Delivering Solutions for Industrial & Utility Applications for Over 65 Years

FrewProcess.com
We’re with you from beginning to end

DESIGN
BUILD
INSTALL
COMMISSION
MAINTAIN

At FREW, our experienced engineers and technicians will work directly with your team to deliver the right solutions for your application.

From the project’s initial design until its final commissioning has been approved, we are committed to your success. Our team will be accessible throughout the entire process.

Rely on FREW for comprehensive solutions.

Contact a Frew engineer now to discuss your application.
855-FREW-PRO
Flow Meters
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Thermal Destruction/Boilers
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- Deaerators and Steam Accessories
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Sensors and Controllers
- Sensors
- Connectivity & Communications
- Water Heaters
- Chart & Paperless Recorders & Monitors
- Controllers
- Single-Loop PID Controllers
- Multi-Loop Controllers
FLOW METERS

**POSITIVE DISPLACEMENT**

- Recordall®
  - Nutating Disc
  - Nutating disc meters are the most common and accurate type of positive displacement meters. The simple and reliable operating principle allows water to flow into the chamber, which causes the disc to nutate.

**REGISTERs**

- HR-LCD Pulse Scaled
- HR-LCD 4-20 Scaled/Unscaled
- Recordall Transmitter Register (RTR)

**OTHER OPTIONS**

- EC-A Adjustable Electric Contacting Register
- ER-6/R Digital Resettable Totalizer
- ER-9 & ER-9/R Digital Resettable Totalizer
- ER-420 Totalizer and Rate of Flow Indicator with 4-20mA Output Signal
- PFT-420, PFT-420-2, FT-420B, RST-420 Analog Flow Transmitter
- PFT-1E, PFT-4E Electronic Scalable Transmitter
- PFT3 Unscalable Pulse Transmitter (Turbo meters)
- PEPT-1, EPT-1XP Electronic Unscaled Pulse Transmitter
- FT-1, PFT-2, FT-2XP, RST, RST-6P Mechanical Unscalable Transmitter
- FT-1E, PFT-2E, PFT-3E Electronic Unscaled Pulse Transmitter
- MS-E1 & MS-ER1 Industrial Pulse Transmitter
- Model 258 Mechanical Register, Non-Resettable
- PMS and MS-ESXP Mechanical Scalable Transmitter
- RCDL Recordall Mechanical Register, Non-Resettable

**TURBINE FLOW METERS**

- Recordall Turbo Series Meters
  - The Industrial Turbine Meter is a rugged, reliable meter ideally suited for industrial fluid applications. Its compact size and ease of serviceability without removal from the line make this a cost effective selection. Designed with performance in mind, the meter provides a high level of accuracy over a wide flow range with a minimum of pressure loss.

- Vision Turbine Flow Meter
  - Suitable for measuring low-viscosity, aggressive and non-aggressive liquids alike.
  - Compact size
  - Measurement in any meter orientation

- Industrial Turbo
  - This meter is ideally suited where continuous service and minimal maintenance are required.
  - Long lasting ceramic bearings
  - Simple inline serviceability
  - Low pressure loss

- Model 1100 Turbine Flow Meter
  - The Model 1100 turbine flow meter is the ideal meter for liquid flow measurement both on and off the oilfield.

- QuikSert® In-line Turbine Flow Meter
  - The Blancett QuikSert® In-line turbine flow meter provides the high accuracy and rigorous design of the standard Blancett turbine, but in a wafer-style mounting configuration.

- FloClean Sanitary Turbine Flow Meter
  - The Blancett FloClean sanitary turbine flow meter provides the high accuracy and rigorous design of the standard Blancett turbine in a sanitary-style tri-clamp mounting configuration.
We offer a large selection of quality, accurate and affordable flow meters.

**TURBINE**

**B1500 Turbine Flow Meter**
Blancett B1500 turbine flow meters have exceptional mechanical linearity, resulting in minimizing, or negating, temperature induced viscosity influence.

**Model 1200 In-line Turbine Flow Meter**
Engineered for applications in high corrosive environments. Developed for use in petrochemical and other process industries with liquid chemical flows.

**900 Series Flow Meter**
Rugged, low-priced and specifically designed to measure floodwater line flow in secondary oil recovery operations. Using time-proven rotary vane and multi-jet impeller mechanisms.

Blancett flow monitors offer advanced digital signal processing technology in an easy-to-access package. These flow monitors process frequency output from a flow sensor and interpret the signal to calculate flow rate, total flow and batch flow.

**IMPELLER**

Impeller products are used to measure liquids in a variety of industrial and commercial markets. These solutions comprise data acquisition and data management products including sensors, monitors and transmitters.

- **228 & 250 Series – Metallic Tee Type Flow Sensor**
- **225 & 226 Series Hot Tap Flow Sensor**
- **220 Series Insertion Style Flow Sensor**
- **SDI Flow Sensor**
- **380 Series BTU System Meter**
- **228PV PVC Tee Industrial Flow Sensor**
- **4000 Series Flow Sensor**
- **735 Series Flow Sensor**
- **310 Series Analog Transmitter**
- **320 Series Pulse Transmitter**
- **330 Series Relay Transmitter**
- **340 Series BTU Transmitter**
  - BacNet/ModBus
  - LonWorks
  - Metasys

**Exact Turbine Meters**
Hydraulically coupled helical dual rotor design provides exceptional performance and many unparalleled benefits.

**Precision Turbine Meters**
Unprecedented mechanical linearity, resulting in minimizing, or negating, temperature-induced viscosity influence.

**Gas Turbine Meters**
Cox Precision Gas Flow Meters are designed for precise and repeatable flow measurement.

**LoFlo Turbine Meters**
Designed to provide exceptional repeatability and speed of response when measuring very low flow rates.
FLOW METERS

ELECTROMAGNETIC

ModMAG M-Series
Whether it’s improving accuracy, decreasing system maintenance or meeting the demands of challenging liquid conditions, Badger Meter Electromagnetic Meters deliver the performance your critical flow measurement applications require. Our electromagnetic flow meters are designed to achieve ± 0.25 percent accuracy. In addition, the non-intrusive, completely open flow tube design virtually eliminates pressure loss. With no moving parts to impede the flow stream, maintenance is kept to a minimum, even in less than ideal fluid conditions.

• M1000 Electromagnetic Flow Meter
• M2000 Electromagnetic Flow Meter
• M3000 Electromagnetic Flow Meter
• M4000 Electromagnetic Flow Meter
• M5000 Electromagnetic Flow Meter
• M7600 Electromagnetic Flow Meter

CORIOLIS

RCT1000
The Badger Meter RCT1000 Coriolis mass flow meter simultaneously measures true mass flow and density reading. The Coriolis meter identifies flow rate by directly measuring fluid mass over a wide range of temperatures with a high degree of accuracy. For fluids consisting of two liquids or a liquid with suspended solids, it can derive the concentration and mass of each fluid based on the density measurement.

• Unobstructed open-flow design
• Low-maintenance operation with no free-moving parts
• Modbus RTU, HART, Modbus TCP/IP, EtherNet/IP network options

FLOW METERING ANALYTICS

AquaCUE Flow Measurement Manager
A simple yet powerful end-to-end solution, the AquaCUE® Flow Measurement Manager combines an intuitive software suite with proven flow measurement technology and leverages cellular network infrastructure to deliver a simple yet powerful dashboard solution for improving management of the use of water throughout your property, including domestic hot and cold water, irrigation systems, recreational use, tenant sub-metering, HVAC systems, and more.
We offer a large selection of quality, accurate and affordable flow meters.

**Ellipse Pitot Tube Sensors**
The Ellipse Pitot tube flow meter is a primary flow sensor designed to produce a differential pressure that is proportional to flow. Its patented elliptical shape provides the lowest pressure loss in the industry. The Ellipse flow meter is designed with a series of ports facing the upstream velocity pressures and flow sensing ports strategically located ahead of the trailing edge flow separation. The Ellipse is capable of highly accurate, precise flow measurements that are proportional to the actual flow rate to 24 inch Pitot tube meter for liquids and gases.

- Ellipse AR Annular Flow Meter
- Ellipse AF Annular Flanged Flow Meter
- Ellipse AS Annular Steam Flow Meter
- Ellipse ASF Annular Flanged Steam Flow Meter
- Ellipse AHR Annular Wet Tap, Low Pressure Flow Meter
- Ellipse AHL Annular Flow Hot Tap, High Pressure Flow Meter
- Ellipse AHS Annular Hot Tap, Steam Flow Meter
- Ellipse AHF Annular Flanged, Hot Tap Flow Meter
- Ellipse AHZ Annular Flanged, Hot Tap Steam Flow Meter
- Ellipse Model BHL Annular Hot Tap, Dual Rod Flow Meter

**Venturi Flow Meters**
The CV Venturi Flow Meter is a differential pressure element designed to accurately measure the flow of liquids and gases by forcing the flow into a smaller diameter section of pipe, then measuring the pressure differences between the unrestricted flow and the restricted flow. It can be installed in any position with minimal straight pipe requirements (5 pipe diameters upstream and 2 pipe diameters downstream).

- CV Series Venturi Flow Meter
- V-Brass Series Venturi Low Pressure Loss Flow Meter
- Model SSL Venturi Classic Flow Meter
- Model SSM Venturi Nozzle Flow Meter
- Model LPL Venturi Low Pressure Loss Flow Meter
- Model VILPL Venturi Low Pressure Loss, Insert Flow Meter
- Model VISSL Venturi Classical, Insert Flow Meter
- Model VISSM Venturi Nozzle, Insert Flow Meter

**COIN Flow Meters**
The Preso COIN wedge wafer flow meter accommodates most flows, even the most abrasive. This compact DP flow meter is streamlined for easier installation due to the narrow face-to-face, creating the lowest installed cost compared to other end connections. This type of wedge meter is effective with clean fluids, gas and steam applications.

- COIN Wedge Wafer (Model NW) Flow Meter
- COIN Back-to-Back Wedge (Model NN) Flow Meter
- COIN Butt Weld Wedge (Model NB) Flow Meter
- COIN Flanged with NPT Pressure Taps (Model NF) Flow Meter
- COIN Flanged, Flange Process by Flange Instrumentation (Model FF)
- COIN Wedge, Flanged with Chemical-Tee Pressure Taps (Chem)

**Cone Flow Meter**
The Cone differential pressure flow meter has a cone-shaped element that shapes the flow profile ahead of the differential pressure (DP) measurement port without impacting the flow against a sharp surface, creating an extremely stable signal for measurement with minimal wear on the cone edge.

Wyatt Engineering Orifice Plates
FLOW METERS

ULTRASONIC

**DXN Portable Hybrid Ultrasonic Flow Meters**
The Dynasonics DXN meter is a powerful tool for troubleshooting flow issues, whether you want to quickly verify the flow reading of another meter or to data log flow system values over an extended time period. The DXN portable meter has transducers that clamp onto the outside of the pipe—no tapping or cutting is required. The meter can be easily moved and installed in different locations.

- Quickly install and setup
- Measure a wide variety of fluids
- Capture multiple variables over several days
- View and archive data log files on a computer

**TFX-5000 Ultrasonic Clamp-on Flow Meter**
TFX-5000 ultrasonic clamp-on meters are quickly and easily installed without cutting or tapping the pipe. Ultrasonic waves transmit upstream and downstream through the pipe wall and water flowing in the pipes. By measuring the difference in the travel time and knowing the pipe size, the meter determines the velocity and flow rate.

**TFX-500w Ultrasonic Clamp-on Flow Meter**
The TFX-500w ultrasonic clamp-on flow meter is quickly and easily installed without cutting or tapping the pipe. Ultrasonic waves transmit upstream and downstream through the pipe wall and water flowing in the pipes.

**DFX Doppler Ultrasonic Flow Meters**
The DFX ultrasonic Doppler flow meter measures flows of liquids containing suspended particles or aerated liquids. The suspended particles must reflect ultrasonic energy. The DFX flow meter operates by transmitting ultrasonic waves into the flow stream and measuring the frequency shift of the reflected wave. The meter’s clamp-on design allows quick and low-cost installation, and eliminates worries of fluid compatibility and pressure head loss. With no moving parts, there is no mechanical wear, so repair kits or replacement parts are not needed.

- Measures liquids containing suspended reflectors
- Non-intrusive, clamp-on transducers for most pipes
- Flexibility: with automatic gain control and in-field linearization
- Wide velocity range

**UFX Hand-held Doppler Ultrasonic Flow Meters**
The UFX hand-held ultrasonic Doppler flow meter is a cost-effective flow measurement device for closed-pipe liquid systems containing suspended particles or gas bubbles. A non-invasive, hand-held transducer is placed on the outside of metal or plastic pipes and ultrasonic waves are transmitted into the flow stream. The velocity of the particles or gas bubbles is determined by measuring the frequency shift of the reflected waves.
Vortex flow meters are suitable for measuring steam as well as a variety of liquids and gases. As fluid moves across a vortex meter shedder bar, vortices form. The frequency of the vortices shedding is proportional to the fluid velocity.

**VN2000 Hot Tap Insertion Flow Meter**
The VN2000 Hot Tap Insertion Vortex Flow Meter measures the volumetric or mass flow rate of steam, gases or liquids over a large flow range.
- Reliable measurement for steam and a variety of fluids
- Reduce replacement inventory, maintenance cost, and spare parts

**VN2000 Compact Direct Insertion Flow Meter**
The meter is a heavy duty design engineered to stand up to the most abusive environments inside and outside the pipe. The meter includes a mounting assembly to simplify the installation and ensure proper installation depth and orientation for a specified pipe size.
- Measure volumetric flow, mass flow with tempcompensation or BTU/energy
- Durable stainless steel design
- Mounting kit for proper installation
- No moving parts to wear

**RVL Series Meter**
The RVL series meter uses vortex-shedding technology has no moving parts, and any potential for fluid contamination is eliminated by the corrosion-resistant all-plastic construction. The meter includes a compact two-wire (4…20 mA) or three-wire pulse transmitter, contained within a conveniently replaceable plug-in electronics module.

**PC200 Process Controller**
The Badger Meter PC200 is a microprocessor-driven instrument designed for batching and filling both small and large quantities, as well as displaying total, accumulated total and flow rate. Designed to interface with our complete line of industrial flow meters, it totalizes, indicates and controls fluid flows. Many years of experience in the industrial market has allowed Badger Meter to incorporate features indispensable in the liquid batching and control operations.

**FC-5000 Flow Computer**
The FC-5000 Flow Computer is a microprocessor-driven device designed for flow monitoring. The FC-5000 is designed to be compatible with the complete line of Badger Meter industrial flow meters, creating a solution to provide totalization of flows, instantaneous rate of flow and total energy consumed, simultaneously, while conforming to EN 1434 calculation standards. Many years of experience in the industrial market has allowed Badger Meter to incorporate features indispensable in control operations.
**FLOW METERS**

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### OPEN CHANNEL

**Dynasonics**

**iSonic 4000 Open Channel Flow Meter**
An economical open channel flow meter, iSonic 4000 measures level, flow rate and total volume of water flowing through weirs and flumes. The meter includes a non-contact ultrasonic level sensor to detect the water level and then calculates the flow rate and volume using the Manning equation and characteristics of the channel. Open channel flow meters perform best where the sediment does not build up.

**ACCURON Model 7750 Area-Velocity Flowmeter Systems**
Each Accuron 7750 system utilizes single or multiple path acoustic transit-time technology capable of realizing highly accurate flow measurements under the most difficult metering conditions.

**ACCURON Crossfire Billing Meters**
Sewer Billing Meters are the cash registers of wastewater treatment plants.

**ACCURON Model 7100 Single Range Open Channel Cartridge Meters**
The Accuron 7100 Cartridge Meter is a factory integrated unit, designed for open channel flow measurement. The revolutionary design combines a trapezoidal flume section and the ultrasonic height sensor in a stainless steel cartridge.

**Palmer-Bowlus Flume**
4" Thru 42" Diameters available. All flumes are fabricated on molds to ensure exact tolerances and dimensions.
- Parshall Flumes
- H Flumes
- Trapezoidal Flumes

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### THERMAL DISPERSION

**FCI**

**ST Series Flow Meters**
The ST100 series transmitter is unsurpassed in meeting your current and future need for outputs, process information and communications. Whether your output needs are traditional 4-20 mA analog, frequency/pulse, or advanced digital bus communications such as HART, Foundation fieldbus, PROFIBUS, or Modbus, ST100 has you covered.

**MT Series Flow Meters**
The ST100 series transmitter is unsurpassed in meeting your current and future need for outputs, process information and communications. Whether your output needs are traditional 4-20 mA analog, frequency/pulse, or advanced digital bus communications such as HART, Foundation fieldbus, PROFIBUS, or Modbus, ST100 has you covered.

**Flow Conditioners**
VORTAB Flow Conditioners eliminate flow distortions that degrade instrument performance. The result is accurate, repeatable measurement with minimal pressure loss.

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**EASTECH Flow Controls**

**FRP Composites**

**iSonic 4000 Open Channel Flow Meter**
An economical open channel flow meter, iSonic 4000 measures level, flow rate and total volume of water flowing through weirs and flumes. The meter includes a non-contact ultrasonic level sensor to detect the water level and then calculates the flow rate and volume using the Manning equation and characteristics of the channel. Open channel flow meters perform best where the sediment does not build up.

**FLUID COMPONENTS INTERNATIONAL LLC**

**ST Series Flow Meters**
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**MT Series Flow Meters**
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**Flow Conditioners**
VORTAB Flow Conditioners eliminate flow distortions that degrade instrument performance. The result is accurate, repeatable measurement with minimal pressure loss.
Valve and Meter Repair & Calibration Services

- Valve Automation & Control Products
- Flow Calibrators, Test Stands & Calibration Services
- Non-invasive, Ultrasonic Flow Meter Rentals
- On-site Application Engineering

Repair and Calibration activities are CRITICAL to your system’s operation and each client’s needs are unique.

The Frew Process Group has faithfully supported its clients for over 60 years, providing them the security of steady reliability in their Flow Meters and Valves.

That’s why you can place your trust in the experienced professionals at Frew to keep your plant running at Peak Performance.

Rely on Frew to find the proper instrument for your application and our ability to support it.

Learn more about these services by contacting our Sales Engineers.

855-FREW-PRO  Sales@FrewProcess.com  www.FrewProcess.com
Air Fin Coolers – ALU
- Air cooler with aluminum fins
- High pressure up to 800 bar
- Temperature range of -120˚C to 600˚C
- Fully made to order
- High speed to low-noise fans

Air Fin Coolers – HDG
- Hot dip galvanized air fin coolers
- Industrial applications in challenging environments
- Fully made to order
- Low-noise fan

Gasketed Plate Heat Exchangers
- Lower pressure and temperature range
- Easy maintenance/replacement/service
- Wide range of applications

Welded Plate Heat Exchangers
- K-Bloc is available in various corrugation designs and size for a wide range of applications.
- This plate heat exchanger is generally used in oil and gas, petrochemical and chemical applications, automobile and pharmaceutical industries, and paper manufacturing

Charge Air Coolers
Machine Cooling

Closed Circuit Coolers
Steam Power Systems

Modular Cooling Towers
Radiators

Customized Air Coolers
Commercial Air Coolers
Condensers / CDC

Brazed Plate Heat Exchangers
- Medium pressure and temperature range
- Compact design, light weight
- Applications – HVAC/refrigeration systems

ACC Mash (extruded or wrap-on)
- Preferred option for air cooled vacuum condensers in API design code ambience
- For petrochemical, oil & gas applications

Desublimators
- Transforming gas directly into solid state
- Special application for chemical plants in phthalic anhydride production

Transformer Cooling Systems
- Forced air/water coolers and cooling units for large power transformers
- Transformer oil pumps for traction transformers and power converters

Shell & Tube
- Special heat exchangers for nuclear power, process and propulsion systems

Sanitary Heat Exchangers
- Sanitary units are built to the highest specification and meet the 3-A standards
- Port sizes range from 1” to 6” and varying frame models offer customized solutions for your process

Air Dryers
- Tube bundles typically with Hot dip galvanized finned tubes to heat air for drying purposes
- Galvanization provides superior anti-corrosion protection and long service life

Double Tube Systems
Safety double tube heat exchanger for critical environments, e.g., for safe separation of toxic substances from the cooling/heating media
Shell & U-tube
PS and PW-Type U-tube heat exchangers are designed for a wide range of liquid to liquid (PW) and steam to liquid (PS) applications.

Shell & Straight Tube
LENS heat exchangers break the mold with a new multi-dimensional, ingenuity opening doors to possibilities in fluid dynamics and process control.

Shell & Coil
JAD shell & coil heat exchangers are distinctly characterized by their angular connections, and by the circular layers of helically corrugated tubes within the shell.

P-Line Sanitary Heat Exchangers
Pharmaceutical & Food Grade Heat Exchangers
A series of exchangers for pharmaceutical and food industries and suitable for all other applications that are in compliance with FDA and 3A.

E-Line Economizers
Air to Water Heat Exchangers
AICs standard line of E-Line economizers is the optimal solution for boiler flue gas heat recovery.

REX Tank Heat Exchangers
The new generation REX instantaneous indirect water heaters are engineered for high heating efficiency.

Schebler
FLUE STACKS, GREASE DUCT & FANS
Schebler: Manufacturing industry-leading complete systems, prefabricated chimneys and engineered stacks

Ask about OEM consignment and volume pricing options.
SEVERE SERVICE CONTROL VALVES

Leslie Aeroflow High Performance Control Valve
- 1 – 16" Valve Sizes
- ANSI CL 150 – 4500
- Zero Leak Technology
- Custom Characterized Cage
- Tri-Sheer Protected Seat Design
- Hung Cage for Thermal Expansion

The unique technology of the Aeroflow begins with aerodynamic vanes cast into the valve body inlet and outlet. Inlet vanes help divert incoming flow evenly around the cage, minimizing turbulence and flow instability.

SCHROEDAHL

Schroedahl AC
- 1/2"-24" (DN25-DN450)
- ANSI 900-4500 (PN150-600)
- ANSI Class V or Better
- Custom Characterized Cage/Axisal Design
- Cavitation Control/High Rangability
- Pneumatic, Electric, or Hydraulic Actuation
- Angle Type, good for High Pressure Applications
- Injection Control and High Pressure Control Valve

Leslie Model DBOY Balanced Control Valve
Leslie control valves are rugged, reliable units specially designed for use in steam, water, gas, vapor, and non-corrosive liquid service.
- 2” – 12" (DN50-DN300)
- Cv Range: 26 - 1240
- ANSI Shutoff Class IV, V, VI
- ANSI Class 125-600 (PN20-PN110)
- End Conn: BWE, SWE, RFF, RTJ, THD
- Body Mat'l: Cast Iron, WCB, WC9, CF8M

Schroedahl BK
Standard Low Pressure and High Pressure Control Valve for Steam or Water

Leslie D-Series Linear Control Valve
An all-purpose cage-guided, balanced control valve with high flow capacities and multiple cage configurations.
- 2” – 16" (DN50-DN400)
- Cv Range: 24-2300
- ANSI Shutoff Class IV, V
- ANSI 150-1500 (PN16-PN250)
- End Conn: BWE, RFF, RTJ
- Body Mat'l: LCC, WCC, WC9, CF8M

RTK Reflex Series Control Valve
All-purpose cage-guided globe control valve. Electric and pneumatic actuators.
- RTK Reflex ½” – 12” (DN15-DN300)
- Cv Range: 0.12 - 1542
- ANSI Shutoff Class IV, V, VI
- ANSI Class 150-900 (PN20-PN150)
- Unbalanced/Balanced Plug Design
- Threaded or Quick Change Trim
- End Conn: SWE, BWE, RFF, THD
- Body Mat'l: WCB, CF8M, WC6, WC9

GENERAL SERVICE GLOBE CONTROL VALVES

Leslie Model DLO Unbalanced Top-Guided Control Valve
Versatile, single-seat, unbalanced, two-point stem guide, and cage-retained seat valves. Suitable for use in steam, water, gas, and process applications. Industry use ranging from food and beverage processing to power generation.
- 1” – 4” (DN25-DN100)
- Cv Range: 0.5 – 201
- ANSI Shutoff Class IV, V, VI
- ANSI Class 125-300 (PN10-PN40)
- End Conn: RFF, THD, SWE, BWE
- Body Mat'l: Cast Iron, WCB, CF8M

Leslie control valves are rugged, reliable units specially designed for use in steam, water, gas, vapor, and non-corrosive liquid service.
SEVERE SERVICE BALL VALVES

**Accuseal CR2 Valves**
Omni-Lap 360° TM optimized roundness and thermally-matched ball and seat assemblies ensure 100% seal-ability regardless of service conditions
- 1/2" - 8" (various bore sizes available)
- 600 - 4500 Limited Class
- Socket weld, Butt weld, Hub Connections

**Accuseal SPV Valves**
718 Fused Carbide trim for HP drains, HRH drains, turbine drains and any high cycle or high thermal stress applications

**Accuseal SP2**
Low Pressure - Steam Power (SP2) Valve

Applications
- Boiler Drains and Vents
- Turbine Drains and Vents
- Control Valve Isolation
- Equipment Isolation

**Accuseal CSV**
A critical service workhorse built to deliver absolute isolation, extreme durability and long life under severe conditions. Two and three piece designs are field serviceable and retain Class VI Shut-off rating.

GENERAL SERVICE BALL VALVES

**ACTUATED BALL**
JFlow Ball Valves may be purchased with an Electric or Pneumatic Rotary Actuator.

**MANUAL BALL**
- 1/2/3-Piece Ball Valves
- Flanged Ball Valves
- 3/4-Way Ball Valves and Lubricated Balancing Valves (Series 5500)
- Sleeved Plug Valves (Series 5400)

**MANUAL LINEAR VALVES**

**SMV MANUAL BALL**
- Manual Valve (SMV)
- 1/4", 1/2", 3/4" and 1" models
- Interchangeable linear, equal percent, quick open or double taper trim sets
- Threaded bonnet for quick disassembly

**SANITARY**

JFlow Controls
Sanitary Butterfly Valve (CES3A-B) and Sanitary Ball Valves

RCV
3A Sanitary Control Valve (SCV-85/95)
Right Angle 3A Sanitary Control Valve (SCV-89) Valves

Frew finds product solutions to meet your project requirements. This is our job.
**AUTOMATIC RECIRCULATION VALVES**

**Schroedahl TDL**
- 3-Way (4-Way with Additional Start-Up Bypass)
- Self Operated Pump Protection Valve
- Max 40Bar / 580 psi LP Service
- No Cavitation at Highest Pressures
- Forged Body

**Schroedahl TDM**
- Max 230Bar / 3335 psi HP Service

**Schroedahl MRK**
- 3-Way Pump Protection Valve
- Supercritical HP Feed & HP Injection Service
- Max 500Bar / 7250psi Critical Service
- No Cavitation Up To 500 Bar
- Suitable for continuous low load application
- Forged Body

**Schroedahl SUL**
- Automatic Recirculation Valve for pump protection
- Dependable operation
- Low maintenance
- Easy to install
- Max 20Bar / 290psi LP Service
- Cast Body

**THREE WAY**

**RTK PV 6321**
Conical plug valve pneumatically-operated
- Class 150 to Class 900
- ½” (DN15) thru 8” (DN150)
- Mixing or Diverting
- WCB, WC6, WC9, CF8M

**RCV**
- ANSI Class 150/300 Globe Style 3-Way Mixing/Diverting with bolted bonnet and post guided innervalve (Model 9000) with NPT, Wafer or Flanged connections
- RCV Low Flow 3-Way Mix/Diverting (564 and 1118) Control Valves
LOW FLOW GLOBE

- Low Flow Control Valves (807)
- Exotic Alloys (807)
- Bellows (808)
- Standard Flange (860 and 1499)
- Standard Cooling Fin (859)
- Extended Cooling Fin (973)
- 14” Extended Bonnet (884)
- Cold Box Extension (CBX)
- 60,000 PSI Ultra-High Pressure (HP-60)
- 40,000 PSI Ultra-High Pressure (HP-40)
- 15,000 PSI High Pressure (HP-15)
- 10,000 PSI High Pressure Globe Control Valve (HP-10 Globe)
- Severe Service Globe Control Valve (1711/1711HD)
- Kynar PVDF Plastic Control Valve for Corrosive Service

RCV Model 9000 ANSI Class 150/300
Globe Style Valve with bolted bonnet and post guided innervalve with NPT, Wafer or Flanged connections. Optional Extended Bonnet configuration.

RCV Model 9100 Process Control Valve
The Model 9100 process control valve is a 2-way, high capacity globe with a B62 bronze body/bonnet. Available with an optional extended bonnet for extremely cold or hot fluids and gases. Comes with a field-reversible actuator and standard live loaded TFE packing.

Let our product specialists help you select the right meter for your application.
STEAM DESUPERHEATERS

SPRAY TYPE DESUPERHEATER
Maximum Turndown Ratio of 5:1  
Approach to Saturate Temperature 5-7°C

DKV — Traditional
DKM — Mini

- 2”-20” (DN 150 – 500)  
- ANSI 150-2500 (PN 10-420)  
- Integrated Water Injection Cooling  
- Simple Insertion Replacement  
- Class IV, V Shutoff Available  
- Rangeability of water 10:1 up to 100:1  
- Flanges up to DN 2” for water  
- EN and ASME materials  
- PN up to class 2500 (PN 400)  
- Electric, pneumatic or hydraulic actuator

STEAM ATOMIZING TYPE DESUPERHEATER
Offers a Possible Turndown Ratio of 50:1  
Approach to Saturate Temperature less than 3°C

DKT Steam Assist

- Ultimate cooling solution  
- Low and high pressure design available  
- Forged material  
- Multi nozzle design  
- Rangeability of water up to 100:1  
- EN and ASME materials  
- PN up to class 2500 (PN 400)  
- 1/2”-40” (DN 15 – 1000)  
- ANSI 150-12500 (PN 20-250)  
- Highest Cooling Rangability  
- Extreme Temperature Reduction  
- Low Steam Velocity Control  
- Precise Saturation Control  
- Flanges up to DN 4” for water and DN 4” for steam assist
STEAM CONDITIONERS

SCHROEDAHL

THE STEAM CONVERTING STATION
FOR POWER PLANT TECHNOLOGY
AND INDUSTRIAL PROCESSES

Wherever specific steam conditions and pressures are required for the most demanding steam applications.

DU Steam Conditioner

Steam cooling with the SCHROEDAHL DU means the following for you: perfect steam conditioning near the saturation temperature, maintenance reduction through low vibration and low noise level of the station, and an extremely short distance to temperature sensor and without additional pipeline protection.

- With steam atomizing steam system e.g. for HP- and LP-bypass stations and also process steam control.
- For temperatures of more than 450°C
- Low noise multistage trim design.
- Best prevention against thermal shocks because of special “Schroedahl atomizing system” (steam assisted water evaporation).
- No downstream protection pipe needed
- Shortest straight run after valve for the downstream temperature measurement
- Best handling for various load cases
- Best control in the near of saturation condition.

STEAM CONDITIONING VALVE

Leslie Ring Style
- 6”-48” (DN 150 – 1200)
- Highly Characterized Control
- High Rangability Through Design
- Up to 1200°F / 600psi Pressure Drop
- Large Spray Volume Capable with No Pressure Drop

Let our product specialists help you select the right meter for your application.
ON/OFF & SOLENOID

- 1700 & 1800 Heat-Actuated & 2800 FIRE-CIDE Series Shutoff Valve
- 2500 Electrically-Actuated Shutoff Valve
- Series 700 Direct Operated On/Off Valves
- Series 700HP Semi-Direct Operated On/Off Valve for Liquid Service
- Series CY 500 Direct Operated Normally Closed/Opened by Cylinder On/Off Valves
- Series CY 600 Semi-Direct Operated Normally Closed/Opened by Cylinder On/Off Valves
- Series 800 Semi-Direct Operated On/Off Valves for Air, Steam, Fuel Gases and other Light Liquids Under High Pressures

R.G. Laurence

ASCO®
GENERAL SERVICE, ELECTRONICALLY ENHANCED, MINIATURE, PROCESS, DUST COLLECTOR VALVES & MORE

ASCO solenoid valves control critical flow of air, gas, water, oil, and steam in applications spanning numerous industries. These 2-way, 3-way and 4-way solenoid valves can handle most fluid control applications and are now available with Class I, Division 2 approvals.

DAMPERS & BUTTERFLY VALVES

Advanced Valve Design
- High Temperature Dampers
- Butterfly Valves
- Severe Duty & Specialty Dampers & Butterfly Valves up to 2200°F
- Wide Range of Metallurgies & Trims

Advanced Valve Design Inc.
ACTUATORS AND POSITIONERS

ELECTRONIC VALVE ACTUATOR
SEVA (Smart Electronic Valve Actuator)
The SEVA is our next generation Smart Electric Valve Actuator that provides our customers with an electric actuator with best-in-class features. This product was designed for extreme conditions with military grade components while providing the accuracy and repeatability the market demands.

Two models are available:
- SEVA 100 for 1/4…1 in.
- SEVA 200 for 1/4…2 in.

- Microprocessor-controlled, linear stepper motor
- Manual override
- Maximum thrusts of 100 and 200 lbF
- Overvoltage protection
- Setup via firmware and terminal interface via USB port
- Optional limit switches for customer-adjustable limit points
- Universal AC input
- 24V DC input
- Analog input/output
- USB CDC device (mini - B)
- Internally powered (active) feedback
- SoloCue Software
- Optional communication protocols:
  ◊ EtherNet/IP
  ◊ Modbus® TCP/IP
  ◊ Modbus® RTU
- Microprocessor-controlled, linear stepper motor
- Manual override
- Maximum thrusts of 100 and 200 lbF
- Overvoltage protection
- Setup via firmware and terminal interface via USB port
- Optional limit switches for customer-adjustable limit points
- Universal AC input

RTK ELECTRIC ACTUATOR
- Control via 3-point step
- Separate force and cut-off for both directions
- Standard equipped with four stored speeds
- Low height due to adaption spindle
- Protection class IP 65
- Mechanical stroke indicator
- Handwheel
- Electrical connections as plug connections
- CE marking

SRD/SRI
Smart & Analog Valve Positioners

PNEUMATIC SPECIALTIES

ControlAir Inc.
- Precision, General & Electronic
- Air Regulators
- I/P, E/P & P/I Transducers
- Volume Boosters & Air Relays
- Valve Positioners
- Diaphragm Air Cylinders
- Air Filters

bürkert
- Pneumatics Singular
- Pilot & NAMUR Valves
- Manifolds
- Valve Units & Automation Systems
- Flow & Shut-off Valves

Frew engineers will optimize your product selection for process conditions, lead time and cost.
PILOT-OPERATED REGULATORS

Class GP Series Air-Loaded Pressure Reducing Regulators

Model GPKP-1 Steam-Piloted, Self-Contained Pressure Reducing Valves

GTK, GTRK, GTB and GTS Eventemp Regulators for Large Volume Heating or Cooling Applications
- 1/2 - 4" Valve Sizes
- End Conn.: THD, RF
- ANSI CL 125 - 300
- Body Mat’l: Cast Iron (GT(R)K), WCB (GTS), Bronze (GTB)

LTC Duo-Matic Regulators for Temperature and Pressure Regulation
- 1/2 - 3" Valve Sizes
- End Conn.: THD, RF
- ANSI CL 125 - 600
- Body Mat’l: Cast Iron (LTCPK), WCB (LTCPS), Bronze (LTCP)

M Series Regulators For Small Flow Applications
- 1/2 - 1" Valve Sizes
- End Conn.: THD
- ANSI CL 200
- Body Mat’l: Cast Iron (MK), Bronze (M)

Critical Solutions for Process Control, Measurement and Indicating Equipment

Frew’s Experienced Engineers are available to assist you with Complex and Custom Solutions.

Talented engineers available by phone, email or on-site: 855-FREW-PRO (855-373-9776) • Sales@FrewProcess.com
DIRECT-OPERATED REGULATORS

Leslie Controls

Leslie L Series Internal Pilot, Piston-Operated Reducing Valves and LX Series Differential Pressure Regulators
- 1/2 - 3" Valve Sizes
- End Conn.: THD, SWE, BWE, RF
- ANSI CL 125 - 600
- Body Mat’l: Cast Iron (LKY), WCB (LS-5), Bronze (LY)

UL Series Back Pressure
- For steam and gases; fast acting, self contained piston operated valve for high accuracy
- Three spring pressure ranges from 25 to 300 psig

General Pressure Reduction and Regulation Service
Leslie L Series internal pilot, piston operated reducing valves provide a high degree of accuracy over the entire flow range and a widely adjustable reduced pressure range.

Differential Pressure Service
Leslie LX Series differential pressure regulators maintain a constant differential between the air, gas or steam pressure passing through the regulator, and any other liquid or gas pressure whose relationship to the regulator outlet pressure should be a constant.

Control Air

- T100M Motorized Air Pressure Regulator
- T90 Miniature Precision Air Pressure Regulator
- Type 100 Precision Air Pressure Regulator
- Type 300 Instrument Air Filter Regulator
- Type 330/340 Instrument Air Filter Regulator
- Type 350/360/370SS Stainless Steel Regulator
- Type 3500 High Pressure Gas Regulator
- Type 400 General Service Regulator
- Type 700 High Flow Pressure Regulator
- Type 700BP Precision Back Pressure Regulator
- Type 800 Subminiature Precision Pressure Regulator
- Type 850/860/870 Miniature Air and Water Pressure Regulator Series

We KNOW valves. Call us for application-specific valve sizing and selection.
NAO elevated, horizontal, pit and enclosed flare systems (designed, manufactured, installed & serviced to ISO-9001 quality standards) utilize field-proven (98 years of experience) technological innovations by which all other flares are judged.....
life, operation, performance & quality

Some of NAO innovations include:

- Dual Phase Sonic Flares
- Eductor Pilots (for inert flare streams)
- Equalator Seal
- Extended Wind/Heat Shield
- Fluidic Seal
- Fluidic Flare
- High Energy Spark Ignitor Pilots
- Liquid Mechanical Atomization Flares
- Long Life Flare Tips
- Low Energy Flares (for efficient combustion of low energy inerted flare streams)
- Low Radiation Flares
- Rain/Windshields for Pilots (250 MPH RAIN & WINDPROOF)
- Reliable Ignitors -- Wide Range of Types
- Steamless Smokeless Air-Assisted Enclosed Flares
- Wind/Heat Shield....and many others
**STEAM & HOT WATER BOILERS**

**Watertube Boilers**
- Waste Heat Boilers (WHB)
- O/D/A-Types

**Firetube Boilers**
- Wetback or Dryback
- 2/3/4-pass designs
- In-stock inventory

**Genesis Series**
- High Temperature Hot Water (HTHW) Heater
- High Temp Thermal Fluid (HTTF) Heaters

**Heat Recovery Solutions**
- Gas turbine
- GT-HRSG / CHP designs
- Flexible HRSGs (2-500k PPH and up to 1050F and 2000 PSI(G))
- Economizers

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**DEAERATORS AND STEAM ACCESSORIES**

**Sterling Deaerator Company**

**Blowdown Tanks**
Sterling’s Blowdown Tank receives blowdown from the steam drum and steam generator. Sterling’s Blowdown Tank can also function as a gravity feed drain for the steam generator, when the generator is drained for maintenance.

**Blowdown Heat Recovery Systems**
Sterling’s Blowdown Heat Recovery System offers an attractive payback, depending on blowdown volume. Several boilers can be connected to a single heat recovery unit, reducing capital costs.

**Model DT**
Dome type with horizontal storage
Spray/tray technology

**Steam Accumulators**
Custom-designed dry & wet accumulators

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**THERMAL FLUID SYSTEMS**

**Vertical Coil**
- Thermal Fluid (hot oil) Heater
  - MODEL: FT-C

**Vertical Tubeless**
- Thermal Fluid (hot oil) Heater
  - MODEL: FT-A

**Vertical Electric**
- Thermal Fluid (hot oil) Heater
  - MODEL: FT-N

**Alliance**
- 3-Pass Horizontal Thermal Fluid (hot oil) Heater
  - MODEL: HC

**Hopkins**
- 2-Pass Horizontal Thermal Fluid (hot oil) Heater
  - MODEL: HPN

**Temperature Control Units**

**Combination Deaerator Thermal Buffer Expansion Tank**

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Call our experienced professionals for sensor calibration, maintenance and repair.
SENSORS

Cox Series 5602 HYD
Hydrometer (highly accurate measurement of specific gravity of liquids)

Preso GMD
Air/Gas/Liquid/Oil Mounted & Portable Direct Readout Pressure Gauges

Applied Sensor Technologies
Thermocouples & RTDs

United Electric - Precision Sensors Division
High Purity & Aerospace/Military Sensors

- Absolute Pressure
- Altitude
- Differential Pressure
- Gauge Pressure
- Temperature
- Vacuum
- Flow
- Liquid Level - Differential Pressure
- Switches & Transmitters

Ultrasonic Level Gages
Burkert
- Type 8137 Radar Level Transmitter
- Type 8185 Guided Microwave Level Measuring Device
- Type 8112 Vibrating Level Switch
- Type 8138 Sanitary & Flange Radar Level Transmitter

Open Channel Flow & Level
Eastech
- Flow Controls Vantage 2200 Series
- Open Channel Flow & Level Meters

Burkert pH, O.R.P., Redox, Chlorine and Conductivity Sensors

Foxboro
Model IDP10 Differential Pressure Transmitter

Available Sensors

- AC or DC Voltage Detection
- Accelerometer
- Activity – Sudden Movement
- Activity - Timer
- Altitude
- Battery Health
- Chlorine
- Compass
- Current
- Dry Contact
- Flow
- G-Force Snapshot / Impact / Max & Avg
- Grains per Pound
- Humidity
- Hydrometer
- Level
- Magnetic Presence
- Mechanical Open/Closed
- pH / ORP
- Pressure / Vacuum / Differential Pressure
- Pulse Counter – Single Input & Multi-Input
- Redox
- Resistance
- RF Asset
- Seat Occupancy
- Strain Gage
- Temperature
- VAC/VDC Measurement
- Vehicle In-Motion
- Vehicle Presence
- Vibration Count
- Voltmeters
- Water Detection
- Wind Velocity
**CONNECTIVITY & COMMUNICATIONS**

**Wireless**
- Impeller
  - Orion fixed and cellular data collection networks (AMI/AMR)
  - Beacon Advanced Metering Analytics (AMA)
  - AquaCue Flow Management Manager
  - 228PV Impeller Flow Meter
  - 350T 900 MHz RF Transmitter
  - 350R 900 MHz RF Receiver Wireless Sensors
  - Model 345WT Network Transceiver
  - Model 3700 Data Acquisition Server
- Obvius
  - Acquisuite intelligent data acquisition server
  - Modhopper wireless
  - Modbus/pulse transceiver
  - High Density Pulse and Flex IO Modules
- Monnit
  - Wireless Industrial Sensor

**WATER HEATERS**

Leslie Controls
Constantemp Feedforward Water Heating System; LES Series Packaged, Steam-fired Water Heater

**CHART & PAPERLESS RECORDERs/MONITORS**

**Partlow**
MRC Series Circular Paper Chart Recorders w/ Multi-Loop Controllers and Programmer, Data VU 7 Paperless Chart Recorder

**WATER HEATERS**

Leslie Controls
LES Series Packaged, Steam-fired Water Heater

**LIMIT CONTROLLERS**

West Control Solutions 4700+, 6700+, 8700+ Limit Controllers

**SINGLE-LOOP PID CONTROLLERS**

West Control Solutions Pro-EC44, Pro-16, Pro-8 and Pro-4 Single/Dual Loop Controllers

**MULTI-LOOP CONTROLLERS**

PMA KS 98-1, KS Vario Multi-Loop Controllers
West Control Solutions MLC 9000+ Multi-Loop Controller

We're here to help. Request a field inspection from a Frew sales engineer to ensure the best product selection.
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