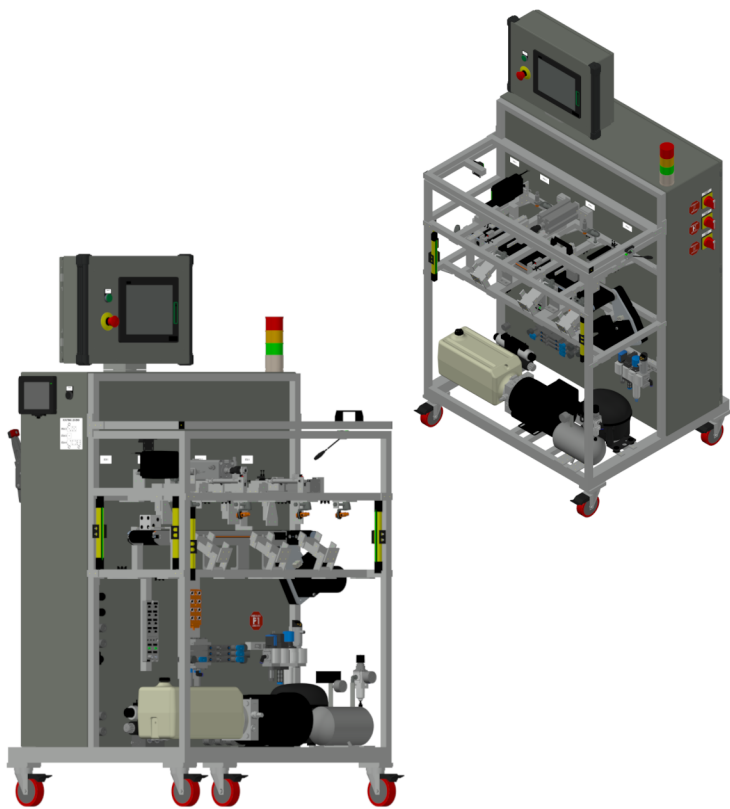


ADVANCED MANUFACTURING TECHNICAL EDUCATION COLLABORATIVE

AMTECWORKFORCE.ORG



SIMULATOR COMPONENTS



SAFETY

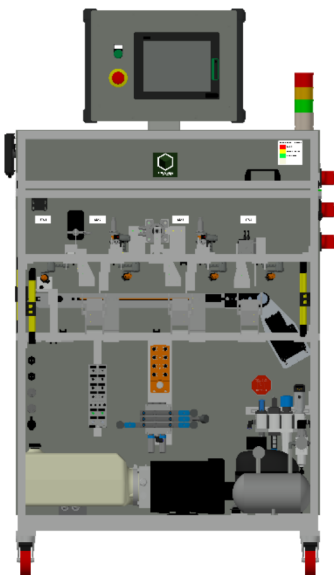
- Light Curtains
- Gate Switch

FUNCTIONS

- Station 1
 - Vision Sensor
 - Vision Display
 - Diffuse Reflection Photo Eye
- Station 2
 - 24VDC Electric BallScrew Cylinder
 - Electric Cylinder Position Switches
 - Diffuse Reflection Photo Eye
 - Pneumatic Die Stop - Rod Cylinder
 - Reed Sensor
 - Inductive Proximity Switch
- Station 3
 - Hydraulic Cylinder
 - Reed Switch
 - Compliance Coupling
 - Diffuse Reflection Photo Eye
 - Pneumatic Die Stop - Rod Cylinder
 - Reed Sensor
 - Inductive Proximity Switch
- Station 4
 - Pneumatic Rodless Cylinder
 - Magnetic Position Switches
 - Diffuse Reflection Photo Eye

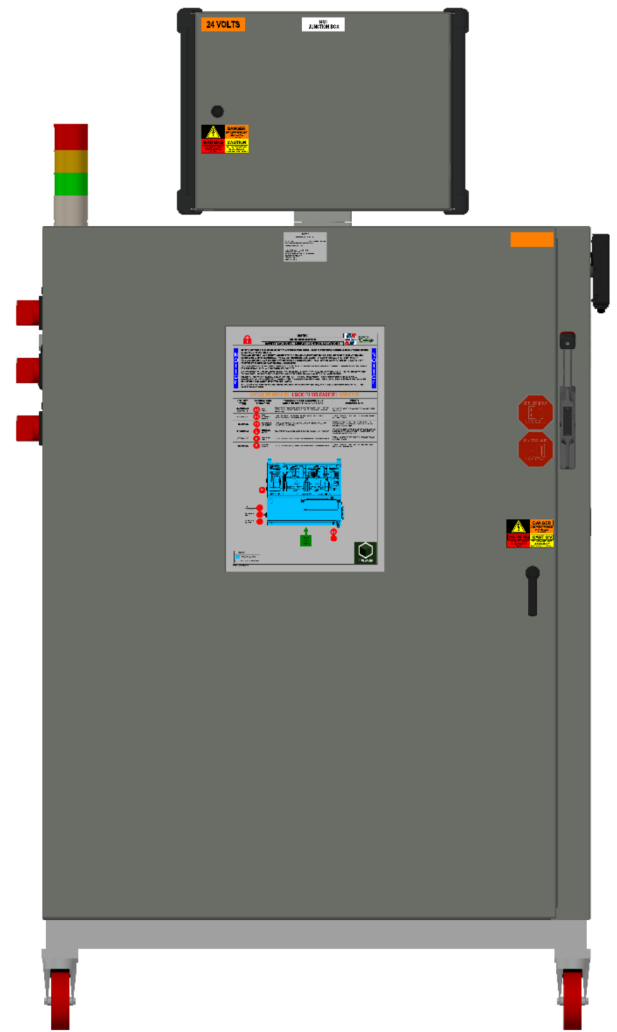


SIMULATOR COMPONENTS



SYSTEM

- Ethernet In / Out Block
- Distribution Multi-Port In / Out Block
- Wireless Cycle Start Pushbutton
- Conveyor
 - Gearbox
 - Belt
 - 3 Phase Electric Motor
 - Speed Controlled with Variable Frequency Drive
- Hydraulics
 - Hydraulic Power Unit
 - 1.5 Gallon Reservoir
 - Pressure Reducing Valve
 - Pressure Gage
 - Directional Control Valve
- Pneumatics
 - Air Compressor
 - Lockout Valve
 - Soft Start / Dump Valve (Electrically operated)
 - Pressure Regulator with Gage
 - Valves with Pressure Regulators
 - Digital Pressure Switch with Analog



MAIN CONTROL PANEL

SAFETY

- Safety Lockout / Tagout Signage
- Lockable Fused Flange Main Electrical Disconnect
- Lockable, Rotary Power Distribution Disconnects
 - Mounted on side of Main Enclosure
- Safety Relay

SAFETY PLC

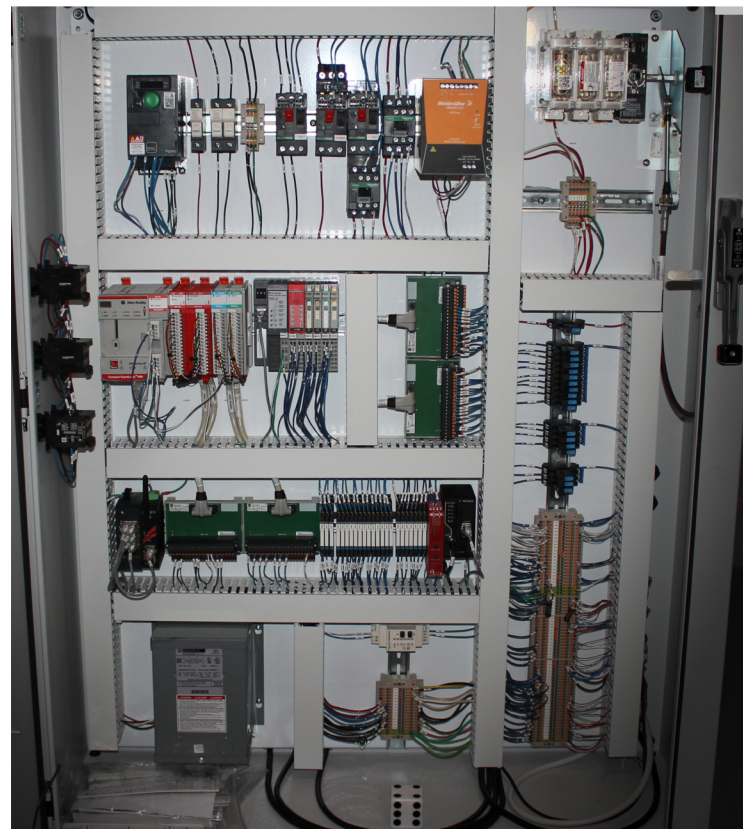
- Programmable Rockwell Automation / Compact GuardLogix SIL2 PLC
 - Safety Inputs & Outputs
 - 24VDC Inputs & Outputs
 - Breakout Wiring Modules
- Ethernet Rockwell Automation PT I/O
 - Safety Inputs
 - 24VDC Inputs & Output
- Analog Current Input & Voltage Output

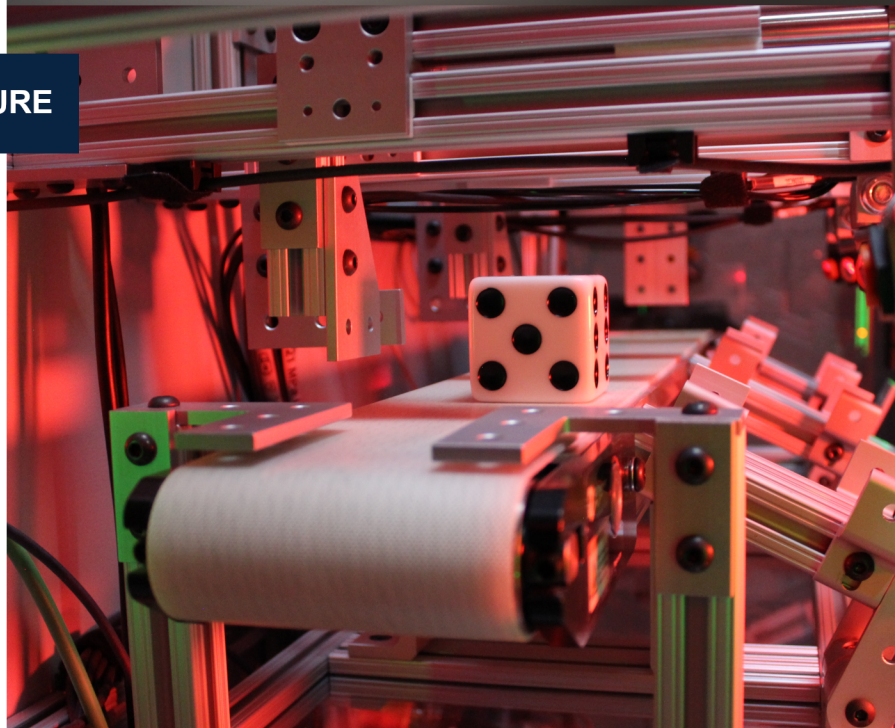
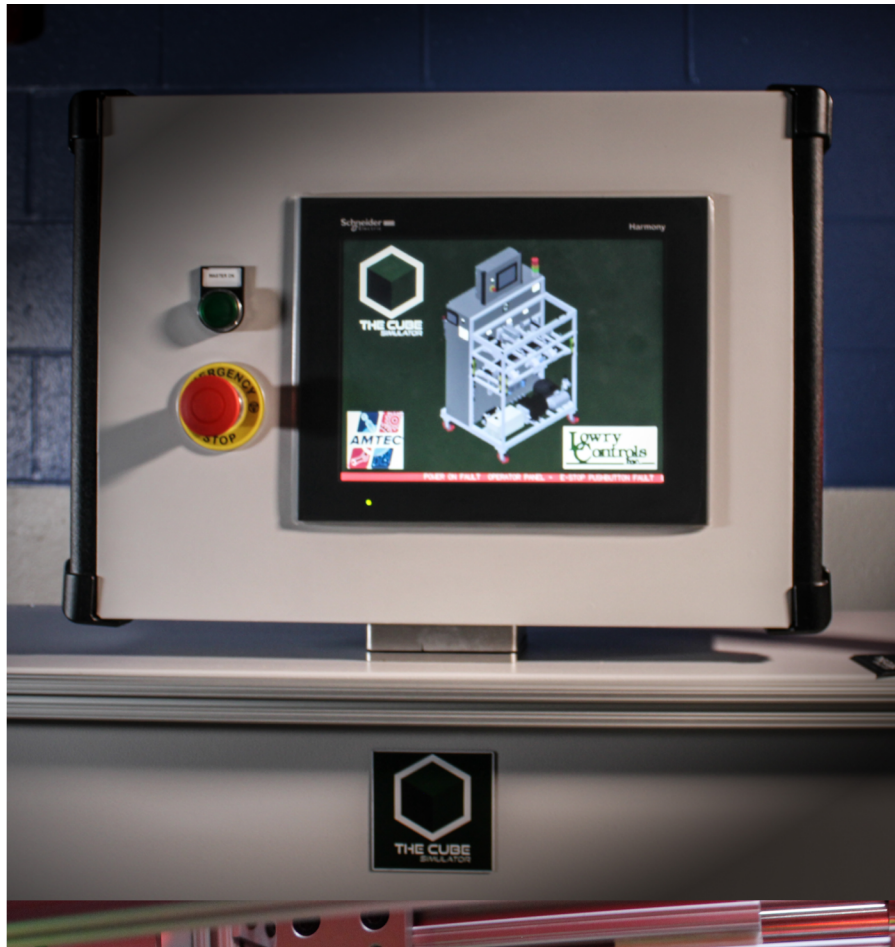
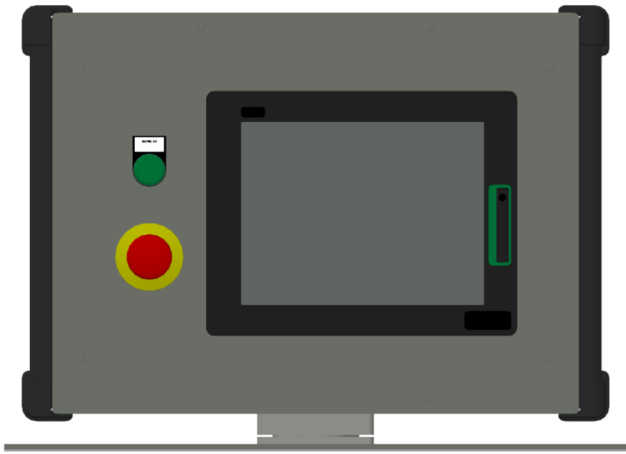
COMPONENTS

- 240 V AC 1 Phase Transformer
- 24VDC Power Supply
- Bus Bar Power Distribution
- Motor Circuit Protectors
- Contactors Utilizing Auxiliary Contacts
- Variable Frequency Drive
 - Analog Speed Control
 - Digital I/O Interface
- Finger Safe Fuse Holders
- Circuit Breakers
- Plug in Terminal Relays
- Terminals - Feed Through & Push In
- Industrial Ethernet Switch
- Vision Controller
- RF Cycle Start Button Controller
- Stack Light with Audible Alarm

FEATURES

- 24VDC Control Power
- Wireless Network
- Component Identification Tagging
- Wire / Cable Identification
- Silence Horn on Alarm Screen





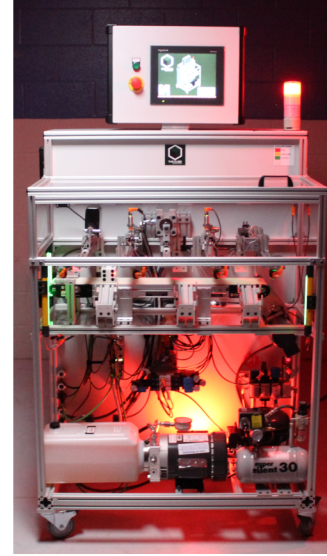
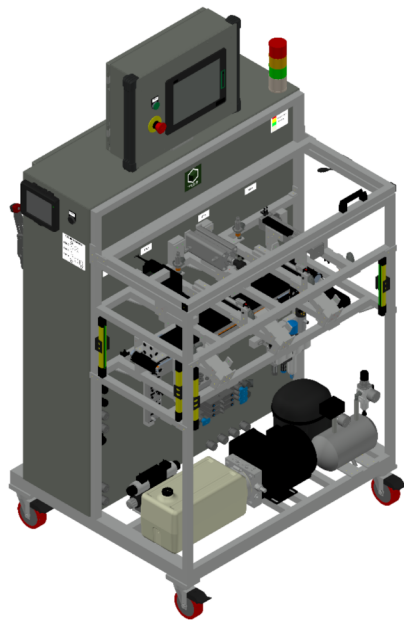
HUMAN MACHINE INTERFACE (HMI) ENCLOSURE

COMPONENTS

- HMI Enclosure
- Swivel Base
- Handles
- 10.4" Color Human Machine Interface Panel (HMI) with Touch Screen
- Emergency Stop Pushbutton

FEATURES

- Overview of Screens
 - Main
 - Manual
 - Popups for Individual Control
 - Status
 - Fault
 - Silence Horn on Alarm Screen
 - Splash Screen
- Fault Control via HMI



SYSTEM WIDE FEATURES

SAFETY

- Enclosed Polycarbonate Guarding
- Clear Vision of Mechanisms
- Safety Gate Switch
- Interlocked Hinged Access Door

ENERGY CONTROL & POWER LOCKOUT - ECPL

- Lockout Placard
- Lockout Identification Tags
- OSHA Compliant
- Electrical Energy Lockout
- Hydraulic Energy Lockout
- Pneumatic Energy Lockout

DESIGN

- Industry Approved Components
- Allen Bradley GuardLogix PLC
- Networked Device Communications
- Pre-Programmed Faults
- Multiple Wiring Methodologies
- Conveyor Features Belt Design
- Remote Operation of HMI Uses EcoStruxure Industrial Device App
- Simulator on Casters for Ease of Movement
- Simulator Plugs into Standard 120VAC 15amp Outlet
- Simulator Provides Compressed Air
- Simulator Fits Through Standard 36" Door

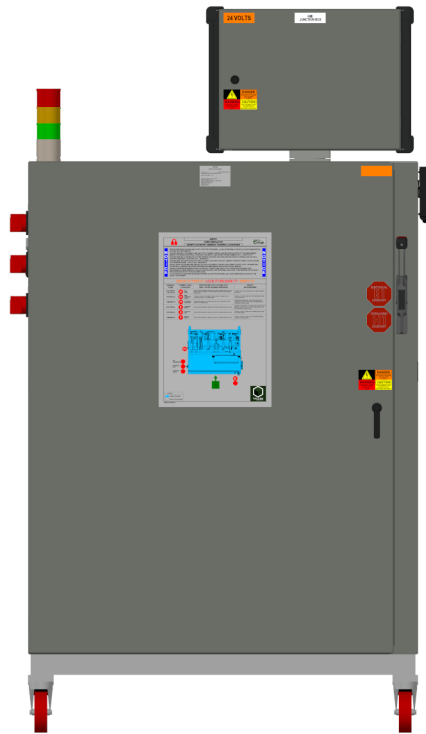
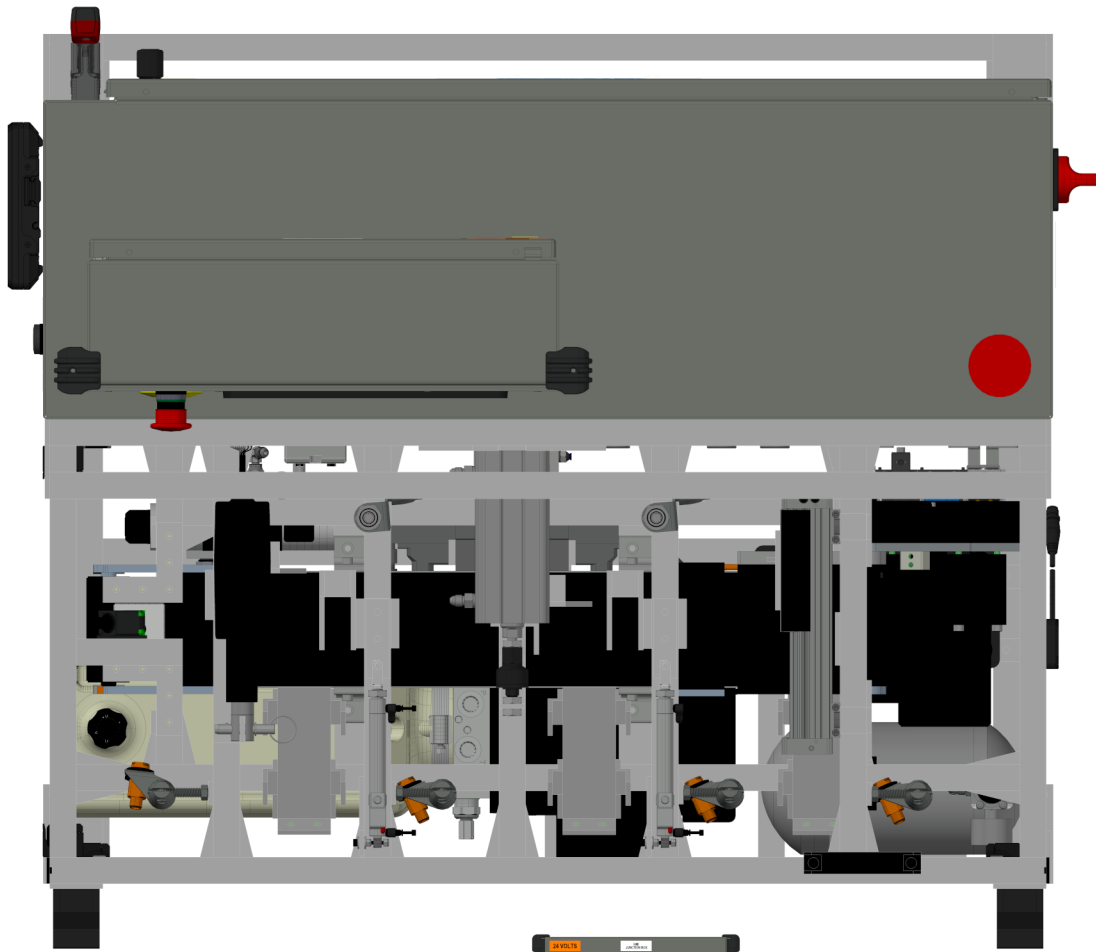
SCHEMATICS

- Electrical / Pneumatic / Hydraulic

USB STICK

- Component Literatur
 - Cutsheets
 - Manuals
 - MSDS
- Schematics - PDF Files
 - Electrical
 - Pneumatic
 - Hydraulic
- Programs
 - HMI
 - PLC
 - VFD
 - Vision
- Fault List

SYSTEM



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