

## Superior Products, Exceptional Service





www.vikinginstrument.com



## ABOUT VIKING



#### Offering quality products and superior service is our priority.

Incorporated in 1990, Viking Instrument & Control Ltd. (Viking) is a well established and respected provider of instrumentation and process control products for the Ontario market. Viking services a wide range of industries including petrochemical refineries, analytical applications, emission monitoring, utilities, power generation, water and wastewater, manufacturing, and OEMs.

#### Viking represents and specializes in the following brand/product lines:

- Parker Hannifin Instrumentation (full line master distributor)
- · Ashcroft Gauges, Diaphragm seals and Industrial Thermometers
- Ashcroft Switches and Transducers
- Autoclave Cone and Thread products
- Headline Filtration
- Partek & Texloc Teflon components
- · Skinner and GoldRing Solenoid Valves
- Hedland flow measurement
- Porter flow measurement and regulation
- · Veriflo Regulators, Valves & CGA connections
- Parker Multitube bundle
- Parker Parflex hose & fittings
- · JMS Southeast temperature measurement
- · Weka level indication
- PGI manifolds
- Process Valves including Kitz, MAS, Mueller
- Techline & ZSI (Cushaclamp) installation systems

Viking has the capability of developing a product or system to meet your specifications or specific needs. Viking has Professional Engineers on staff that work with our manufacturers to help our customers specify the correct products for their application, thus improving their system performance, reducing maintenance and downtime which yields better returns.

In addition to our main office and warehouse facility in Burlington, Ontario, Viking also operates a satellite branch office in Sarnia to better serve our customers in Southwestern Ontario.

To ensure a high level of quality and accuracy, Viking is ISO 9001:2008 certified. Our Quality Management System is regularly audited by a third party to ensure we meet and/or exceed every requirement.

We only promote and sell products from top quality manufacturers to ensure reliability, with a strong background in quality and service. Brand name products such as Parker Hannifin and Ashcroft represent the highest standards in the industry.

Viking believes in the systems approach for your projects and can provide the necessary products for final installation such as tube clamps, cabinets, hose assemblies, tubing, tools, leak detectors, and sealants.

The team here at Viking will ensure that your process solutions are fully met. Starting with a strong technical field support staff, then a knowledgeable inside sales staff with engineering resources and a detail oriented inventory/shipping department, our customers will be serviced in a manner rarely seen in this modern wireless society. We look forward to working with you and your company.

## MANUFACTURERS



#### Ashcroft

Our passion is to design, manufacture and deliver the most innovative and well-crafted pressure and temperature gauges on the planet; then back them with superior customer support. We want you to always trust the shield, so we bring five core values to work every day.



#### **Parker Power Generation**

As the world's motion control expert, Parker offers you a complete range of proven, off-the-shelf products. Engineered to work together, these products deliver streamlined systems and subsystems with exceptional quality and durability.



#### **Finite Filter** Parker offers a complete line of Finite compressed air and gas filtration products. Compressed Air and Gas

Filters, Parfit Conversion Elements, Instrumentation and Gas Sampling Filters, Steam Filters, Vacuum Exhause Filters, Air Dryers, Drains, Gauges, and other Accessories, Air Preparation Units



#### Hedland

Hedland is a manufacturer of quality flow measurement solutions for over 33 years.Since the introduction of the Hedland Variable Area Flow Meter for hydraulic oil, our product line has grown to over 15,000 flow meter models including, turbines, switches and transmitters.

Autoclave Engineers

**Autoclave Engineers** 

Autoclave Engineers was founded in

1945 to fill a gap in the world of high

pressure and high temperature



#### JMS Southeast Inc. We design and manufacture a complete line of high quality standard and customized temperature sensors including thermocouples, RTD's and Thermowells as well as a wide selection of temperature accessories



#### Parker Skinner

Parker Fluid Control Division. manufacturers of the Skinner and Gold Ring lines of solenoid valves and the Sinclair Collins line of process control valves, now offers a six-port Marine Selector Valve for electric remote tank selection in boats with multiple diesel fuel tanks.



#### **Headline Filters**

Headline Filters is a UK manufacturer of bonded microfibre filter elements and associated filter housings, the only major European manufacturer of this type of filter. These filters are suitable for a variety of gas and liquid applications.



#### M.A. Stewart & Sons Ltd.

M. A. Stewart and Sons distribute valves and fittings for every commercial and industrial application. We have products available in every size,

material and configuration. These products range from dependable utility valves to high performance, precision process controls and actuators.



#### **PGI International** The PGI Division, established in 1941, serves the global energy, OEM and agricultural industries by designing, manufacturing, selling and servicing innovative high precision machined products and specialized electronic systems.



#### Veriflo

Veriflo Division, Parker Hannifin Corporation is a leading manufacturer of precision diaphragm and bulk gas valves, regulators, and flow control components for the control and application of liquids and gases.



#### **Parker Distributor**

Parker Hannifin provides highly engineered flow control instrumentation and systems. These range from tube fittings, pipe fittings, needle valves, ball valves, compact stream switching valves to modular process valve packages.



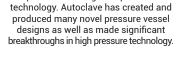
#### Porter

Porter engineers critical flow solutions for industrial science applications such as Laboratory Analysis, Life Science, Microelectronics, Chemicals, Solar and Fuel Cell Industries. Together, we can solve your toughest process flow challenges



#### **WEKA** WEKA is a leading manufacturer of

instruments for Level Measurement of Liquids, Cryogenic Components and Special Valves. With about 60 employees our company reacts fast on clients needs.





#### TechLine MFG.

Committed to customer service for over a 30 years Techline Mfg. was founded in 1982 as an industrial support manufacturer. Since that time Techline has emerged as one of the nation's leading manufacturers of tubing and instrument support systems.



## **ZSI Cush-A-Clamp** ZSI's products have earned a

well-deserved reputation for unparalleled quality and effectiveness. As industry develops new needs, ZSI can and will respond with superior quality products.

## SERVICES

## For your convenience, Viking offers free consultations to assist you and your company in determining your needs. Some of the services we can provide:

#### Vendor Managed Inventory

This service consists of a Viking representative coming onsite for an initial consultation and working with the customer to determine inventory levels. From there, a Viking representative will come in regularly to ensure that these levels are maintained. Viking will also ensure that the customer is aware of any inventory items that may need to be increased or decreased, depending on usage.



#### **Gauge Fill and Diaphragm Assembly**

For the convenience of our customers, Viking also offers in-house Gauge Diaphragm Assembly and Gauge Fills. After realizing the high demand for these services, we made the investment in highly specialized equipment to allow us to service different types of gauge/ seal assemblies. Viking is an authorized Ashcroft



gauge seal assembler. Ashcroft factory training and bi-annual recertification ensure we meet factory specifications.

#### **Gauge Repairs and Calibration**

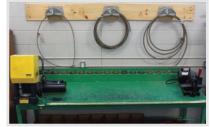
Gauges aren't indestructible and we understand that, over-pressurization, vibration, pulsation or accidental damage are all part of the real world for pressure gauges. Viking will bench test your damaged gauge and provide an analysis of whether if it is a repair or should be replaced. Viking has the equipment to properly test and calibrate your gauges. If required we can also provide a third party calibration certification.

#### **On Site Technical Troubleshooting**

With this service, a Viking representative would go onsite and discuss with the customer any issues they may be having and make recommendations on what can be done to help solve them. Depending on the issue, a manufacturer's representative or engineer may be brought in to help analyze complex issues. There is never any pressure to buy products because we believe in trying to help our customers build a strong relationship. We consistently offer our customers advice on the best practices and industry standards as well as offering alternative ways of achieving the same result while saving them money.

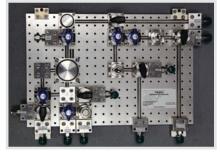
#### **Custom Hose Assembly**

Viking has the in-house capability to manufacture custom hose assemblies for various applications, with end connections as required by our customer's process. This in-house service, dramatically reduces lead time which is always an issue with hose assemblies.



#### **Custom System Fabrication**

System fabrication is another service Viking provides. This consists of taking a variety of different products or components and putting them together in a predetermined way, according to either the engineer's diagrams or the customer's specific instructions. These systems range from something as simple as



instruments in a weatherproof heated box to prevent freezing, or as complex as a full sampling panel. This helps the customer reduce labour, installation time and/or downtime with these ready to go assemblies.

## TRAINING SEMINARS

#### **Autoclave Cone and Thread Classes**

Specific to the Autoclave product line, this seminar is designed for high pressure applications (15,000-150,000 PSI), which require a coned and threaded connection on the tubing. In this class, our instructor will teach safety, how to properly cone and thread the tubing, as well as the correct fitting make up procedures.



#### Tube Bending Classes – Installation Training

This session will educate our customers on the proper tube bending techniques and best practices. In addition, participants will also learn about tube gain, and how to measure and prepare for a tube bend through extensive hands-on training.



#### **Regulator Seminars**

Viking offers seminars to our customers to better educate them on the products they use. During the product training for our Regulators, we will disassemble the unit, explain the different parts and mechanisms, and teach our customers what to look for when choosing a good regulator.



#### **Valve Training**

Having a vast knowledge of various types of valves, here at Viking we also offer product training on our valves. We will show different samples, and tell our customers about the best application use for each specific valve. In addition, we'll provide knowledge on flow coefficient, temperature and pressure curves, industry standards, as well as what to keep in mind when buying/specifying valves.



#### **Manifold Training**

We like to keep our customers feeling confident in their purchase decisions, so we also offer product training on our manifolds where we show sample products, give advice on how/where to use each manifold, provide customers with knowledge on industry standards, flow coefficient, temperature and pressure curves, as well as what to keep in mind when buying/ specifying manifolds.



#### **Tube Fabrication Course**

This is an installation course that teaches customers how to perform proper fitting make up procedures, and how to select the right tubing using temperature and pressure charts. We will also go over industry standards and best practices, and inform customers about safety and not using metals that would react with each other. If this course is completed, in conjunction with our tube bending class, customers will receive an industrial certification.

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### **Gauge Training**

Providing our customers with the knowledge they need isn't necessary, but at Viking, we like to make it a priority to ensure our customers are informed. For this reason, we offer product training on the gauge lines that we carry. During these sessions, we perform demonstrations, show samples and are willing to go over any questions our customers have in order to select the proper gauge.



## ASHCROFT PRODUCTS



#### **Bimetal Thermometers:**

The complete line of Ashcroft industrial bimetal thermometers provides quality choices for your temperature applications. Each instrument is manufactured to a standard accuracy of 1% of span (ASME B40.3, Grade A) traceable

to NIST. Available in dial sizes of 2", 3" and 5", and a number of different styles including field adjustable, hermetically sealed, and liquid filled.



#### Diaphragm Seals

Diaphragm seals are used to isolate the media from the instrument due to many reasons including corrosive services, slurry

and process prone to clogging, suspended solids, and safety. When choosing a diaphragm seal there are many different models to choose from, and each has a number of options for material of construction and fill to ensure proper media compatibility.



#### **Differential Gauges**

With a wide selection of differential gauges to choose from we have a solution to meet most applications. We have

gauges capable of handling high static line pressures while measuring differentials in inches of water. There are a number of different case materials and styles to choose from, some models also include the ability to add switches.



#### Pressure and Temperature Switches

Ashcroft pressure and temperature switches are designed for tough industrial and OEM applications

requiring a durable, high-quality switch. Available with single or dual independently adjustable setpoints, both fixed and adjustable from 15%-100% of range. Available with a number of classifications including UL, CSA, and NACE. With a wide array of optional switch elements, seals, and enclosures we have a switch for virtually all process, industrial and OEM applications.



#### **ISO Rings**

Available in both wafer and bolt through styles, the Ashcroft ISO Rings are adaptable to a variety of process conditions and

applications. A 360-degree flexible inner cylinder means no clogging, assuring reliable and accurate pressure readings. Available in sizes from 2" to 20" it can be used in any pressure within the limitations of ASME classes 150 and 300, and even in most vacuum applications.



**Duratemp Thermometers** Duratemp gas actuated thermometers have an exclusive

movementless design which is resistant to shock and vibration.

No gears to wear or misalign results in increased instrument life. Available in a number of different dial styles, Duratemp thermometers are accurate to 1% of full scale, are mercury free and come either direct mounted or with a bulb and capillary.



Stainless Steel Gauges Ashcroft's line of stainless steel

gauges come in a wide range of dial sizes and accuracies so we are sure to have a gauge to meet

your needs. Our stainless steel gauges are available with a selection of dial sizes and end connections including tube stub and panel mounting brackets. Our line of stainless steel gauges are capable of handling applications from full vacuum to 100,00 PSI.



Process Gauges

Ashcroft Process gauges are made to ASME B40.100 specifications and are accurate to 0.5% of span. We have a large selection of bourdon tube

materials, case materials and dial sizes to meet your process needs. The line of process gauges uses Teflon coated 400 series stainless steel for rotary movement parts for longer life. All process gauges are available in dry, liquid filled and Performance Plus! as well as a large selection of other options.





#### o choose from.

**Digital Gauges** Large five digit LCD displays, make our multi-functional digital gauges perfect for a wide range of applications. These gauges come complete with easy to use menus, multiple units of measure,

different backlite display options, and memory capabilities. Our digital line of products are capable of meeting a number of different certifications including, CSA, CE, FM, NEMA, and UL.



#### **Test Instruments**

Ashcroft precision test instruments yield consistent, reliable accuracy through the use of state-of-the-art precision machining. There is

test equipment to suit any of your needs including analog, digital, handheld units, dead weight testers, and volume controllers. The Ashcroft line of test equipment is able to handle applications up to 100,000 PSI with a high degree of accuracy up to +/- 0.025% of full scale.



Pressure Transmitters and Transducers

We carry a complete line of Ashcroft pressure transmitters and transducers to meet the needs of your applications including commercial, OEM, and industrial. Available with a wide selection of pressure connections,

electrical terminals, accuracies to 0.25% of full scale and pressures from vacuum to 20,000 PSI.



#### Thermowells

Used to separate your process media from your instruments, thermowells come in a wide range of sizes and connections

to meet your needs. In order to be compatible with your media we have a large selection of materials to choose from, and are available with a number of process connections including flanged, welded, and sanitary.



## **Commercial Gauges**

Made to top quality Ashcroft standards, we offer a complete line of economical gauges to meet your application needs.

Whether your function is fire protection, ammonia service, refrigeration, or a large number of specialty applications we have a wide selection of products suitable for your requirements. There are a number of case styles, accuracies, and wetted parts to choose from.

# PRODUCTS

## MANIFOLD VALVES



## Monoflange (Catalog 4190-FP)

Compact double block and bleed valves, featuring needle valves
Reducing installations cost while improving safety through a reduction in leak paths



## Pro-Bloc® (Catalog 4190-FP)

- Compact double block and bleedvalves, featuring needle or ball valve options
- Reducing installations cost while improving safety through a reduction in leak paths



#### H-Series (Catalog 4190-PM/4190-FM)

- A comprehensive range of 2, 3 and 5 valve manifolds for pressure and flow measurement applications
- Available with integral PTFree® connections, reducing leakpaths and installation cost

## DIAPHRAGM VALVES



#### NV17 (Bulletin 25000222) • General purpose, high cycle,

compact valve • For regulator outlet valve, gas control panels and analyzer sampling system applications



#### FS190 (Bulletin 25000034)

- Excess flow shut-off valve
- Manual or pneumatic actuation
- Non-attitude sensitive
- Six pressure/flow limit settings

### FILTERS



#### **F Series (Catalog 4135-CV)** • Replaceable sintered 316

stainless steel filter element



### FT Series (Bulletin 4135-CV)

- Filter elements are easily replaced without disconnecting the tube lines
- Fast Loop bypass option enables a continuous self cleaning flow

## VAPOURIZING REGULATORS

#### AVR3 (Bulletin 25000138) • Steam heat design

Internally threadless design

• Available in 316L SST, Monel®





AVR4 (Bulletin 25000137) • Electrical heat design • Field serviceable heat transfer element

- CSA, Cenelec, and ATEX certified
- Internally threadless design

### **CHANGEOVER SYSTEMS**



Maintains continuous gas delivery from two separate sources; allows maximum cylinder gas usage from one source before automatically switching to the second.

### **PFA / PTFE PRODUCTS**



#### Parflare PFA Tube Fittings

• Parflare fittings provide low dead volume, which decreases the possibility of particle entrapment and bacterial growth.

#### **Pargrip PFA Tube Fittings**

• Perfect for applications where ease of assembly is a requirement. Grooved tubing is not required.

#### Parbond PFA Fusible Pipe Fittings

• Parbond fittings welded design eliminates threaded connections and entrapment areas and creates a leak free connection.

#### **PFA Pipe Fittings**

 Available in a variety of configurations, all with standard NPT threads.

### FLOW CONTROLLERS



#### Gas Mass Flow Controllers (Catalog FM-1041 & FM 441)

- Models available with flow ranges of 0-5 sccm to 0-1000 slpm N2
- Responds to a step change in
- setpoint in less than one second
- Accuracy options down to 1% of rate



#### Variable Area Purgemeter (Catalog FM-1058)

- Variable area flowmeters include 65mm and 150mm scale length tube assemblies
- Available in either forged body or side-plate construction.



#### Severe Duty Gas Mass Flow Controllers (Bulletins FM-1164)

- NEMA 4X / IP66 certified and available in Class1, Div2, ATEX Zone 2 and IEC Ex certified versions with industry standard connectors
- Available with Analog or Digital I/O including ModBus, ProfiBus and DeviceNe



#### Acrylic Flowmeters (Bulletin FM-1160)

- Brass, PVC or stainless steel process connections
- Metering tube of machined cast acrylic

#### Glass Tube Flowmeters (Bulletin FM-1163)

• Available in 35 flow ranges in 6 tube sizes



#### Metal Tube Variable Area Flowmeters (Bulletins FM-1158, FM-1161, FM-1162)

- Multiple process connection options including NPT and ANSI flanges
- Optional inductive slot sensor alarms and 4-20 mA transmitter



# PRODUCTS

## FITTINGS



#### **CPI<sup>™</sup> Fittings** (Catalog 4230/4233)

- Three piece simple design to work on all instrumentation grade tubing
- Molybdenum Disulfide coated nuts to prevent galling and provide lubrication
- Single ferrule system treated with SuparcaseTM technology to insure sealing

#### **A-LOK®** Fittings (Catalog 4230/4233)

· Industry standard design for all instrumentation grade tubing Silver coated threads to reduce galling

#### MPI<sup>™</sup> Fittings (Catalog 4234)

- Compression fitting for medium pressure applications up to 15,000 psi (1034 bar)
- · Inverted body and nut design for added strength with thick-wall tubing
- Longer thread area for improved performance and resistance to vibration



#### **PARKER Autoclave Engineers**®

- High pressure fittings
- Coned-and-threaded connection • Tubing sizes are 1/4", 5/16", 3/8", 9/16" and 1"



#### **Phastite®** (Catalogue 4235-PH)

- Option for welded systems Simple assembly process provides high integrity
- connections, first time every time · Installation time reduced to seconds



#### **Brass Push-to-Connect** Fittings (Bulletin 3531 ORG/USA)

- Prestolok® brass and Prestolok II® composite push-to-connect fittings are designed for use with nylon, polyethylene, polyurethane and soft metal tubing
- Ideal for pneumatic applications

## **BALL/PLUG VALVES**



- **MB** Series (Catalog 4121-MB)
  - One piece compact barstock design
  - Center off position for 3-way · 2-way, inline, angle; 3-way,
  - 4-way and 5-way

## **B** Series (Catalog 4121-BV)

- 2-way, 3-way diverting or spring
- loaded 3-way selector designs
  - Wide temperature application range -65°F (18°C) to +450°F (232°C)
  - Rated for up to 6000 psi (413.7 bar)

#### **HB Series (Catalog** 4121-BV)

- Compact FNPT version for tight work areas
- · Full operating pressure in any port

#### PR Series (Catalog 4121-BV)



vent and metal tee handles

## Actuators

• 60 Series pneumatic actuators provide 90° and 180° rotation in both double acting and spring return models

#### **HBV Series (Catalog** 4190-HBV)



- Suitable for the most
  - demanding applications in the oil, gas and process control industries
- Integral compression ends available, eliminating taper threads and thread sealants
- Two piece barstock design reduces body leakage paths

### **BACK PRESSURE REGULATORS**

#### ABP1 (Bulletin 25000021)

- Reduce contamination and
- accurately control back pressure
- Internally threadless design Convoluted Hastelloy C-22®

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## PRESSURE REGULATORS



#### **IR4000 Series** (Bulletins 25000226. 25000223, 25000233)

- Internally threadless design Convoluted Hastelloy C-22® diaphragm
- · Available in 316L SST, Brass, Hastelloy C-22®, Monel®

#### **IR6000 Series** (Bulletins 25000141, 25000224, 25000227)

- Dual stage regulator
- Internally threadless design Convoluted Hastelloy C-22®
- diaphragm • Available in 316L SST, Brass,
- Hastelloy C-22®, Monel®

## **NEEDLE VALVES**



### V Series (Catalog 4110-NV)

- · For positive leak tight shut-off and regulation of fluids
- Choice of three stem types

#### SN6 Series (Catalog 4110-NV)

- Provides shut-off and coarse regulation of liquids and gases
- Choice of two stem types

#### VQ Series (Catalog 4110-NV)

• In-line and angle patterns

#### NP6 Series (Catalog 4110-NV)

- Choice of two non-rotating stem types
- Packing below power threads

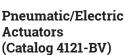
## U Series (Catalog 4110-NV)

- Stem packing below the threads isolates the thread lubricant from the flow
- · Severe service applications

### **HNV Series (Catalog** 4190-NV)

- Compact needle valves
- For applications up to 10,000 psi (690 bar)

7



 Low operating torque Optional locking device, downstream







## Panel mountable

# INTEGRATED SYSTEMS SOLUTIONS

## **DESIGN & FABRICATION**

Give us your toughest applications or even your simplest and we will help you custom design a complete package tailored to your specifications.

- Mass Flow Systems
- Sample Conditioning Systems
- Flow Transmitters
- Stream Switching
- Valve Systems
- Change Over Systems
- Filtration Systems
- Water / Steam Sampling
- Process Sampling
   Cylinder Sampling
- Cylinder Sampling
  Enclosure / Shelter System
- Enclosure / Shelter Systems
   Accessories
- Accessories
- Kitting
  Assemi
- Assembly
- Double Block and Bleed Valves

#### And much more . . . just ask!!



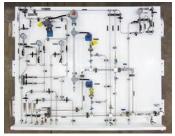
Instrument Box Fabrication



**Air Distribution Panels** 



**Chemical Feed Systems** 



Autoclave - High Pressure Panels



**Control Panels** 



Sample Conditioning Systems



Analyzer Pressure Regulation & Vent Recovery System



Vent Master



Pro-Bloc Double Bloc & Bleed Manifolds

**INSTRUMENT CLOSURE BOXES** 



Heated Sample Conditioning Parker Intraflow



R-Max Stream Switching System



**Change Over Systems** 



## PRODUCTS

### **GOLDRING AND SKINNER** SOLENOID VALVES



Parker's Gold Ring<sup>™</sup> and Skinner general purpose solenoid valves include the two, three and four-way products for use in a variety of applications. The valves are used in situations where the need exists to electrically control the flow of a fluid or gas. Available in a number of functions including normally closed, normally open, and universal three-way valves.

## **QUICK COUPLERS**



Parker offers quick connect and quick disconnect couplings for hydraulic, pneumatic and medical applications. Parker quick disconnect couplings are used to connect and/or disconnect hydraulic or pneumatic lines quickly and easily without the use of tools. Parker offers quick disconnect couplings in a wide variety of styles, such as non spill and double-shut-off quick couplings, and connect under pressure quick couplings.

### **BRASS AND PLASTICS**



Parker has a complete line of brass and thermoplastic components for fluid and gas applications including the following product categories:

- · Compression style for pneumatic and transportation
- Push to connect for pneumatic and transportation
- · Thermoplastic fittings and valves
- Flare fittings Adapters
- Barbed fittings

PROCESS VALVES



KITZ **RED WHITE** American Valve Moygro BERIC BONNEY FORGE Powell

### BUTTERFLY



MAS KITZ. Mueller Steam Demco Flow Control W-K-M Powell

## **BALL VALVES**



M. A. Stewart and Sons distribute valves and fittings for every commercial and industrial application. We have products available in every size, material and configuration. These products range from dependable utility valves to high performance, precision process controls and actuators.

### **CRYOGENIC VALVES**

- WEKA AG is a leading manufacturer of Cryogenic-Components for the application of liquefied, cryogenic gases.
- Cryogenic Valves (Shutoff and Control Valves, Vacuum Jacketed and also for Cold Box Mounting)
- Special Valves for any Cryogenic Applications
- · Bellows Sealed Valves (up to PN600)
- Cryogenic Transferlines and **Couplings Space Cryogenic** Components
- Custom made Cryogenic Components e. g. Cryostats and Ejectors

### VISUAL LEVEL INDICATOR

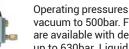
Operating pressures can be from vacuum to 500bar. Float chambers are available with design pressures up to 630bar. Liquid densities as low as 0.3g/cm3 (SG 0.3) and an operational temperature range from 77 K to 673 K (-196 to 400° C) allow use with cryogenic liquids as well as steam boilers or water hydraulics. Hermetically sealed, non-pressurized floats for condensing media are available up to 320 bar operating pressure.

### TANK LEVEL INDICATOR

Highly reliable float technology that provides extremely accurate liquid level sensing under almost all operating conditions. Floats follow true liquid surface, rather than extrapolate results from indirect indications such as pressure or echoes.

Floats feature the unique capability to monitor liquid interface levels in virtually any tank size or shape. Anywhere liquids with differing densities (> 0.1) are contained together GEMS float type sensors keep operators aware of their interface level position.





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## **TUBING & HOSE**







#### Viking is your source for Stainless Steel Instrumentation tubing!

Stocking standard sizes 1/4", 3/8", 1/2", 3/4" and 1" of stainless steel tubing (seamless or welded) foreign or domestic, we can fulfill your tubing needs today! Viking can also supply copper tubing, as well as exotic alloys such as Monel, Hastelloy and others.

#### **HOSE PRODUCTS**

#### Pressure Hose

- Fittings & Adapters (stainless steel, steel, brass)
- Hose Assemblies
- PTFE Lined Hose
- NGV Hoses
- Thermo Plastic Hoses
- High Pressure Hoses







### **INSTRUMENT AND HEAT TRACE TUBING PRODUCTS - FLUID & GAS HANDLING**



TT - Temptube® - Stainless Steel

TT - Temptube® - Copper

#### **Chemical Processing & Refineries**

- Temptube® Single Tube Insulated
- Steam Trace LT Series Light Trace
- Steam Trace HT Series Heavy Trace
- Electric Trace Self-Regulating

#### **Power Generation**

- Intermittent High Temperature Steam
   Purge-Freeze Protection
- Continuous High Temperature Steam Purge-Freeze Protection

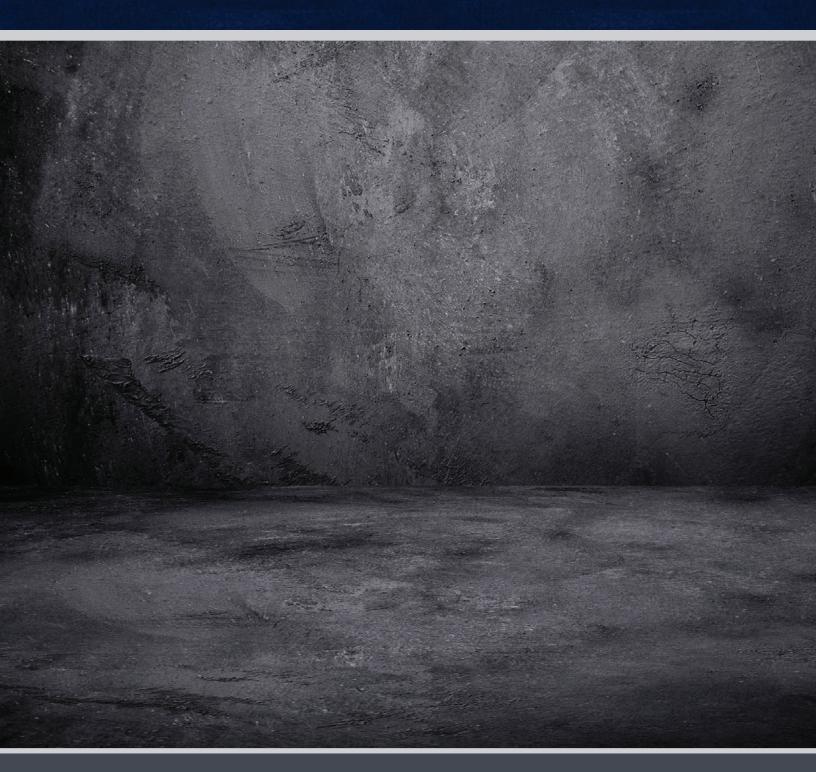
#### Process Control and Environmental Monitoring System

- Analyzer Bundles
- Probe Support
- Constant Watt Low Temperature Maintenance
- Constant Watt High Temperature Maintenance
- Mineral Insulated High Temperature Maintenance

#### Industrial Plant - Robotics - Laboratory

- Multiple Plastic Tube Bundles
- Multitube
   Metal

# Superior Products, Exceptional Service





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