



*Process Solutions*

*A Division of EGM*

# PRODUCT OFFERING AND SOLUTIONS GUIDE





## COMPANY OVERVIEW

At L&L Process Solutions, it is our mission to partner with you and quality suppliers to bring you the very best solutions and products to meet the challenges of the industries we serve.

L&L Process Solutions has built a knowledgeable and experienced team to offer support to clients in solving industrial application challenges. The company is organized in a unique manner to serve the needs of a wide variety of industrial, municipal and large commercial clientele. Its structure lends itself to combine the inventory and distribution capabilities for analytical and process instrumentation, valves, industrial pipe, fittings and accessories with a full line of instrumentation and automation products.

As an affiliate of EGM LLC, we have the capabilities to truly be a total solutions provider for all your process automation needs. EGM is a leading producer of value-added process and chemical feed systems for a wide range of industries and applications. Our equipment design and manufacturing expertise is backed with years of specialty chemical sales, service and application development experience. The entire line of equipment solutions provided by EGM is built on a philosophy that better designs bring better value.

In addition, we offer a complete electrical panel, control panel, and automation services through our EGM Automation group. From simple motor starter units to complex PLC based designs, we can handle most industrial, municipal or commercial electrical and automation requirements. We are a CSA and UL certified shop.



## TABLE OF CONTENTS

L&L Service & Team	4-5
Chemical Feed Systems - Turn Key Solutions	6
Hydrogen Generator Monitoring Equipment - Turn Key Solutions	7
Automation and Electrical Panel Fabrication - Turn Key Solutions	8
Flow Measurements	9
Level Measurements	10
Process Analytical - Gas	11
Weighing Systems	12
Process Analytical - Liquids	13
Advanced Analytical	14
Temperature Monitoring	15
Pressure Measurements	16
Fittings and MRO Items	17
Fittings and MRO Items	18
Valve Solutions	19
Heat Trace	20
Instrumentation Accessories	21

# L&L SERVICE:

**At L&L Process Solutions, we provide professional and proficient service for the set up and calibration of various instruments and devices (included, but not limited to):**

- Level (ultrasonic, radar) and pressure transmitter
- Temperature elements and transmitters
- Flowmeters
- Density meters
- Valve actuators and positioners
- Analytical instrumentation (ph/orp, conductivity, silica, sodium, dissolved oxygen, gas detection)
- Variable frequency drives



## L&L TEAM:

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# CHEMICAL DELIVERY SYSTEMS -TURN KEY SOLUTIONS

## WATER TREATMENT CHEMICAL SYSTEMS

- Turn key system for make-down and delivery of flocculant and coagulant chemicals
- Automated make-down and concentration control

## PAPER SPECIFIC PROCESS EQUIPMENT

- Automated delivery of industry specific chemistry for paper and board manufacturers
- Helps customer optimize chemistry feed for more profitable process

## METERING PUMP SYSTEMS

- Multiple pump type and arrangements to accommodate any feed scheme
- Available in thermoplastic or SS framing
- Cooling tower, boiler, and wastewater applications

## SKID MOUNTED EQUIPMENT

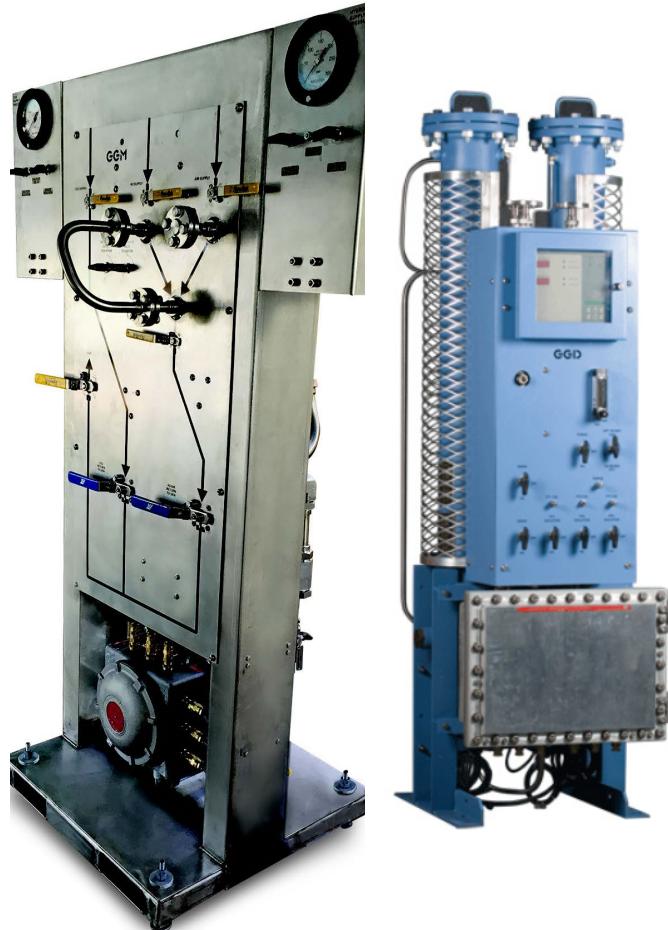
- Tanks, vessels, and pump stations
- Solid feed systems and Dechlorination skids



# HYDROGEN GENERATOR MONITORING EQUIPMENT

## Generator Gas Manifold

- Online gas analysis for Hydrogen purity in generators
- Automated/ Operator initiated generator purge from control room.
- Ability to avoid operations interaction with potentially dangerous environment



## Purity Monitoring

- Monitor purity of gases in the generator using thermal conductivity
- Triple range sensor providing continuous measurement of gas purity

## Hydrogen Dryer

- Removes impurities (such as moisture) from generator cooling gas
- Improves heat transfer inside generator to reduce windage loss

## Portable Gas Analyzer

- Portable Hydrogen analyzer for redundant measurements during purge cycle
- Can be dedicated for short term installation

## Gas Feed Systems

- Vaporizers and heaters to reduce CO2 freezing and flow restrictions
- Turn key system to ensure no details are overlooked on your system



## WEIGHING SYSTEMS

### Process Weighing

- Weight of vessels and tanks
- Versatile load cells can measure a wide variety of force
- Level monitoring of silos by weight

### Crane Weighing Systems

- Total weight measurement for protecting cranes against overloads
- Designed to be replace in kind with OEM load pins
- Maintenance software for monitoring PM schedule
- Accuracy to 0.1%

### Web Tension

- Web tension monitored by force through load cells
- Used on paper machines and steel strip lines

### Process Automation

- Variety of communication protocols, including wireless

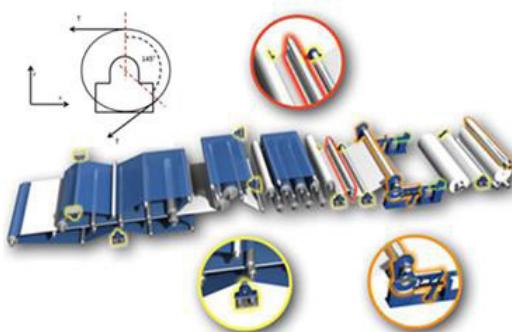


Process Weighing Systems



Load Cells

**BLH NOBEL**  
A **VPG** Brand



Web Tension Systems



Instruments & Accessories

## AUTOMATION & ELECTRICAL PANEL FABRICATION

### Turn Key Electrical Shop

- Custom built and designed HMI, PLC and control panels
- Starter & drive panels design and construction
- UL 508A & CSA certified fabricator
- 

### Custom Engineered Solutions

- Extensive knowledge in wireless communication protocols—including web based data reporting
- PLC programmers fluent in Allen Bradley, GE and Siemens
- Programmers are available for in –field or remote based troubleshooting
- 

### Wireless Accessibility

- Remote data reporting for process optimization and real time alarms
- Remotely monitor field equipment in previously hard to reach areas

### Automation Accessories

- Full line of signal isolators and embedded I/O devices
- Digital panel meters and accessories



## FLOW MEASUREMENTS

### Electromagnetic Flow meters

- Low noise Electrodes
- Partially filled pipe flow
- Virtual reference



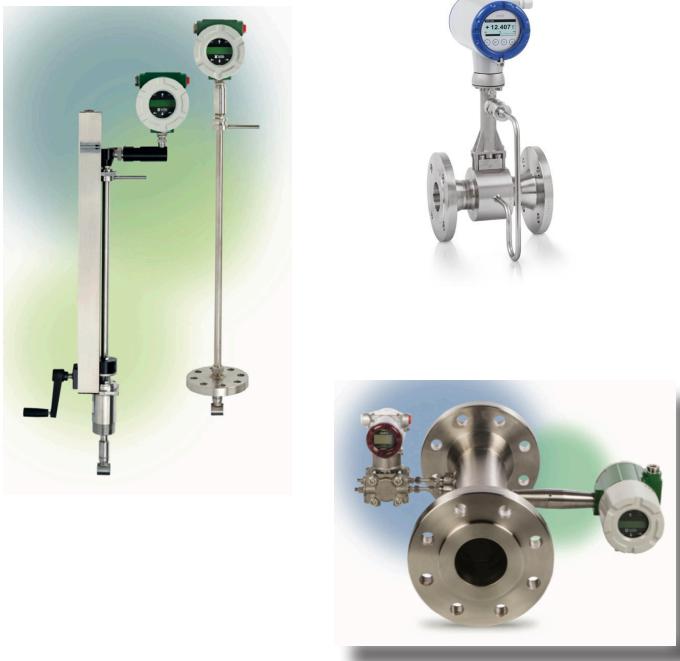
### Coriolis Flowmeters

- 1/2"-16" single straight tube Coriolis for no pressure loss
- Entrained Gas Measurement, slurry flow & density monitoring
- Multiple Alloy tube options (TI, Tantalum)



### Vortex

- Universal devices for liquids, gases and steam
- Integrated pressure and temperature compensation, integrated energy calculator



### Ultrasonic

- Inline used for: high temperature, superheated steam, custody transfer, and non-conductive liquids
- Clamp on for non-intrusive flow measurement on slurries and high purity water
- Open Channel flow measurement for ditches and weirs

### Variable Area

- Glass and metal tube purge meters for low-flow applications 1/2"
- Glass and metal tube process meters up to DN150 / 6"
- Optional electronics: limit switches, analogue outputs, digital communc



measure the facts

## LEVEL MEASUREMENTS

### Radar Level

- Non Contact level measurement for tanks, vessels and sumps
- 80 GHz capabilities for solids and liquids
- Variety of lens arrangements to accommodate each unique application

### DP Level

- Transmitters, primary elements, diaphragm seals and accessories
- Ceramic and metallic measuring cells
- 

### Magnetic Level Indicators

- Contact level measurement of liquids
- Rugged stainless steel design, hermetically sealed, e.g. for flammable, toxic and corrosive media

### Guided Wave

- Large choice of probes, e.g. for aggressive or abrasive media, high pressure or temperature and tanks with internals or boiling product surfaces

### Plugged Chute

- Burst filter bag detection
- Detects incoming blockages & flow / no flow of solids

### Switches

- Capacitance, conductive, vibrational switches for both liquid and solid levels



**KROHNE**

► measure the facts



 **Delta Controls**  
CORPORATION



## PROCESS ANALYTICAL—GAS

### Gas and Flame Detection

- Wireless (up to 32 sensors) battery operated gas analyzers
- Variety of detection sources and methods
- Local indication module available with horn and light



### Combustion Analysis

- Flue gas and boiler analysis and control
- Coal bunker monitoring for CO and CO<sub>2</sub>
- Turn key sample draw system for continuous monitoring



### Weather Monitoring Systems

- Humidity, temperature and pressure weather stations
- Lightning monitor for personnel safety
- Dew point monitor



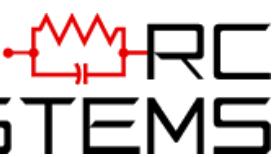
### NDIR Laser

- Simultaneous and continuous measurement of 5 gases
- Automatic calibration on desired interval
- Single dual path laser for O<sub>2</sub> & CO
- Used in incinerators and boilers

Detector with flow guide tube      Detector with ejector



 Fuji Electric

 RC  
SYSTEMS

 VAISALA

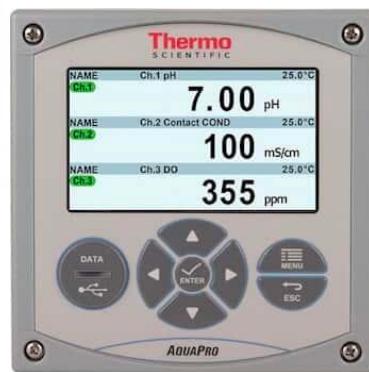
## PROCESS ANALYTICAL—LIQUID

### Smart Sensors

- 2 wire “smart sensors” that require no transmitter
- Available for pH, conductivity, and dissolved Oxygen
- 4-20 mA output for easy integration into a DCS or PLC

### Advanced Analytical

- Sodium, Silica, Phosphate measurements for high purity and BFW applications
- TOC and organic meters to identify process upsets
- True non-contact turbidimeter
- Bench-top meters and reagents for grab samples



## ADVANCED ANALYTICAL

### Solids Monitoring

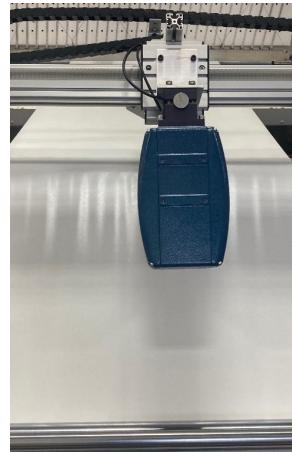
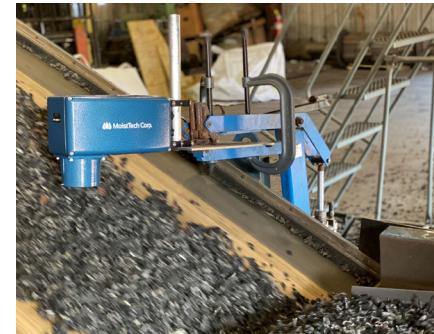
- Optical sensors for solids monitoring
- Solids are measured in stock preparation, wet-end, broke recycling, etc...
- Ash content headbox measurements
- Fiber loss can be measured in streams to tighten up process

### Measurement Solutions

- Inline measurements for density and viscosity
- Refractometer for inline concentration measurement
- Bench top instruments for lab measurements
- Superior process control

### NIR—Components of a Stream

- Near-Infrared Moisture Measurement
- Instantaneous Moisture measurement, also measures Coating and Oil Thickness
- Applications for:
- Bio Energy, Minerals Mining, Bulk Materials, Wood, Food, Chemical, Converting, and Textile Industry



## TEMPERATURE MONITORING

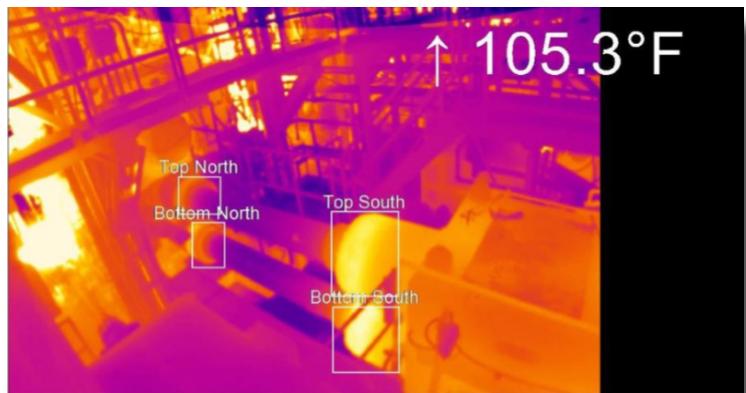
### Non Contact Temperature Monitoring

- Infrared technology for point detection and alarming
- Plethora of cameras from pyrometers to 1080P
- Plug and play setup with included PixConnect Software
- Advanced Cooling Jacket can withstand temperatures up to 599 °F



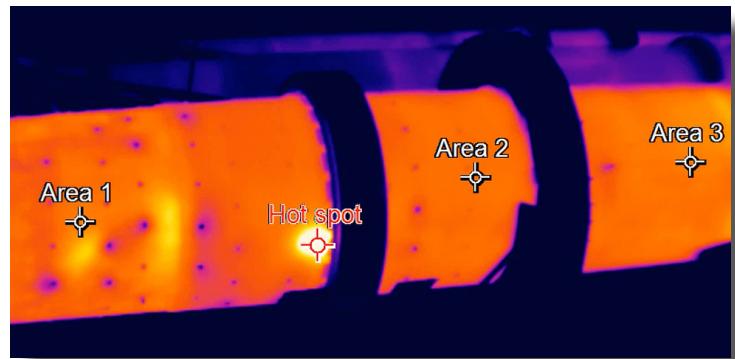
### PixConnect Software

- Functionality to trigger alarms and recordings
- Ability to measure multiple points within the same frame
- Included with every camera purchase



### Multipoint Temperature Monitoring

RTD's / Thermocouples



## PRESSURE MEASUREMENTS

### Differential Pressure

High static pressure

### Diaphragm Seals

For harsh environments

### Local Indication

High vis faceplate for easy reading

### Pressure Accessories

Manifolds



**REOTEMP®**  
INSTRUMENTS



**AUTROL®**  
**AMERICA**  
AUTOMATION CONTROL



**Fuji Electric**

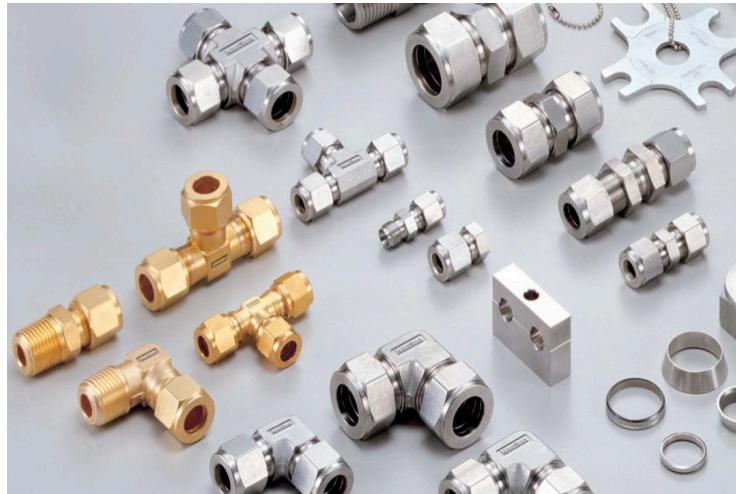


## FITTINGS AND MRO ITEMS/ VALVE SOLUTIONS

### S-LOK® NA Valves & Fittings

#### Tube Fittings

- S-LOK Single Ferrule Tube Fitting
- S-LOK Two Ferrule Tube Fitting
- Bite Type Tube Fitting (JIS B2351)



#### Pipe and Weld Fittings

#### Valves

- Needle valve
- Ball & Plug valve
- Check Valve
- Manifold & Gauge Valve
- Filter
- Relief, Bleed & Purge Valve



## FITTINGS AND MRO ITEMS

### Tubing Fittings and Valves

- Stocking inventory for same day and next day delivery options
- Inter-mixable and interchangeable with Swagelok and Parker
- Tubing fittings, instrument valves, hoses



### Tubing and Piping

- Welded and seamless tubing
- Thermoplastic piping

### Valves

- Solenoid
- Ball Valves
- Thermoplastic valves and accessories



### Avtron Encoders

- Mill Duty encoders
- Instrument Stands



**Nidec**  
Nidec Avtron Automation

**ASCO**™

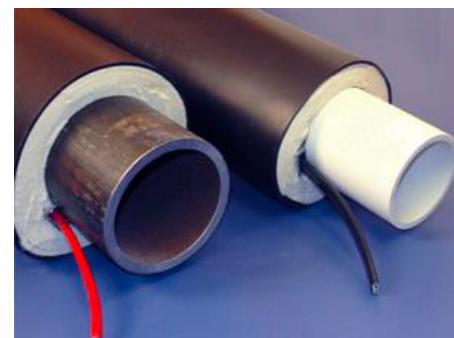
## FITTINGS AND MRO ITEMS

### Pre-Insulated Tubing/Tubing Bundles

- Thermally Insulated Transport line for steam, gas, or liquid
- Long-term savings when used to return condensate back to Boiler
- Eliminate Installation Failure
- Self-Regulating for Instrumentation lines
- Maintain Constant Fluid Properties (ie, viscosity)

### Fiberglass Reinforced Plastic Protective Enclosures

- Material Technology makes these Enclosure Lightweight yet Strong
- Excellent Insulation due to Low Thermal Conductivity
- Resistant to Corrosion, Abrasion, and UV Radiation
- Electromagnetically Transparent for use
- Wireless Applications
- Fire Retardant



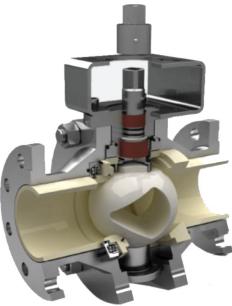
**DEKORON®**  
**Unitherm™**  
Tubing Bundle Experts Since 1962



## VALVE SOLUTIONS

### Control Valves

- Globe
- Rotary Globe
- Segmented Ball
- Anti Cavitation
- Microflow
- Corrosion Resistant



### On / Off Valves

- Angle Seat
- Ball Valves
- Pinch Valves
- Double/Triple offset Butterfly
- Resilient Seating



### Specialty Valves

- Teflon Lined
- Ceramic
- De-superheater
- Metal Seated Ball



## HEAT TRACE

### Industrial Heat Tracing Cables

- Self-Regulating Heat Trace Cables
- Constant Wattage Heat Trace Cables
- Mineral Insulated Heat Trace Cables
- Industrial Heat Trace Controls & Monitoring System Components & Accessories



### Heaters

- Silicone Laminate Flexible Heaters
- Tank & Drum Heaters
- High Temperature Band Heaters
- Tubular Band Heaters
- Air & Radiant Heaters



### Process Heaters & Controls

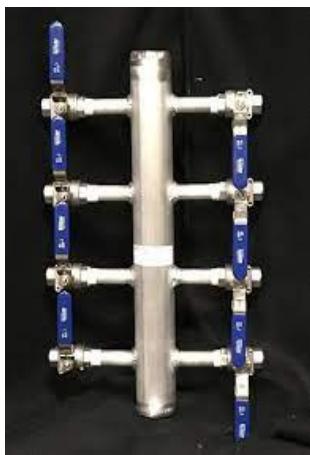
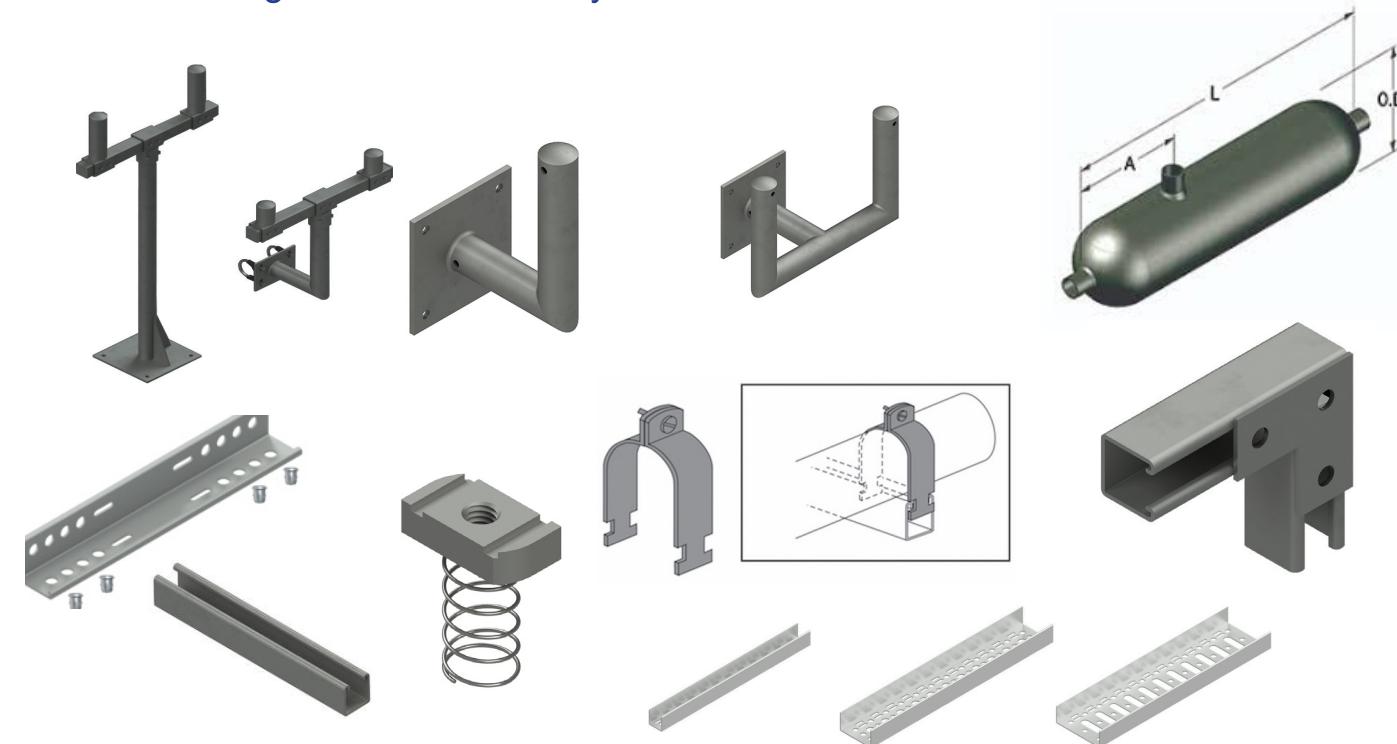
- Screw Plug Immersion Heaters
- Over-the-Side Immersion Heaters
- Flanged Immersion Heaters



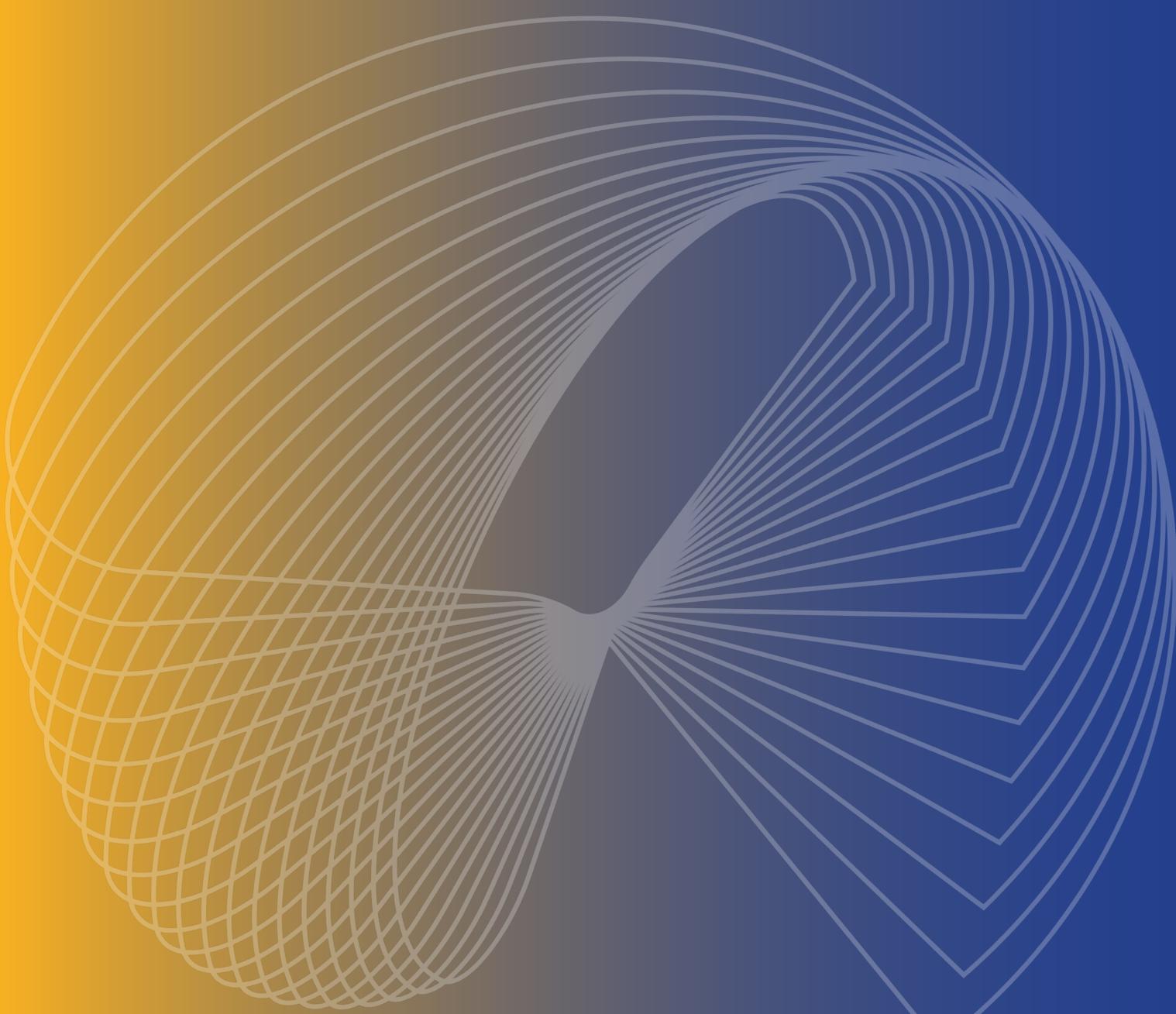
## INSTRUMENTATION ACCESSORIES

### Accessories:

- Instrument Stands
- Distribution Manifolds
- Condensate Chambers
- Instrument Racks
- SnapTrack Cable Trays
- Perforated Angled & Channel Trays



## NOTES:



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