



## Case Study

# Gas blending process adopts CVA for improved accuracy, economy and environmental performance

**Industry:** Oil & Gas - Compressor Stations  
**Client:** Fluxys, Belgium  
**Product:** CVA

### Summary

In an effort to reduce costs, Fluxys decided to evaluate their blending process. It was decided that process valve response times and control efficiency both needed to be improved. Rotork provided CVL-5000 actuators so that this goal could be achieved.

### Overview

Rotork's innovative CVA electric control valve actuator technology has successfully delivered an improvement in performance with reduced operating costs for the vital gas blending process on a European natural gas distribution network.

### Challenge

Fluxys is the independent operator of the natural gas storage and transmission system in Belgium, supplying domestic and industrial consumers throughout the country. Natural gas can come from different sources and the composition of each source varies, so the quality of the gas is closely monitored for calorific value and density at blending stations.

The gas blending process is therefore a critical part of the transmission and storage structure, impacting on product quality, environmental regulations and profitability.

Wishing to improve the blending process, Fluxys identified valve actuation as a key area. Improving process valve response times whilst reducing dead-time and overshoot would increase control efficiency and eliminate potential cycling and variability problems. If an electrical solution could also be found, it would reduce operating costs and improve environmental performance by eliminating the requirement to waste gas through venting to air as determined by existing equipment.

### Solution

Rotork's agent in Belgium, proposed the use of the CVL-5000 electric control valve actuator as an alternative to the existing actuator on a blending flow control valve in a trial at the Fluxys booster station at Le Roeulx. As well as simplified, all-electric operation with low power consumption, the CVL-5000 delivers a high thrust linear output performance that suits the heavy duty demands of the large control valves used in the application, combined with a programmable integral fail-safe capability.



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Engineers from Fluxys, Rotork and Mokveld removed the existing actuator, fitted an ATEX certified explosionproof CVL-5000, re-connected the control signal and carried out a series of tests that demonstrated improved response times, accurate valve positioning, low running costs and fail-to-position operation on loss of mains supply.

Fluxys decided to adopt the CVL-5000 as the standard actuator for its gas blending plants; over time, existing valves will be retrofitted whilst new valves will have the actuators factory fitted. It is estimated that the improved performance achieved by each valve installation can be accompanied by an annual saving of up to 5,000 Euros in operating costs per unit.

The Rotork CVL linear electric process control actuator offers a highly accurate and responsive method of automating control valves, without the complexity and cost of a pneumatic supply. With resolution figures better than 0.1% and the ability to

eliminate position overshoot, the CVL helps to maximise product quality and plant capacity.

The CVL is built in a range of sizes suitable for almost all linear control valve applications requiring very accurate positioning. It offers end users high standards in performance, build quality and overall value. Standard features include continuous unrestricted modulation duty (S9); single-phase or DC power supplies; on-board data logger; non-intrusive set-up, control and diagnostics; watertight IP68 and explosionproof enclosures; digital communication choices including HART and Profibus; configurable fail-to-position ability using supercapacitor technology.



*Above: Rotork CVL-5000 linear electric actuator.*