



MeasureTrol™

Innovative solution
for precise steam
pressure control
and steam flow
indication

Pressure reduction is essential in steam-based processes to ensure optimal steam utilisation. Maintaining the correct steam pressure for equipment supply, not only prevents productivity loss and excess steam consumption, but also ensures safe operations. Pressure reduction methods vary to suit process requirements, and are determined based on what is best suited for handling the pressure and flow characteristics of the process.

Metering of steam at the process block is vital to quantify the steam consumed, map deviations and identify losses and establish the potential for improvement, but is often ignored.

For over 75 years, Forbes Marshall has provided innovative solutions to enhance process efficiency and environmental responsibility globally. Collaborating with industries, we enhance product quality and energy efficiency.

Forbes Marshall MeasureTrol™ is an innovative patented control valve which combines PID based precise pressure reduction and integrated steam flow indications. The built-in capability to compute steam flow gives an instant insight into the instantaneous flow rate of steam. This helps address pressure variations that may occur as a result of incorrect operating practices at equipment level or steam leaks at the points of distribution or utilisation of steam.

The MeasureTrol is powered by a 24VDC input and equipped with an inbuilt smart pressure controller which communicates via a mobile app-based Bluetooth and / or PC based configurator on RS485 Modbus.

It compares the set point with the actual pressure of the process and eliminates the deviation accurately using an internal PID control action. The microcontroller provides fast, sensitive and accurate pressure control. It uses a contactless feedback valve position sensing technique.

At the heart of the MeasureTrol is a piezo based transducer, which is a low power and low air consumption device. The electrical signal from the microcontroller is converted to equivalent pneumatic signals through the transducer, which operates a pilot valve. The pilot valve, in turn, supplies air to the valve actuator, in proportion, to accurately maintain the downstream pressure according to the set point.

Features and Benefits

- Monitors the steam consumption along with pressure reduction
- Displays instantaneous as well as totalised steam flow rates

Inbuilt smart pressure controller and positioner

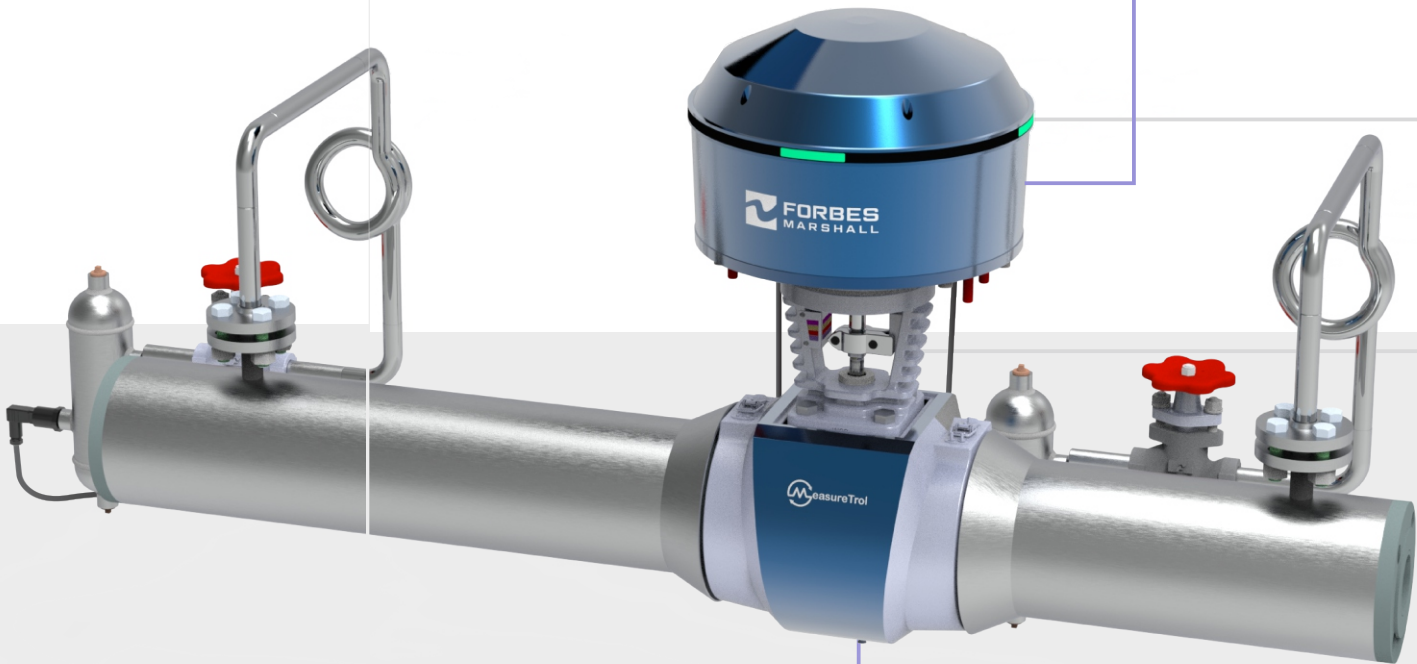
- Compact footprint
- Auto/manual PID tuning of downstream pressure
- Eliminating linkages used in conventional valves with positioners

Contactless valve position feedback

- Fast, sensitive and accurate pressure control

In-built LED indication for instrument health

- Ease of troubleshooting
- Higher uptime



Seat leakage
Designed as per class IV and VI as per FCI 70.2

Parabolic / perforated plug
Precisely controls steam pressure with desired steam flow for process requirements

Piezo based transducer
Air consumption of only 0.03 m³/hr

Local display

- Steam pressure: set point
- Steam Pressure: actual pressure
- Steam flow reading: instantaneous and totalised flow

Digital connectivity to help monitor, improve and sustain performance

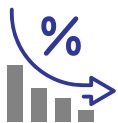
- Bluetooth enabled calibration with data connectivity to monitor critical parameters on cloud
- Cloud computation and on-the-go monitoring
- Available for mobile app, PC configurator or standalone LCD



Precise pressure control with control accuracy of +/-1%



Improved uptime



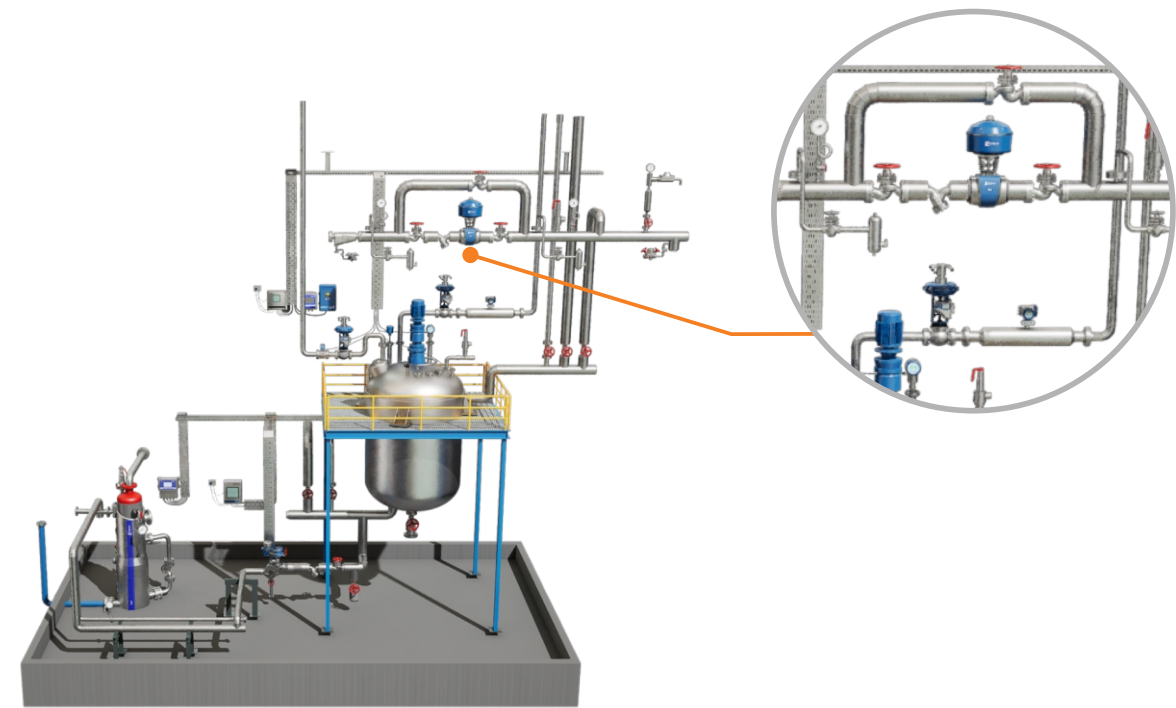
Lower rejection rates



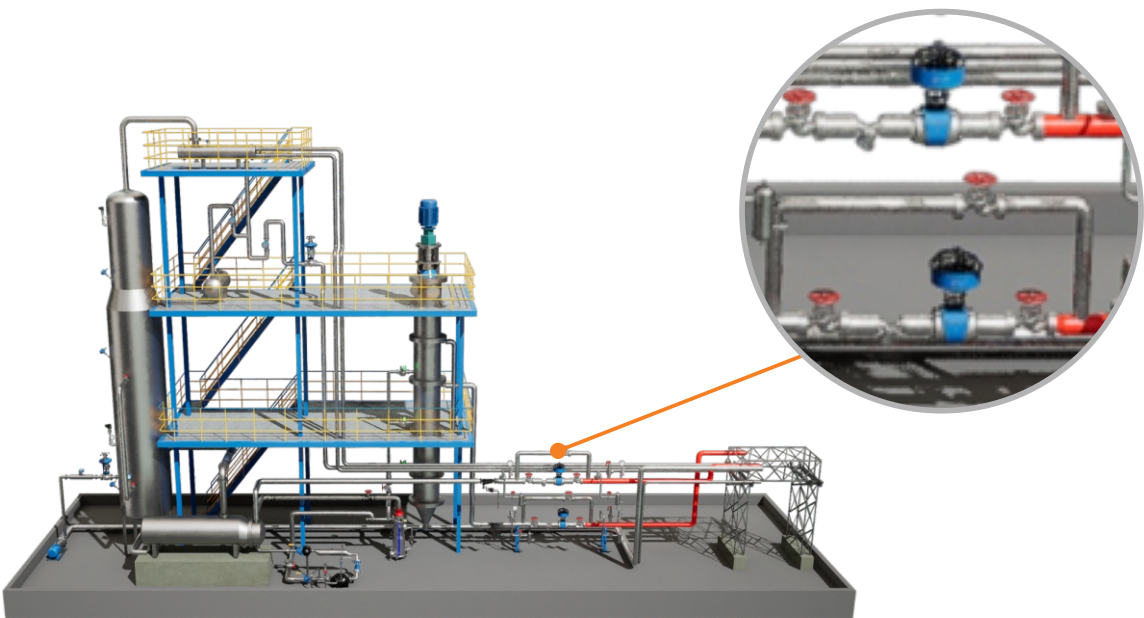
24x7 availability of data for steam pressure and steam flow

Precise Pressure Control and Steam Flow Indication

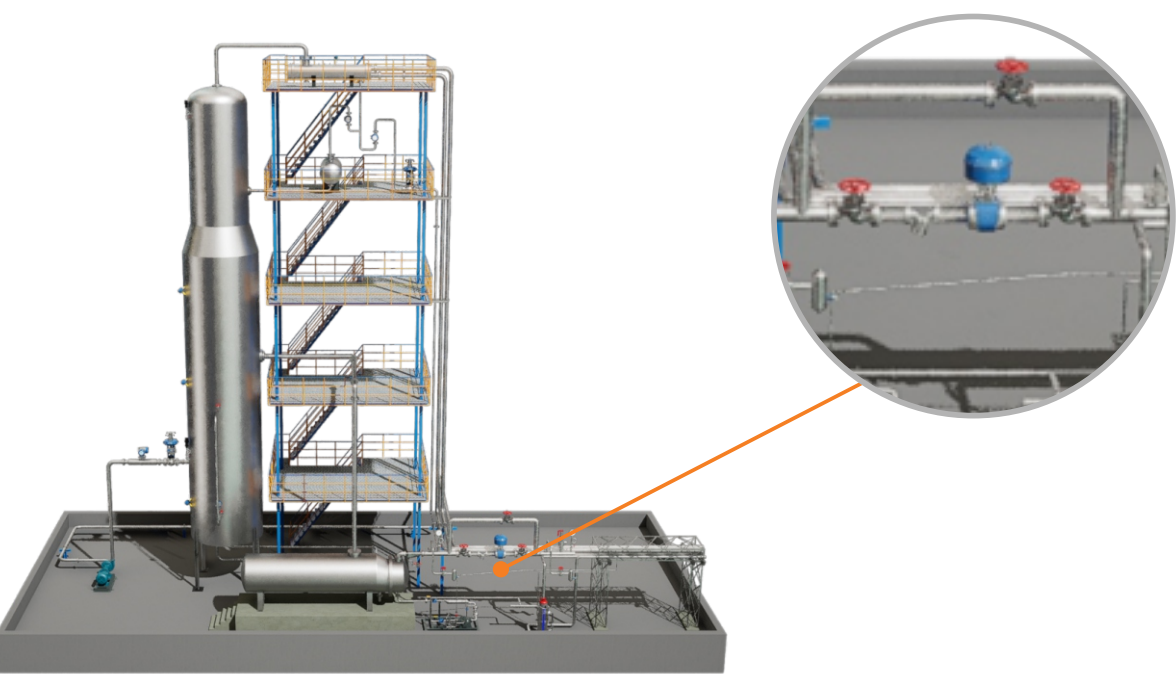
Multi Utility Reactor



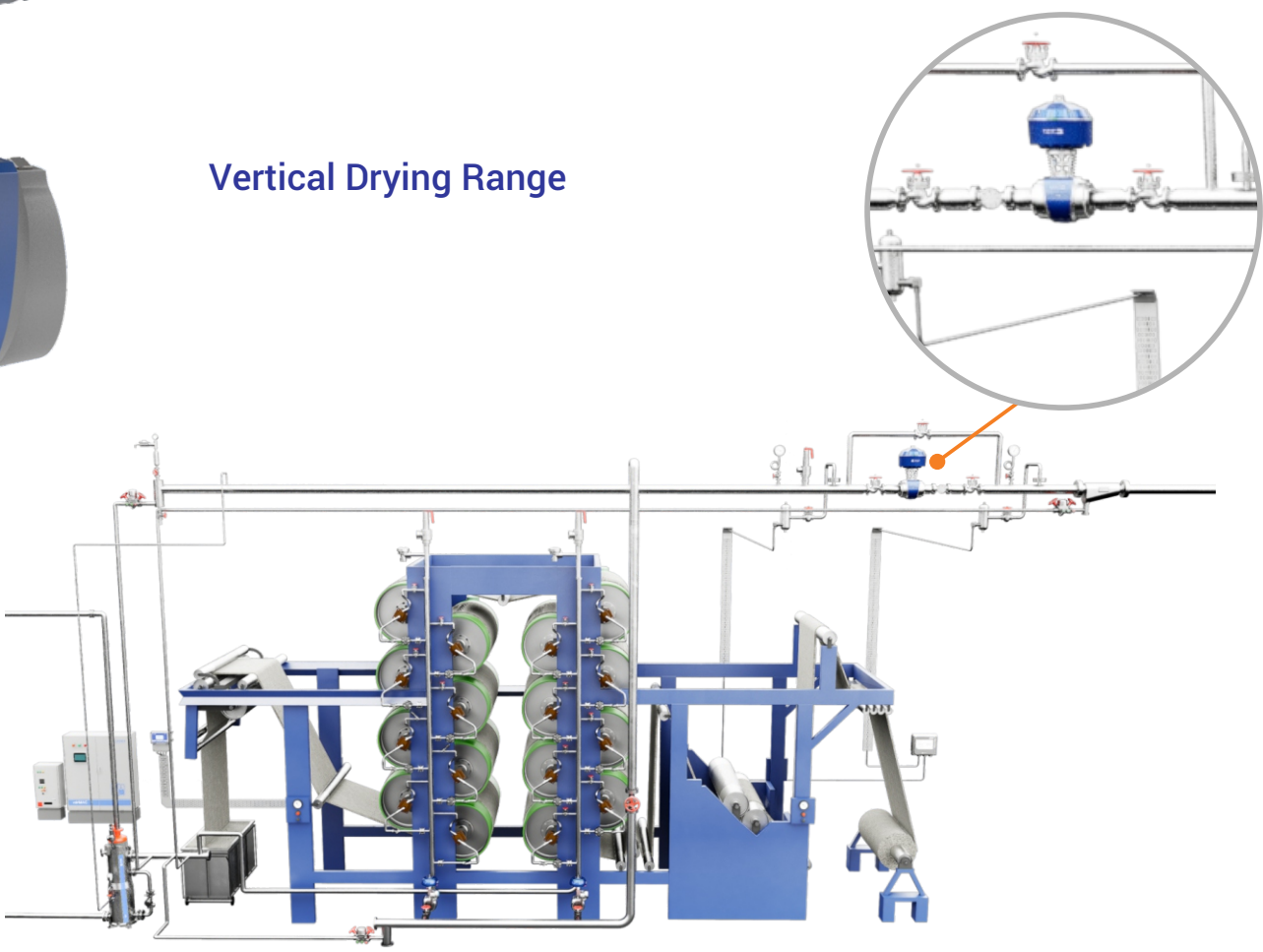
Multi-Effect Evaporator



Rice Parboiling



Vertical Drying Range



Instant Diagnosis
Instant Control

Parameters available on the go - diagnose every point

- Upstream and downstream pressure
- Instantaneous steam flow rate
- Instrument inlet air pressure
- Valve actuator air pressure
- Valve position
- Valve seat wear and tear
- Sensor health check

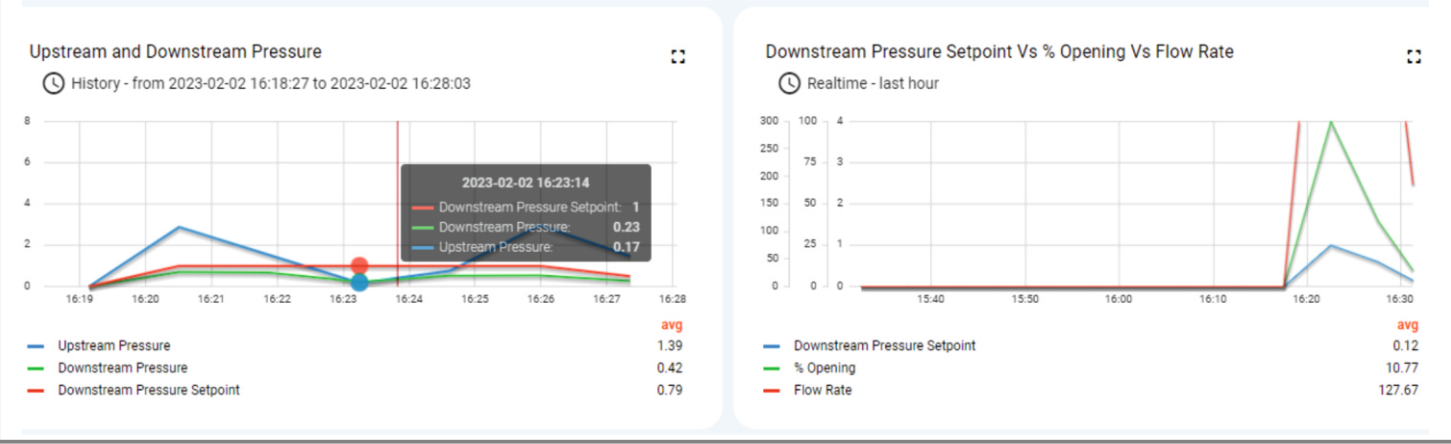
Smart Features
and Benefits

Instant visibility into current operating conditions, enabling quicker actions and identification of misoperations or failures, with a timestamp indicating the time of occurrence.

On Site

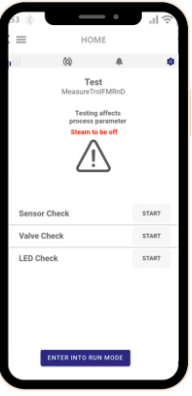


Control Room



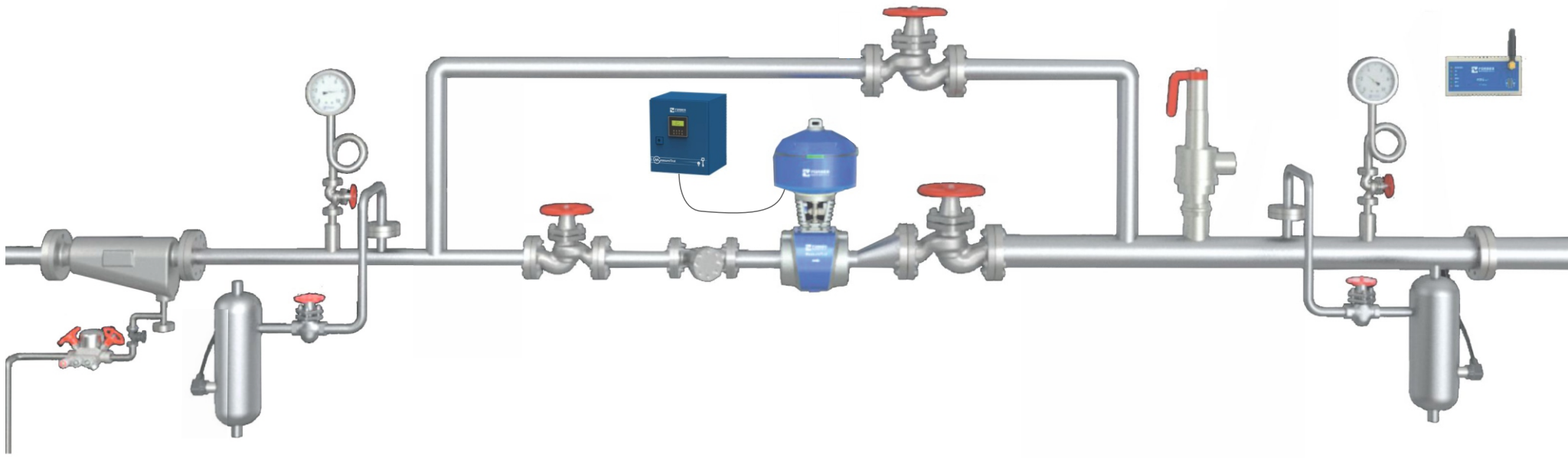
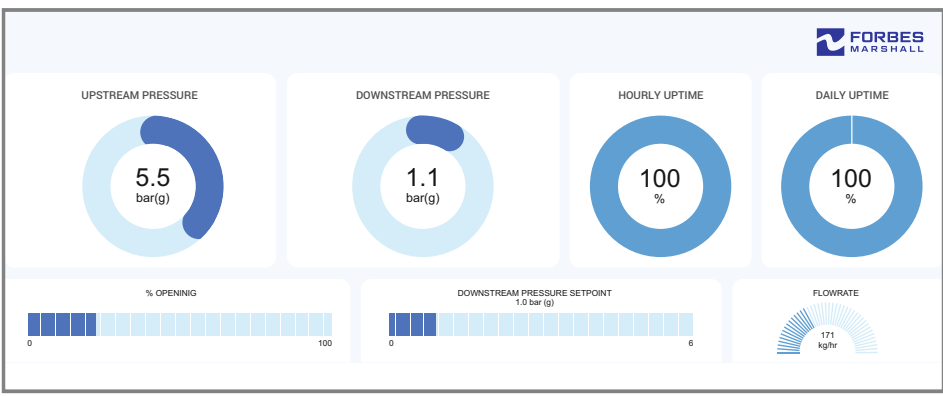
Setting of downstream pressure

Ability to view upstream pressure and steam flow parameters

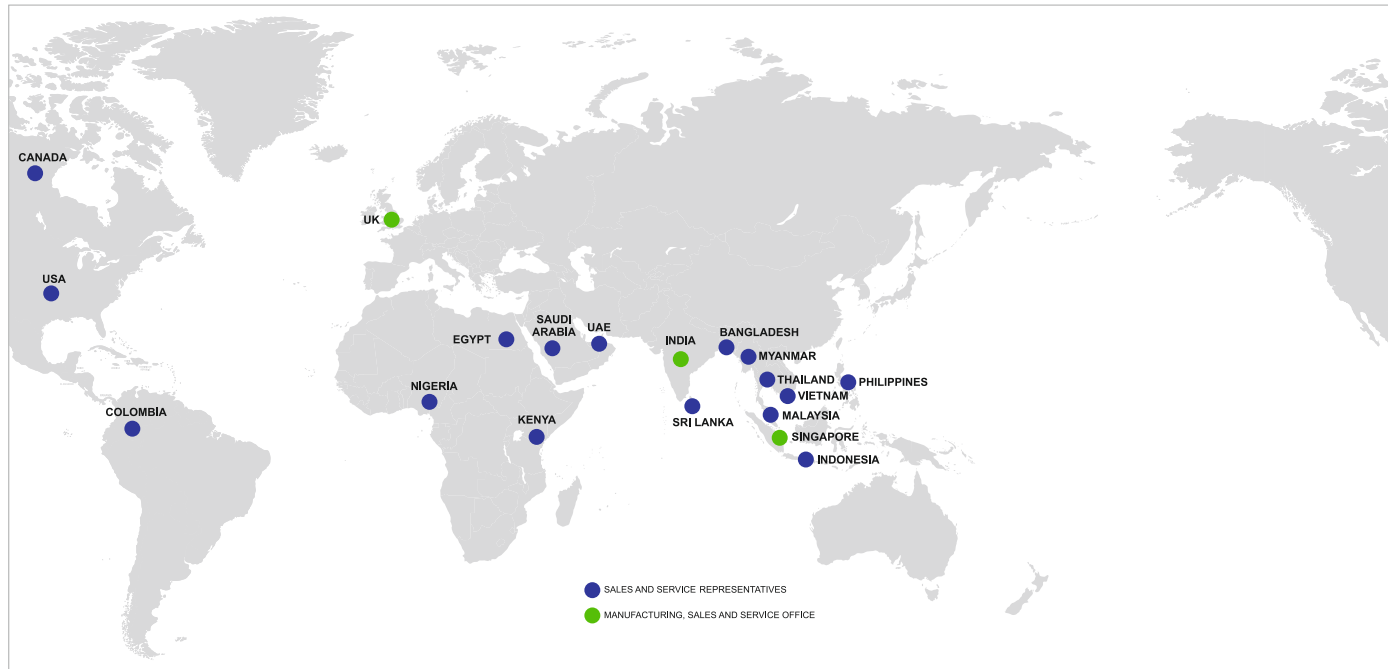


Auto tune

Sensor check



Energising Businesses and Communities Worldwide



A Multinational with Indian Roots

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33	Distribution Centres
500	Sales and Services Engineers
8,000	Customers Worldwide

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Improved Asset Uptime

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