

MEASUREMENT IQ FOR GAS

Measurement Under Control



Honeywell

What if You Could...

- Monitor all your assets by means of vendor agnostic single-pane-of-glass
- View and share data before you get to the equipment?
- Get real-time alerts when parameters exceed limits?
- Track historical data to see when and why issues occurred?
- Maintain certified performance against the last wet calibration?

Measurement IQ for Gas is your answer.

• Predictive maintenance

• 24/7 condition based monitoring

• Local installation or Cloud-based

• Best-in-class cyber security

• Outcome based Service packages

SEE EVERYTHING WITHOUT BEING EVERYWHERE.

Elevate your Measurement insight with real-time, actionable data from Honeywell's enhanced Measurement IQ solution. Proactively troubleshoot the problems that lead to mis-measurement, unplanned downtime and lost profits. Diagnose issues quickly from anywhere and arrive at the metering station with the right tools and knowledge for a faster fix – keeping your measurements at the highest accuracy.

Measurement IQ's new features give even greater insight into your measurement systems:

- Support for Honeywell and third party meters (including Sick, Daniel, Krohne, RMG, and Weise) to cover more of your measurement equipment
- Real time uncertainty calculations to quickly detect deterioration and signs of problems
- Gas chromatograph diagnostics included for confident, accurate energy-based billing

MEASUREMENT IQ FOR GAS: MEASUREMENT UNDER CONTROL

All your meters, all the time – right across the world. Measurement IQ for Gas software connects you to your metering stations. It lets you reduce lost gas, drive down costs and increase profits with a more effective, connected metering operation.

THE COST OF INACCURACY

Small errors are a big problem in gas metering. Errors are rarely random; they accumulate. Undetected, they quickly erode profits. An error of 0.5% in ultrasonic gas measurement can add up to \$1 million in losses over a year. Unaddressed, faults can also disrupt operations and lead to unplanned downtime.

With a broader hydrocarbon mix, an increasing number of pipelines, and the rising prospect of contaminated gas, effective ultrasonic meter care is critical. Operators need effective, efficient regimes to maintain meter health while controlling costs across their business.



LOOKING AT ACCURACY FROM EVERY ANGLE

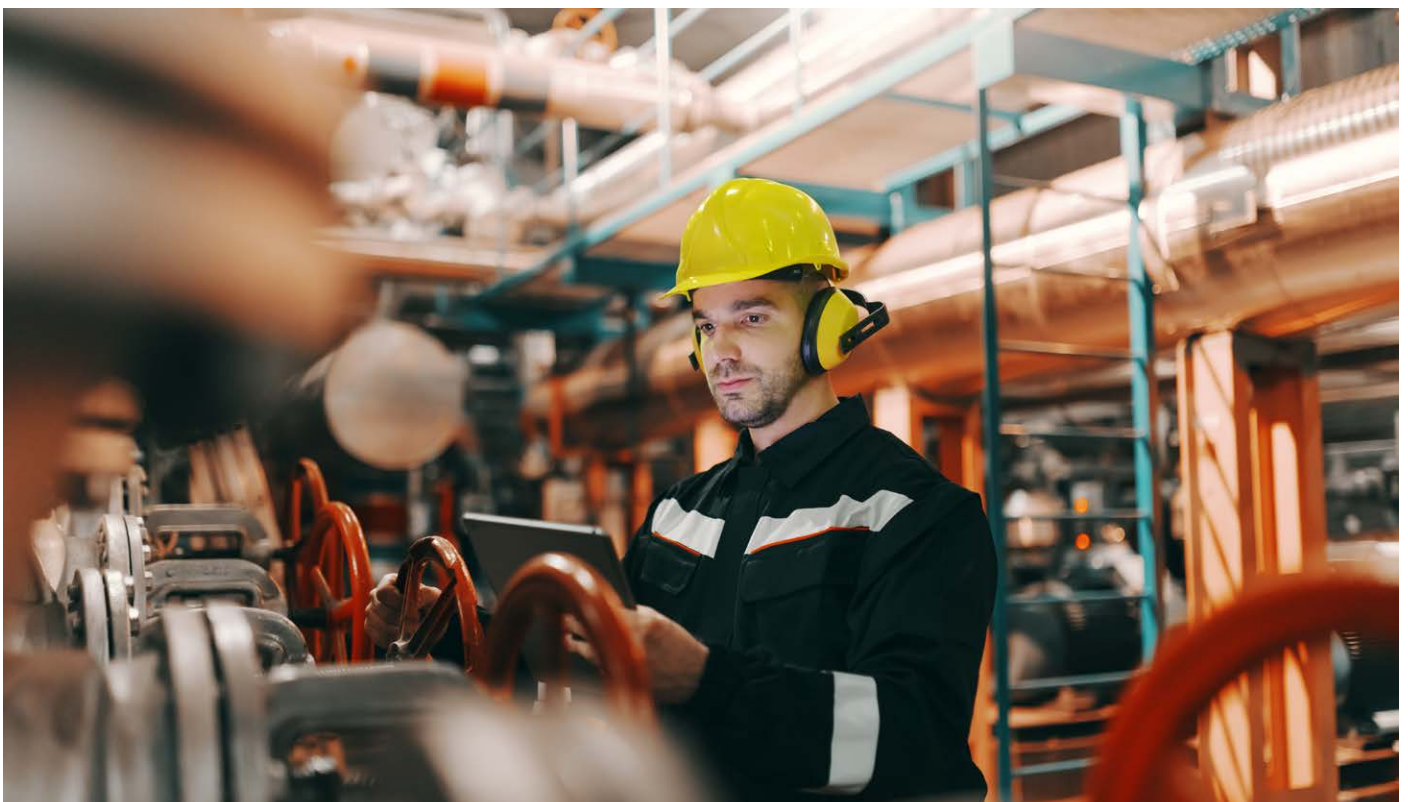
For accurate billing, operators need confidence in all their measurements. Measurement IQ doesn't just monitor your ultrasonic meters; it covers the secondary measurements and devices critical to the metering operation, too, including pressure and temperature transmitters and gas chromatographs (GCs).

With continual monitoring of GC diagnostics, operators can have confidence in not just the line flow rate but the composition of the gas – essential for accurate calculation of the volume at base conditions and energy used for billing.

With these measurements, Measurement IQ calculates real-time metering uncertainty around line volume flow, standard volume flow, energy flow and mass flow. It provides the most comprehensive view of metering and measurement health available, considering a wide range of uncertainty contributors (For example, with the primary measurement by an ultrasonic meter):

- Calibration uncertainties
- Linearity (calibration curve correction)
- Installation conditions
- Meter repeatability
- Handling and Operational circumstances
- Resolution, computation, drift and zero stability
- Meter status, with reference to accuracy state and condition based monitoring.

With these insights, Measurement IQ can provide real-time uncertainty calculations in accordance with international standards (i.e ISO 5168 and ISO 17089-1 standards), boosting confidence and helping identify measurement issues quicker.

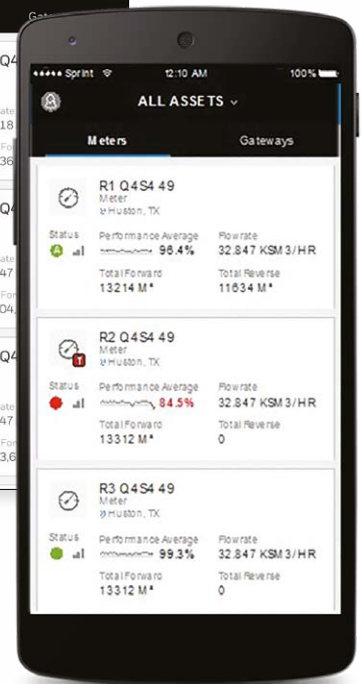
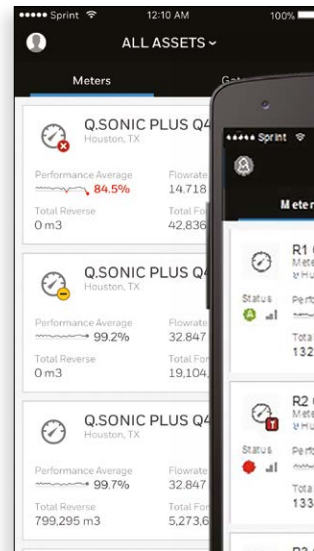
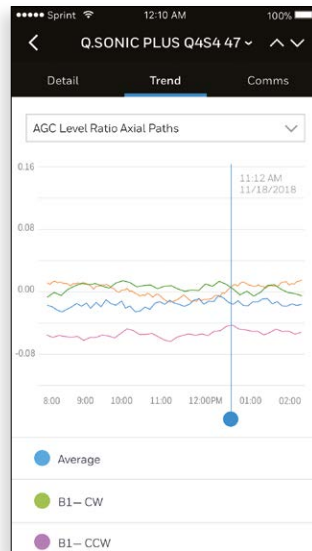


BETTER DATA. BETTER INSIGHTS. BETTER PERFORMANCE.

Enhanced visibility of high-pressure equipment across the enterprise means you can implement effective preventative maintenance, minimize calibration requirements and reduce operating expenses

Measurement IQ provides real-time, round-the-clock visibility of your metering assets. It puts you in control:

- To detect faults and errors faster and cut the costs of lost and unaccounted for gas
- Anticipate problems before they occur and avoid downtime
- Keep measurement uncertainty to a minimum
- Eliminate unnecessary maintenance and extend periods between calibrations, without compromising compliance or measurement confidence



Measurement IQ for Gas is the connected solution that lets you deliver more effective metering.

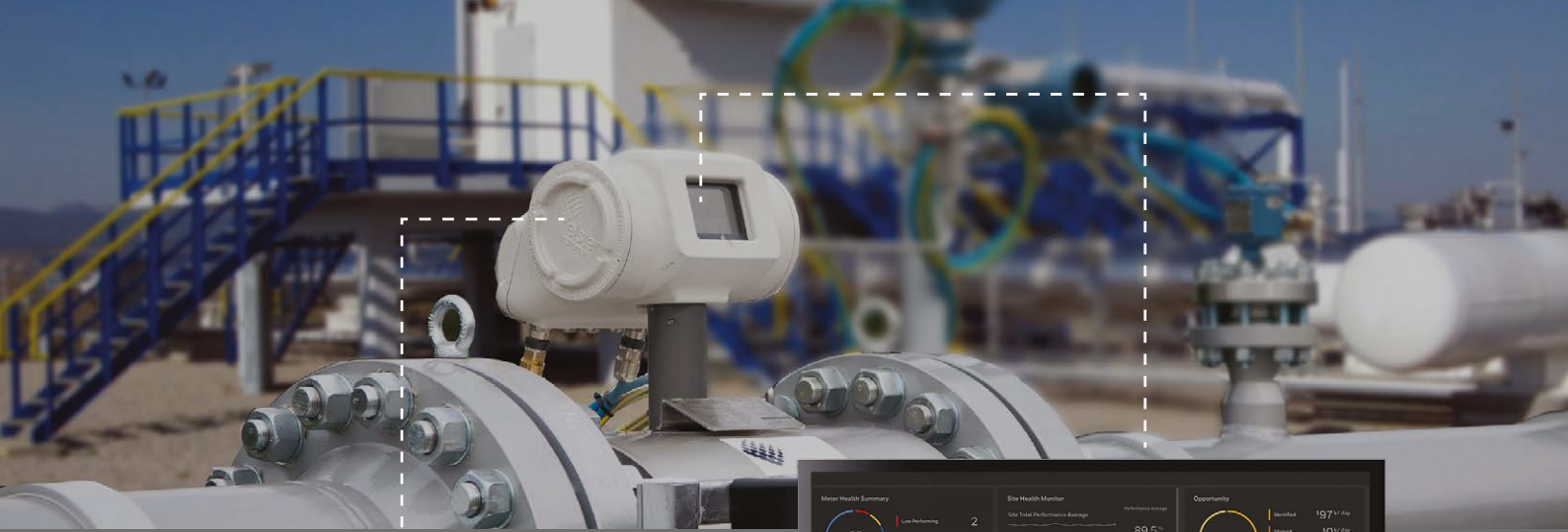
TRANSFORM YOUR ENTERPRISE

Capture, consolidate and share data across the enterprise and around the world with Measurement IQ for Gas. It securely connects and collects data from gas metering systems across sites and draws it into a single, integrated view to focus resources on meters at risk of measurement errors.

- With best-in-class industrial cyber security you can rapidly and securely access all your gas metering stations, wherever they are, with simple connection to an edge device
- Flexible options – have Honeywell host your solution or choose to install onsite
- Gain unlimited scalability and unrestricted computing power, with Cloud analytics and data processing
- Connect to your data securely and work with it anywhere via a web browser
- Collaborate across the enterprise, and leverage expertise from across the world
- Relieve costs and boost security with automatic updates (Cloud only)
- Get data and alerts where and when they're needed using the Honeywell Experion mobile app (Cloud only)

EMPOWERING YOUR PEOPLE WITH IMPROVED PRODUCTIVITY

Measurement IQ for Gas accelerates diagnosis of problems and massively reduces the need for service engineer site visits. It gets data to the people who need it and provides the insights they need to realize its value. It turns data into actionable intelligence, letting you draw on expertise inside and outside the business to improve visibility and make better decisions.



Making a difference with Measurement IQ for Gas

- Real-time, 24/7 enterprise-wide condition-based monitoring
- Cloud connectivity option for easy data sharing, remote monitoring and efficiency
- Condition-based monitoring for maintenance as required
- Meter audit trails for third parties and metrology approvals
- Total Care outsourced maintenance option for outcomes-based service.
- Real-time uncertainty calculations



Seeing is Believing: 24/7 Condition-based Monitoring

Measurement IQ's diagnostic dashboard gives an at-a-glance overview of gas metering stations across your operations. Intelligent warnings and alarms powered by advanced diagnostics let you rapidly identify problems and drill down to identify root causes and troubleshoot.

Combining an intuitive interface with in-depth analysis, the software enables users to anticipate problems and make informed decisions about maintenance and recalibration. It will automatically detect significant changes in not just the flow meter, but also in the process and environment in which it operates – promoting a safer, more efficient and more reliable operation.



Portable Power: Metering Data on the Move with the App

With the Honeywell Experion® App, Measurement IQ for Gas users can get customized real-time plant notifications direct to their smart phone. They can then use Measurement IQ for Gas from any internet-enabled PC, tablet or phone to access the diagnostic dashboard and drill down to find the problem meters, secondary measurement equipment or process conditions.

With tailored alerts for operations, maintenance or leadership teams, we bring people together with the data they need to make a difference.



Total Peace of Mind with Outcome based service

Measurement IQ for Gas is a connected solution, and you can choose to have Honeywell manage your metering maintenance. Our outcome based packages gives cost certainty and consistent reliability through continuous remote monitoring and guaranteed service levels for your metering stations.

It enables you to take strategic control of your metering and lets you leverage decades of experience and Honeywell's expertise around the globe.

CONDITION-BASED MAINTENANCE FOR SAFER, MORE EFFICIENT OPERATIONS

With condition-based monitoring you can save on maintenance, optimize the health of your assets, increase safety and prevent incidents.

Under traditional time-based maintenance, meters are calibrated at specified intervals. These can be extended with evidence of stable measurements, under a risk-based maintenance approach. In both cases, though, calibration occurs even when it's not needed.

With Measurement IQ for Gas you can move to true condition-based monitoring. Powerful in-built analysis draws on diagnostic information to detect changes in flow meters, the process or operating environment. Where indicators show performance deteriorating or evidence of forthcoming equipment failure, it prompts users to send a service engineer: Maintenance only when it's meaningful.

With Measurement IQ for Gas, users can significantly reduce their maintenance and calibration costs and enhance their operations:

- Using historic diagnostic information as a basis to extend calibration intervals specified by regulatory authorities
- Reducing engineering site visits, with no need for regular inspections
- Increasing safety by reducing field visits for troubleshooting
- Boosting measurement confidence with continuous validation of metering systems

- Automatically analysis of measurement and control functions as well as measured data to solve technical and operational issues
- Capturing calibration data to compare individual calibrations and calibration facilities and monitor every meter throughout its lifespan.

BENEFITS OF MEASUREMENT IQ FOR GAS

- Reduce Lost and Unaccounted for Gas and Cut Operating Expenses
- Detect and Diagnose Meter or Process Issues Quicker
- Increase Measurement Certainty
- Prevent Downtime
- Extend Calibration Periods
- Reduce Engineer Site Visits



MEASURING THE BOTTOM LINE: POTENTIAL ANNUAL SAVINGS

\$50,000

Extending recalibration intervals from one to two years

\$112,320

Reducing measurement uncertainty of 0.08%

\$1,000,000

Avoiding lost and unaccounted gas through a 0.5% mis-measurement

A BROADER PORTFOLIO.

A One-Stop Shop for Measurement and Metering.

Honeywell offers industry-leading solutions for the entire metering system, including flow computers, gas chromatographs, and pressure and temperature transmitters – as well as the world's best ultrasonic meters.

Field proven in demanding fiscal applications since 1985, we have one of the most extensive installed revenue measurement bases in the world: more than 200 million metering devices deployed in over 130 countries.

Delivering advanced features and reliable performance, our equipment, services and solutions help build the metering operations our clients need: minimizing uncertainty, maximizing reliability and boosting efficiency to help meet the challenges of a changing market.

KEEPING YOU SUPPORTED

Wherever you are, whatever you do, we're here to help. We have over 160 service engineers and 30 service centers across the world.

With Outcome based service packages we keep your equipment and software safe, reliable and efficient to deliver the best return on your investment. Our services include site surveys; configuration, programming and calibration support; product and system integration; and commissioning.

From first to last, we'll help ensure your solution delivers the value you need to keep the operation running smoothly and profitably.

For more information

To learn more about Honeywell Measurement IQ for Gas, visit www.honeywellprocess.com or contact your Honeywell account manager.

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FUTURE
IS
WHAT
WE
MAKE IT

Honeywell