## Contract Manufacturing Services for High Reliability Applications

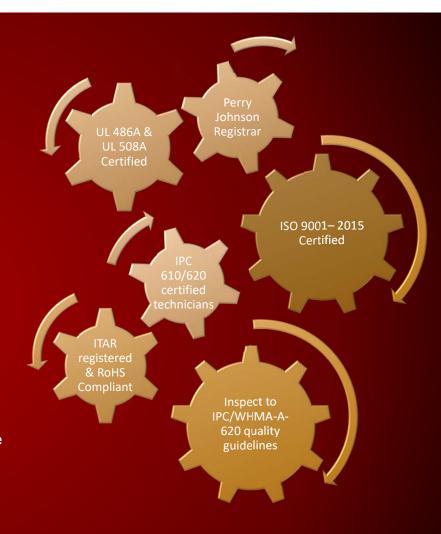


Electronic & Electromechanical Design, Development & Manufacturing

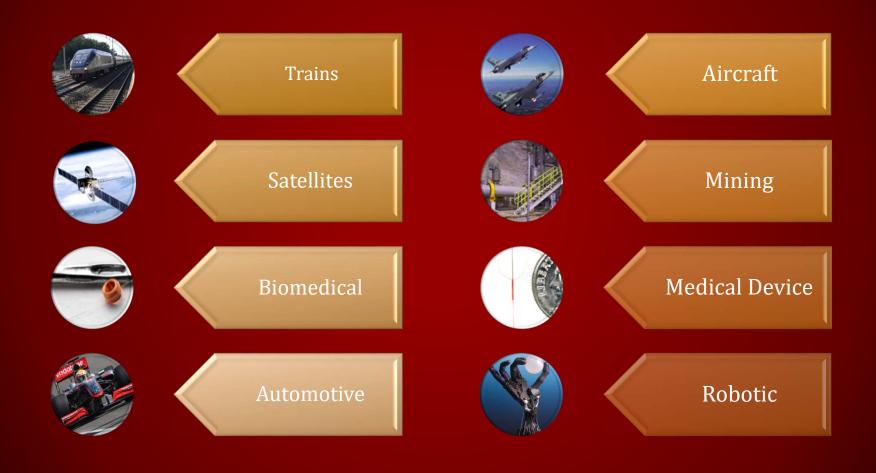


#### ABOUT US...

- Manufacturing facilities in Buffalo, NY; Boston, MA, Durham, NC
- □ 35 years of experience in harness manufacturing
- Between our 3 facilitles we have over 75,000 sq. ft. of state of the art manufacturing space
- ☐ We strive to become an extension of your engineering department
- Contract manufacturer of high reliability components used in critical operations in transit, aerospace, defense, industrial, and medical settings
- We focus on manufacturability though up front design involvement
- Lower total acquisition costs through technical services
- ☐ We can help lower installation costs at your facility
- Manufacturing services include cable and wire harness assembly, electromechanical devices, PCB Assemblies, Surface-mount and PTH, and value added sub-assembly preparation
- Design and manufacture customized, built-to-print, performance-critical products
- More than a century of highly developed design and documentation experience

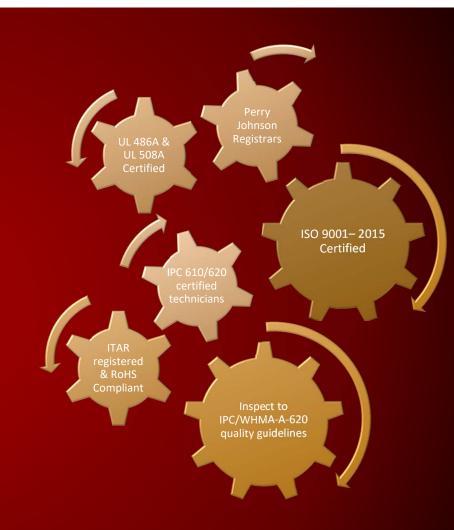


### OUR COMPONENTS ARE ON THESE SYSTEMS...



#### VERTICAL INTEGRATION...

- ☐ Hi-Reliability experienced and dedicated team
- Low to medium volume, high mix
- Special Process Qualification Programs: Crimping\Soldering
- ISO 9001:2015 Certified
- ☐ Inspect to IPC/WHMA-A-620 quality guidelines
- ☐ IPC 610/620 certified technicians
- ☐ ITAR registered
- Specialty: Wire & Multi-conductor cable assemblies



#### SERVICES...

- Design & Development Support
- Build to Print
- Prototype to Production volume
- Panel Build
- ☐ Complete Box Builds/Integration
- Complex Cable & Harness Assemblies
- Burn-in and full testing
- Specialty: Wire & Multi-conductor cable assemblies
- PCB Assemblies Surface-mount and PTH
- Kit assembly, Fulfillment Services, Packaging & Labeling Services



## RAIL EXPERIENCE...JUST TO NAME A FEW.

NYC TRANSIT - R160 (Interior Harnessing)

PATH - Westcode US - PATH R160; Vapor Rail - PATH R160 (HVAC)

PATCO - Control Panels

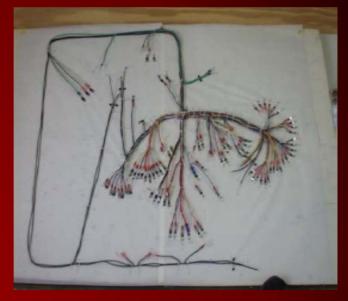
**Knorr Brake** – M9 (Starter Box and Cable Assy)

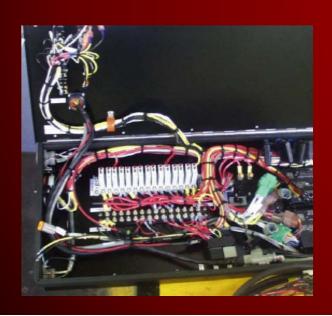
MDT - SMART SYSTEMS (Harnesses)



Cable Harnesses -

**←** Wire Harnesses





Electro-Mechanical Assemblies —

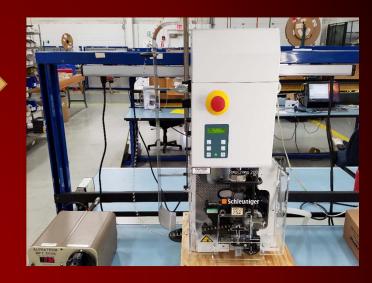
**←** Control Panels





**20 Termination Presses** 

**←** 50,000 Sq. Ft. Bldg.





250 Applicators -

12 Wire and Cable Strippers



## PRODUCTION SYSTEM LEAN MANUFACTURING STRATEGIES

- Small Batch Manufacturing
- Quick Changeover
- Point of Use Inventory
- Flexible Workforce
- Kanban
- Standard Work Practices



#### **CORE TECHNOLOGIES**

- Wire Harnessing, Cable, Component Prep and complete Value-Added Assembly
- Utilizing Shinmaywa, Schleuniger,
  Carpenter –Wire Cutting Equipment
- Amp, Molex, Deutsch, JST, Burndy, Packard, Delphi –Application Equipment
- Cablescan, Cirris, DIT-MCO –Q.A. Equipment



#### **COMPUTERIZED SYSTEMS**

- Global Shop Solutions –Total ERP System
- ☐ Accounts Payable/Receivable
- ☐ Inventory Control
- ☐ Capacity Planning
- ACCESS EDI PRO
- ☐ Material Management
- ☐ Tooling Management
- ☐ Design Management
- ☐ Quality Management
- ☐ Training Management
- ☐ Productivity Management





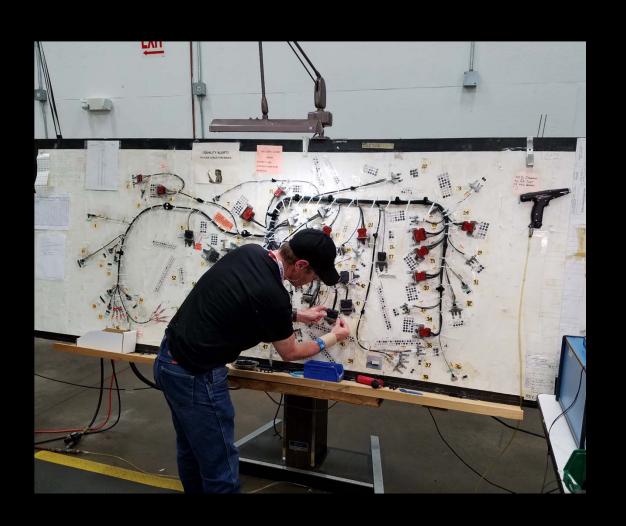
#### **CAPABILITIES**

- Complete Engineering and Design Support Services
- Material Standardization
- Detailed ManufacturingDocumentation
- On-site Support
- ☐ CAD/Electrical Data Software
- Quick-turn Manufacturing Cell
- □ Rapid Prototyping



#### **QUALITY SYSTEMS**

- ISO 9001 2015 Certified
- ☐ Inspect to IPC/WHMA-A-620
  - quality guidelines
- ☐ UL 486A Certified
- ☐ UL 508A Certified
- ☐ ITAR Approved
- ☐ RoHS Compliant



#### **QUALITY SYSTEMS**

#### **INSPECTION CONSISTS OF:**

- Incoming inspection based on MIL Standard Sampling
- In-process statistical audits
- 100 % on-board testing with more than one conductor
- □ 100% quality inspection on finished assemblies
- Information stored and analyzed in Access database

## PCB Assemblies – Surface-mount and PTH

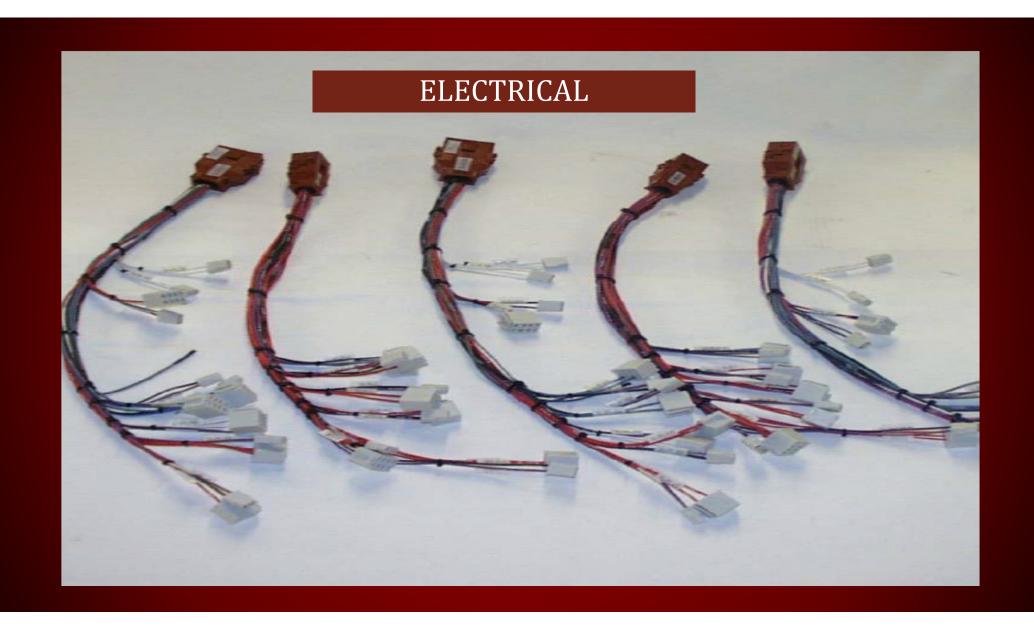




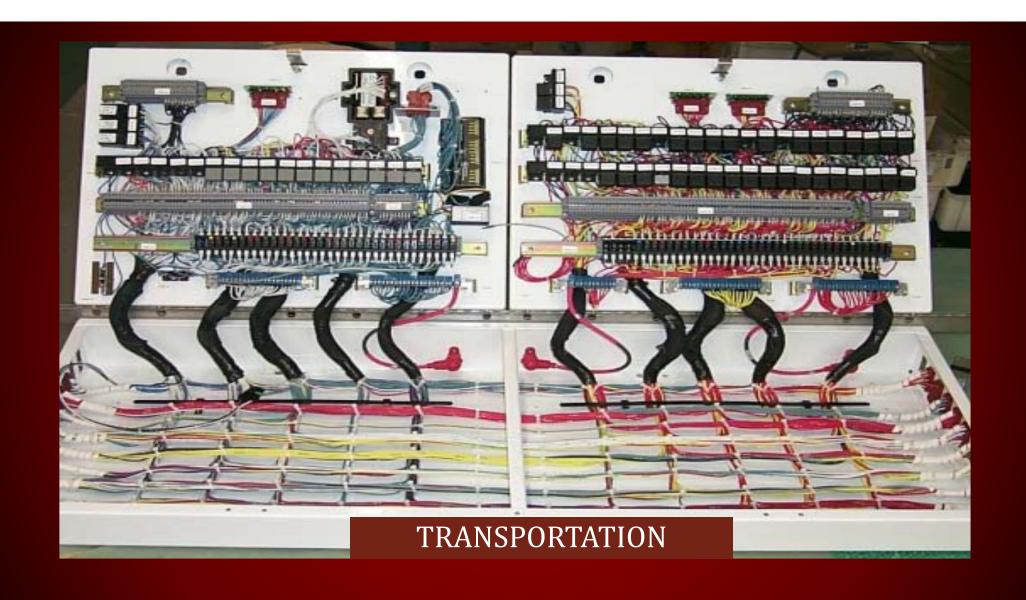










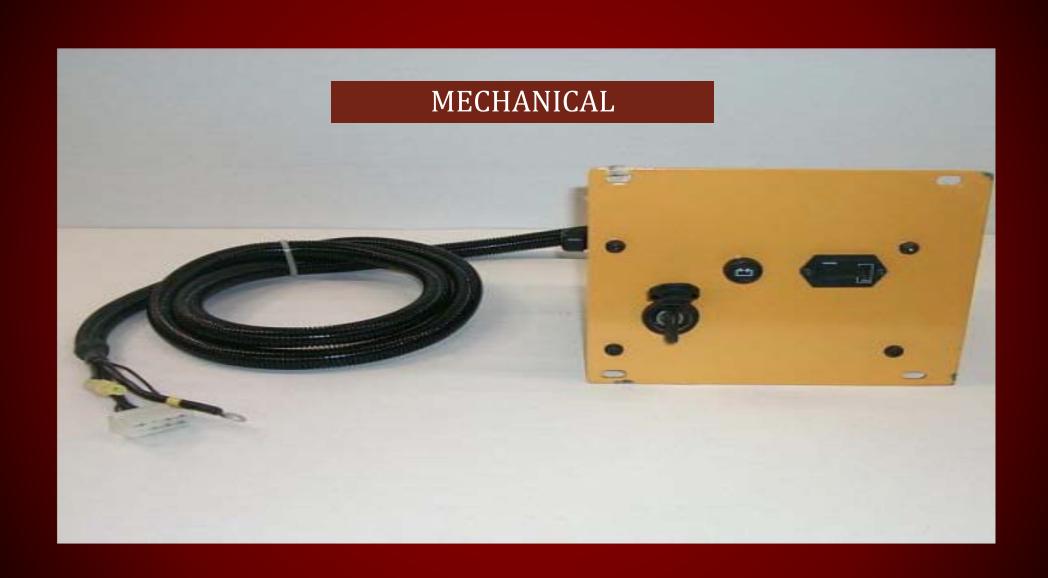


# Specializing in custom harnesses and assemblies for industrial OEMs

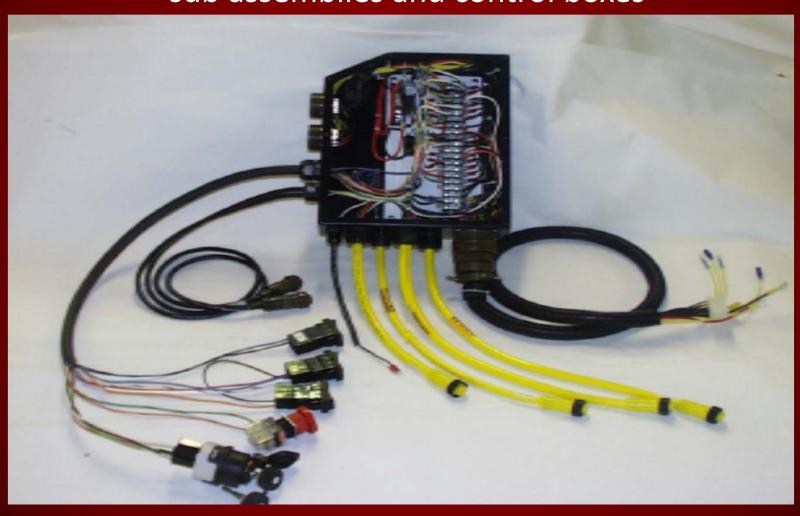


## Wire harnesses, sub assemblies and control panels

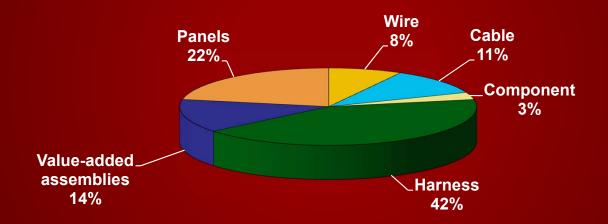




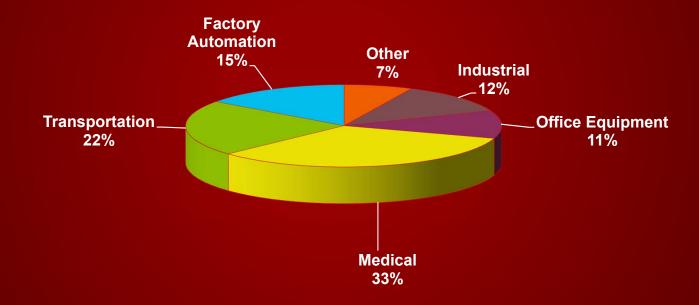
## Design and build custom control panels, electro-mechanical sub assemblies and control boxes



## Product mix by commodity



## Customer type by industry



### ADDING VALUE...

**EFFICIENCY** – Increasing efficiency of employees allows us to lower costs for our clients

**GROWTH** – Adding increased value to existing clients and establishing new clients

**REAL-TIME DATA** – Using real-time data of our process to continuously improve and reduce waste

**EMPLOYEE ENGAGEMENT** – Helping employees benefit from success and prosper

**TECHNOLOGY ROAD MAP** – Adding speed, agility, and insight to our clients, while decreasing time and increasing quality consistency

## JOINT CERTIFICATIONS...

- HUBZone (Cert. # 63400)
- SBA EDWOSB
- □ WBE
- USDOT DBE, NY; MA; GA; PA; CA; IL; AZ; DC; RI; FL; TX City of Buffalo/County of Erie Joint Certification
- ISO9001:2015 Certified
- ☐ Inspect to IPC/WHMA-A 620 quality guidelines
- ANSI/IPC A-610 Certified Class 1, 2, 3 Acceptability of Electronic Assemblies
- ITAR Certified
- RoHS Compliance
- UL 486A & UL 508A Certified



#### PROFILE...

☐ COMPANY DUNS NUMBER: 624104464

☐ COMPANY CAGE CODE: 4LUQ2

Business Certifications: SBA 8(a) BD (CASE# 304603), SBA, EDWOSB,

USDOT DBE, NY; AZ; CA; GA; DC; IL; MA; PA; RI; FL; TX

JOINT CERTIFICATION: City of Buffalo/County of Erie

NAICS CODES: 332618, 334290, 334418, 334419, 334511, 335311,

335929, 335931, 335999, 423610, 423690, 541330, 541340, 541380, 541611, 541712, 541990, 561910

□ FEDERAL SUPPLY 5935, 5995, 5998, 6145, 6150

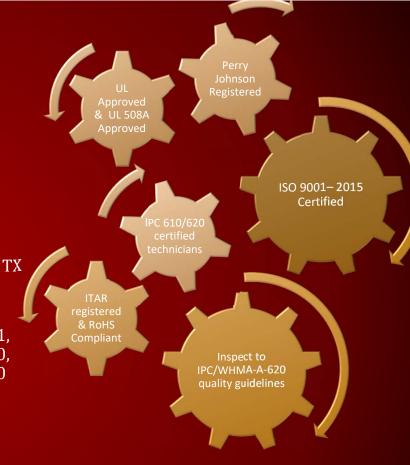
Classification

□ Customer Audits: Alstom Transport, Clever Devices, Wabtec/Vapor Rail, Bombardier, Westcode, Knorr Brake,

NYAB, Mitsubishi, Lockheed-Martin; Hamilton-Sundstrand Space Systems International; Moog;

Cobham Mission, Carestream Ortho-Clinical, Systems; Tactair, Taber, Remotec/Northrop-

Grumman; Parker, and Dresser Rand



### OUR CONTACT INFO...

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