Honeywell offers complete solutions for liquid and gas measurement in custody transfer applications as well as for gas regulation from a single source.

**Meeting the Demands of Custody Transfer Applications**

With extensive experience executing large automation projects, and a portfolio of products and services acquired through Enraf and RMG, Honeywell is now a trusted global partner for integrated skids and pre-packaged stations for the oil and gas industry.

Honeywell offers complete solutions for liquid and gas measurement in custody transfer applications as well as for gas regulation. Our skid-mounted, pre-packaged solutions are designed to meet the individual requirements of major customers such as Shell and ExxonMobil.

**Honeywell’s Integrated Metering Solution**

A sound metering solution is an essential for any major petroleum producer as they need to know the exact amount of product going into a pipeline, truck, barge or ship.

The control and supervisory management functions of a metering solution are key to capturing the maximum value of custody transfer. MeterSuite is Honeywell’s standalone integrated metering solution, which measures and calculates volume flow rate, mass flow rate, energy rate, flow density, and flow total of gas and liquid with the highest accuracy.

Integrated with Honeywell’s Experion® Process Knowledge System (PKS), MeterSuite offers the benefits of a centralized metering solution, including monitoring, management and reporting processes to supply accurate data for the entire operation. MeterSuite integrates a metering function with the control system architecture—improving cost-effectiveness in terms of installation, configuration and support over the long-term.

All the capabilities of the Experion platform which are integrated to manage the metering function are -

- Flexible reporting
- Web-based access
- Integration with wireless transmitters
- Integration with fieldbus transmitters
- Single point of configuration
- Advanced trending and Seamless connection to Honeywell systems.

MeterSuite offers many benefits for the typical oil & gas operation. Since there are fewer systems to maintain, less training is required. With more functions inside the control system, there are no external components or custom interfaces. This eliminates a separate database, configuration and graphics building effort.

In addition, MeterSuite’s standard human-machine interface (HMI) encourages users to observe its operation more closely. Web access to metering information is available across the enterprise or between businesses for authorized users.
Liquid Metering Systems

Honeywell metering systems can be integrated with a tank farm management system or terminal automation system, thus providing greater value for customers.

Honeywell’s precision liquid metering systems are supported by the PKS Advantage Program, which offers best-in-class products from companies like Krohne, FMC, Endress+Hauser, General Electric, IDEX, and Brodie. These systems are available with turbine, Coriolis, ultrasonic, magnetic, vortex and PD flowmeter.

Complete Solutions for Liquid & Gas Measurement

RMG by Honeywell has been in the gas business since 1843. It’s a trusted partner wherever gas needs to be moved, measured or stored and is an ideal single-source supplier to meet the gas metering and regulation needs of the natural gas industry and the industrial market.

Gas Pressure Regulating Stations

RMG by Honeywell has successfully engineered several gas pressure reduction stations. These include skid-mounted, pre-packaged pressure reducing solutions for above and below ground applications, stations ranging from domestic regulator skids to high-pressure gas transmission stations, including filter, regulators and isolation valves.

The pressure regulating stations can be customized according to specifications. Factory-built units are pre-tested to meet strict quality assurance standards, while also simplifying on-site installation/commissioning and reducing manpower requirements.

Gas Metering Systems

RMG by Honeywell solutions encompass volume-measuring instruments such as rotary displacement, turbine and ultrasonic meters, as well as devices for calculating the quantity of gas and gas analysis systems. In combination, these devices provide all data needed for the billing of natural gas or industrial gases.

Honeywell’s equipment is available individually or as a complete measuring system for gas metering stations. This includes all measuring, evaluation and data-logging units in ready-wired electrical cabinets providing remote data transfer. The measuring instrument line is supplemented by different software packages for data acquisition and evaluation.

Station Automation and Control Systems

RMG by Honeywell designs and builds station automation and control systems according to customers’ needs. Natural gas cools down at relaxation of pressure. Low temperatures may cause icing, separation of condensate as well as hydrate formation with a potential effect of malfunction on pressure and flow control. By use of intelligent automation systems temperature control can be managed and operating costs can be reduced. The flexible programming of RMG automation systems realizes fast conversion of complex gas regulative and controllable technical tasks like regulation of outlet pressure, inlet pressure, meter protection and control of standard flow.

Integrated Terminal Automation Solutions

Terminals receive oil and gas directly from fields, via pipelines or from redistribution to tankers, rail, other pipelines or processing plants. The prime responsibility of a terminal management system is to ensure that a terminal operates in a secure, safe and well-documented manner. Efficient management of terminal operations and improved usage of storage facilities are essential to move product throughout the enterprise.

Honeywell’s integrated Terminal Automation Solution (TAS) helps to manage the movement of hydrocarbons through a network of pipelines, tankers and terminals, eliminating losses and meeting strict government regulations. Only a truly integrated solution, such as the Honeywell TAS solutions, can
help to keep the capital and operational expenses of a terminal facility to a minimum, and give terminal owners, managers, and operators the advantage they need in today's highly competitive markets.

**Meter Provers**

Honeywell offers a choice of flowmeter proving skids for liquid metering systems. These range from master meter and bi-directional flow provers, to compact and portable provers for a variety of applications. The Honeywell Calibron® Prover meets the most stringent requirements for flowmeter proving. It is designed for use with all modern flow measurement devices, including PD, turbine, Coriolis and ultrasonic meters. This advanced prover is available as a stand-alone unit, mounted onto a purpose-built trailer, or installed onto a modular metering or loading skid. The Calibron prover is designed to precisely displace a constant volume of fluid with each cycle. This assures consistent proving results with repeatability equal to or exceeding 0.02%, as defined by API. Superior sealing integrity and fluid compatibility are made possible by PTFE-filled seals and the unit has a constant displaced volume of 100%, regardless of the meter location.

Due to its small size and wide turndown flow range ratio of 1200:1, the Calibron prover is ideal for custody transfer meter proving, as well as offshore and stationary applications. The prover’s precision, smoothbore cylinder and measurement piston assembly includes an integral bypass valve in order to minimize disturbance to flow streams. Its external optical switches have a repeatability of 0.0001 of an inch or better. This allows the prover volume to be very small without sacrificing performance or accuracy.

**Advanced Technology Ensuring Precise Transactions**

**Loading and Blending Skids**

With increasing energy costs and greater concern over environmental issues, the majority of the world’s oil companies are seeking to capitalize on the expansion of blended bio-fuels at loading terminals. The benefits of blending products at the load rack are numerous, and include reduced dependency on multiple storage tanks and greater load rack flexibility by creating variable product load arms. Honeywell Enraf provides high quality, well-engineered skids for blending of two or more products to a predetermined specification during a standard flow process. Applications run the gamut: from ship feed and storage tank processes, to aircraft and tanker, trucker refueling.

The design of Honeywell Enraf's blending skids simplifies the addition of an ethanol or bio-diesel blending capability to the load rack. The small footprint blender facilitates

- accurate specification of static and dynamic seals
- precise volume measurement of ethanol and bio-diesel,
- volume growth factor when mixing, ethanol into petroleum,
- varied communication interfaces into the existing load rack and
- flexibility of varying blend ratios.

By using the MicroBlender for single-stream applications, or the Multi-stream Blender for multiple stream/product applications, loading terminals can ensure a smooth installation, accurate blend ratios, and extended equipment life. Honeywell Enraf’s loading automation system manages and controls loading and unloading in a safe, secure and efficient manner. The system allows compliance with the ever-changing market requirements; enables just-in-time supply and minimized stocks by linking carriers, suppliers and customers; and helps users increase terminal throughput while reducing costs.

The integrated loading automation solution utilizes a powerful load computer and multi-functional Terminal Manager automation software. The Access Terminal is a range of instruments specifically designed to ensure security at tank terminals, and the Securiterre system eliminates the explosion hazard. These elements comprise a total package meeting the demands for reliability, flexibility and safety.

Honeywell believes that a true measurement solution requires more than just supplying instrumentation and systems. Instead, it must be part of a total package that includes consulting, training programs, maintenance, and ongoing customer services.
More Information
For more information on RMG by Honeywell Solutions or any of Honeywell’s products, services, or solutions, visit www.honeywellprocess.com, or contact your Honeywell account manager.

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