# GAS PRESSURE REGULATORS FOR DEMANDING GAS OPERATIONS



# Rely on Recognized Expertise in Gas Pressure Control

When it comes to today's demanding natural gas industry, there is no room for error. Measurement and control instruments must provide a high level of performance—all the time, in every environment. Honeywell offers a comprehensive line of gas regulation products enabling dependable operations for the various applications in the gas value chain.

#### Your Complete Partner

- Over 150 years in the natural gas industry
- Automation and control, and measurement portfolio backed by more than 100 years of experience
- Global domain expertise with local support
- Broad suite of products, from single regulators to turnkey solutions
- Seamless integration with plant-wide automation and security
- Guaranteed compliance and accuracy in custody transfer.

With our comprehensive product portfolio, gas industry companies are assured of precise and reliable pressure control. Honeywell's rugged and accurate gas pressure regulators and control/safety valves deliver outstanding long-term performance and a low total cost of ownership.

#### Meet Today's Challenges

Throughout the global gas industry, there are critical challenges related to energy security, climate change, regulatory oversight and more. Rising energy demand is accompanied by key concerns such as regulatory policies and geopolitics as well as price volatility and economic uncertainty. At the same time, developments like shale gas and expansion of the liquefied natural gas (LNG) trade are changing the face of the energy market.

Now, more than ever, gas operators need to partner with an equipment supplier with deep domain expertise, a comprehensive portfolio, and experience helping users integrate operations, maximize asset utilization, and reduce total cost of ownership (TCO).

#### Worldwide Leadership

No matter the operational requirement, Honeywell has the technology and know-how to help you

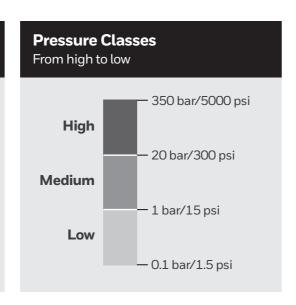
succeed. We offer a broad portfolio of products and solutions ranging from integrated control and safety systems, SCADA and RTU platforms, exception-based surveillance technology, data visibility and intelligence, to a complete line of standalone gas pressure regulators, flow control valves, metering and safety devices, as well as complete systems for gas pressure reduction stations. There's no better partner to assist with control, analysis, measurement, and storage of your gas inventory.

#### Responsive Local Support

The world's major gas providers turn to Honeywell to optimize their diverse operations. We have pioneered regulators for the gas business for more than 100 years, offering end-to-end, smart metering solutions for a host of crucial applications. Customers also count on responsive local support delivered by over 1,000 Honeywell employees. We maintain 7 locations in five countries, strategically situated worldwide. Honeywell regulators have been deployed worldwide more then 250,000+ times and have a customer base of 1400+ customers ranging from local gas distribution companies and power plants to major national gas transportation companies, from direct end customers to pressure station builders.

# Sub Verticals Covering the whole natural gas value chain Transmission Distribution

Commercial/ Industrial Utilization



#### Experience Where It's Needed

No other regulator supplier has more expertise in natural gas than Honeywell. From upstream gas production, to transmission, storage and distribution we understand all aspects of the industry. We collaborate with industrial, commercial and gas distribution customers to apply unsurpassed measurement and control experience—wherever it's needed.

#### Solutions Across the Gas Value Chain

Honeywell understands the unique business processes of companies in the rapidly growing natural gas market. The gas value chain demands tightly integrated solutions that provide lower TCO and increased asset utilization to help maximize profitability.

Honeywell delivers accurate, stable and efficient pressure regulation solutions for use across the gas value chain from underground storage units, gas-fired power plants, industrial plants to city gate stations. We have solutions for all tough applications. We work closely with customers to ensure the safety, dependability and performance of their gas assets once they become operational—and throughout the entire life of the investment.

We have products for all possible applications meeting the most diverse customer needs. Our portfolio spans these whole pressure ranges—from regulators which operate at inlet pressures as low as 100 mbar/1.5 psi up to products which accurately regulate at inlet pressures as high as 350 bar/5000 psi. Apart from regulators our portfolio includes all auxiliary equipment needed to complement the regulator to form a full pressure reduction offering including safety valves, actuators, pilots, filters, gas pre-heater, venting valves, etc.

Beyond single products we can offer our customers the fully engineered gas regulation solution. This can range from off-the shelf solutions, offered as standardized packages up to fully customized solutions, which are provided as turnkey projects.

From standalone products to complete engineered solutions, Honeywell covers the needs of the entire natural gas value chain with a comprehensive line-up of gas regulators, from low to high pressure applications and with a broad range of valve designs.

#### Standardized Solutions

Example of a standardized package is our gas trains offering. These are small skids which provide a stable and reliable supply of natural gas to gas engines. Gas engines is a rapidly growing segment of combustion engines which can be deployed at land as small power supply or emergency backup as well as at sea as propulsion engine for LNG tankers or power supply for cruise ships. Another example of a standardized solution are underground modules. These are standard pressure reduction skids in a container which can be buried underground and are an ideal solution for urban areas with space limitations.

#### **Engineered Automation**

Beyond this we can support our customers by helping them to integrate their regulators into the remote operations. Our engineered automation solution enables remote monitoring and control and is targeted at customers who want to optimize their existing gas station or gas supply.





## Flagship Regulator Portfolio

From the large portfolio of regulator and valve products, Honeywell has selected the Flagship offerings to cover the majority of our customer applications over the entire gas value chain. The advantages of having this Flagship Portfolio are that it allows for faster lead times and quicker responses to inquiries and request for quotations. The rest of the portfolio remains and constitutes one of the key strengths of Honeywell gas solutions: the ability to address the most diverse customer needs with a comprehensive offering.

Pressure Range		High Pressure (from 20 Bar up to 100 Bar)										
Application		Transmission, Storage, Distribution, Power, Industrial Distribution, Industrial								Distribution		
Product Category		Regulator		Flow Control Valve		Safety Shut-off Valve		Regulator	Regulator with Option of Integrated SSV		Regulator—Direct and with Pilot	
Product	Picture										*	
	Name	HON 512	HON R100	HON 530-E SP/WG	HON C210S	HON 711	HON HSV086	HON 5020	HON 502/3	HON 402	HON 370/2	
	Туре	Axial	Globe	Globe/Axial	Globe	Axial	Globe	Membrane	Membrane	Membrane	Globe	



#### HON 512

The HON 512 is recognized for its use in transmission and distribution stations and large industrial facilities such as feeding gas turbines in natural gas power

plants. It is highly configurable with superior stability and reliability. Users benefit from unmatched gas throughput thanks to an axial flow design, as well as exceptionally fast response. It is easily integrated into standard distributed control system (DCS) platforms, and its versatile expansion options enable lower capital expenditures (CAPEX).



#### **HON R100**

At the transition points of the large national gas networks into the regional distribution grid and at the connection points of large power

plants and industrial facilities to the high pressure grid, large volumes of natural gas have to be reduced from high inlet pressures to much lower values. Essential is that the outlet pressure is kept accurately constant even when the high inlet pressure strongly fluctuates and large variations in demand occur. HON R100 series of high-pressure regulators is ideal for these applications.



#### **HON 530-ESP**

The HON 530 series consists of electrically operated flow control valves. These valves supply a constant flow of gas independent of the inlet pressure and are

available up to inlet sizes of 20"/DN500. Best suited for flow control in gas storage and natural gas networks.



#### **HON 530-EWG**

The HON 530-E WG is a flow control valve with an electric actuator for electronic flow or pressure control. It is ideal

for feeding gas into and/or withdrawing gas from gas storage facilities and important gas mains.



#### **HON C210S**

The HON C210 is a pneumatically operated flow control valve with excellent control characteristics, high degree of accuracy, low noise

output, and a fast response time. It is used to control the gas flow in transmission networks.

### **Accurate and Reliable**

Honeywell's Portfolio of gas pressure regulation solutions sets the standard for accuracy and reliability. Our gas regulators are rigorously tested and employ state-of-the-art technology. They are designed to handle higher system pressures, ensuring gas delivery and reduced noise output, resulting in increased capacity without emission of natural gas.



#### **HON 711**

The HON 711 is a Safety Shut-off Valve (SSV) used for safeguarding against emergency situations. The SSV's unique axial design ensures minimum pressure

drop, while at the same time it supports an in-line maintenance capability, which saves time and money for the operator. This safety valve is used in transmission stations in gas networks, as well as in power plants and industrial facilities.



#### HON HSV086

The HON HSV086 is a Safety Shut-off Valve (SSV) offering superior over-pressure and under-pressure protection. This shut-off valves is used in gas

transmission systems, gas distribution networks and industrial gas pressure regulating systems.



#### HON 5020

The HON 5020 gas pressure regulator features state-of-the-art external pilot operation for safe and accurate control of outlet

pressure. Known for its industry-leading stability and reliability, the regulator is a quieter, better performing, modular pilot solution for a wide range of gas applications. Users also achieve lower maintenance and support costs. Target applications are distribution and industrial pressure reducing stations.



#### **HON 502**

The HON 502 is a pilotoperated gas pressure regulator which is widely deployed in transfer stations in gas transport networks,

power plants and industrial facilities, as well as gas storage facilities.



#### **HON 503**

The HON 503 is a design variant of HON 502, which incorporates an integrated Safety Shut-off Valve (SSV).



#### **HON 402**

The HON 402, a pilot-operated gas pressure regulator with integrated safety shut-off valve (SSV). This regulator is ideal for use in gas transmission

stations as well as in power plants and industrial facilities with inlet pressures of up to 50 bar.



#### **HON 370**

The HON 370 is a springloaded, direct-acting gas pressure regulator that is excellent for dynamic regulating lines (i.e., gas furnaces).



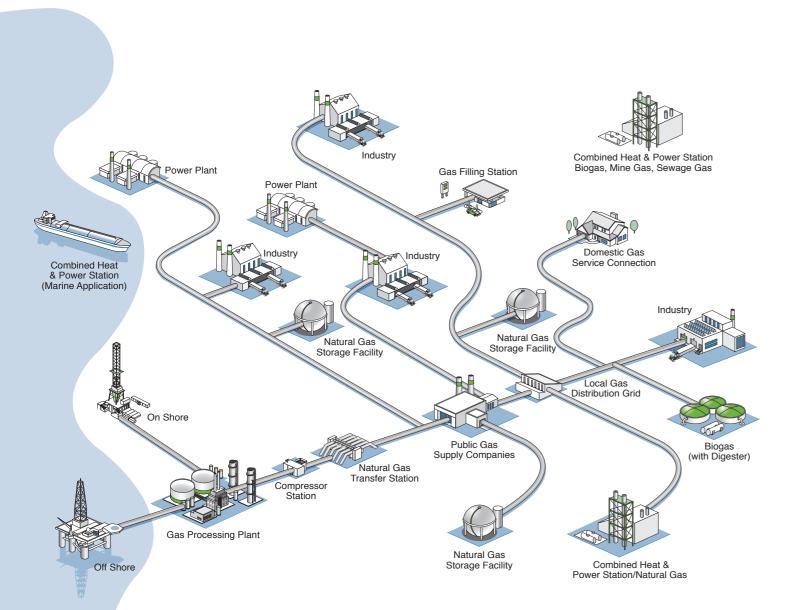
#### **HON 372**

The HON 372 is the pilotoperated version of the HON370. Ease of maintenance is due to interchangeable functional units. This regulator is ideal for off-take

stations in gas transmission as well as commercial and industrial facilities.

# **Discover Integrated Solutions and Technology**

Smart, integrated solutions that deliver optimum performance no matter where you operate in the gas value chain.



## **Choosing the Right Product**

In a natural gas system, pressure reducing regulators are used both for transmission and distribution applications. With the broad diversity of pressure-related measurement and control requirement it is essential to choose a regulator that's right for the job.

	Product										
Application	HON 512	HON R100	HON 530	HON C210S	HON 711	HON HSV086	HON 5020	HON 502/3	HON 402	HON 370/372	GASTRAINS
Compressor Stations			•	•	•	•					
Gas Pressure Reducing Skids	•	•		•	•	•	•	•			
Gas Storage			•	•	•	•					
Gas Power Stations (on Transmission Network)	•	•			•	•	•	•			
Industrial & Commercial (on Transmission Network)	•	•			•	•	•	•			
City/Regional Gas Suppliers	•	•			•	•	•	•			
Local Distribution Stations									•	•	
Industrial & Commercial Utilization									•	•	
CHP Station Marine									•		•
CHP Station Land (Natural Gas)									•		•
CHP Station Land (Biogas, Mine Gas, Sewage Gas)									•		•

Product Name	Туре	Max. Inlet Bar/psi	Min. Outlet Pressure Bar/psi	Max. Outlet Pressure Bar/psi	Min. Inlet Size mm/inch	Max. Inlet Size mm/inch	Min. Outlet Size mm/inch	Max. Outlet Size mm/inch	AC	SG	Capacity KG
HON 512	Regulator	100/1450	0.3/4.4	90/1305	25/1	300/12	25/1	600/24	1	5	55000
HON R100	Regulator	100/1450	3/44	60/870	25/1	400/16	25/1	400/16	1	10	87000
HON 530-ESP	Flow Control	100/1450	0/0	100/1450	50/2	200/8	50/2	300/12	N/A	N/A	23000
HON 530-EWG	Flow Control	100/1450*	0/0	100/1450*	200/8	500/20	200/8	500/20	N/A	N/A	19200
HON C210S	Flow Control	100/1450	0/0	100/1450	100/4	400/16	100/4	400/16	N/A	N/A	87000
HON 711	Safety Valve	100/1450	0/0	90/1305	25/1	300/12	25/1	300/12	N/A	N/A	13040
HSV086	Safety Valve	100/1450	0/0	100/1450	25/1	400/16	25/1	400/16	N/A	N/A	10000
HON 5020	Regulator	100/1450	0.015/0.2	90/1305	25/1	150/6	25/1	150/6	5	5	14000
HON 502	Regulator	100/1450	0.3/4.4	90/1305	25/1	200/8	50/2	300/12	5	5	27000
HON 503	Regulator	100/1450	0.3/4.4	90/1305	25/1	150/6	25/1	300/12	5	5	13200
H0N 402	Regulator	50/725	0.02/0.3	40/580	25/1	100/4	25/1	200/8	5	5	550
HON 370	Regulator	20/290	0.02/0.3	4/58	25/1	150/6	25/1	150/6	5	5	12800
HON 372	Regulator	20/290	0.01/0.1	15/218	25/1	150/6	25/1	150/6	5	5	12800

\*cl. 900 (150 bar) upon request



Scan this QR Code to see how Honeywell's integrated gas solutions can help you to better manage your gas assets and optimize your value chain.

#### For more information

To learn more about Honeywell's Flagship Regulator Portfolio, visit www.honeywellprocess.com or contact your Honeywell account manager.

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