

The image shows a large industrial HVAC system. A prominent red motor is connected to a large, grey, cylindrical unit. Yellow pipes are visible on the left side. The system is mounted on a metal frame with stairs. The background is a clean, industrial setting with a tiled floor.

rotork[®]

Keeping the World Flowing
for Future Generations

Industrial and Offshore HVAC Overview



Exposed ventilation systems in a cargo ship's empty storage hold

Industrial and Offshore HVAC

Working with industrial and offshore industries for more than 60 years, we have partnered with corporations and legislative bodies to improve process efficiency, reduce energy consumption and above all, ensure safe working operations.

Our products and flow control solutions are important components in HVAC installations.

- Valve actuators are used for valve and damper applications including isolation valves and air damper operation
- Fail-safe solutions are specified on emergency safety systems such as fire dampers used in tunnel ventilation
- Precision instrumentation is used, including sensors for differential pressure, drive belt monitoring and humidity
- Intelligent HVAC controllers are used in applications including volume flow sensing and temperature control

Rotork products are known for accuracy and reliability, reducing process waste and increasing efficiency. Our reliability delivers longer product lifespans, reducing plant maintenance and increasing profitability. Rotork products pay for themselves many times over during their life cycles.

This is why Rotork is specified as the flow control partner of choice for the global HVAC industry.

Understanding Your Challenges

Our HVAC experience allows us to understand your process requirements and deliver solutions.

Combined systems integrate HVAC with safety systems such as smoke and gas detection, prevention of smoke ingress to areas, safe smoke and gas clearance, interaction with main fire and gas systems, provision of minimum life support conditions and pressurisation of spaces and airlocks.

HVAC equipment must be certified for uses including waterproof, dustproof, high and low temperatures, toxic environments and potentially explosive atmospheres (with approvals such as ATEX, CSA, IECEx, EAC, CCC).

Operational costs

Increasing lifespan, reducing maintenance and improving efficiency of HVAC installations means less plant downtime, less energy consumption and reduced operational costs.

Energy consumption

We know that reducing energy consumption of industrial buildings and transport vessels is vital; Rotork products help you achieve this without compromising safety or reliability.

Safety in remote locations

We understand that offshore can mean platforms, shipping and submarines. Each of these is a remote and potentially hazardous environment where high safety levels are critical.

Moving to zero emissions

We can help you reduce your emissions and achieve your targets. Zero emission targets for industry are fast approaching – The EU (2050), China (2060).

Controlled environments

Industry can require highly accurate environmental control to achieve desired production yields. Rotork products are renowned for high accuracy, repeatability and reliability.

Durability and reliability

We know that reducing energy consumption of industrial buildings and transport vessels is vital; Rotork products help you achieve this without compromising safety or reliability.

Life cycle management

Plant designers and managers can reduce the risk of equipment failure and obsolescence by utilising Rotork's advanced technologies and asset management systems.



ExMax electric actuator

Used widely in HVAC damper applications. Available as safe area and explosionproof versions



The Importance of Flow Control

Correctly specified flow control equipment can provide a safe working environment, increase process efficiency, reduce emissions and increase your profitability.

Valve actuators automatically and remotely control dampers, heaters and humidifiers and are essential items of HVAC equipment. Sensors, filter monitors and controllers work with actuators and other equipment to monitor conditions and control the environment.

Accuracy, repeatability, reliability, efficiency and safety are the key factors in choosing HVAC flow control equipment.

Process efficiency

The ability to move quickly and precisely to a set position will make your process more efficient, minimise waste and reduce energy consumption.

Repeatability

Many operations require valves and dampers to move repeatedly between set positions. Rotork electric actuators provide precise operation, with repeatability and resolution.

Reliability

Flow control equipment should be specified correctly to operate in the chosen process environment. Our products are certified for operation in HVAC works applications including water-tight, dust-tight, high temperature and potentially explosive atmospheres.

Safety

Tunnels and underground buildings have areas requiring emergency flow control procedures to stop fire spreading and divert smoke away from people. Rotork safety related actuators can operate within 0.5 sec to fully open/closed.

Reduced maintenance

Installing correctly specified and highly engineered solutions will reduce unplanned maintenance and plant downtime. Our intelligent diagnostics work with asset management systems to maximise plant uptime.

Cost of ownership

Rotork products are designed and engineered to very high performance levels. They pay for themselves many times over during their life cycles.



RC200 actuator and YTC valve positioner

Compact pneumatic solutions – ready to use combinations for fail-safe air damper operation



Rotork in HVAC Applications

Rotork recently provided more than 3,000 HVAC flow control products for essential ventilation safety functions in process module buildings at a major oil and gas development in Kazakhstan.

Challenge

Our customer required rugged HVAC products to monitor and control the environment within their process (production) modules. Actuation of safety critical fire and gas dampers was essential for a safe and reliable system.

Solution

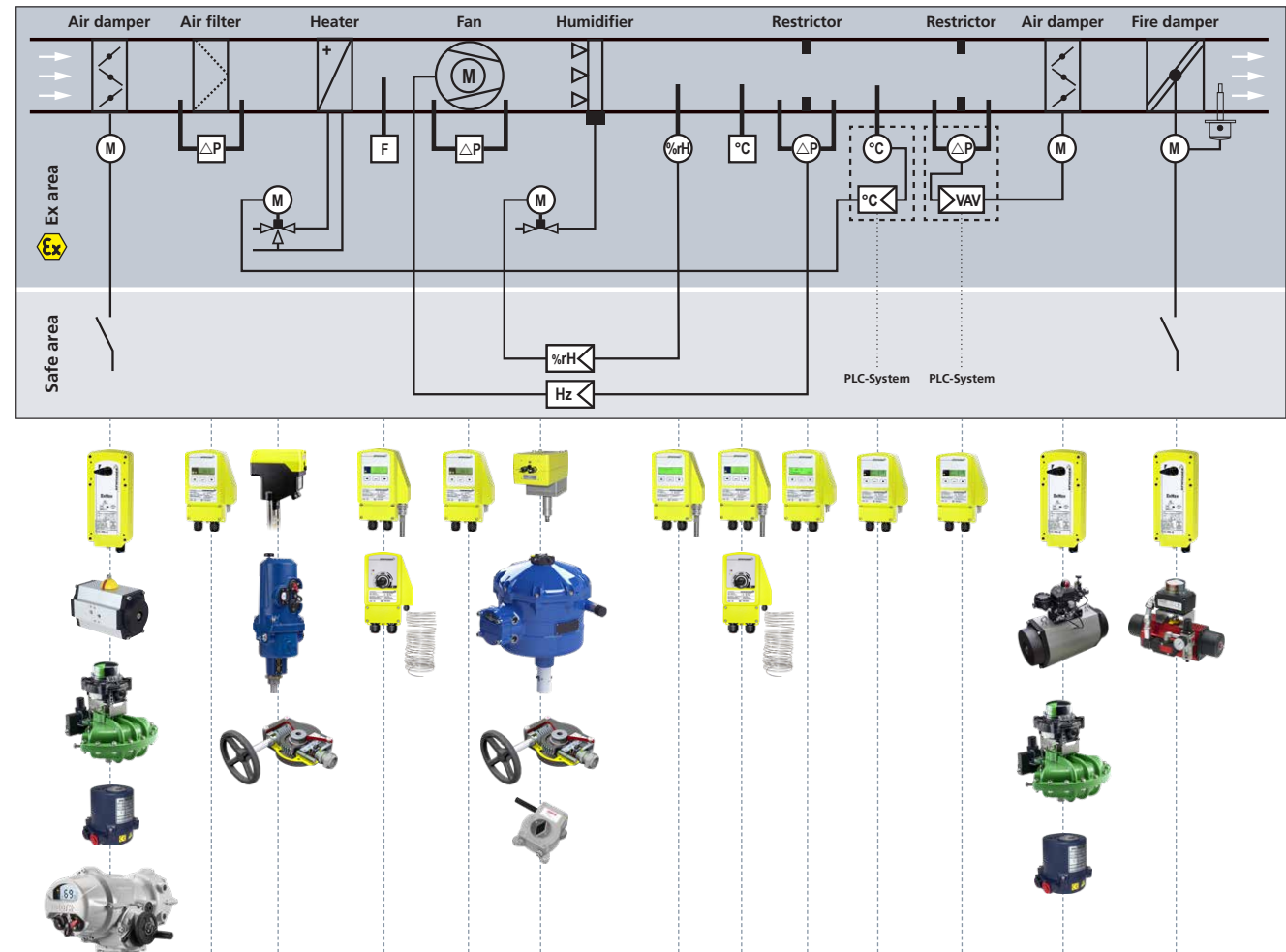
Rotork enabled monitoring and control of the environments within process and production modules and buildings with Rotork stainless steel and hydrogen-sulphide resistant electric and pneumatic products. 1,650 GTS pneumatic rack and pinion actuators and 400 Rotork Schischek ExMax-VAS fail-safe spring return actuators provided flow control, while 1,000 Schischek ExCos-P differential pressure and ExCos-D temperature sensors provided measurement capabilities.

Customer Benefits

The electric and pneumatic fail-safe actuators operate safety critical fire dampers, emergency shut-off and control dampers. This created a safe working environment in a situation where this is critical.

The stainless-steel electric actuators provide a fail-safe solution. The stainless-steel construct is resistant against atmospheres potentially contaminated with concentrations of hydrogen sulphide ensuring continued safe operation. The stainless-steel sensors are designed specifically for HVAC applications (temperature and pressure ranges) rather than “de-tuned” process sensors.


The Rotork product portfolio allowed us to tailor HVAC solutions to suit individual applications. We consider the environment, atmosphere, existing plant equipment and energy supply options before proposing our solution:



Product Solutions for Industrial and Offshore HVAC

Rotork design engineers work with plant managers, network systems engineers, legislative bodies and government environmental groups to specify and supply the correct solutions for your requirements.

Our extensive product range allows us to meet all your requirements and help you achieve your goals. For detailed application information see our Application Focus documents available on rotork.com

<p>Electric Actuators</p> <p>Schischek Range – Compact explosionproof part-turn and linear actuators</p> 	<p>Fluid Power Actuators</p> <p>RC Range – Compact scotch yoke actuators</p> 	<p>Instrumentation and Control</p> <p>Limit Switch Boxes and Valve Positioners</p> 	<p>Instrumentation and Control</p> <p>Environmental Sensors and HVAC Controllers</p> 	<p>Service and Aftermarket</p> <p>Lifetime Management</p> 
<p>IQ Range – Multi-turn and part-turn actuators for arduous environments</p> 	<p>GT Range – Rack and pinion actuators</p> 	<p>Air preparation – Filters, regulators, lubricators and accessories</p> 	<p>Poppet Valves</p> 	<p>Intelligent Asset Management</p> 
<p>CVA & CMA Ranges – Linear, part-turn and rotary precision modulating actuators</p> 	<p>K-TORK Range – Pneumatic vane actuators</p> 	<p>Volume Boosters</p> 	<p>Compact Pneumatic Solutions – Ready to use combinations of flow control equipment</p> 	<p>Spares</p> 
<p>ROM & RCEL Ranges – Compact general purpose electric actuators</p> 	<p>Gearboxes and Valve Accessories</p> <p>Hand Operated and Motorised – Part-turn and multi-turn gear operators</p> 	<p>Solenoid Valves</p> 	<p>Manifolds</p> 	<p>Life Cycle Services</p> 



Trusted Partner

Rotork is a market-leading provider of flow control and instrumentation solutions. We have served global industrial actuation and flow control markets for more than 60 years, delivering results in all regions and in all environmental situations.

Our reliability record is second to none. Rotork products are designed with safety and performance at their core and are put through vigorous testing by international safety institutes. Our products are certified for use in the world's most dangerous, and hazardous areas.

Partnering with Rotork provides the following:

- Assured safety and reliability
- Industry leading accuracy and efficiency
- Proven technology that works with all control systems
- Product range with solutions to suit every application
- Assistance with plant planning, development and maintenance through our local support service

History shows we are a company to do business with:

- Established in 1957, we have always been innovators and leaders in flow control technology
- Safety is a core value of our business and products
- We have innovative research and development centres throughout the world
- With 3,400 employees globally and 85 sites, we provide local service on a global scale
- We are embracing a more diverse workforce
- We are committed to reducing our own environmental impact, reducing water and power usage year-on-year

Our service engineers work with industrial partners to design, update and maintain their plant and equipment.



A full listing of our worldwide sales and service network is available on our website

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