

Honeywell



Honeywell

The History of Honeywell:

*** 1885: Invention of The Furnace Regulator**

Considered the official beginning of the company that became Honeywell, in 1885, inventor Albert Butz patented the furnace regulator and alarm. He then formed the Butz Thermo-Electric Regulator Co. in Minneapolis and soon created a device he called the "damper flapper." That invention was a predecessor to the modern thermostat. The Consolidated Temperature Controlling Co. acquired Butz's patents and business, and by 1893, had renamed itself Electric Heat Regulator Co. In 1898, the company was purchased by W. R. Sweatt, who, by 1916, named the company Minneapolis Heat Regulator Company, expanded its product line and patented the first electric motor approved by Underwriters Laboratories.



***1906: Honeywell Heating Specialty Co. Formed**

Young engineer Mark Honeywell formed the Honeywell Heating Specialty Co. Incorporated. The company specialized in making hot water heat generators, after perfecting them as part of his plumbing and heating business.

*** 1920: Allied Chemical & Dye Corporation Formed**

During World War I, Germany controlled much of the world's chemical industry, causing shortages among the U.S. and its allies of critical drugs and dyes. In 1920, publisher Eugene Meyer and scientist William Nichols formed the Allied Chemical & Dye Corporation as a partnership of five American chemical companies.

***1927: Heating Companies Merge**

Minneapolis Heat Regulator Company and Honeywell Heating Specialty Co. merged to form the Minneapolis-Honeywell Regulator Co. The business became the largest producer of high-quality jeweled clocks. W. R. Sweatt became Chairman and Mark Honeywell became President. The company quickly grew as it began to tackle more challenges, including industrial controls and indicators.



*** 1969: Moon Mission Support**

On July 20, 1969, Neil Armstrong and Buzz Aldrin walked on the moon during the Apollo 11 mission. Honeywell was critical to that mission. For example, 16,000 Honeywell parts went into the 14 separate electronic devices that made up the Stabilization and Control Systems (SCS). Meanwhile, Honeywell pilots helped with flight testing.

Honeywell

*1999: AlliedSignal Acquires Honeywell

In 1985, Allied merged with Signal Companies, adding to its aerospace, automotive and engineered materials business. Then in 1999, Honeywell was acquired by AlliedSignal, who elected to retain the Honeywell name for its brand recognition. The headquarters were moved to the AlliedSignal headquarters in Morristown, N.J. Together the companies shared huge business interests in aerospace, chemical products, automotive parts and building controls. By the turn of the century, Allied had already bought Union Texas Natural Gas and aerospace and automotive company Bendix Corp.

*2005-2016: Two Decades of Acquisitions

At the start of the 21st century, Honeywell continued to grow by acquiring businesses across industries. In 2005, we acquired Universal Oil Products, a leading international supplier and licensor for the petroleum refining, gas processing, petrochemical production and major manufacturing industries. Three years later, we added Metrologic Instruments, which made laser, mobile imaging and remote scanners. In 2016, Intelligrated came on board. They provide automation solutions for distribution centers and warehouses.

* 2018: Homes and Transportation Systems Become New Companies

Honeywell spun off its homes business into an independent, publicly-traded company: Resideo, which still creates Honeywell Home products as a licensed brand. The same year, the Transportation Systems business was also spun off as Garrett Motion.

* 2019: Honeywell Forge Launched

In June 2019, Honeywell launched its Enterprise Performance Management software solution called Honeywell Forge. The software leverages Honeywell's expertise in asset and process control technology across industries, including buildings, airlines, industrials and critical infrastructure.

In August 2019, Honeywell relocated its headquarters to Charlotte, North Carolina from Morris Plains, New Jersey.



Honeywell

Industries:

***Chemicals**

Leaders in today's chemical industry need to optimize production while reducing emissions and increasing gross margins. Our solutions offer a foundation to aid in improving efficiency while monitoring for cyber attacks and helping you stay ahead of breakdowns via predictive maintenance. Honeywell industrial software is the answer to assist you with challenges in a quickly evolving chemical industry.



***Aerospace**

Honeywell is a familiar face in the aerospace industry. With best-in-class software that helps optimize fuel efficiency, enhance OT cyber security, and accelerate digital transformation to help aerospace enterprises operate safely and efficiently, Honeywell stays on the cutting edge of innovation, so our aerospace partners can too.



***Food, Beverage & Tobacco:**

Our food, beverage and tobacco solutions help you optimize production and increase profitability so that you can focus on quality, flexibility and repeatability. Conquer challenges like product traceability, shifting customer demands and disruption in supply chains with the support of our solutions.



Honeywell

*Government:

Whether you operate within a large federal campus or in a standalone state-owned building, government facilities require the utmost security to protect visitors, assets and communities. Honeywell helps government agencies stay on the cutting edge of security, sustainability and operational efficiency.



*Healthcare:

Healthcare is driven by missions: provide attentive patient care, create pharmaceutical innovations, and deliver lifesaving medical devices to communities across the globe. Healthcare organizations can better ensure the stability required to fulfill their missions by implementing software to help improve product quality management, increase supply chain visibility, bolster OT cybersecurity and mobilize sitewide operational efficiency.



*Infrastructure:

A city's critical infrastructure impacts the community it serves. From schools and hospitals to smart office buildings and airports, investing in more efficient, secure and sustainable infrastructure keeps our communities safe and connected. Honeywell has the tools and expertise to help enterprises prioritize cyber security, operational efficiency and the safety and comfort of workers.



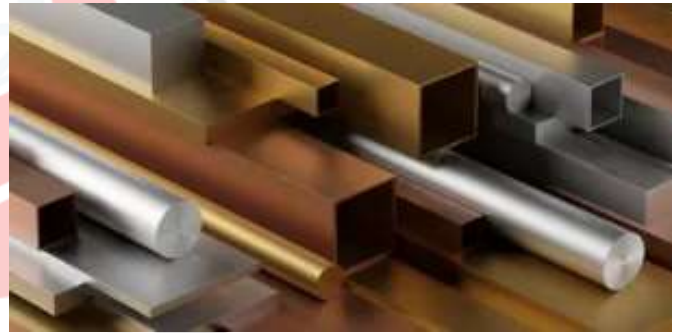
***Manufacturing:**

In manufacturing environments, a stable workplace goes beyond occupant comfort, safety and security. Streamlined, compliant enterprises also prioritize reducing carbon emissions and pollutants, increasing efficiency and creating a frictionless, end-to-end experience. Honeywell offers the cutting-edge solutions designed to address a manufacturer's need to extract maximum value from each process.



***Materials:**

Extract more from your operations by tying data, locations and processes together. Our purpose-built industrial software helps empower and connect your workers to facilitate and streamline the discovery, development and processing of raw materials. Predict and prevent asset failure while getting support to help you protect your operations with OT cyber security solutions designed for complex industrial infrastructure.



***Oil & Gas:**

A more sustainable oil and gas industry is possible. We partner with global fossil fuel companies to streamline their production efficiency while helping to enhance worker safety and the optimization of emissions. Extract more from your operations by using tools designed to maximize plant performance and asset potential.



Honeywell

*Retail:

A streamlined distribution network is about more than getting products from point A to point B. It's about orchestrating the production, movement of assets, labor, and inventory even as you encounter the unexpected. No matter where and when obstacles appear, Honeywell has solutions that support your bottom line while helping to protect data, streamline incident response and create a more efficient workforce.



*Logistics & Supply Chain Management:

The rapid growth of e-commerce — combined with rising costs and consumer demand for fast shipping — means more pressure on every point in the supply chain. Delivering on budget, on time and at the speed consumers want requires an accurate view of your assets, processes and people. Our technology and data solutions can support your logistics journey, help uncover hidden inefficiencies, and assist you with increasing accuracy and productivity.



*Utilities:

All day people rely on utilities to provide safe, reliable services to their homes and businesses. Avoiding downtime, keeping assets secure and maintaining high-functioning workforces is key — and Honeywell can help you do it.





Honeywell Products:

- Control & Supervisory Systems --- Page 9
- Gas control, measurement and analysis equipment --- Page 12
- Field Instruments --- Page 22
- Process Instruments --- Page 25
- Terminals --- Page 27
- Thermal Solutions--- Page 28
- Utilities --- Page 40
- Industrial Sensing --- Page 45

Honeywell

- **Control & Supervisory Systems:**

Honeywell delivers integrated process control and advanced safety with better lifecycle support to protect and future-proof users' investments.

- ✓ **Distributed Control Systems (DCS)**

Honeywell transforms process control beyond traditional DCS functionality by unifying people with process variables, business requirements and asset management.



- ✓ **Safety Systems**

Honeywell offers a broad range of SIL 1-3 certified solutions for industrial process safety, Fire & Gas and critical control.



- ✓ **HMI (Human Machine Interfaces)**

Honeywell's Panel HMI portfolio offers the right solution for field operations. It offers intuitive hardware design with proven user interface that delivers maximum performance & lifecycle benefits.



Honeywell

✓ SCADA (Supervisory Control and Data Acquisition)

Honeywell provides a highly scalable, integrated, multiserver SCADA solution that incorporates innovative applications for human machine interface (HMI) to address complex remote automation requirements.



<https://www.aparat.com/v/JL0d9>

✓ Quality Control Systems (QCS)

Honeywell provides continuous sheet manufacturing processes with leading edge hardware and systems solutions for optimization of sheet quality and process resources



✓ Modular Controllers

Programmable Logic Controller with best in class cybersecurity, that enables efficient operations and reduced maintenance, thanks to the integration with Experion and Universal I/O technology.



Honeywell

✓ Remote Terminal Units (RTU)

Modular, scalable and efficient controller that together with Honeywell's SCADA products provides an integrated solution to solve complex remote automation requirements for distributed equipment.



✓ IIOT Solutions

Combine Honeywell's market-leading solutions, automation expertise and execution services required to realize your IIOT goals



✓ Drives

Honeywell's energy efficient Variable Frequency Drives meet automation requirements across multiple industrial segments and process applications, which improves performance and manages the system.



Honeywell Variable Frequency Drive (VFD) is a general-purpose solution that meets automation and energy efficiency requirements across industrial segments and process applications, from small pumps to large compressors.

The solution controls the speed and torque of single-phase and three-phase induction motors by varying their input frequency and voltage, driving the performance, management, and energy efficiency of the system.

Honeywell

✓ Certified Recycled Parts

Honeywell Certified Recycled Parts are not new, but are components acquired from customers and factory surplus. They go through a comprehensive certification process before being made available for sale to customers with a full one-year warranty.



✓ Modular Systems Remote IO

Modular Systems Remote IO helps to decentralize the monitoring and control IOs from control room. This replaces the traditional junction boxes and provide the fast installation of Remote IO system near to field devices with reduced CapEx and OpEx.



• GAS

Honeywell offers industry leading gas control, measurement and analysis equipment to gas utilities and other users around the world.

✓ Automation

Innovative control technology for the automation of gas, industrial, compressor systems and special applications. Individual hardware and software solutions from a single source.

- Odorizers

Efficient and high-precision odorization systems up to 100 bar with a consistent control concept for up to two odorization pumps per controller.



-Station Automation

Individual control applications including visualization (diagnostic tools) such as gas pressure/quantity control, energy-efficient preheating control, automatic track switching and individual special applications.



-Automation Spare Parts & Accessories

Sustain your installed base of odorizers and controllers with genuine spare parts and accessories.



✓ Distribution

Honeywell Elster offers a wide range of different gas measuring devices, comprising volumetric meters such as rotary meters as well as flow meters such as turbine meters.



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-Communication Modules & Gateway

Honeywell modems wireless cellular modem are integrated with the EC 350 volume corrector, are fully field-programmable and simple to use through short-range wireless communication or serial interfaces, and associated software.



Honeywell

-Configuration Software

Honeywell integrated software solutions works across the entire gas portfolio and provide a software package to configure, calibrate and access data, and the dashboard enables users to determine the overall health status of the instrument.



-Dataloggers & Pressure Recorders

Honeywell Dataloggers and Pressure Recorders are intended to simplify and optimize custody transfer & industrial measurement and offer best-in class datalogging, accuracy, expanded memory, advanced diagnostics and integrated cellular communications.



-Mechanical Recorders

Honeywell Mechanical Recorders provide accurate chart records of pressure and/or temperature. All critical components, including the pressure element, temperature system and chart drive are manufactured to precise specifications.



-Rotary Meters

Honeywell Elster Rotary gas meters are volumetric meters for gaseous media using the displacement principle and are characterized by high measuring ranges and compact dimensions. They ensure high accuracy, even if the gas flow is low or irregular.



Honeywell

-Turbine & Quantometers

Honeywell Elster Turbine meters TRZ and SM-RI as well as quantometers Q, Q75 and QA are flow meters which display the volume flowing through the device in actual cubic meters.



-Volume Converters

Honeywell's volume correctors are purpose-built, UMB- and rotary-mount devices, which are intended to simplify and optimize custody transfer and industrial measurement.



-Distribution Spare Parts & Accessories

Sustain your installed base of Honeywell Gas Distribution products like EVCs and Data Loggers with genuine spare parts and accessories.



✓ Regulators & Safety Accessories

Honeywell offers a variety of gas pressure regulating devices, safety equipment, and accessories for the natural gas industry, transmission, and distribution.



Honeywell

-High Pressure Regulators up to ANSI 600

Pilot-operated gas pressure ideal for use at transfer stations in gas transport networks for power plants and industrial facilities.



-High Pressure Regulators up to PN40 (ANSI 300)

Pilot-operated gas pressure regulators available with a safety shut-off valve that is ideal for applications covering a large inlet pressure range. The regulators are ideal for deployment at offtake stations in the gas distribution network.



-Medium Pressure Regulators up to PN16 (ANSI 150)

Gas pressure regulators ideal for deployment in distribution networks, industrial facilities and commercial applications.



-Pilot Heater

Electric and pneumatic pilot heaters used for pilot operated regulators.



-Safety Relief Valves

Safety relief valves used to relieve gas leakage in pressure reduction stations.



-Safety Shut-Off Valves

Safety shut-off valves to be used as a protection system for gas supplies and networks.



-Series 200 Small Pressure Regulators (Pressure Reducer)

Pressure reducers suited for use at industrial facilities, laboratories, and low-load lines in gas pressure regulating stations.



-Series 600 Control Equipment for Safety Shut-Off Valves

Actuator systems to be used for safety shut-off valves for over-pressure release and under-pressure release.



-Series 600 Pilot Regulators for Pilot operated Gas Pressure Regulators

Pneumatic and electro-pneumatic pilots for gas pressure regulators.



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-Series 900 - Gas filters/Valves and other Components

Filters and accessories for natural gas applications.



-Regulators & Safety Accessories Spare Parts

Sustain your installed base of Honeywell gas pressure regulators and safety valves with genuine spare parts and accessories.



✓ Transmission

Reliable gas transmission measuring devices for custody and non-custody applications; including Gas analysis and volume conversion.



-Gas Analysis Equipment

Gas analysis measurement devices for custody transfer of Biogas/Natural gas + Hydrogen enriched natural gas.

○ GasLab Q2

The GasLab Q2 is a gas quality analyser for natural gases, it is flame free, works quickly and continuously. It determines the calorific value, Wobbe index and other parameters of the sample gas.

Honeywell GasLab Q2 includes an infrared sensor to measure the absorption of hydrocarbons and carbon dioxide in natural gas. In addition, another sensor detects the heat conductivity of the full mixture of natural gas. By analyzing this Information about infrared inactive components (like Nitrogen), target values are determined and the Wobbe-index can also be calculated. The physical background for the successful description of gas properties by only three parameters is the typical composition of natural gas.



Honeywell

-Ultrasonic Meters

Reliable gas flow measurement with ultrasonic technology for different gases and mixtures.



-Transmission Spare Parts & Accessories

Sustain your installed base of flow computers, ultrasonic meters and gas analysis equipment with genuine spare parts and accessories.



✓ Software & Solutions

Honeywell's Autonomous Gas Solutions (AGS) deliver actionable insights for intelligent operations. Start your journey to autonomous operation and benefit from improved safety, reliability and efficiency.



*Gas & Flame Detection: HIZ ENERGY BAKHTAR

Accidental gas leaks pose a huge threat to properties, environment and human life. Therefore, Honeywell manufactures a full and comprehensive range of gas detection products dedicated to all types of industrial facilities, from smaller boiler rooms to large petrochemical plants and oil refineries. Honeywell's wide range of technologies and devices – gas detectors, flame detectors, natural gas alarms – provide exceptional protection at every level, ensuring the most favorable coverage, detection, hazard mitigation and life protection.

Get the specific gas detection product you need and benefit from quality, functionality and ease of use. Wherever hostile environments exist, Honeywell will make it a safer workplace for everyone.

Honeywell

- **Industrial fixed gas detectors:**

A wide range of industrial fixed gas detectors featuring flexible integration, simple installation, user-friendly operation and straight-forward maintenance. Gas leaks are a constant threat for industrial plants, their employees and people living nearby. Worldwide incidents, involving asphyxiation or explosions are a constant reminder of this problem.

When fast and informed decisions make the difference between life and death, you need full control of your gas detection system. It's easier than ever to ensure safety and compliance, while also reducing setup and operation time and minimizing the need for training.

Fixed gas detectors are used to detect leaks and accidental releases of combustible and toxic gases in outdoor or indoor areas. They are mounted in places where there is potential for a gas leak, expected to protect assets and personnel.

<https://share.vidyard.com/watch/11LGGpPMap71bLT4eA2cPg?>



RAEGuard 2 PID
Fixed photoionisation detector (PID) that measures a broad range of volatile organic compounds (VOCs)



MeshGuard
Networkable wireless gas monitoring solution designed for quick deployment in areas where low cost/high ROI solutions are required



XNX Universal Transmitter
A universal transmitter compatible with all Honeywell Gas Detection gas sensor technologies



Series 3000 MkII and MkIII
2-wire loop powered toxic and Oxygen gas detectors for use in potentially explosive atmospheres



Searchline Excel
World renowned open path IR detector with 200m dynamic monitoring range



Sensepoint XCD
Flammable, toxic and Oxygen transmitter and sensor with tri-colour display for viewing status from a distance



Sensepoint XCD RFD
A flammable gas transmitter for use with remotely mounted flammable gas sensors



Sensepoint XCD RTD
A gas transmitter for use with directly or remotely mounted toxic and Oxygen gas sensors



Optima Excel Local Display (OELD) NEW
Smart junction box for the Searchpoint Optima Plus and Searchline Excel infrared detectors for flammable hydrocarbons



Searchpoint Optima Plus
Market leading point IR detector with 100 gases available. Optional HART® over 4-20mA output



Sensepoint XCL NEW
Bluetooth®-enabled single-gas detector with a wide variety of toxic gases supported. Allows for quick installation, commissioning and reporting from a smartphone*



Sensepoint XRL NEW
Bluetooth®-enabled single-gas detector that monitors a wide range of toxic gases, combustible gases and Oxygen. Allows for quick installation, commissioning and reporting from a smartphone*



Sensepoint High Temperature Sensor
Ideal for combustible gases in high temperature areas



XPT Gas Sampling System NEW
Designed to measure the concentration of toxic and potentially explosive substances in locations where access is difficult. Supports up to 2 channels that can be configured serial or parallel



Sensepoint Range
ATEX certified flammable, toxic and Oxygen gas detectors

Honeywell

- **Portable gas detectors:**

A wide range of portable gas detectors offering real-time visibility of your workers' safety status. BW™ Solo, ToxiRAE, MicroRAE and more. Accidental gas leaks pose a considerable threat to properties, environment and human life. Therefore, Honeywell Analytics and BW™ Technologies manufacture and produce a full and comprehensive range of portable gas detectors, offered in compact, lightweight designs – from simple alarm-only units to advanced, fully configurable and serviceable instruments.



BW Clip Series **NEW**
No-maintenance single-gas device offering continuous detection; available in standard and Real Time (RT) versions and in 2 and 3 year versions



GasAlert Extreme
Reliable serviceable single-gas monitoring with a wide variety of toxic gases supported



BW Clip4 **NEW**
Easy-to-use wearable 4-gas detector, with 2-year continuous runtime. Does not require charging, sensor or battery replacement



GasAlertMicroClip Series **NEW**
Rugged, ultra-compact, lightweight, continuous monitoring of up to 4 gas hazards. Available in 2 versions, XL and X3



GasAlertQuattro
Feature-rich and rugged multi-gas device with simple one-button operation to monitor up to 4 gas hazards. Flexible power options to be always ready



GasAlertMax XT II
Multi-gas detector with motorised pump for remote sampling for simultaneous monitoring of up to 4 gas hazards



MicroDock II
Quick, cost effective automatic bump testing of GasAlert range of portable gas detectors



GasAlertMicro 5
Continuous monitoring of up to 5 gas hazards. Available in diffusion or pump versions



GasAlertMicro 5 PID
Continuous monitoring of up to 5 gas hazards with a wide selection of toxic and VOC gases supported. Available in diffusion or pump versions



GasAlertMicro 5 IR
Continuous monitoring of up to 5 gas hazards with a wide selection of toxic gases supported, including CO₂. Available in diffusion or pump versions



IntelliDoX **NEW**
Combines smart docking modules and Fleet Manager II software to provide automated instrument management for the BW Clip Series, BW Clip4 and GasAlertMicroClip Series gas detectors



Colorimetric Gas Detection Tubes
For quick, on-the-spot, compound-specific measurement of a wide range of toxic and combustible gases and vapours



SPM Flex
Using Chemcassette® tape technology, it is both a fixed and a portable unit; detecting ultrasensitive gases including hydrides, mineral acids and amines

- **Commercial Gas Detection:**

Various gas detection solutions designed for use in commercial buildings, shopping centers, office towers, universities and more. Today, Honeywell's gas leak detectors have evolved to meet the requirements of diverse industries and applications, delivering comprehensive solutions designed to drive down the cost of gas detection, while providing enhanced safety and peace of mind. Detect gas leaks as they happen and make fast and informed decisions in case of any gas leak emergency.

- **High Tech & Semiconductor:**

A full range of gas and chemical detection instrumentation for various applications: semiconductor processing, research laboratories, emergency response. Honeywell's toxic gas monitoring products are the industry's most complete and includes solutions using infrared spectroscopy with no cross-interference to Chemcassette paper tape colorimetric technology, offering detection down to parts per billion levels. Applications include semiconductor manufacturing and nanotechnology, photovoltaic cell production, aerospace propulsion and safety, specialty chemicals, academic and industrial research labs, and emergency response.

- **Field Instruments**

Honeywell's measurement and control products enable users to manage their plant assets better and optimize their productivity.

- ✓ **Pressure Transmitters**

Our SmartLine pressure transmitters feature industry-leading performance, unique features that lower total cost of ownership and Smart Connection Suite for the best control system integration.



✓ Temperature Transmitters

Our Smart Temperature Transmitters and Probe Assemblies help users monitor and protect asset health, comply with environmental regulations, reduce energy waste, and improve throughput and safety.



✓ Multivariable Transmitters

Our SmartLine Multivariable Transmitters (SMV800) extend its proven smart technology to the simultaneous measurement of three separate process variables according to standard industry methods for air, gases, steam and liquids.



✓ Wireless Transmitters

Our wireless instrumentation offering includes the new SmartLine Wireless Pressure transmitter portfolio, the field-proven XYR 6000 wireless transmitter offering, and the OneWireless Adapter for enabling wireless communication with HART transmitters.



Honeywell

✓ Level Transmitters

Our level transmitter portfolio includes Guided Wave Radar and Non-Contact Radar technologies to provide solutions to the industries level monitoring needs.

- SmartLine Guided Wave Radar Level Transmitters
- SmartLine Non Contact Radar Level Transmitters



✓ Flow Meters

VersaFlow flow meters provide accurate measurement of mass flow, density, volumetric flow rate and temperature for gases, pastes, liquids with low viscosity and applications where users are unwilling or unable to cut into the process measurement line.

- Ultrasonic, Coriolis, Magnetic, Vortex Shedding Flow Meter

<https://www.aparat.com/v/wuhfa>

<https://youtu.be/OOTbOtmRE8>



✓ Honeywell Versatilis™ Equipment Health Monitoring (EHM) Solutions

The Honeywell EHM solution is an on-premises remote monitoring solution designed to monitor the Honeywell Versatilis™ Transmitter product line.

- Honeywell Versatilis™ Transmitter
- Honeywell Versatilis™ Connect Application
- Honeywell Versatilis™ Experion EHM



Honeywell

✓ RMA Remote Meter Assemblies

RMA Remote Meter Assemblies provide process measurement values in remote locations where the integral meter in the field instrument is difficult to view.



✓ Field Instruments Configuration Tools and Software

Honeywell supports the ability to easily configure, calibrate, diagnose and troubleshoot field instruments through handheld tools or host systems



• Process Instruments

Honeywell's broad line of process instruments enable improved decision-making and keep plant operations running smoothly, efficiently and safely.

✓ Actuators

Our Herculine[®] electric actuators are designed for precise positioning of dampers and quarter-turn valves. They perform exceptionally well in demanding environments and simplify configuration, process monitoring and maintenance for users.



✓ Analytical Instruments & Sensors

Our Analytical Instruments and Sensors measure critical process parameters such as pH/ORP, dissolved oxygen and conductivity in a wide variety of industrial applications for reliable process monitoring and control.



✓ Recorders

We offer circular chart and paperless recorders to help users record process parameters and improve decision-making and efficiency through data analysis.



✓ Controllers & Programmers

We offer a variety of industrial controllers and programmers to accurately and reliably control process temperatures and variables in a wide range of applications.



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• Terminals

We offer a comprehensive range of solutions for inventory management and tank terminal operations for connectivity, modular design and a robust migration.

✓ Enraf Tank Gauging

Honeywell Enraf tank gauging system combine the latest technology with proven measurement concepts for an unrivaled solution to help terminals across the world create safer, more reliable and more efficient operations.



✓ Loading & Additive Products

Our Enraf Loading Automation portfolio manages and controls the loading and unloading of petrochemicals to meet safety, accuracy, availability and traceability norms. It helps run terminals in the most cost-effective and efficient way.



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✓ Provers

Honeywell's Small Volume Provers meet the most stringent accuracy requirements of custody transfer meter proving. Their small size and turndown flow range ratio of 1200:1 are ideal for portable, offshore and stationary applications.



✓ Portable Gauging & Sampling for Land Applications

For complementing automatic tank gauging systems, we provide portable gas-tight HERMetic UTImeters for manual measurement of ullage / innage, temperature and interfaces along with liquid and gas samplers, thermometers and matching tank top valves.



• Thermal Solutions

For 100+ years Honeywell has delivered the world's most versatile, innovative and comprehensive portfolio of thermal transfer and connected solutions.

✓ Burners & Heat Exchangers

With the most comprehensive selection of industrial burners and heat exchangers in the industry, we can create unique solutions for any thermal application



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-Direct Fired Furnace Burners

For industrial furnaces and firing systems in the heat treating market, direct fired furnace burners come with a variety of flame speeds, shapes, and capacities for a wide array of applications



Honeywell

-Self-Recuperative and Radiant Tube Burners

Furnace burners designed with integrated recuperators, and are typically paired with a radiant tube for improved fuel efficiency and reduced emissions.



-Single Burners

Designed for applications that typically require only one burner per chamber, while offering robust, reliable heat in a variety of heating applications.



-Line & Duct Burners

Provide clean, reliable, uniform heat over a wide area to ensure the highest product quality and most efficient operation



-Glass & Oxygen Burners

Designed to fire at required capacities and temperatures while meeting the most challenging emissions requirements in a variety of glass melting furnace configurations

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-Immersion Tube Burners

Designed to fire directly into tubes in immersion heating applications and deliver safe and reliable operation.



-Hauck Asphalt Burners

Designed specifically for the unique needs of the asphalt industry to ensure robust, reliable and clean operation in aggregate drying plants.



-Exothermics Heat Exchangers & Indirect Air Heaters

Provide improved process efficiency and fuel savings by recovering heat from a variety of industrial applications and feeding it back into the process



-Pre-Mix Equipment

Equipment for effectively pre-mixing air and fuel.



-Pilot Burners

For safely igniting gas burners.



TAJHIZ ENE

-Burner Accessories

Peep sights other accessories for burner.



Honeywell

✓ Burner Management Systems

Burner management is the safe sequencing of burner fuel delivery, flame safety, fuel air ratio and limit operation



-Burner Control Units

Burner control units and automatic burner control units, enclosed or 19 rack-mounted, for controlling and monitoring gas burners~



-Flame Detectors

UV and infrared flame detectors for intermittent and continuous operation in conjunction with burner control units.



-Industrial Flame Monitoring (IFM)

Industrial Flame Monitoring in various versions



Honeywell

-PFU Accessories

Accessories for 19" rack-mounted devices PFU



-Ignition Components

Various ignition transformers/generators and ignition electrodes and flame rods



-Burner Management Accessories

Components and accessories for Honeywell Burner Management Systems.



✓ Fuel & Air Delivery

Fuel delivery is the accurate delivery of fuel at the optimal pressure, temperature and flow – within safe operating conditions



Honeywell

-Manual Valves & Filters

Valves for manual shut-off, for gas, air and water, also manual valves with thermal equipment trip, adjusting cocks for precise flow rate adjustment, gas filters for cleaning gas and air.



-Pressure Regulators

Pressure regulators to maintain a constant set outlet pressure pa despite changing gas flow rates, air/gas ratio controls to maintain a constant gas/air ratio



-valVario Valves

Pressure regulators with solenoid valve as a space-saving option combining two functions in valVario design



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-Shutoff Valves

Gas and air solenoid, motorised and pneumatic valves for automatic shut-off of pipes



-Butterfly Valves & Actuators

Butterfly valves and actuators for air and gas control, including pre-assembled valve and actuator combinations.



-Control Valves

Control valves for controlling continuously regulated burner processes



-Pressure Switches & Gauges

Diaphragm pressure switches with micro switch for monitoring gas and air pressures on industrial installations and boilers, pressure gauges for pressure display



-Blowers & Boosters

Provide the air pressure needed for optimal system performance while helping increase the pressure of any gas or air/gas mixture to meet application requirements.



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-Accessories

Products needed to complete applications



-Sensors



-Smartlink/Smartfire

Smartlink controls include valves with electronic parallel positioning for air/fuel ratio control, mass flow meters, and complete burner control systems.



✓ Complete Combustion Solutions

The future of manufacturing is connectivity. When your burners can analyze and stream data in real time, you have the ability to increase efficiency and productivity



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TAJHIZ ENERGY BAK

-Thermal IQ

Thermal IQ platform automates the process of extracting long-hidden thermal process data and helps you drive better business outcomes with real-time thermal analytics



Honeywell

-Control Panels

Pre-engineered control panels for a variety of industrial applications.



-Valve Trains

Complete gas trains for gas and air supply according to international standards.



-Heating Systems Heat-Up Burner

A ThermJet Furnace Burner paired with a pre-designed control panel to use as supplemental heating in certain high temperature applications in the glass and metals industry



-Air Heaters AH

Direct fired air heaters that can be used in a variety of industries including paper, minerals, and chemical processing as a way to efficiently heat a wide variety of products.



Honeywell

➤ Three subsidiaries of Honeywell Thermal Solutions that we are their trusted partners:

- ✓ MAXON
- ✓ ECLIPSE
- ✓ KROMSCHRÖDER

- MAXON

Honeywell Maxon provides burner solutions and engineered combustion systems for industrial process heating applications including gas and oil burners and valves, hazardous area shut off valves, and low and Ultra-low NOx burners.

Honeywell



Products:

- Industrial Burners
 - Natural Gas Burners
 - Oil-Fired Burners
- Gas Valves & Oil Valves
 - Shut Off Valves
 - Ratio & Flow Control
 - Oil Flow Valve
- Low Nox Burners
- Flame Monitoring
- Combustion Systems
- Control Panels
- Pilots
- Maxon Ignitors and Flame Rods

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✓ ECLIPSE



Eclipse, Inc. a worldwide manufacturer of industrial burners and combustion systems, specifically high temperature furnace burners; air heating burners; glass burners; furnace burners, direct & indirect; air heat burners; immersion burners; oxygen - fuel burners; heat exchangers & recuperators; safety shutoff valves & gas valve trains; control panels for combustion processes.

Honeywell Eclipse is located in Rockford, Illinois, United States.

Products:

- Air Heating Burners
- Furnace Type Burners
- Tube Firing Burners
- Heat Exchangers
- Air and Fuel Supply Components
- Shutoff and Control Valves
- Ignition/Supervision Components
- Process Measurement and Control
- Glass Industry Burners and Accessories

✓ KROMSCHRÖDER

Honeywell Kromschröder components are recognized as being of the highest quality. Well-known manufacturers of industrial furnaces like to install them. As they too cannot accept the slightest compromise when it comes to safety, economy and reliability.

Honeywell Kromschröder is located in Germany.

Honeywell

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Products:

- Manual valves and filters
- Pressure regulators
- Valves and butterfly valves
- Pressure switches
- Combination controls and Moduline
- Electronic flame detection and control
- Pilot burners and burners
- Further ignition- and control devices
- Thermo-electrical safety devices
- Accessories
- Measuring and testing instruments

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- **Utilities**

Our utility portfolio is designed to support the entire supply chain from generation to transmission to distribution.

- ✓ **Gas**

Honeywell is the largest, most experienced, and only OEM-certified provider of American Meter testing and repair services in the world and is well-equipped to provide a total-value solution that fits your specific needs.



- Gas Metering**

Honeywell set the standard for durability and accuracy in gas measurement. It is unequalled for accuracy retention and for life cycle maintenance economies.



- Gas Regulators**

Honeywell gas pressure regulators meet the highest demands for quality and capacity.



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- Perfection Distribution Products**

Honeywell Perfection's complete mechanical polyethylene gas distribution system allows installers to make fast, easy and safe connections from main to meter; without using special tools or expensive equipment.



-Gas Communications

Communications Modules for cable-based or wireless data transfer.



-Test Equipment

Honeywell Test Meters are typically used to measure small volumes and low flow rates. Ideal for any application where accurate measurement of small volumes and low flow rates of manufactured, natural or technical gases are required.



-Gas Filtration

Effectively remove dirt, pipe scale and other foreign matter from flowing gas lines in commercial and industrial applications.



-Indexes & Components

The meter index indicates the amount of gas used and is generally read on a monthly basis. Indexes are available with circle or odometer readouts, including the option for pressure compensation.

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-Meter Hardware & Accessories

Assorted meter hardware and accessories including batteries, dust caps, and gas leak detectors.



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-Meter Services

Solutions that Measure, Regulate, and Manage.



✓ Electricity

Honeywell Smart Energy is combining its expertise in smart metering technology with end-to-end smart grid innovations to develop connected solutions that empower utilities to better balance resources, ensure grid stability, and drive efficiency.



-Residential Meters

Advanced revenue metering, power quality monitoring, enhanced security, interval data recording, and more for residential metering needs.



-Commercial & Industrial Meters

Meters designed to comply with the latest standards for metrology, communications, safety and security in commercial or industrial settings.



Honeywell

-Communications

Intelligent solutions for empowering enterprise intelligence.



-Collectors

Products designed for single or multi-service deployments that can be used in gas or water only service areas as well as electricity and combined electricity, water, and/or gas service areas.



✓ Water

As a leading provider of smart meters, software and service solutions, Connected Water from Honeywell empowers customers to transform their operations from end to end and redefine the future of water.



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-Residential Metering

Volumetric, multi-jet, and single-jet water meters for residential metering.



Honeywell

-Commercial & Industrial

Commercial & industrial irrigation, static, volumetric, and turbine meters to support your measuring needs.

- Turbine Meters
- Static Meters
- Irrigation Meters
- Volumetric Meters



-Water Sub Metering

Honeywell multi and single-jet meters designed for water sub metering.

- Multi-Jet Meters
- Single-Jet Meters



-Digital Metering

Mbus, NB-IoT, LoRa and more digital water meters.



-Water Metering Spare Parts

Commercial and industrial, residential, and smart meter spare parts for Honeywell Water meters.



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*Industrial Sensing:

From the factory floor to the furthest distribution center, Honeywell sensors, switches, interfaces, and custom assemblies offer unmatched value down the line — powerful solutions for any industrial need. Enhanced accuracy, accountability and durability are built into every part or construction, improving output and endurance. Honeywell solutions are tailored for stronger performance, longer productivity, and increased safety.

- **Industrial Sensors:**

As a leader in industrial sensing, Honeywell has been engineering sensing solutions for over 75 years. We collaborate with customers to develop optimal solutions for their specific applications. Our extensive expertise and engineering experience allow us to develop leading-edge sensing solutions and new approaches. Whether working with OEM customers for industrial application-specific designs or delivering aftermarket support, Honeywell offers the perfect combination of performance and innovation to meet any of your needs today.

- ✓ **Industrial gas sensors:**

Industrial gas sensors are purposefully designed to measure a variety of toxic and combustible gases to help keep workers safe in harsh commercial and factory environments.



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- ✓ **Magnetic Sensors:**

Hall-effect or anisotropic magnetoresistive (AMR) sensor ICs in digital or linear outputs for angle, position & speed sensing; value-added packages.



Honeywell

✓ Industrial Pressure Sensors:

Built for the toughest applications. Our heavy duty pressure products are known industry-wide for enhanced quality, reliability, & service.



✓ Temperature Sensors

RTD & thermistor sensing elements & packaged temperature probes; commercial, precision & high reliability thermostats/thermal switches.



✓ Board Mount Pressure Sensors

Full line of industrial-grade sensors: media-isolating design, multiple ports, electrical configurations, and outputs; ranges from 0 psi to 250 psi.



• Industrial Switches

Powerful industrial solutions. Enhanced accuracy, reliability and durability are built into every product, improving output and endurance.

From the factory floor to the furthest distribution center, Honeywell switches, and made-to-order custom engineering offers unmatched value down the line — powerful industrial solutions. Enhanced accuracy, reliability and durability are built into every product, improving output and endurance.

Honeywell

✓ Basic Switches

Highly reliable and rugged switches, basics include miniature, subminiature, large. specialty, sealed and unsealed versions.



✓ Limit Switches

A broad & deep limit switch portfolio, including global, heavy-duty, miniature, general purpose, hazardous location and sealed switches.



✓ Safety Limit Switches

For critical safety applications, switches include key-operated interlocks, cable-pulls, hinge-mounts, limits, & non-contacting options.



• Industrial Test & Measurement

Honeywell's test and measurement sensor solutions help customers worldwide in research and development, design, quality testing, manufacturing, and system monitoring in many different industries, challenging applications, and rugged environments. Pressure transducers, load cells, torque transducers, LVDTs, accelerometers, and instrumentation for test and measurement applications.

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✓ Accelerometers

Configurations include miniature transducers, bi- & tri-axial measurement, submersible – in screw type, bolt mount, & epoxy mounting configurations.



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✓ Instrumentation

Includes single & multi-channel units, pressure gauges, in-line amplifiers, power supplies, transducer simulators; analog & micro-processor based.



✓ Load Cells

General purpose to fatigue-rated, high performance, Honeywell offers a comprehensive selection of tension, compression, & universal load cells.



✓ LVDTs

Large selection of linear variable displacement transducers (LVDTs) meets the rugged requirements of single- & multiple-point industrial gauging.



✓ Pressure Transducers

Absolute, gage, & true gage pressure sensors for test & measurement specs, from general industrial processes to specialized hazardous locations.



✓ Torque Transducers

From basic torque telemetry to advanced digital measurement, Honeywell has been designing rotary & reaction torque transducers for more than 50 years.



Honeywell

Honeywell competitors	
❖ Emerson	❖ Schneider Electric
❖ GE	❖ 3M
❖ Rockwell Automation	❖ Bosch
❖ Yokogawa	❖ Siemens
❖ Johnson Controls	❖ Endress+Hauser
❖ ABB	❖ TE Connectivity

*Industries:

- Petrochemical
- Oil refinery
- Gas refinery
- Copper industry
- Steel industry
- Ceramics industry
- Paper Industry
- power distribution
- Utilities
- Food Industry
- Chemicals
- Healthcare
- Aerospace Technologies
- Logistics & Supply Chain Management
- Building Automation

Customers in Iran

▪ Khorasan Petrochemical Co.	▪ Arvandan Oil & Gas
▪ Marun Petrochemical Co.	▪ National Iranian copper Co.
▪ Bushehr Petrochemical Co.	▪ Isfahan Oil Refinery Co.
▪ Razi Petrochemical Co.	▪ Abadan Oil Refinery Co.
▪ Mahabad Petrochemical Co.	▪ Hashemi Nejad Gas Refinery Co.
▪ Kermanshah Petrochemical Co.	▪ Khorasan Steel Complex Co.
▪ Kordestan Petrochemical Co.	▪ Khorasan Electricity Distribution Co
▪ Lorestan Petrochemical Co.	▪ SPGC
▪ Pars Oil & Gas Co.	▪ SPEC

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