

rotork®

Process Controls



Glass Manufacturing **Applications**



Advanced Process Control
for Glass Manufacturing

Established Leaders in Actuation Technology

Application Overview

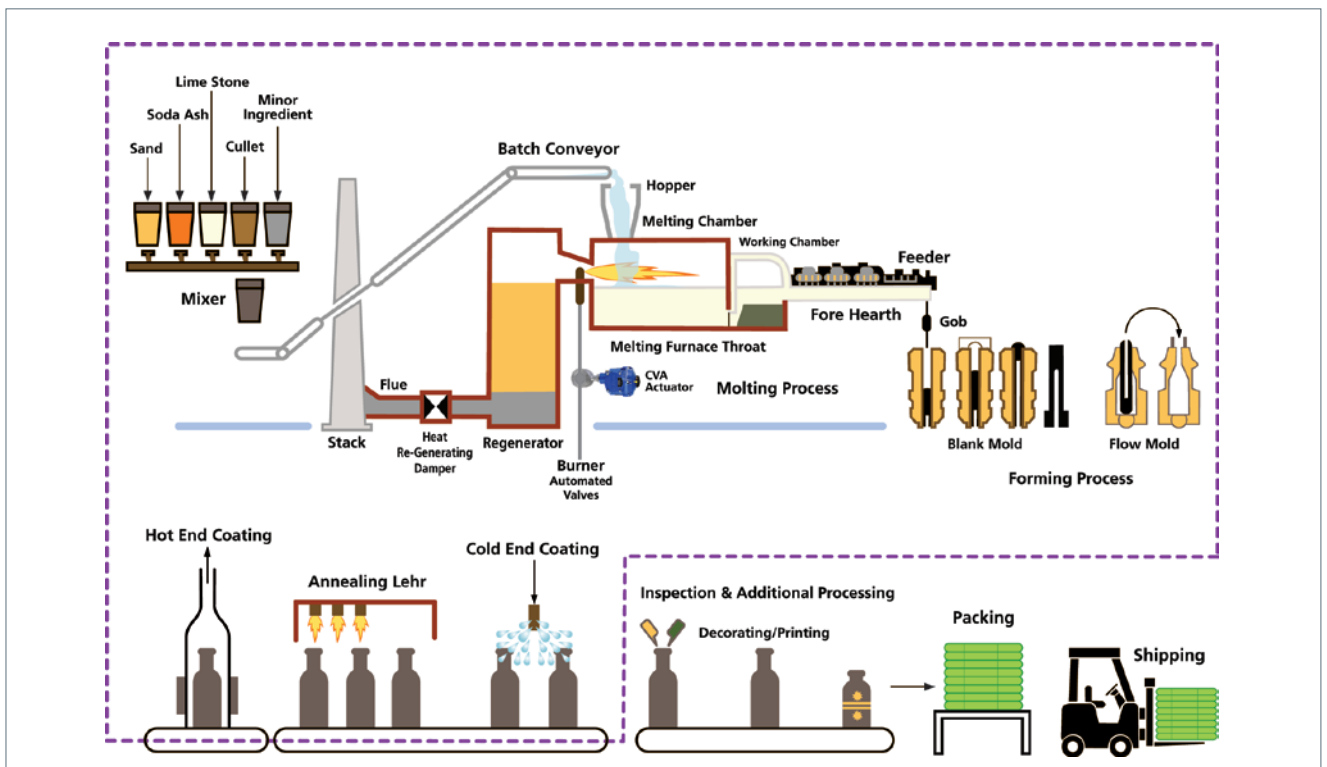
Rotork Process Control's CVA Series of control valve actuators services a variety of needs within the glass manufacturing industry. With options and custom configurations, RPC products can meet any need, no matter how precise, no matter how demanding.

Glass manufacturing requirements are highly specified and require safety and reliability above all else. With over 50 years of engineering and manufacturing expertise, we have thousands of successful valve actuator installations worldwide with hundreds of CVAs 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

A leading glass manufacturer selected CVAs for a plant in Europe specializing 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, organized appearance.



Gas and Oxygen Control at Fiberglass Plant

An Asian fiberglass 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 fiberglass 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 gray and natural gas are yellow in the photo.

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



**PROFI
BUS**



HART
COMMUNICATION PROTOCOL

CVA Range – Linear and Quarter-Turn Actuators

CVA - Linear & Rotary actuators



Rotork Process Control'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.





Electric Actuators and Control Systems
Fluid Power Actuators and Control Systems
Gearboxes and Gear Operators
Projects, Services and Retrofit

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

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