

EcoStruxure™ Process Instrumentation

Life Is On | Schneider Electric

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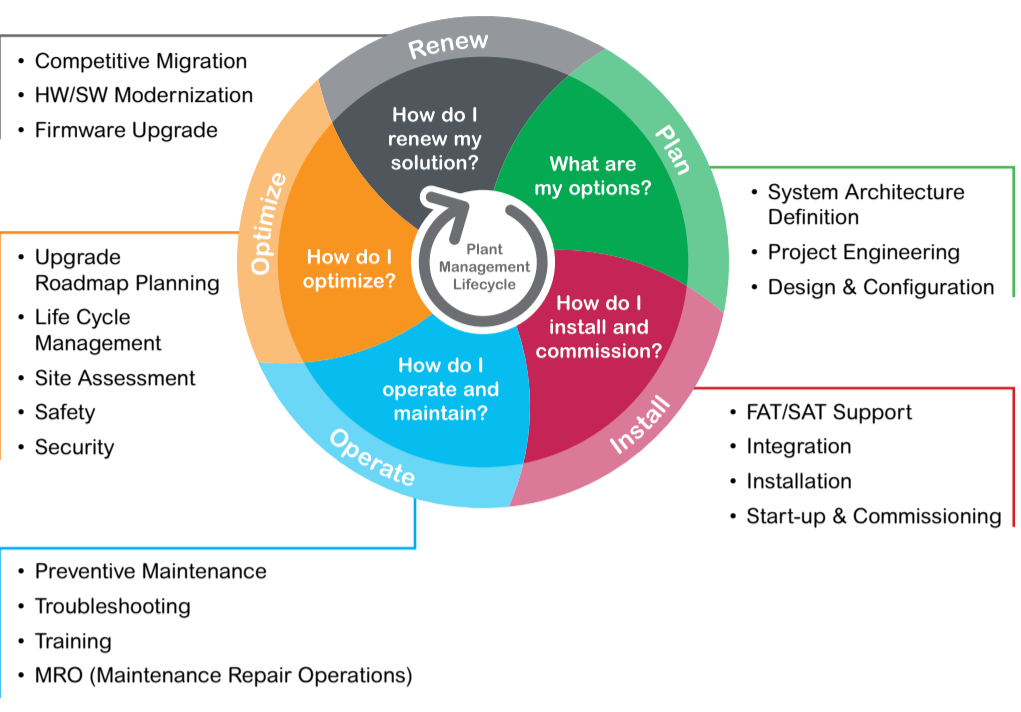
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Service Offering

Process Instrumentation



Your Challenges

- Maximize your plant safety
- Optimize your process performance
- Manage your assets
- Increase your productivity
- Improve your TCO

Our Solutions

- Proactive and collaborative support
- Leveraging Schneider electric factory experts
- Implementing assets performance analysis
- Providing medium/long-term recommendations
- Large-scale service offerings proposition

EcoStruxure™ Innovation At Every Level



Learn more here



Learn more here

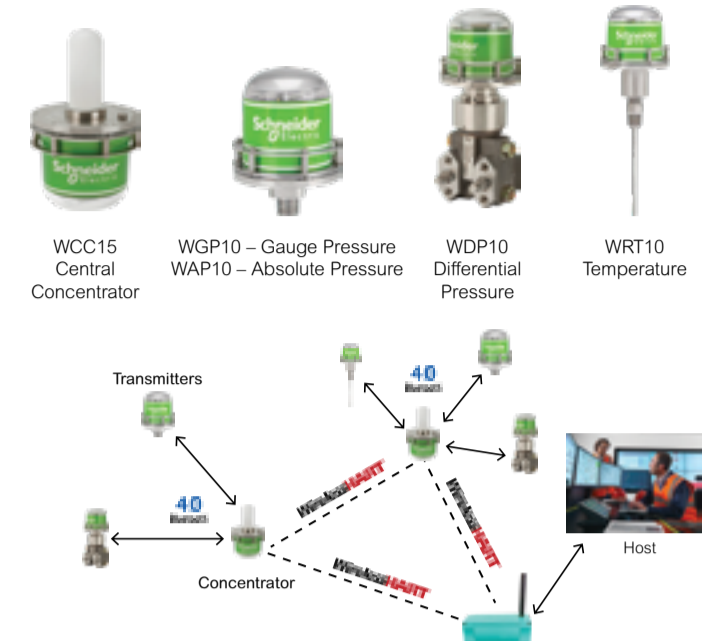
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Wireless Information Network Solutions

Wireless is a driving technological force in today's world. Schneider Electric's wireless offerings are easy to use, cost effective, safe, secure, expandable, and sustainable. With their proven operational efficiency and reliability, our wireless portfolio delivers data and insights - letting users visualize and manage data collected via Schneider Electric's web-based IIoT Platform or SCADA and Telemetry systems.

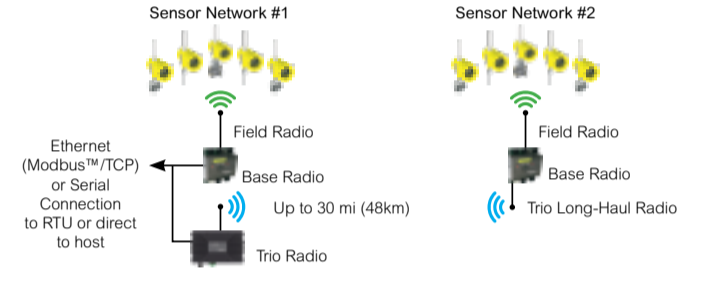
Instrument Area Network (IAN) portfolio

- One-and-only hybrid Bluetooth and WirelessHART network solution
- Longest battery life of 10 years for the transmitter and 5 years for the concentrator
- Agency certification to meet hazardous and non-hazardous locations and secured with 128-bit AES encryption
- Takes only a pushbutton to activate the Concentrator and to pair with up to 8 transmitters
- Seamless integration into such platforms as Wireless HART MESH, Ethernet/IP, PLCs, and RTU types of environments
- Simple integration with any third-party gateway
- Web-enabled configuration interface – no costly handheld devices required



Accutech Wireless Product Portfolio

Dependable, self-powered, spread-spectrum radios (900MHz and 2.4GHz) provide effective connectivity and long-range service. Certified for use in hazardous locations and function in extreme environments of temperature and humidity



- Frequency-hopping network, offering ranges up to 1,000m
- Highly scalable – base radio can support up to 100 sensors with up to 1 second sampling; 256 base radio can coexist for extended scalability
- Battery life span up to 10 years, depending on field unit type, data rates and batter options
- A push button interface for quick configuration
- Found in wireless wellhead monitoring, tank level measurement and environmental monitoring (storm water, irrigation, reservoirs, etc.)
- Remote site monitoring with discrete input switches and in delivering 4-20mA signals from third-party units



Data Logger 4G LTE Portfolio

Low power IIoT solution utilizing cellular technology which offers modularity and flexibility to provide data from remote assets and provide the customer the capability to analyze data and make decisions that facilitate efficient, secure and affordable infrastructure networks and operations.

- Sampled sensor data is collected, transmitted securely, and then stored on a secure cloud server or a customer's on-premises server
- Low-power and predictive analysis algorithms result in up to 10 years battery life
- Molded polycarbonate enclosure with IP 68 / NEMA 6P waterproofing rating
- Embedded with the most advanced cybersecurity technology of sensor authentication and data encryption
- Sensor-agnostic, utilizing various configurations of sensors and samplers
- Can be remotely configured and data can be visualized and managed via a web-based IIoT Platform. Data can be also be integrated on premise into SCADA or other software system.
- Perfect in remote monitoring (equipment, vibration, disposal well)
- Revenue metering, pressure and flow measurement and pipeline leak detection



Tank Level Monitoring Solutions

Imagine this: your delivery operation is running at maximum efficiency. Run outs are eliminated, emergency runs are a thing of the past, and your trucks deliver more product in less time — and they always come home empty. Now, imagine automatically generated orders and the efficiently loaded trucks are routed and dispatched in minutes.

- Schneider Electric's tank monitoring fuels your decisions by creating a central point for your data that includes powerful tools, targeted information, and sophisticated analytics that allow you to increase your efficiencies
- Generate reports that show you the key performance indicator of percentage of tank filled by customer by regions and easily evaluate and track your delivery items performance over time, quickly comparing various performance measurements
- OptiFill™ uses that sampled information to automatically decide which tanks should be filled, and it automatically dispatches and routes your trucks within minutes — substantially decreasing your hands-on dispatching efforts
- Industries that we operate in – fuels, lubricants, Oil & Gas production, propane, heating oil, wastewater, agriculture and chemicals



Process Analytical Measurement

pH, ORP and Conductivity

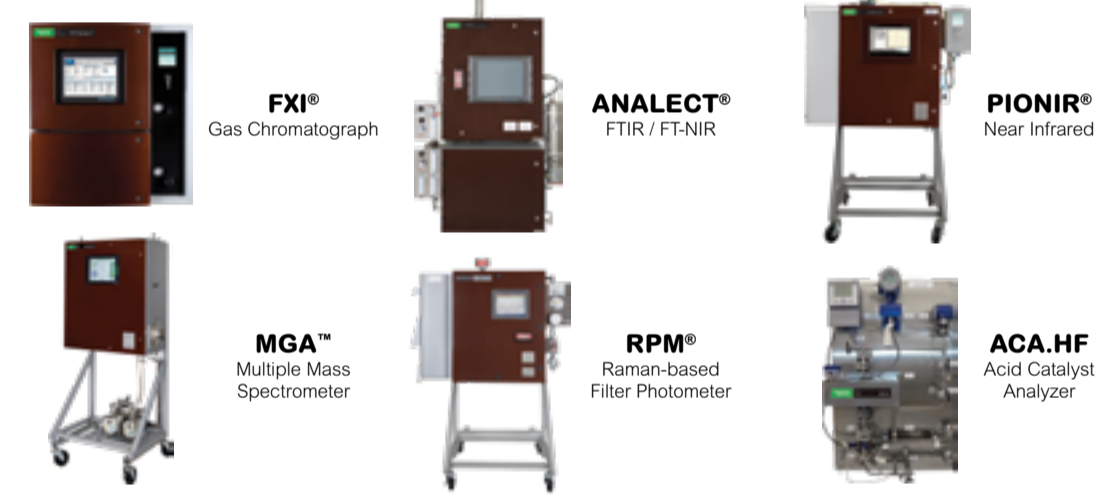
Widest array of innovative pH and conductivity sensor technologies, materials, sizes and geometries in the business to simplify your requirements for installation, calibration, troubleshooting and maintenance.

- PH10 sensor line with our reference technology of internal Nafion™ ion barrier protects external junctions from fouling and reduces maintenance
- PH12 series with PEEK bodied sensor and available with flat membrane sensing electrode and no metallic wetted parts
- SMART portfolio to store all factory data with Sensor Service Prediction feature for predictive maintenance
- Eliminate the need of bringing pH buffer to field when using SMART PH10 and PH12 sensors coupled with 876PH-S transmitter
- For pure and ultrapure water measurement, our 871CR sensors provides the highest possible accuracy
- Our 871FT flowthrough sensors provide innovative, non-invasive solution for aggressive chemicals and industries requiring unbroken process lines
- Patented Calibration plug accessories to facilitate inline calibration without needing to remove conductivity sensor from the process



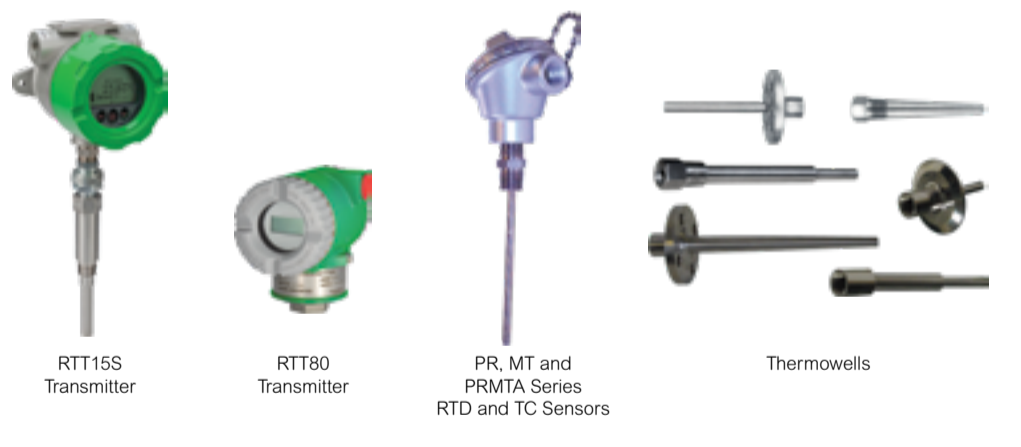
Process Analyzer

Applied Instrument Technologies (AIT) design and manufacture end-to-end process analytical solutions serving the hydrocarbon processing, chemical, biotech/pharmaceutical, steel, natural gas, as well as other manufacturing industries.



Temperature Measurement

With two families of intelligent temperature transmitters and broad selections of sensors and thermowells, accurate and reliable measurements over a wide range of temperatures can be ensured in the harshest of environments. Inputs from Resistance Temperature Detectors (RTDs), Thermocouples (TCs), ohm, or mV sources are converted by Schneider Electric RTT15S, and RTT80 transmitters into scaled analog and digital outputs.



Where do I find the documents?



The world is evolving in profound and exciting ways driven by digitalization, industrialization and urbanization, on a scale and pace never experienced before.

Schneider Electric is passionate and committed to collaborate with our partners and customers to drive their business towards next-generation sustainability and profitability. Our Process Automation business proves itself as a trusted and reliable partner of choice to provide an end-to-end customer focused solutions with our world-renowned **EcoStruxure™ Process Instrumentation** offer portfolio and ranges alongside digitalized measurement technologies which cover all facets of your process instrumentation functionalities and plant operation requirements across all targeted markets.

We continue our commitment to offer utmost quality, reliability and excellent services support to ensure a seamless transition as we embark on this digital transformation journey together.

Consumer Packaged Goods Segment

Pressure, Flow, Analytical, Valves, Wireless

Water & Wastewater Segment

4G LTE DataLogger, Battery Powered MagFlow, Accutech Wireless, Analytical, Valve Positioner, Pressure

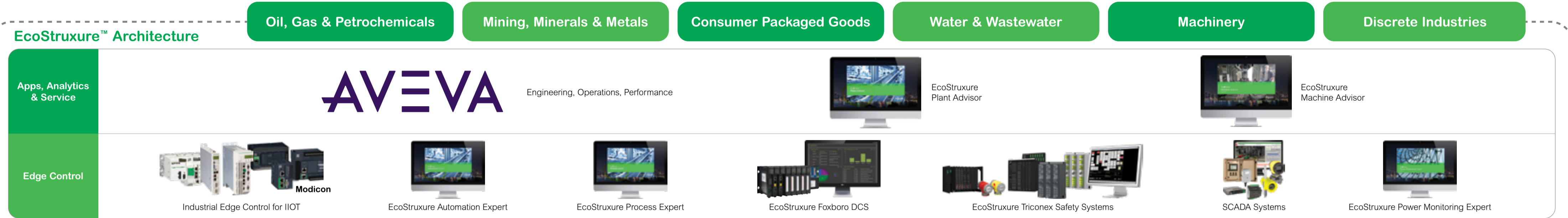
Mining, Minerals & Metals Segment

Pressure, Vortex Flow, Accutech Wireless, Analytical, Valve Positioner, 4G LTE DataLogger

Oil, Gas & Petrochemical Segment

Pressure, Accutech Wireless, Flow, Level-Buoyancy, Valves

EcoStruxure™ is our open, interoperable, IoT-enabled system architecture and platform. EcoStruxure delivers enhanced value around safety, reliability, efficiency, sustainability, and connectivity. EcoStruxure leverages advancements in IoT, mobility, sensing, cloud, analytics and cybersecurity to deliver Innovation at Every Level. This includes Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure has been deployed in 480,000+ installations, with the support of 20,000+ system integrators, connecting over 1 billion devices.



Pressure Measurement

Multi-tiered S-Series pressure transmitter line of Gauge, Differential, Absolute and Multivariable models which allow you to select one best suited for your application in terms of feature, performance and price

- State-of-the-art Accuracy as a % of reading
- 400:1 turndown capabilities
- High Speed Response < 125ms
- Longest standard warranty – 5 years
- SIL 2 TÜV Certified

Connected Products

FoxCal™: Multiple Calibration Technology

Where traditional suppliers have a static calibration approach with conventional 2-point calibration technology, FoxCal dynamic technology including 11 calibration curves in 1 transmitter which are stored permanently in the sensor memory.

- Reduces inventory by 2/3
- Fast replacement with less downtime
- Reduces erroneous sensor selection
- In-service time tracking
- Latest communication protocol offerings
- Can be used to measure fluid flow rates or liquid level, interface or density when connected to primary device such as orifice plate or diaphragm seal

Accuracy of Transmitters

Schneider Electric Pressure Advanced and Premium Transmitters maintain the same percentage of reading accuracy from 100% up to 4% of URL. Traditional transmitters begin to degrade at a much higher percentage.

Level, Density and Interface Measurement

Buoyancy / Displacer

Proven and preferred technology to measure the level, interface, or density of liquids in industrial processes.

244LD LevelStar, 167LP Pneumatic

Our level transmitters are rugged and extremely reliable, requiring virtually no maintenance. They also provide precise measurements, even at extreme process temperatures from -196°C to +500°C (-320°F to +930°F) and pressures from vacuum to 500 bar. They are FM/ATEX rated explosion-proof and intrinsically safe, approved for SIL2 applications with a proof-test interval up to 5 years.

Radar

Complete radar lineup of Guided Wave and Free Space Radar transmitter for solid and liquid applications.

24GHz LR54, LR74, LR64, 80GHz LR75, LR65

- Precise measurement even in shifting and varying media
- Accurate measurement of ±0.2% over 100m range for liquid and solid
- Line-up of 10GHz, 24GHz and 80GHz radar models and customized antenna type to excel in various fluid conditions

Guided Wave Radar transmitter

LG01 GWR

- Accurate measurement of ±3mm
- Not affected by surface agitation, foam, turbulence and varying media density and temperature
- Modular designs of housing and probes for variety of mounting positions and applications

Flow Measurement

With a 100-year tradition of excellence in flow measurements, the Schneider Electric Process Automation group (formerly Foxboro) of Coriolis, Magnetic and Vortex technologies offer complete flow solutions.

Magnetic Flowmeter Portfolio

Designed to fit a wide range of applications, including water, slurries, chemicals, pharmaceuticals, and foodstuffs, in a wide range of industries with our new, unique feature 'virtual reference grounding,' grounding rings can be left out, simplifying and reducing installation costs while eliminating the risk of the accuracy being affected by an unstable ground on-site.

IMT300A, IMT31A, IMT33A Transmitter Models; 9500A WWT Drinking Water Approval; 9600A F&B Pharmaceutical Specialty/Hygienic Flange; 8500A High Performance Ceramic-lined Wafer

Vortex Flowmeter Portfolio

Forget about specifying different models for liquid, gas, and steam measurements. With the Schneider Electric vortex flowmeter, a single sensor design handles the majority of your measurement needs. The unique shape of the shedding element has no moving parts to wear out and degrade accuracy. The 84C, with optional built-in Pt1000 RTD temperature sensor, provides best-in-class accuracy for compensated mass flow of saturated steam.

84CF, 84CW, 84CN, 84CS

- Our flanged-body and wafer-body vortex flowmeters measure liquid, gas, or steam at process temperatures up to 430°C (800°F).
- Our sanitary intelligent vortex flowmeter is the only 3-A sanitary vortex meter in the market authorized for applications that require crevice-free design to enable inline cleaning.

Positioner Product Portfolio

We are producing control valve positioners of the highest quality since 1961 and offer the widest range of valve positioners to complement any application in any industry. To enable you to drive your process at its best, we manufacture valves with this criteria in mind:

- Fast Commissioning with user-friendly backlight LCD with full test and menu
- Full Valve Compatibility with largest range of mounting kits/accessories for valve manufacturers
- Widest Application Coverage with High Flow / Pressure version, Remote Mounting and Modular designs for inter-operability and practicality
- Premium features are also available such as Partial Stroke Test (PST), Fugitive Emission Monitoring, FDT-DTM

Smart Positioners

SRD998, SRD991, SRD960

Electro-Pneumatic (Analog) & Pneumatic Positioners

SRI983, SRI986, SRI990

Pneumatic Positioners

SRP981

Accessories

Remote Mounting, Filter Regulator and Volume Booster

The RMU996 Remote Mounting Unit is the solution for valve/actuator applications in harsh environments, such as operating the valve at very low or very high temperatures and high vibrations.

VBSX00 Volume Booster Series is designed to operate pneumatic valve actuators via a valve positioner. It is recommended for large actuators to reduce positioning time. The bypass valve is used to adjust dynamic response to provide stable operation over a wide range of actuator sizes.

FRSX is dedicated for direct mounting to valve positioners with pneumatic performance "High Air Output." Control of instrument supply air pressure, and removal by filtration of dust particles and water content, to drive pneumatic actuators.

Coriolis Mass Flowmeter Portfolio

Coriolis Plus offers a broad range of sizes from 1/2" to 16" and multiple wetted materials to fulfill virtually every application and process condition. The innovative construction and superior performance provide mass, volume flow, density and concentration measurements of liquids and gases. Challenging applications such as entrained gas (2-phase flow), highly viscous media, non-homogeneous mixtures, slurries are addressed with this offer.

CFT34A Transmitter, CFS300A, CFS400A, CFS700A, CFS600A

- Schneider Electric's 2-phase flow functionality offer a solution for flow conditions at a gas volume fraction (GVF) from 0 to 100%
- Exotic Wetted Materials: Hastelloy, Titanium, Tantalum and Duplex SS.
- Standard Secondary Pressure Containment
- Lowest pressure drop with single straight tube design
- Extreme temperature applications (-200°C to +400°C) with twin bent tube design
- Custody Transfer Approvals: NTEP, MC, OIML
- Enhanced diagnostics with 2-phase signal
- Diagnostics in accordance with NAMUR NE 107 requirements
- Calibrated at 3 temperatures to optimize compensation for temperature

FlowExpertPro™ Flowmeter Sizing

Searching for a great vortex meter? Look no further than Schneider Electric. Visit www.FlowExpertPro.com for help with sizing and selection of a vortex flowmeter that meets your liquid, gas, or steam flow measurement needs.

Process Valve

No matter the application, Schneider Electric enables you to drive your process at its best. Our portfolio of general and severe service valves covers today's toughest demands for valve performance.

General Service Linear Control
VTX10, VTX30, VTX50

General Service Rotary Control
VTX70, VTX90

Severe Service Control
MVR20, MVR40

Ball Valve BAV90

Butterfly Valve
TVT60, TVT80, TVT8--Cryo

Quick acting with excellent flow manipulation and throttling characteristics. Wide selection of trim reductions and sizing specifications available. Tight shutoff to ANSI/FCI 70-2 Class IV to mitigate leakage. Applications include erosion, noise & cavitation control.

Quick acting with excellent flow manipulation and throttling characteristics. Control gas, steam, liquids, dirty fluids, fibrous slurries, abrasive chemicals. Applications include erosion, noise abatement, cavitation control. Precise flow control, tight shutoffs, low delta-P.

Suited for extreme pressures, temperatures, fluid velocities, corrosive media. Control vapor, gas, steam with severe pressure changes. Applications include noise & cavitation control, vibration control.

Quick acting for On/Off control of slurries, sewage waters. Applications include low delta-P, general isolation service.

Quick acting for On / Off control of slurries, sewage waters. Applications include low delta-P, general isolation service.