

- Full Coating & Laminating Line Drives and PLC Upgrades
- Controls for Machine Sections
  - Unwinds (plus conversions from braked to motorized)
  - Coating Sections
    - Gravure
    - Reverse Roll
    - Slot Die
    - Hot Melt
- Cast Film Lines / Extrusion
- Laminator Sections
- Oven / Dryer Rolls and Blowers
- Cooling / Chill Rolls
- Nips
- S-Wraps
- Slitters
- Accumulators
- Rewinds
  - Log Winders
  - Turret Winders with Automatic Splice
  - Robotic Winders
  - Surface Winders



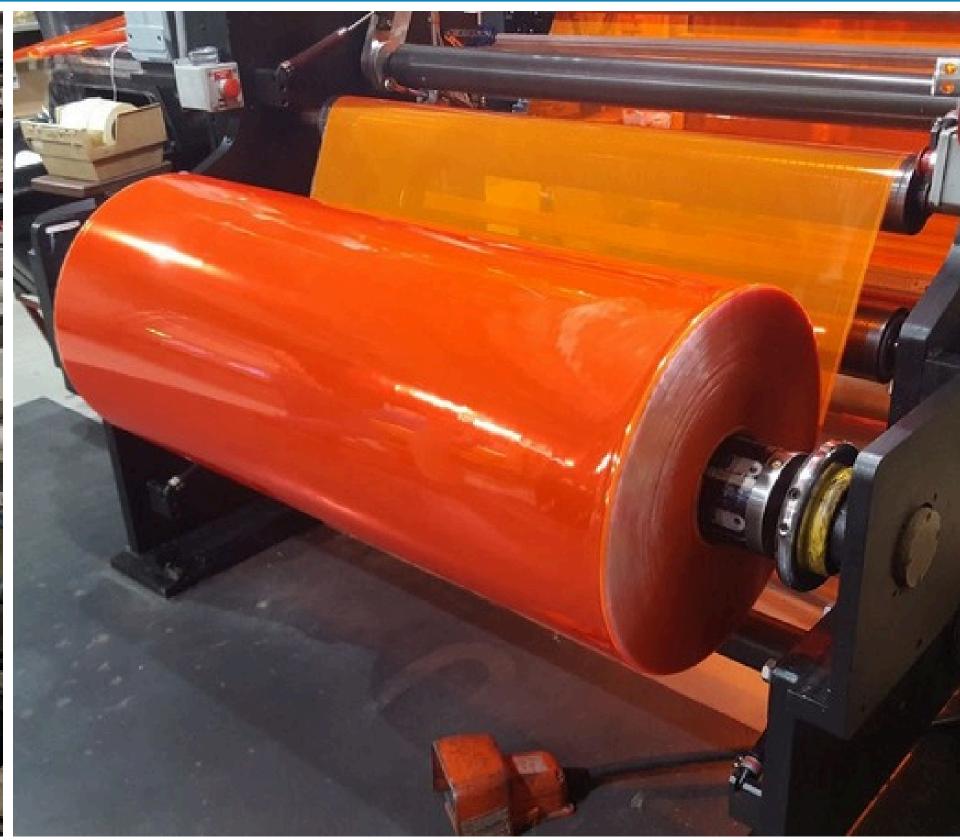


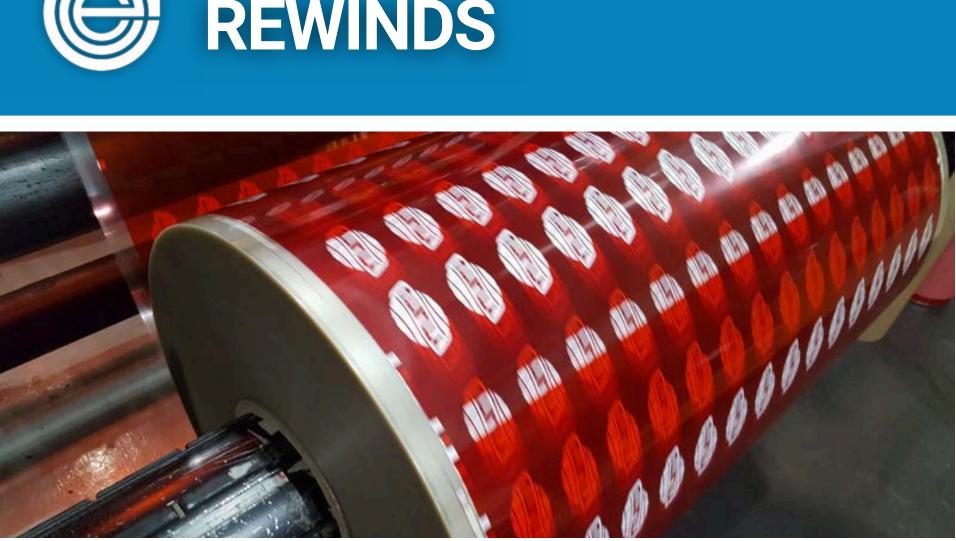
- Full Coating & Laminating Line Drives and PLC Upgrades
  - Other Components / Sections
    - Edge Guides
    - Meyer Rods
    - Purge Systems
    - Release / Interleaf Paper Winders/Unwinds
    - Universal Shafts
    - XP Motors and Controls
- Applications / Specialties
  - Line Speed / Tension / HP Increase
  - Taper Tension
  - Addition of Tension Zones
  - PID Control
  - Temperature Control
  - Conversion of individual TCUs to PLC/HMI control with Recipes



## SPECIALIZING IN UNWINDS







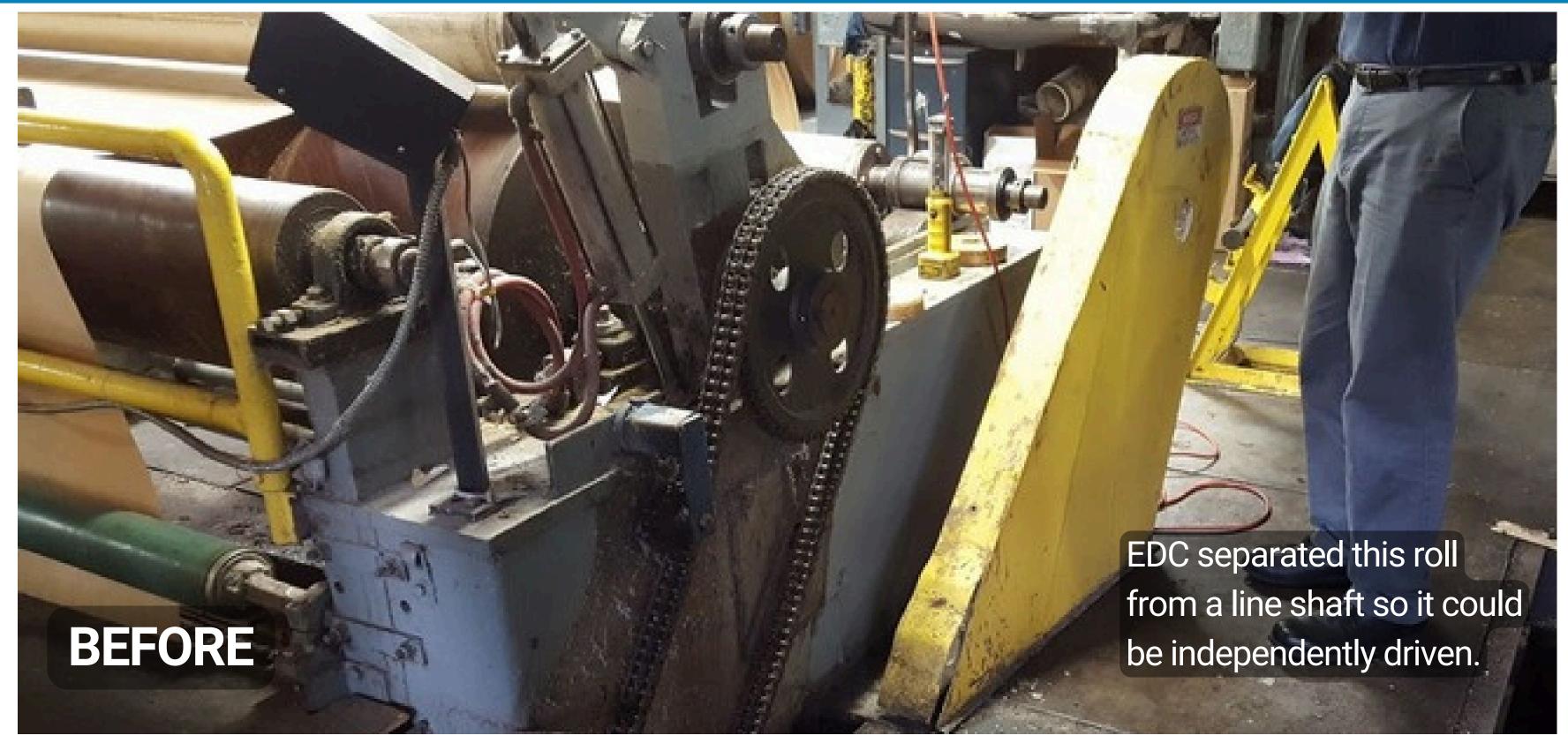






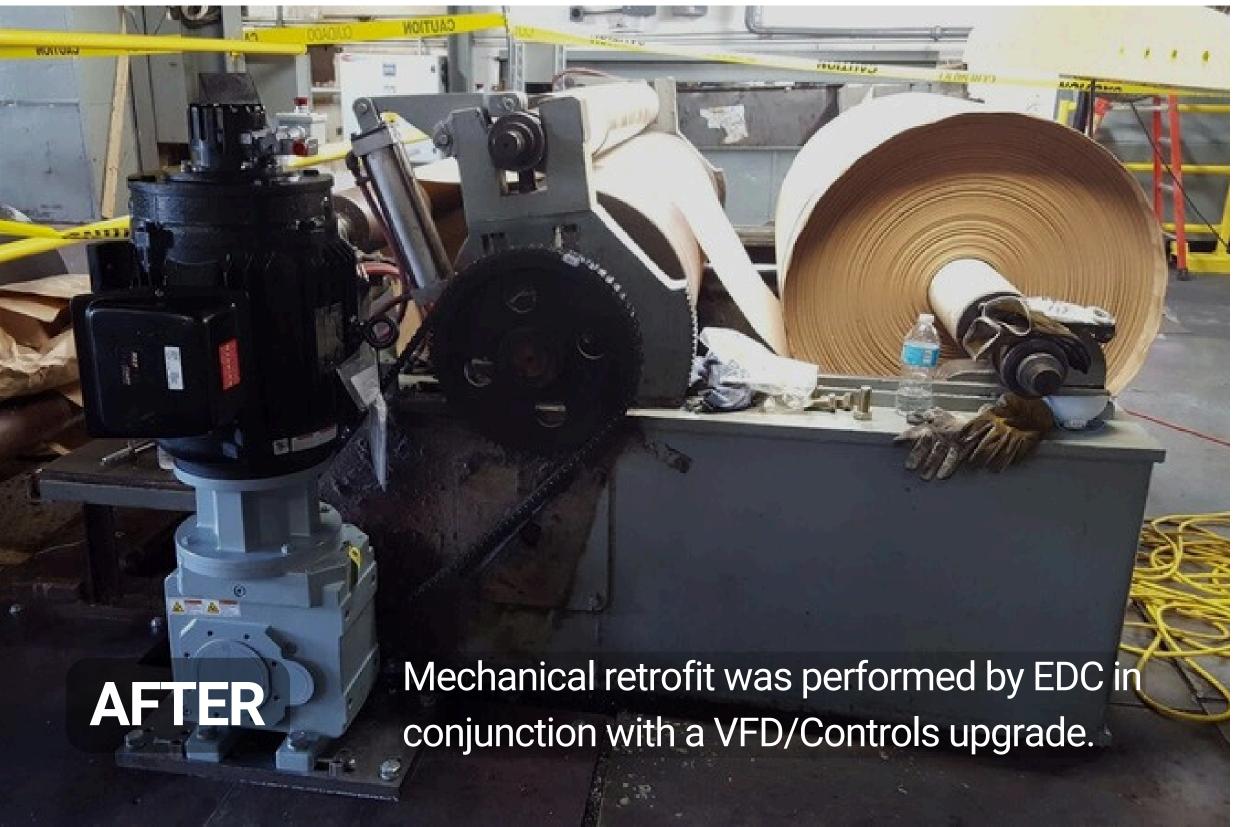


#### SPECIALIZING IN LINE SHAFT AND MOTOR CONVERSIONS





#### SPECIALIZING IN LINE SHAFT AND MOTOR CONVERSIONS





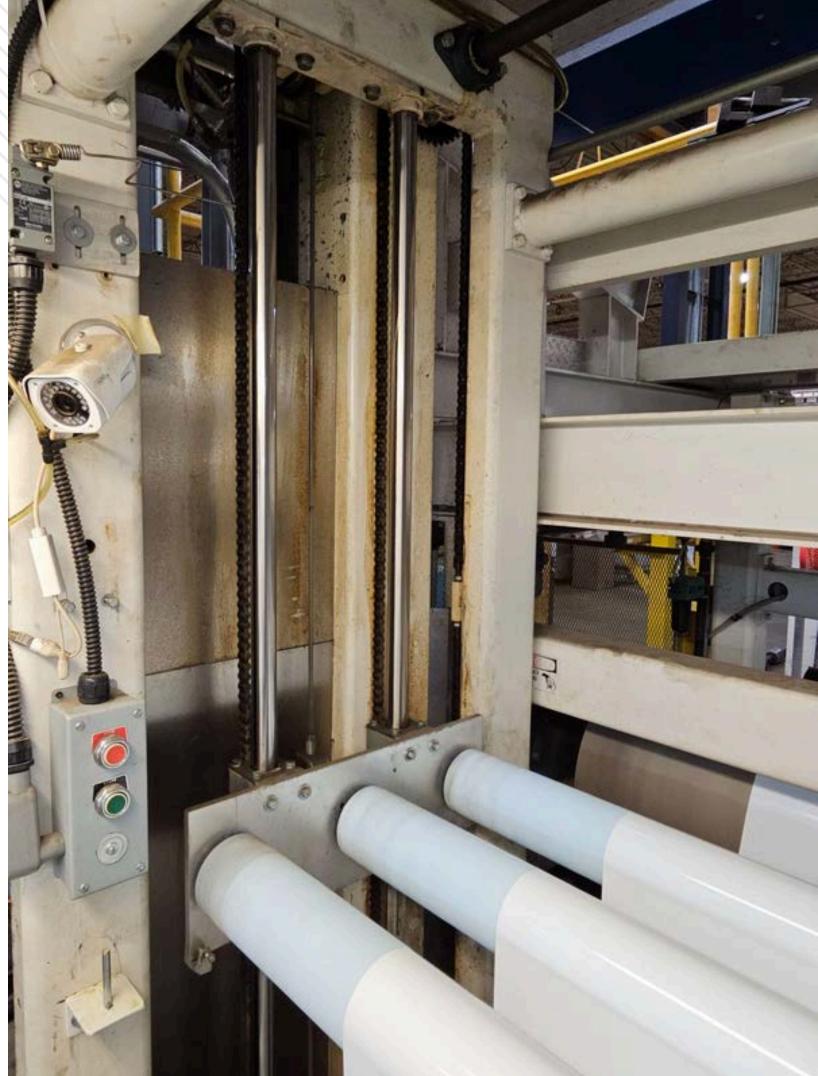
## SPECIALIZING IN REWIND EMBEDDED OEM DC MOTOR



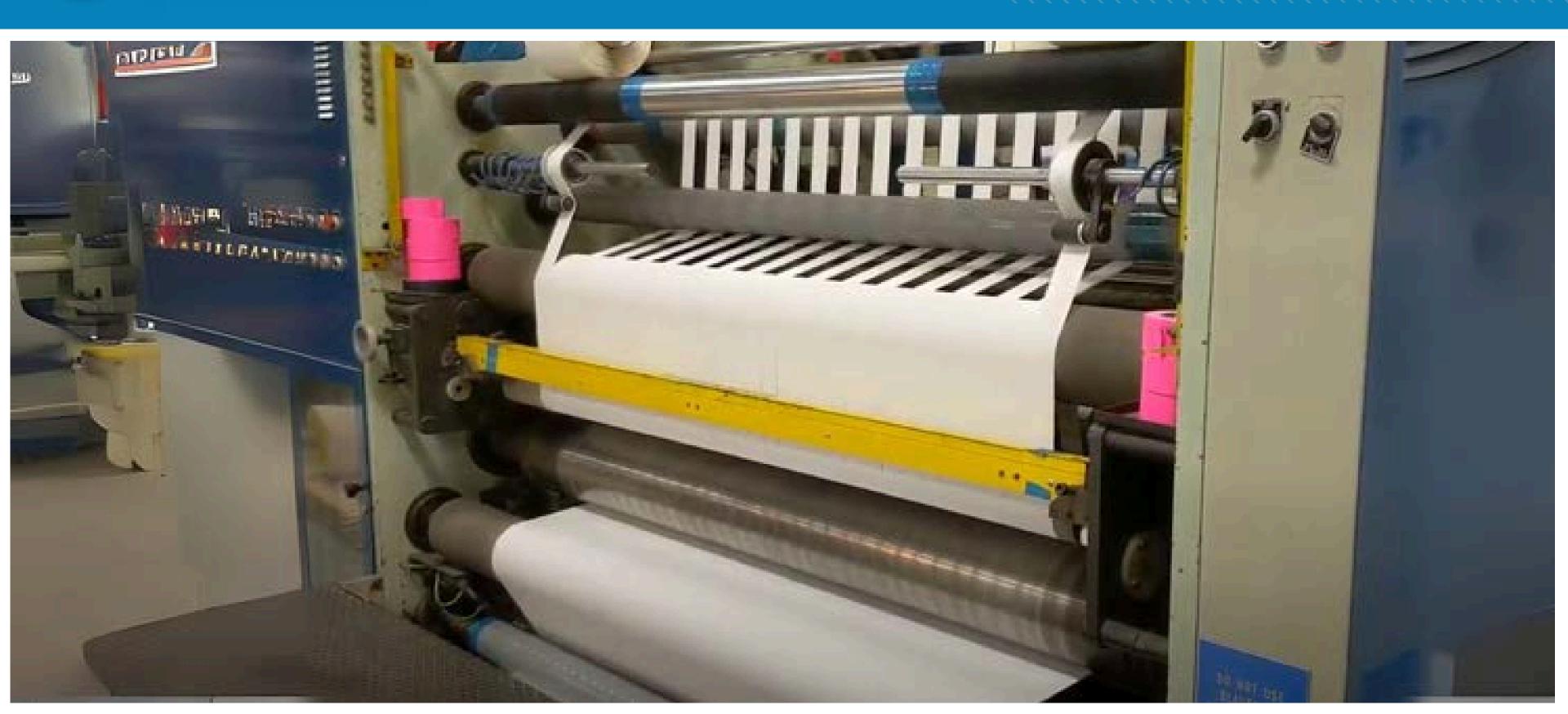






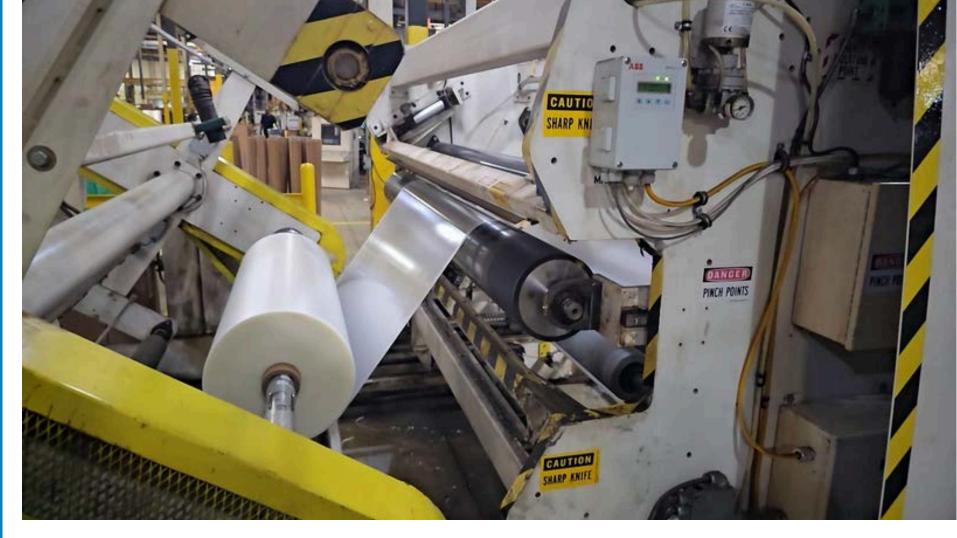


# SPECIALIZING IN SLITTING





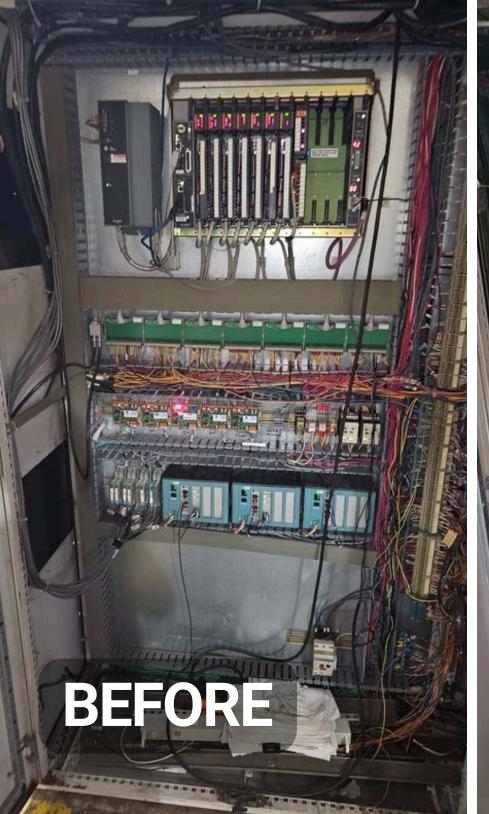
- Converted Allen-Bradley PLC5 to ControlLogix
- Upgraded 28 Vector Drives
- Changed PLC5 Remote I/O to Rockwell 1734
   Point I/O
- Created Ethernet I/P network for PLC, drives,
   I/O, HMIs and connection to plant network
- Removed and replaced control panels onsite
- Upgrade of Robotic Winder with Autosplice feature







### FILM COATING LINE UPGRADE PLC & TYPICAL DRIVE ENCLOSURE



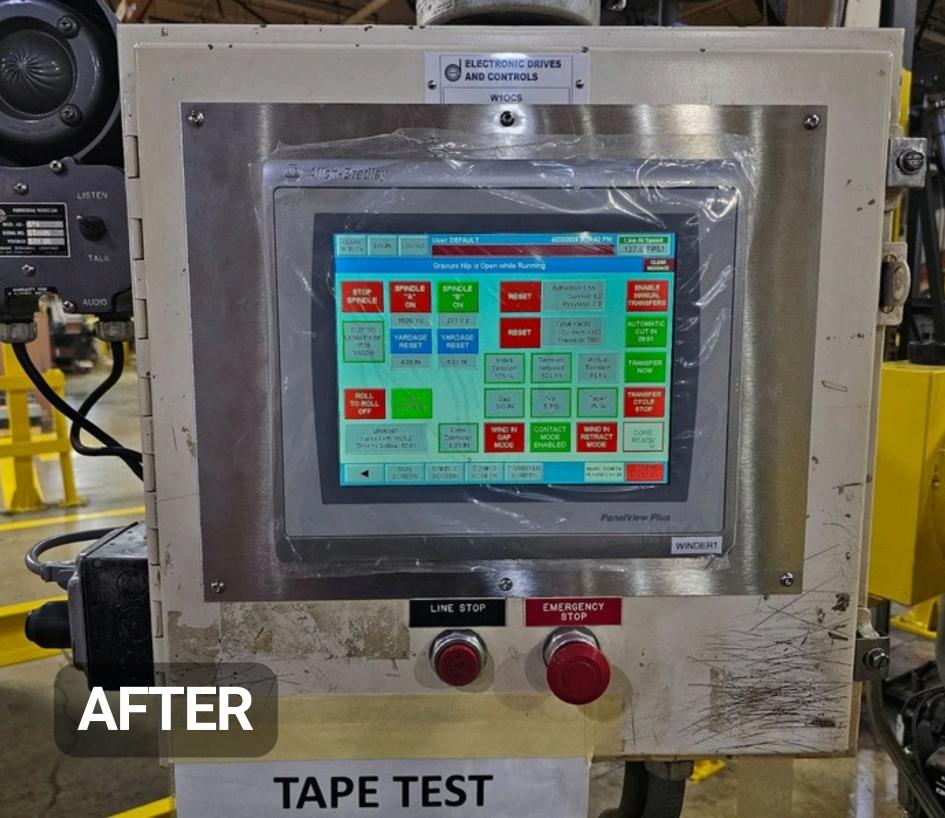




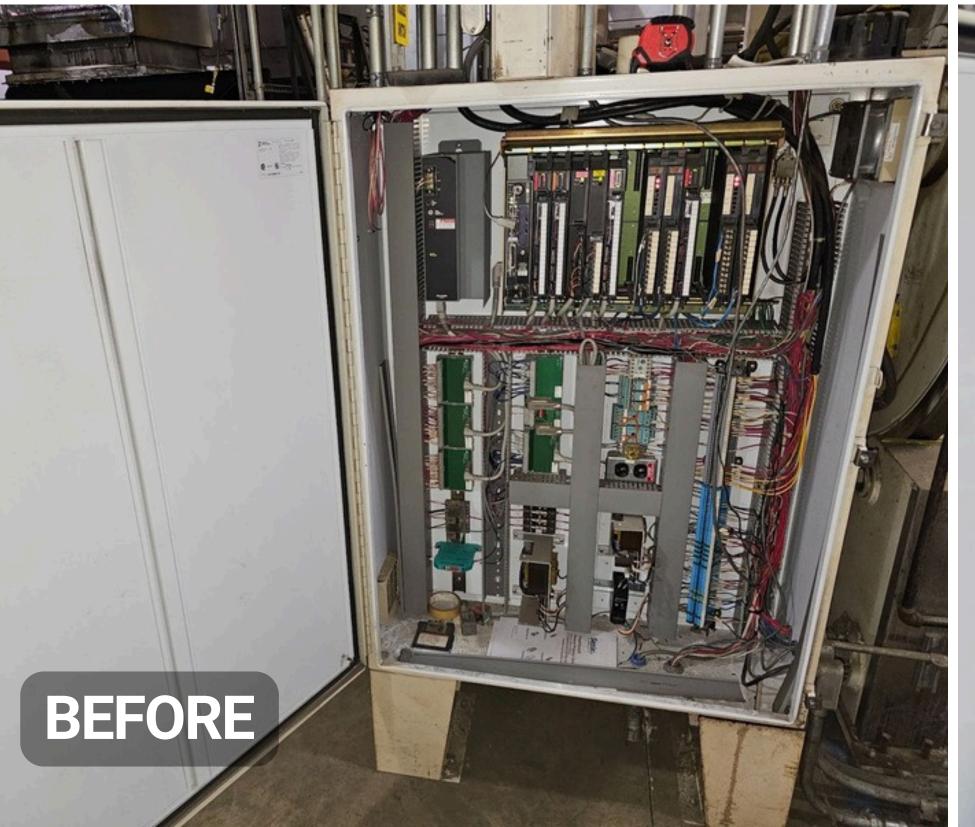


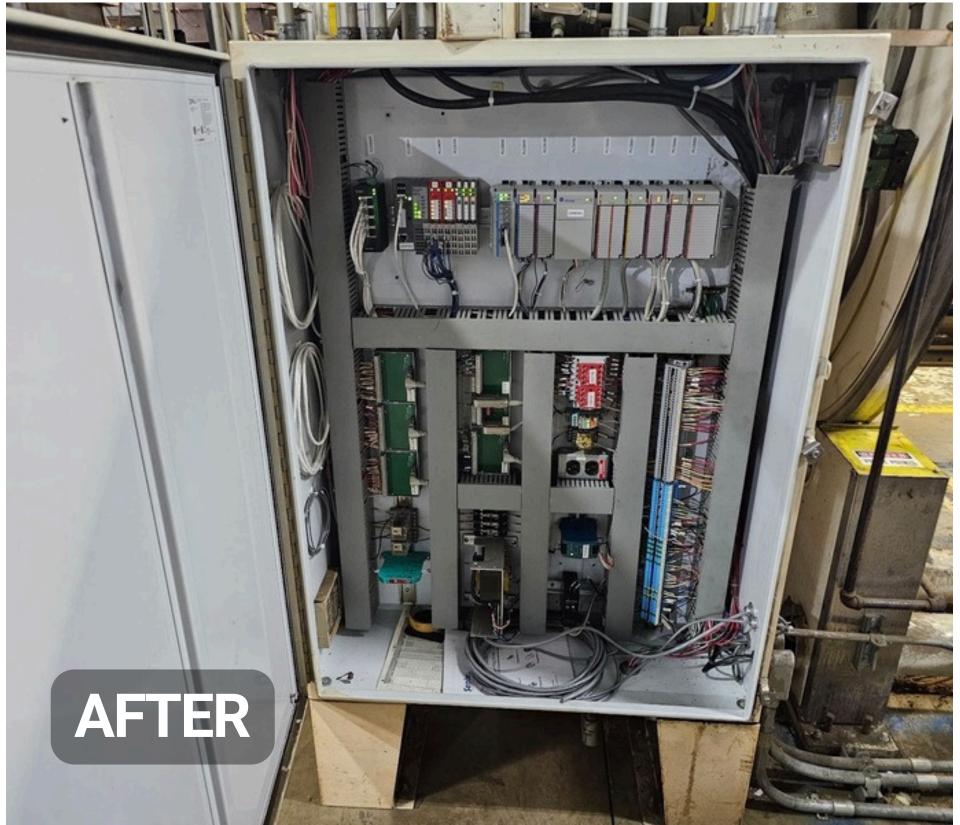
## FILM COATING LINE UPGRADE HMI









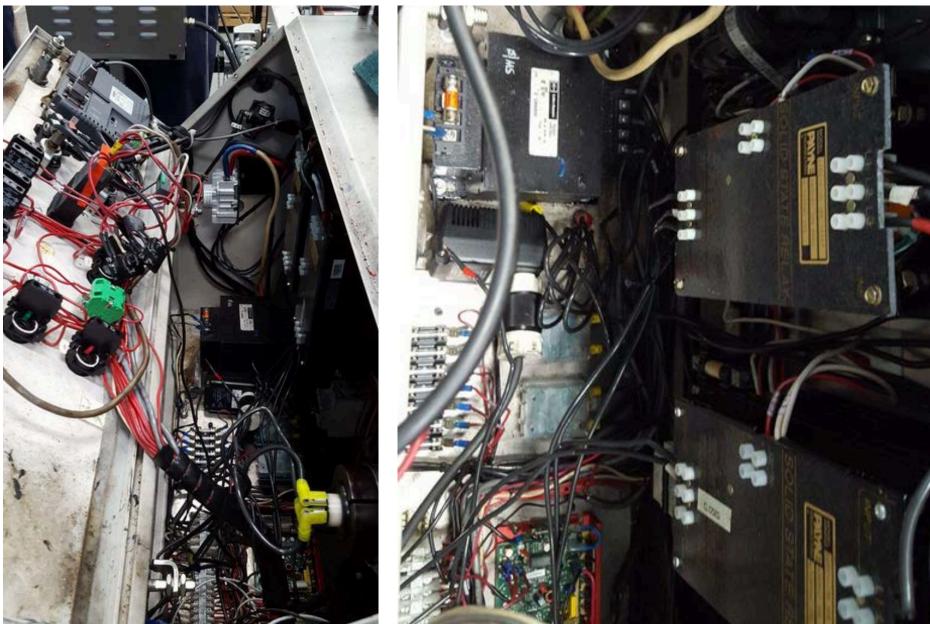




### LAMINATOR UPGRADE PROJECT BEFORE

- Replacement of custom desk-style console with meters, knobs and dials with new desktop enclosure with HMI and clean, userfriendly layout
- PLCs and servo drives enclosed in desktop enclosure
- PLC-based temperate control replaced individual controllers
- Improved winding with diameter calculator and tension control algorithms





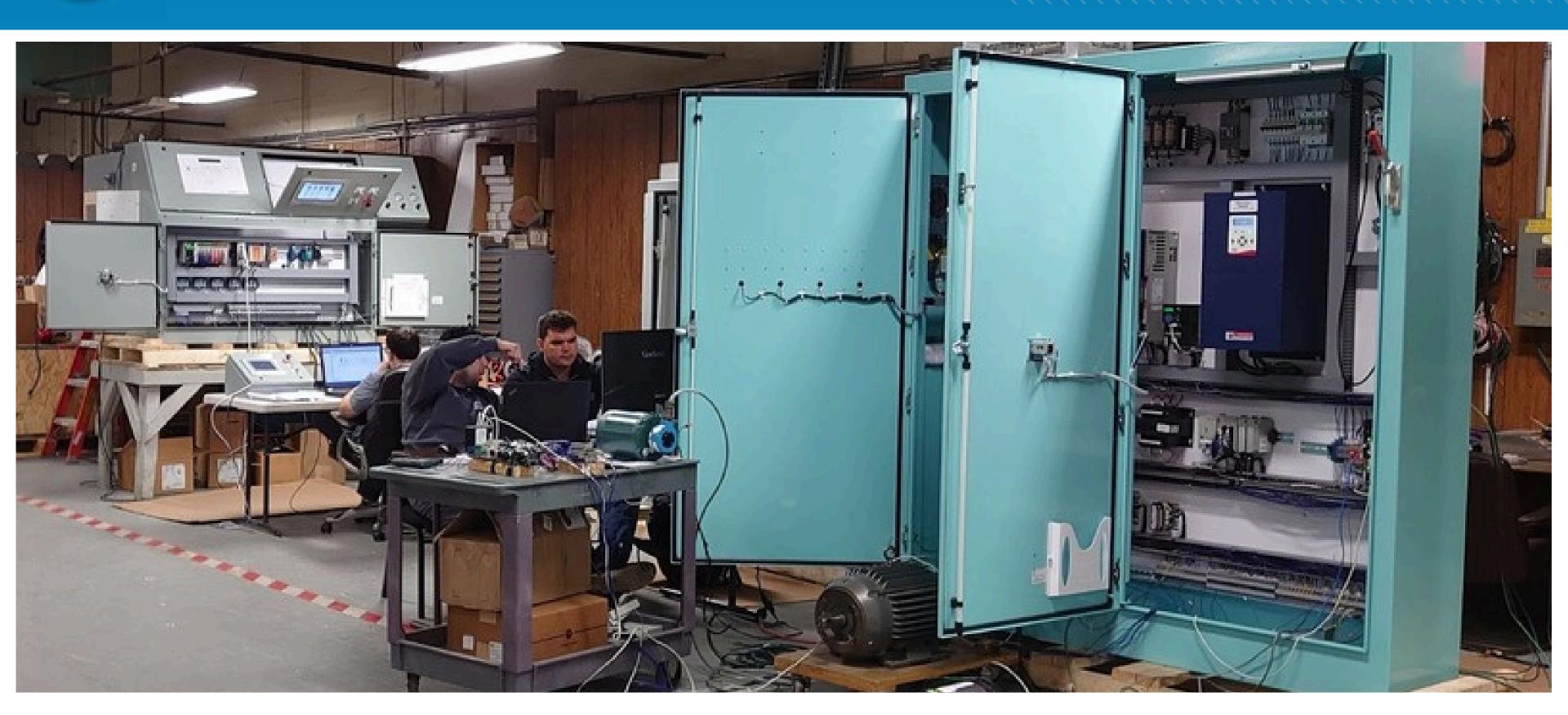








## SPECIALIZING IN CERTIFIED UL508A MANUFACTURING



## SPECIALIZING IN EDGE GUIDE CONTROLS

