



**Representing World Class Equipment & Services  
for Energy, Environmental, Maintenance, Repair & Process Challenges**

**Partnered in Virginia with Kahlco Representatives of Delaware  
for Sales Engineering & Support of the following CVA & Kahlco Lines**

***Energy Savings & Sustainability:***

**Removable, Reuseable Thermal Blanket Systems** ◦ **Shannon Global Energy Solutions** ◦ Save Up To 92% Of Pre-Installation Energy ◦ Reduce Greenhouse Emissions ◦ CAD Designed ◦ Factory-Made ◦ Best Fit & Ease of Use Plus ID Tagging & Manufacturer Archives Help Ensure Re-Installation for Sustained Energy Savings & Personnel Safety ◦ Energy & Emissions Surveys with Accuracy of +/- 5% ◦ Post - Install Measurement & Verification Services ◦ DIY Or Turnkey Installations ◦ Guaranteed Fit

**More on Energy Savings.....** As A Result of Exceptional Designs, Improved Technologies, Diligent Application Review and Execution by Our Manufacturer And Service Partners, Virtually all the Equipment and Many of The Services We Represent Produce Energy, Emissions, Labor and/or Utility Savings, Sustainability & Process Improvements

Some examples are **Baghouse Advanced Control Upgrades** – Save as Much as 50% of Compressed Air & Electric See Air Pollution Control **Dense Phase Pneumatic Conveying** – More Tonnage Conveyed Per KWH - See Process Equipment & Services

***Air Pollution Control Equipment:***

**Acid Gas and Particulate Removal - AirPol** 40+ Years in the Design & Manufacture of Wet Scrubbers ◦ More than 1,400 Wet Scrubber Installations Worldwide ◦ Absorption Spray Towers ◦ Packed Towers ◦ Venturi Scrubbers ◦ Cyclonic Scrubbers ◦ Wet Electrostatic Precipitators ◦ Tray Towers ◦ Evaluation of Existing Systems ◦ Upgrades ◦ Repairs ◦ Parts & Service ◦ Project Management ◦ Turnkey Installations

**Baghouse Advanced Control Upgrades** ◦ Industry Leader in Proven, State of the Art Dust/Particulate Sensor Systems ◦ Eliminate False Alerts & Wasted Labor ◦ Rapid ROI's with up to 50% Savings of Compressed Air, Energy & Labor ◦ Reduce Particulate Emissions ◦ Identify Plugged or Damaged Bags Down to an Individual Row ◦ Meet/Improve EPA & DEQ Compliance Status ◦ Tailored Solutions ◦ Onsite Surveys ◦ Turnkey Services ◦ Numerous Case Studies & Testimonials

**Baghouses, Bin Vents & Hoppers - Equipment & Services** ◦ Design & Construction ◦ Baghouse Inspections ◦ Conversions ◦ Upgrades ◦ Repairs ◦ Blasting & Resin Coatings ◦ Rapid Quotes ◦ Very Competitive Rates ◦ AEROPULSE® & Pulse-Jet Systems & Parts ◦ Baghouse Parts & Accessories for Any OEM Brand of Dust Collection Equipment ◦ Hopper Level Sensors

**Bio-Oxidation HAP & VOC Abatement, Odor Control - PCC Dual Bio Phase™ Systems for High Flow Rate, Low Concentration Contaminated Gas Streams** ◦ Unique State of the Art Synthetic Media is Designed for Low-Pressure Drop and Allows Added Surfaces for Biofilm Growth Without Clogging ◦ Approximately 60% Less Annual Operating Cost than an RTO System ◦ HAP & VOC Typical Airflow ≥250,000 Acfm, Concentration Range (25 – 5,000 Ppmv) ◦ Odor Removal for Odor Concentrations of <50 Ppmv ◦ 80% Reduction of Greenhouse Gases ◦ 100% Reduction of NOx

**Dust/Particulate Sensors** ◦ Replace Inefficient Opacity Sensors with FilterSense Dynacharge™ Particulate Monitors to Prevent Excess Emissions, False Alerts & Process Problems by Providing Reliable Low-Level Particulate Monitoring, Early Warning Leak Detection, Better Control, And Real-Time Diagnostics of Filtration Systems ◦ Rapid ROI's ◦ Most Reliable Charge-Based Sensors on The Market ◦ Meet/Improve EPA & DEQ Compliance Status ◦ Built to Strict Quality Standards ◦ Reliable Alarming ◦ Repeatable Measurement ◦ High Accuracy ◦ Simple Conversions ◦ Easy to Use and Simple to Operate ◦ Easy Cost-Effective Upgrades from Entry-Level to Most Comprehensive System Via Scalable, Modular Systems ◦ Turnkey Installs

**Flare Systems – PCC Corporation** ◦ Simple, Cost - Effective Means of Processing Waste Gas Streams from Landfills, Digesters and Biogas Applications ◦ Commonly Used as a Thermal Destruction Device for Waste Streams that Have a Heating Value ◦ Enclosed Ground Flare or Forced Draft Flare Designs ◦ 98% To 99.9+% Destruction Removal Efficiencies ◦ Require Minimal Maintenance ◦ Can Be Placed Adjacent to Other Equipment at Your Facility ◦ Modular Design Allows for Simple and Quick Modifications to Increase Residence Time or Incorporate Heat Recovery

**NOx Reduction To 98% YARA's NOxCare® Team** Is a World Leader in Design, Engineering, Manufacturing, and Maintenance of Selective Catalytic Reduction (SCR) & Selective Non-Catalytic Reduction (SNCR) Systems ◦ More than 1,300 Completed NOx Control Systems Worldwide ◦ YARA's In-Depth Knowledge Of NOx Emissions In Your Industry Provides A Solution Tailored To Your Needs ◦ Onsite Rejuvenation Of All Makes Of SCR Catalyst ◦ Site Studies ◦ Pilot Plants ◦ Optimization of Existing Systems ◦ Highest Quality Reducing Agents for Effective NOx Reduction ◦ YARA Produces One-Third of the Worlds Natural Gas Based Ammonia and Urea Via a Network of 30 Plants and 200 Terminals and Warehouses, Assuring You of Consistent Quality and A Constant Supply, at Competitive Prices

**Thermal Oxidizers - PCC Corporation** Global Leader In Design, Engineering & Manufacturing of Thermal Oxidizers ◦ Direct Thermal Oxidizers, Flameless Thermal Oxidizers, Packaged Combustion Systems, Recuperative Thermal Oxidizers, Regenerative Thermal Oxidizers, Vapor Combustors, Low NOx Burners & Combustors Onsite Audits, Parts, and Technical Service for all Makes, Brands, and Configurations of Thermal Oxidizers and Ancillary Equipment ◦ Spare and Replacement Parts, Equipment Training, Maintenance Programs, Retrofits and Upgrades, and Industrial Process Consultations

### **Environment & Sustainability:**

**Oil Removal & Recovery From Water – Coolant Recovery & Reuse Oil Skimmers Inc** 50 Years Providing Exceptionally Long-Life, Nearly Maintenance-Free Solutions for Process Industries ◦ Brill® Floating - Tube Skimmers, More Efficient And Reliable Than Belt, Mop or Rope Skimmers in Removing Fats Oil & Grease (FOG) from Process or Wastewater ◦ SAS Oil Water Separators With Brill® Continuous Active Oil Removal™ ◦ Improve Environmental Compliance ◦ Reduce Your Operating Costs ◦ Less Water in Used Oil Increases its Resale Value ◦ Prolong Life of Wash Solutions ◦ Recover & Reuse Coolants ◦ Standard or Engineered Systems ◦ Excellent Lead Times ◦ In-House Engineering

**Process Water Reclamation & Re-Use, Chemical Reclamation & Re-Use, and Heavy Metal Removal**  
- **CeraMem**® Ceramic Ultrafiltration and Microfiltration Membranes and Skid Systems ◦ *Key Advantages Vs Polymeric Membranes*; Average 10 Year Membrane Life ◦ Robust Construction ◦ Resistant To High Temperatures, Extreme Acidic or Caustic Conditions ◦ More Hydrophilic than Polymeric Membranes ◦ Higher PSI Helps Prevents Clogging ◦ May Be Back-Pulsed & Flushed ◦ Consistent Permeate Quality ◦ Compact System Footprint ◦ Lower Life-Cycle Cost ◦ *Typical Applications*; Acid Reuse ◦ Alkaline Cleaner Recycle ◦ Bilge Water Treatment ◦ Caustic Reuse ◦ Chlor-Alkali Brine Purification ◦ Clarification ◦ Desalter Brine Filtration ◦ External Ceramic Membrane Bio-Reactor (MBR) ◦ Fractionation ◦ Heavy Metal Removal ◦ Laundry Wastewater Reuse ◦ Oily Water & Oil Water Emulsions ◦ Pervaporation ◦ Purification ◦ Process Water Filtration for Disposal or Reuse ◦ R-O Pretreatment ◦ Tailings Pond Recycle ◦ In-stock Quick-Mobilization Pilot Plants from 1 L/Min (16 GPH) To 16 M3/H (70 GPM)

**Treatment of PFAS Contaminated Water Systems – Altair Water Equipment** AECO's Staff of Engineers and CAD Designers Have Over 200 Years of Experience in Power & Industrial Water Treatment Systems and have developed processes for reducing PFAS contamination levels to parts per Trillion ◦ See also Utilities - Water Treatment Equipment

### **Equipment Repair:**

**Repair, Refurbishment Services Of Electronic, Hydraulic And Mechanical Items - Advanced Electronic Services** ◦ Free Evaluations & Quotes ◦ Fast Turnaround Time ◦ Extremely Competitive Pricing ◦ Highest Quality Workmanship ◦ OEM Factory Trained Technicians ◦ Scheduled Pickup and Delivery Routes ◦ Customer Portal for Real-Time Tracking of Your Items ◦ CNC Servos & Spindles ◦ Printed Circuit Boards ◦ Encoders ◦ AC/DC Drives and Motors ◦ Medical Equipment ◦ Monitors/Touch Screens ◦ Light Curtains ◦ Servo Motors ◦ Spindles Power Supplies ◦ Temperature Controls ◦ Inverters ◦ Regulator Controls ◦ Programmable Logic Controls (PLC) Hydraulics ◦ Pumps/Vacuum Pumps ◦ Gear Reducers ◦ Hoist & Crane Motors ◦ Access to Rare & Obsolete Parts ◦ Manufacturing & Assembly Services ◦ Parts Inventory Stocking & Management ◦ Engineering

**Equipment Repair, Refurbishment, Design-Build Services, OEM Parts Fabrication for Heavy Industry - Glunt Industries** ◦ 60 Years Serving North America's Top Steel and Aluminum Mills, Aggregate Plants, Mining and Manufacturing Industries With the Most Complete and Largest-Scale Fabrication and Machining Center in The U.S. ◦ Fast, Reliable Turnaround on Repairs to OEM or "OEM Plus" Condition at Competitive Rates ◦ Engineering ◦ Reverse Engineering of Obsolete Parts & Equipment ◦ 3D Scanning, Modeling & Printing Capabilities ◦ 24/7 Emergency Break-Down & Rush Services ◦ Unparalleled Fabrication and Machining Services

### **Facility Repairs:**

**Engineered Resin Systems** - ASME Emergency Pipe Wrap Systems ◦ Cast-In-Place Pipe Linings ◦ Chemical/High Temp Coating Systems for Absorbers, Condensers, Heat Exchangers, Knock Drums & Production Vessels ◦ Concrete Floor Coating Systems, Abrasion & Chemical Resistant, Decorative, Epoxy, ESD (Electro-Static-Dissipative), Urethane ◦ Concrete Repair/Resurfacing Containment Basin Lining ◦ Cooling Tower Rehabilitation ◦ Emergency Leak Repairs ◦ FDA/NSF Approved Coatings ◦ Secondary Containments & Coatings ◦ Riveted Tank Repair ◦ Surface Condenser Water Box Repair and Lining ◦ Tank Coatings and Linings for Corrosion/Abrasion/Erosion Protection ◦ Thermal Insulative Coatings ◦ Water Infiltration Prevention ◦ Resin Injection ◦ Soil Stabilization, Waterproofing

**Heat Exchanger Cleaning and Rebuild Services - Kelvion** ◦ Most Extensive Portfolio of Field and Factory Repair Services in the U.S. ◦ Servicing Kelvion, GEA, and Alfa Laval Heat Exchangers and all Brands & Styles of Heat Exchange Equipment Including Shell & Tube, Plate and Frame, Brazed Plates, Welded Blocks, Air Fin Coolers, Cooling Towers And More ◦ 24/7 Help Desk, 24/7 Call-Outs,

Consulting, Inspection & Maintenance, Repairs and Overhauls, Testing & Monitoring, Operator & Maintenance Training ◦ Performance Agreements Tailored to Your Needs

**Insulation/Re-insulation of Frequently Accessed Items – See Energy – Removeable, Reuseable Blanket Systems**

**Lightning Damage, Related Issues – See Safety – Lightning Strike Prevention, Lightning Grounding Upgrades for Tank Farms, Lightning Ground Engineering & Equipment**

### ***Process Equipment & Services:***

**Agitators, Drives & Mixers – Cleveland Mixers – U.S. Industrial Mixer Engineering and Manufacturing Since 1939** ◦ Engineered & Application Reviewed for Process Performance & Energy Usage, Process Guarantee on Engineered Systems ◦ Extremely Robust Construction ◦ Lower Maintenance ◦ Premium Grade Drives & Motors ◦ Tank, Vessel & Railcar Mixers Portable Mixers ◦ Drum & Tote Mixers ◦ Turbine And Side Entry Agitators ◦ Railcar Agitators, Heaters and Mixers for Asphalt, Chemical, Industrial, Municipal, and Pharma Applications

**Conveying – Dense Phase Pneumatic Systems - Macawber Engineering, Inc** 40+ Years in the Design, Engineering & Supply of the Highest Quality Low Velocity, Dense Phase Pneumatic Conveying and Bulk Handling Equipment to Process Industries, 1,000's of Installations Worldwide ◦ Clean, Long Term, Reliable and Energy-Efficient Handling of Everything from Pebble Lime and Peanuts to Coal and Baby Powder ◦ Fewer Moving Parts, Increased Tonnage Per Hour, Low Velocity for Reduced System Wear & Material Degradation Vs Dilute Phase ◦ Environmentally Cleaner & Less Maintenance Vs Open Belt System ◦ Free Material Flow Tests at our In-House Materials Lab with 700 Lineal Foot Pneumatic Test System ◦ Library of Over 1,200 Tested Materials ◦ Field Services ◦ Install Supervision ◦ Turnkey Installations

**Conveying & Material Handling - Dome Valve II® – Macawber Engineering** - The Dome Valve II® is a Pressure-Tight, Power-Operated Sealing Valve for Handling Dust Laden Gases, Abrasive Materials, Granules, and Slurry Mixtures from 0° To 350°C ◦ Reliability and a Bubble - Tight Seal in Severe Applications with Abrasive Materials, High Temperature and High Pressure Differential, *Even When Closed Through a Stationary or Moving Column of Material* ◦ Rated for 1 Million Cycles Between Service ◦ Rotating Dome Displaces Material, Even a Choke-Filled Dome Valve Will Close and Seal ◦ Proprietary Double-Acting Pneumatic Actuator Drive For Higher Torque ◦ More Than 100,000 Dome® Valves are in Operation in a Wide Variety of Applications.

**Drum & Tote Heaters, Hot Boxes, Drum Heating Tunnels – See Ovens - Industrial**

**Drum & Tote Mixers, Mixer Stands – Cleveland Mixers – See Agitators and Mixers**

**Drying, Mixing, Agglomeration, Coating, , Granulation & Reacting – Lodige** Inventor of the Ploughshare™ Mixer ◦ Perform Multiple Processes with One Machine ◦ Greatly Improved Process Times & Product Quality ◦ Rapid ROI's ◦ Test Lab for Material & Process Evaluation ◦ Onsite Equipment Evaluations & Service ◦ Parts & Service for Lodige, Littleford & Papenmeier Machines

**Filter Presses – Industry-Leading Design, Engineering & Manufacture Of Filter Presses for a Variety Of Filtration and Dewatering Applications Since 1983** ◦ High-Quality, Cost-Effective Filter Press Equipment and Solutions ◦ Low Operating Costs ◦ Trouble-Free Operations ◦ Efficient and Economical Filtering & Dewatering ◦ Technical Expertise in Repair, Refurbishment ◦ Spare Parts For Any Make Or Model Of Filter Press ◦ Filter Cloth Filter Media Filter Presses Filter Plates ◦ Standard & Custom Designs ◦ Pilot Presses ◦ In-House Laboratory Services ◦ Field Services

**Filtration – High Purity For Process Industry Compressed Air, Steam & Vacuum – Microdyne**  
**Products** 30+ Years Of Experience Providing Sanitary Grade and Sterile Grade Filtration ◦ Food & Dairy, Beverage, Brewing, Pharmaceutical & Others Needing High Purity Filtration ◦ Modular Designs/ Simple Reconfiguration For Changing Needs ◦ Unique Low PSI Sub-Micron Systems ◦ Lenticular Filters ◦ Superior Filtration Technology & No-Compromise Designs ◦ Affordable, Efficient, And Reliable ◦ Standard & Custom Designs ◦ In-House Engineering ◦ Rapid Response & Quotes

**Filtration Equipment & Vessels - Industrial** U.S. Made ASME Code & Non-Code Filter Vessels Air/Gas/Liquid Filter Vessels Particulate and Coalescing Up to 3000 PSIG or More ◦ Air Intake Sheet Metal Housings ◦ Silencers ◦ Vacuum Filter Vessels ◦ Liquid Duplex Filters ◦ Rapid Response & Quotes

**Filtration - Natural Gas, Chemical Processing, And Power Generation - *Shawndra R100™*** Horizontal ASME Multiple Capability Unit: The R100 Is a Slug Catcher (Water/Liquid), Coalescer (Water/Liquid/Mist), Particulate Filter To 0.1 Micron ◦ Does Not Bypass - Keeping Compressor or Turbine Equipment Safe ◦ Fewer, Larger Elements in Vertical Orientation so Filters Drain Completely ◦ Elements Last Up to 25 Times Longer ◦ Horizontal Units With Integrated Walkway are Safer for Personnel ◦ Nearly 1,300 R100s™ are In Service Around the World ◦ Corporate Approvals from the Leading Pipeline Companies, Extractors, and Utility Companies. At a Price-Point Equal or Less Than Leading Conventional but Less-Capable Equipment ◦ U.S. Made

**Filter Elements — 100% U.S. Made – For All Industrial Duty Air Or Gas Filtration Services** ◦ Premium Materials and Construction ◦ Equal or Better than OEM Quality ◦ Direct Replacements for All Brands of Metal End or Molded End Filters ◦ Accordion Style Filters ◦ Coalescing Filters ◦ Lube Oil Filters ◦ Panel Filters ◦ Sewn End Filters ◦ Custom Elements ◦ Absorption Pad Sets ◦ Gasket sets ◦ Factory Recovery of All Brands of Sewn End Filters ◦ Rapid Quotes & Service ◦ Factory Engineering & Support

**Heat Exchange & Recovery – *Kelvion - Formerly GEA Heat Exchangers Group*** Experts in Heat Exchange Since 1920 ◦ World's Broadest Scope of Standard & Custom Engineered Heat Exchange Solutions & Services for Virtually Every Application in Power, Heavy Industries, Chemicals, Data Centers, Food & Beverage, Industrial Gases, Industrial Refrigeration ◦ Air Fin Coolers, Compact Fin, Plate Heat Exchangers in Gasketed, Brazed Plates, Welded Blocks ◦ Single Tube, Shell & Tube, Sample Coolers, Seal Coolers, Vaporizers, Vent Condensers, Modular or Site-Erected Cooling Towers

**Heat Exchanger Cleaning and Rebuild Services - *Kelvion*** ◦ Extensive Portfolio of Field and Factory Services ◦ Servicing Kelvion, GEA, and Alfa Laval Heat Exchangers and all Brands & Styles of Heat Exchange Equipment Including Shell & Tube, Plate and Frame, Brazed Plates, Welded Blocks, Air Fin Coolers, Cooling Towers And More ◦ 24/7 Help Desk, 24/7 Call-Outs, Consulting, Inspection & Maintenance, Repairs and Overhauls, Testing & Monitoring, Operator & Maintenance Training ◦ Performance Agreements Tailored to Your Needs

**Heat Transfer – Shell & Tube Heat Exchangers & Condensers *CMS Heat Transfer*** – ASME Code Shop ◦ Specializing in Design, Engineering and Fabrications of Shell & Tube Hex & Condensers for More Than 30 Years ◦ Standard and Engineered Systems ◦ Rapid Quoting ◦ Excellent Service

**Hydrogenation Plants, Gas to Liquid Reaction Plants – *Biazzi*** ◦ 85 Year Global Leader in Process Design, Equipment Design, & Services for Chemical ◦ Pharma ◦ Flavors ◦ Food and Other High-Value Applications. Biazzi's Experience & Test Facility Provide the Shortest Time to Market with Direct Scale-Up from Lab Trials to Full Scale Industrial Skids ◦ Process Guarantee ◦ Short Lead-Time Pharma-Skids ◦ Lab Trials & Optimization Consulting

**Magnetic Systems International** – over 25 Years in Conveying, Sorting, & Bulk Materials Applications, MSI is a Respected Leader in The Design and Manufacture of Magnetic Systems for the

Agricultural, Casting & Forging (Ceramic Shot Blast Media Recovery), Pulp & Paper, Recycling, Mining, Pharmaceutical, Food Processing & Aggregate Industries ◦ In-House Engineering ◦ Premium Grade Materials ◦ Improve Your Processes, Product Safety, Provide Greater Protection of Expensive Downstream Equipment & Processes ◦ Limit Downtime

**Ovens – Industrial – LEWCO, Inc.** 100 Year U.S. Manufacturer of World - Class Industrial Ovens For Aging, Annealing, Baking, Composites, Curing, Drying, Finishing, Heat Treating, Normalizing & Stress Relieving ◦ Batch Ovens, Conveyor Ovens, Drum & Tote Heaters, Hot Boxes, Drum Heating Tunnels, High Temperature Furnaces, Large Field - Assembled Ovens ◦ Energy Efficient, Durable, and Reliable ◦ Every Order is Engineer-Reviewed for Suitability to Your Application ◦ Standard or Customized Industrial Ovens and Oven-Conveyor Combinations to Your Specific Requirements at a Cost-Effective Price ◦ ISO 9001 Certified

**Process Condensers, Process Eductors** - Schutte & Koerting Manufacturer of Power and Process Equipment Since 1876 ◦ More Than a Century of Experience in the Design and Manufacture of Steam Jet Vacuum Systems, Steam Jet Heaters, Exhausters and Compressors, Scrubber Systems, Desuperheaters, Thermocompressors, Eductors and Syphons, Ejectors, and Valves

**Process Skid Systems** ◦ 30+ Years in Design and Manufacture of Custom Fluid Handling Skids for Chemical, Food & Beverage, Paper, Pharma, Power & Other Industries ◦ Initial Design ◦ Fabrication ◦ PLC Programming ◦ Testing & Documentation ◦ Proflow is an Expert (ASME, National Board, TUV, UL Certified) In Many Skid Categories: ASA Emulsification ◦ Chemicals Makedown ◦ Color Metering ◦ Delayed Product Differentiation ◦ Dye Blending And Delivery ◦ Flavors Metering ◦ Fuel Blending And Delivery ◦ General Metering ◦ Ingredients Metering ◦ Jet Steam Cooking ◦ Pilot Plant Test ◦ Polymer Makedown ◦ Post Dilution Addition ◦ PVOH Makedown ◦ Starch Makedown ◦ Yankee Dryer Adhesives

**Process Temperature Control Equipment – Delta T Systems** ◦ U.S. Made Water or Oil Circulating Process Temperature Control Equipment & Chiller Systems for Molds, Dies, Tanks, Jacketed Vessels, Mixers, CNC Machining & Welding Stations, Extrusion Processes, Heat Transfer Rolls & More ◦ Variable Speed Chillers with Energy Savings to 50% Provide a Rapid ROI ◦ Variable Speed Compressor & Condenser Fan, Electronic Expansion Valve, State of the Art Controls, Touch Screens, Remote Access Options and Industry 4.0 Ready ◦ Superior Accuracy, Consistency of Temperature Control to +/- 1°F ◦ Outstanding Customer Service & Technical Support ◦ All Components are Non-Proprietary, Readily Available ◦ Stocked Standard Units ◦ Custom Designs ◦ Refurbishment of Existing Systems, Broad Online Selection of Parts for Your Existing Equipment

**Steam & Vacuum Equipment** - Schutte & Koerting Manufacturer of Power and Process Equipment Since 1876 with More than a Century of Experience in the Design and Manufacture: Atmospheric Relief Valves ◦ Surface Condensers ◦ Steam Jet Vacuum Systems, Steam Jet Heaters, Exhausters and Compressors, Scrubber Systems, Desuperheaters, Thermocompressors, Eductors and Syphons, Ejectors, and Valves, Vacuum Skids

**Tanks & Vessels ASME & Non-Code – See Utilities**

**Vacuum Drying & Mixing Equipment** ◦ World Class German-Made Mixing, Granulating, Coating & Reaction Process Equipment from Lodige, Inventor of the Ploughshare™ Mixer ◦ Improve Process Times, Product Quality, Repeatability ◦ Rapid ROI's ◦ Test Lab for Material & Process Evaluation ◦ Service & Parts for Lodige, Littleford & Papenmeier Machines

**Water Treatment Equipment – See Utilities**



## **Productivity Improvement:**

**Predictive Maintenance & Machine Alerts Using IIoT 4.0 Equipment Connectivity – Industrial Metrics I-M Device®** ◦ Secure Wireless Stand-Alone 4G Systems ◦ Identify Deviations & Events In Real-Time Alerts & Service Reminders ◦ Monitor Equipment or Machine Status from Anywhere on any Wireless-Capable Device ◦ Sensors are Self-Contained, Require no Facility Modifications, Special Connections, Power Drops, Ethernet Connections or Extensive Cabling ◦ Data Sent Via 4G Encryption to Secure Cloud Providers is Independent of Your Internal Computer Systems, Providing Greater Security From Hacking & Ransomware ◦ 100% U.S Owned/U.S. Based ◦ Trials With Money Back Guarantee ◦ Lifetime Warranty on Equipment ◦ Lifetime 24/7/365 U.S. Support

**Productivity Improvement – Industrial Metrics I-M Device®** Production Monitoring & Actionable Data in Real Time ◦ The I-M Device Collects Data from Key Process Steps to Monitor Operations in Real Time & Notify Key Personnel by Text, E-Mail, Monitor Screens, etc. within Seconds of a Process Deviating from the Plan, Providing Time to Make Corrections and Maintain Schedules & Productivity ◦ View Operations Dashboard from Anywhere ◦ Sensors are Self-Contained, Require no Facility Modifications ◦ Special Connections, Power Drops, Ethernet Connections or Extensive Cabling ◦ Data Sent Via 4G Encryption to Major Cloud Providers is Independent of Your Internal Systems & Provides Greater Security from Hacking & Ransomware ◦ 100% U.S Owned/U.S. Based ◦ Trials With Money Back Guarantee ◦ Lifetime Warranty on Equipment ◦ Lifetime 24/7/365 U.S. Support

## **Safety & Critical Process Protection:**

**Ambient Heat Reduction – Burn Prevention – see Energy – Thermal Blankets**

**Critical Components / Critical Valves - Fire Protection – See Energy – Thermal Blankets**

**Back-up Monitoring of Critical Infrastructure Operations – Industrial Metrics I-M Device™ as Back-Up Real-Time Monitoring & Alerting for Facilities Such as Chemical Plants, Pipelines, Tank Farms & Water Treatment Facilities** – I-M Device Will Accept Signals from Facility Equipment Sensors for Secure Wireless Monitoring & Alerts to Key Personnel in Real Time of Changes in Factors Such as Chemical Injection, Tank Levels, Temperature Fluctuations, Valve Positions, etc. ◦ Self-Contained, requires no Facility Modifications, Special Connections, Power Drops, Ethernet Connections or Extensive Cabling ◦ Data Sent Via 4G Encryption to Secure Cloud Providers is Independent of Your Internal Computer Systems & Provides Security from Hacking & Ransomware ◦ 100% U.S Owned/U.S. Based ◦ Trials with Money Back Guarantee ◦ Lifetime Warranty on Equipment ◦ Lifetime 24/7/365 U.S. Support

**Lightning Strike Prevention – Lightning Eliminators, & Consultants Inc** - In 1971, LEC Introduced the Dissipation Array System (DAS) ◦ Rather Than Attracting Lightning, The DAS is a Proactive Lightning Protection System That Eliminates Lightning Strikes to the Protected Structure or Site by Utilizing Charge Transfer ◦ More Than 3,500 Systems Installed Worldwide ◦ Over 77,000 System - Years of No-Strike Performance with a No-Strike Efficiency of 99.87% ◦ U.S. Made ◦ No-Strike Warranty ◦ No-Cost Initial Technical Review ◦ Site Ground Surveys ◦ Smart Ground® Testing Advanced Audits ◦ Supervision ◦ Installation

**Lightning – Prevent Lightning-Related Ignition of Petroleum Storage Tanks – Lightning Eliminators** Patented U.S. Made Retractable Grounding Assembly (RGA) Assures Much Greater Tank Top to Ground Bond Vs Shunts, Rolling Ladder Assemblies or Coiled Cables ◦ Over 13,000 RGA's are

Currently in Service Worldwide ◦ In Addition to the DAS, LEC Also Provides Surge Protectors for Nearly Every Application and Grounding System Engineering and Products

**Lightning Grounding (Earthing) System Engineering & Surge Protection Equipment - *Lightning Eliminators & Consultants*** – 50 Years in Site Risk Analysis & Grounding Surveys, Design, Engineering & Implementation of LEC's DAS™ Lightning Prevention Systems ◦ Design & Manufacture of Some of the Highest Ampere Rated & Most Reliable Power and Data Line Protection Devices in the Industry

**Noise Reduction & Personnel Protection – Shannon Global Energy Solutions** ◦ Removable, Reuseable Acoustic Blanket Systems for Industrial & HVAC Applications ◦ CAD Designed ◦ Factory-Made ◦ Best Fit & Ease of Use Plus ID Tagging & Manufacturer Archives Help Ensure Re-Installation for Sustainable Noise Reduction & Personnel Protection ◦ Acoustic Surveys ◦ Post – Install Surveys ◦ DIY Or Turnkey Installations ◦ Rapid Quotes ◦ Accurate Proposals ◦ Guaranteed Fit

**Pressure Relief Doors & Hatches, Reuseable - Philadelphia Explosion Relief Devices** 46 Years Helping Companies Protect Their Valuable Assets and Personnel with Over 5,000 Installed Explosion Doors And Explosion Hatches ◦ Unique Explosion Relief Doors and Hatches Engineered to Provide Superior Affordable Pressure Relief Protection in the Event Of An Explosion ◦ Reusable Explosion Relief Doors Don't Require Replacement After an Explosion ◦ Dual-Purpose Design Provides Pressure Relief Protection and an Emergency Access Door with Fingertip Manual Release ◦ Lightweight Door Panels Weigh Less than 2.5 Lb/Sq.Ft. ◦ Stainless Steel, Carbon Steel, and Aluminum Door Frames With Stainless Steel Or Aluminum Door Panels ◦ Designs From -65FTo 1000F ◦ Fully Assembled for easy Installation

**SlipNOT® Metal Safety Flooring Systems** ◦ In Use for 40+ Years the Patented SLIPNOT® Process Deposits Molten Metal in a Random Hatch Matrix Onto Steel, Aluminum or Stainless Steel Substrates for a File-Hard Surface Between 55-63 on the Rockwell C Scale with a Bond Strength of at Least 4,000 PSI ◦ Bar Gratings, High Friction Safety Floor Plates, Ladder Rungs, Rung Covers, Perforated and Expanded Metal Retrofit Plates and Stair Treads, ◦ Standard Shapes, Sizes or Customized to Your Project's Needs ◦ Can be Fabricated, Welded and Treated Like any Other Metal Plate or Grating ◦ Durability, Superior Slip Resistant and Grit-Free Surface Ensures Maximum Worker Safety with no Loose-Grit Contamination of Product, Expensive Machinery & Components ◦ Exceeds All Recommendations and Standards for Coefficient of Friction Specified By ANSI, NFPA, ADA, and OSHA

**VACUUM SAFETY RELIEF VALVES** - Protect Explosion Relief Membranes and Discs from Implosion Damage ◦ Designed to Open at Calibrated Over-Pressures and Remain Open When Tripped ◦ PTFE Seals Assure Positive Sealing ◦ Use Adjustable Rare-Earth Magnet Doublets to Insure a Set Opening Vacuum ◦ Adjustable to 14" WC Vacuum ◦ 300 Series Stainless Steel Construction ◦ Diameters To 14"

### **Utilities:**

**Dampers – Industrial – Hunter Expansion Joints** ◦ 42 Year Industry Leading Manufacturer of Highest Quality Industrial Duct Dampers ◦ Carbon, Stainless or Alloys ◦ Ambient to Refractory Temperatures ◦ Damper Actuators ◦ Designed & Engineered by System & Equipment Engineers Highly Experienced in Your Industry ◦ Fast, Reliable Quotes & Order Management ◦ Excellent Pre & Post-Purchase Support

**Expansion Joints for Industrial Ducting - Hunter Expansion Joints** 42 Years in The Design and Manufacture of The Highest Quality Duct Expansion Joints - Fabric Belt & U Flanged ◦ Fabric Convolute ◦ Metal Fabricated ◦ System & Equipment Engineers Highly Experienced in Your Industry Provide Correct Solutions for Your Duct Expansion Joint Challenges ◦ Reliable Quotes & Order Management ◦ Low Costs ◦ On-Time Shipments ◦ Outstanding Customer Service



**Expansion Joints for Pipe Systems - *Hunter Expansion Joints*** 42 Years in the Design and Manufacture of The Highest Quality Pipe Expansion Joints - Formed Metal Bellows ◦ Rubber Molded ◦ Teflon Lined Metals ◦ Formed Teflon Pump & Equipment Couplings ◦ System & Equipment Engineers Highly Experienced in Your Industry Provide Correct Solutions for Your Pipe Expansion Joint Challenges ◦ Reliable Quotes and Order Management ◦ Low Costs ◦ On-Time Shipments ◦ Outstanding Customer Service

**Strainers – Fabricated Tee, WYE, Single or Duplex Basket – *Hellan Strainers*** – 58 Years In Design And Manufacture Of American Made Strainers For Water & Liquid Service ◦ TEE, WYE & Single Basket Pressures to 3705PSI, Duplex Basket PSI to 1480 ◦ All Styles Temp To 800°F ◦ Filtration Down To 40 Microns ◦ Large Strainer Baskets ◦ Both Compact and High-Capacity Units are Available ◦ Carbon Steel, Stainless Steel, Other Materials Upon Request ◦ Sized to Your Requirements

**Strainers – Self Cleaning – Removes Solids From The Fluid Flow Without Stopping The Flow Of Fluid Or Disassembling Of Strainer - *Hellan Strainer Company*** – U.S. Made ◦ 58 Years in Designing & Manufacture of American Made Strainers for Water & Liquid Service ◦ Manual or Remote Automatic Operation ◦ Simple Turn Of The Hand Wheel Or Actuation Of The Screen Motor Cleans Screens in ≤ 60 Seconds, Debris Moves to Built-In Sump For Removal By Periodic Manual or Automatic Flushing ◦ Closed System Protects Personnel from Contact with Strained Debris ◦ No Routine Disassembly Required, All Internals Accessible W/O Special Tools ◦ Manual Models Upgrade to Automatic Operation in the Field W/O Disruption of the System ◦ Weighs Half as Much as Conventional Basket-Type Strainers, Requires 40% Less Space, No Special Foundation is Needed ◦ Cast Iron, Cast Steel, Cast Stainless, Bronze, Super Duplex, Others ◦ In-House Engineering ◦ Rapid Quotes & Service

**Suction Diffusers – Pump – Fabricated Suction Diffusers - *Hellan Strainer Company*** Fabricated Suction Diffuser is A Flow Straightener, Pump Strainer, Elbow & Pipe Reducer in a Single Device ◦ Filtration to 40 Microns ◦ Large Diffuser Screens ◦ Direct Mount to Pump Provides up to 40% Space Savings Vs Equivalent Pipe Lengths ◦ Laminar Flow Reduces Turbulence & Cavitation for Increased Pump Efficiency & Pump Life ◦ Increase Suction Head ◦ Reduce/Eliminate Turbulence-Induced Water Hammer ◦ Fabricated Diffusers Offer Size & Weight Savings Vs Cast Diffusers, Zero Pinholes or Other Casting Failures ◦ Standard Sizes from 10" to 24" IPS, Custom Sizes Available ◦ Carbon Steel, Stainless Steel, Others ◦ Rapid Quoting & Service

**Tanks & ASME Code Vessels** ◦ 50+ Years Producing the Highest-Quality Pressure Vessels and Process Tanks Available with Over 58,000 ASME Code Vessels in Service ◦ Design & Fabrication of Both Non-Code and ASME Pressure Vessels and Process Tanks ◦ Carbon, Stainless Steel or Exotic Materials ◦ Responses and Quotes in 24 Hours ◦ Approval Drawings within 7 Days of Receipt of PO and Deposit ◦ CAD Equipment Cuts up to 1-Inch Thick Stainless Steel, Performs Flat Plate Cutouts 10 Feet Wide X 30 Feet Long, Handles Dished-Head Surfaces Up to 10 Feet In Diameter on a Third, Z-Axis ◦ Custom Process Tanks Up to 12 Feet in Diameter, 40 Feet Long ◦ Rapid Quoting & Approval Drawings

**Water Treatment Equipment – *Altair Water Treatment Equipment*** over 40 years in Industrial Water Treatment Systems for Power Plants, Industrial Boiler Systems & Manufacturing Plant Processes. ◦ Altair Equipment Includes: Exchange-Service DI Systems ◦ Dealkylizers ◦ Demineralizers ◦ Deaerators ◦ Condensate Polishers ◦ Continuous Blowdown Heat Recovery Systems ◦ RO Systems ◦ Pressure Filters & Validated Ultrapure Systems ◦ Individual Components ◦ Skid Mounted or Weatherized Container Systems ◦ Purchase or Rentals ◦ Self-Installed or Complete Turnkey Installations ◦ Several Pre-Built Systems In Stock and Ready to Deliver ◦ Altair's Services Include: Exchange Service DI Systems, Membrane Cleaning ◦ Refurbishment and Upgrades of Existing Systems, System Design, Troubleshooting, Start-Up, Assembly, Service Contracts

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