

rotork®

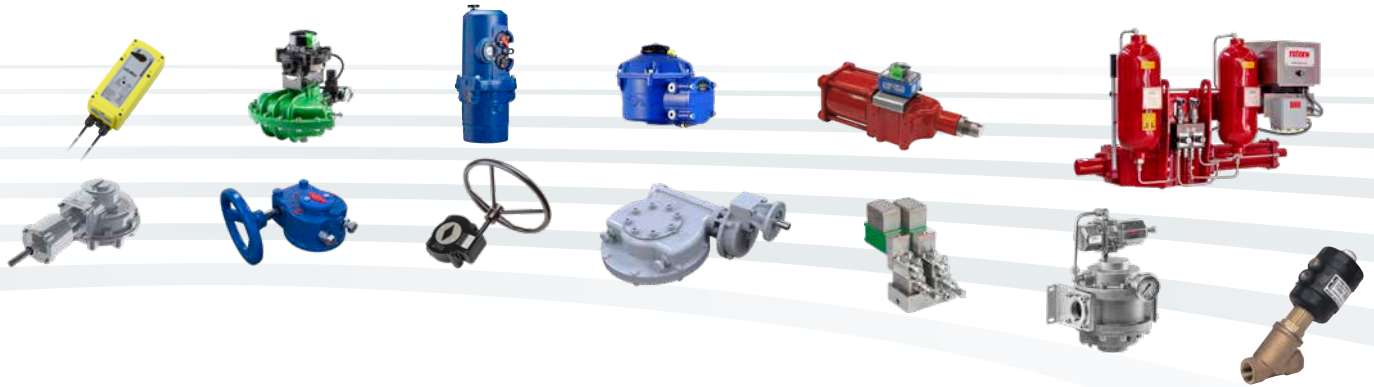
Keeping the World Flowing
for Future Generations

Glass Manufacturing Applications



Advanced Process Control for Glass Manufacturing

Reliability in critical flow control applications



› Reliable operation when it matters

Assured reliability for critical applications and environments. Whether used infrequently or continuously, Rotork products will operate reliably and efficiently.

› Quality-driven global manufacturing

We offer products that have been designed with over 60 years of industry and application knowledge. Our research and development ensures cutting edge products are available for multiple applications across multiple industries.

› Customer focused service and worldwide support

Rotork solve customer challenges and develop new solutions that are tailored to the needs of our clients. We offer dedicated, expert service and support from initial inquiry, to product installation, to long term after sales care.

› Low cost of ownership

Long-term reliability prolongs service life. Rotork helps to reduce long term cost of ownership and provides greater efficiency to process and plant.

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Comprehensive product range serving multiple industries

Rotork products offer improved efficiency, assured safety and environmental protection across sectors such as the Power, Oil & Gas, Water & Wastewater, HVAC, Marine, Mining, Pulp & Paper, Food & Beverage, Pharmaceutical and Chemical sectors.

Market leaders and technical innovators

We have been the recognised market leader in flow control for over 60 years.

Our customers rely upon Rotork for innovative solutions to safely manage the flow of liquids, gases and powders.

Global presence, local service

We are a global company with local support.

Manufacturing sites, service centres and sales offices throughout the world provide unrivalled customer services, fast delivery and ongoing, accessible support.

Corporate social responsibility is at the heart of our business

We are socially, ethically and environmentally responsible and committed to embedding CSR across all our processes and ways of working.

Application Overview

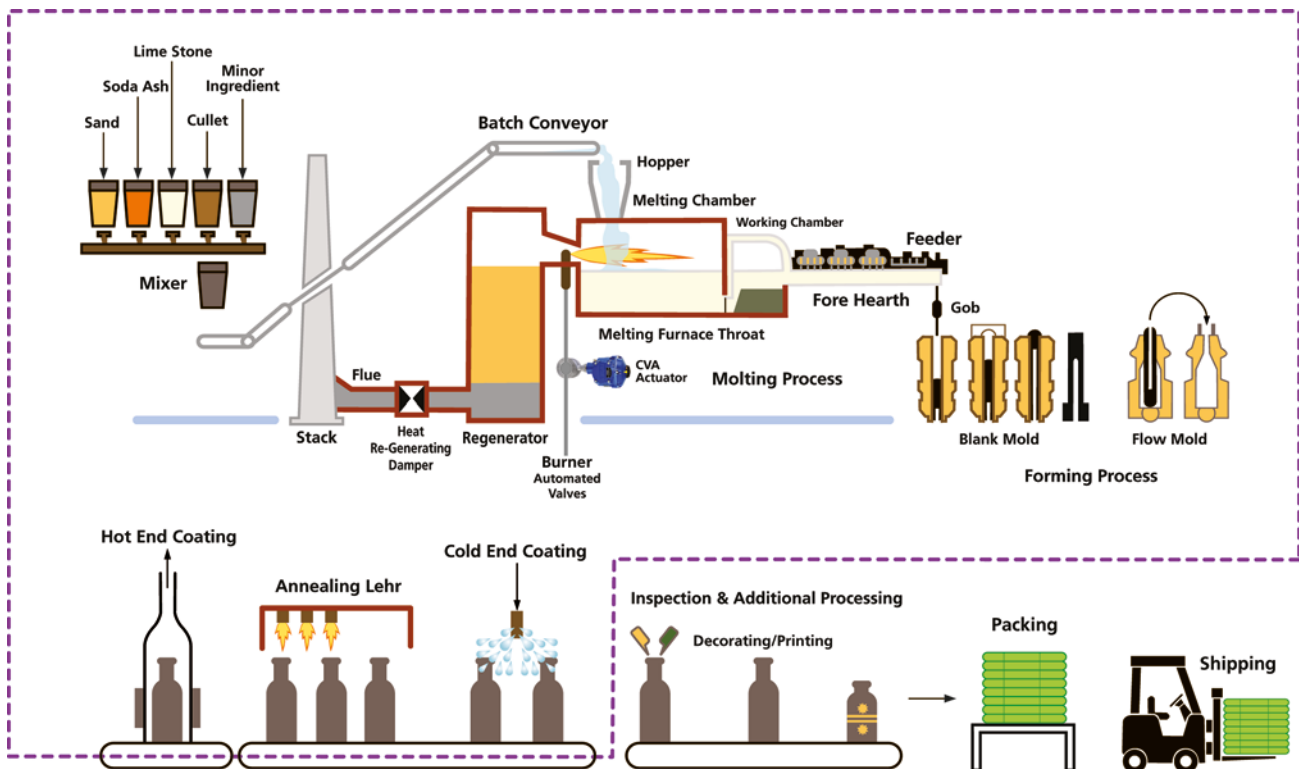
Rotork's CMA and CVA control valve actuators services a variety of needs within the glass manufacturing industry. With options and custom configurations, our products can meet any need, no matter how precise, no matter how demanding.

Glass manufacturing requirements are highly specified and require safety and reliability above all else. Rotork has over 60 years of engineering knowledge and manufacturing expertise, with actuators installed in all applications and industries around the world including CMA and CVA actuators used extensively in glass manufacturing plants.

Actuators play a critical role in fuel valve control, controlling the ratio of gas and oxygen used to fire the furnace to melt the glass. Our precision valve control actuators have a proven history of increasing efficiency and reducing maintenance costs at glass manufacturing sites.



Typical Glass Manufacturing Process



Gas and Oxygen Control at Pharmaceutical Glass Plant

A leading glass manufacturer selected CVAs for a plant in Europe specialising in producing glass and plastic products for the pharmaceutical and life science industry. Products include laboratory glassware, glass and plastic packaging and containers for medical, life science, pharmaceutical and cosmetics purposes.

CVAs replaced older technology electric actuators to improve the modulation rate and provide better control. The CVA is also certified to ATEX hazardous area requirements and has Profibus® communications capability.

The CVAs are mounted to 1" Honeywell control valves to regulate gas flow on the furnace. The actuators control the ratio of natural gas and oxygen used to fire the furnace to melt glass for manufacturing test tubes.

The CVA also provides a Profibus communication capability. This not only facilitates control communications but also diagnostics capability. The digital communication requires less cabling and provides a less complicated installation with a clean, organised appearance.



Gas and Oxygen Control at Fibreglass Plant

An Asian fibreglass manufacturer uses electric actuators for several of their plants. Previously, they used a locally made control valve and actuator but suffered from poor performance of the actuator and valve controls.

Raw fibreglass material (pellet form) is transported from a hopper into a furnace and melted. Globe control valves must accurately control the ratio of natural gas and oxygen to the furnace to melt the raw glass. The precision of the CVA delivers this accurate control.

The correct mixture of natural gas and oxygen will ensure good combustion and provide a lean burn, saving both natural gas and oxygen. Oxygen pipes are grey and natural gas are yellow in the photo.

The melted material is then extruded into fine threads of fibreglass. Water mist is sprayed on the fibre threads. The cooled fibre threads are reeled into coils and sold as finished product. These threads are extremely strong and used to weave or wrap fibreglass pipe, tanks, car bumpers and speed boats.



PROFI
BUS



HART
COMMUNICATION PROTOCOL

CVA and CMA Range – High Precision Control Valve Actuators



Rotork's CVA series is the leading control valve actuator for the glass manufacturing industry. Maintenance engineers in many glass manufacturing plants want to improve the efficiency and life of the furnaces, and the CVA is playing an important role in these improvements.

Whether it's a new plant, expansion or retrofit, the CVA series features include:

- Electrically powered
- Continuous, unrestricted modulation duty – S9
- High resolution and repeatability
- Optional bus interface available
- Comprehensive datalogging
- Watertight IP68 and explosion proof enclosure
- Reliable control to 0.1% resolution
- No stick-slip overshoot
- Programmable fail-to-position option
- Separate, double-sealed terminal compartment
- Optional intrinsically safe control and instrumentation compatible
- Non-intrusive setup/calibration
- Optional manual override
- Available in linear and quarter-turn configuration
- IP68, CSA, ATEX, FM and GOST certified.

See the CVA Range brochure [PUB042-001](#) or visit www.rotork.com for more information.

The CMA range delivers precise position control and continuous modulation for a variety of linear, part-turn and multi-turn control valve and pump applications. CMA actuators can be optimised for the specific application with the addition of local controls, a positional display and a Reserve Power Pack for fail-to-position functionality.

- Accurate and repeatable position control with up to 0.1% accuracy
- All electric solution for linear, part-turn and multi-turn control valve and pump applications
- Explosionproof to international standards
- Less than 1 watt standby power
- Optional Reserve Power Pack (RPP) for fail-to-position functionality
- Adjustable speed control
- Brushless DC motor for reliable, accurate, S9 / Class D continuous modulation capability
- Encoder technology for dependable position measurement
- Suitable for mounting in any orientation
- Built-in HMI allows for quick and simple setup
- Permanently lubricated, maintenance-free drive train
- Zero stick slip during operation
- Optional integral local controls and positional display
- Suitable for 1-phase or DC power supplies
- Compatible with a wide variety of fieldbus, hardwired and analogue site systems

See the CMA Range brochure [PUB094-001](#) or visit www.rotork.com for more information.

rotork®



www.rotork.com

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

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