

Accelerated commissioning with re-designed, pre-assembled, ready-to-install modules

RESULTS

- Replaced 25-year old valves with state-of-the-art valve pneumatic technology
- Reduced hardware requirements by over 80% with a compact form factor
- Saved valuable commissioning time by pre-assembling and testing valves
- Minimized maintenance and replacement with valve reliability of 75 million switching cycles



APPLICATION

Construction chemicals

CUSTOMER

Claviag AG, Moosleerau, Switzerland

CHALLENGE

Since 1968 Claviag AG—a subsidiary of Nouryon Chemicals AG—has sought ways to improve its formula and process reliability for manufacturing products used by the dry mortar industry. Producing over thirty different dispersion powders, Claviag AG revolutionized the industry with the industry's first redispersable polymer powder and an important component in tile adhesive, ELOTEX®.

After switching to Bosch valve systems for its state-of-the-art, pneumatic control technology over 25 years ago, spare parts were no longer available. The company decided to modernize its pneumatic control system, taking advantage of the latest valve technology to actuate numerous metering units and other actuators in the branched system.

SOLUTION

Claviag AG decided to install the AV03 valve series from Emerson's industry-leading AVENTICS™ product range. A compact design and simple assembly was required since several hundred valves needed to be installed in the plant's basement. The slider's diagonal arrangement inside the valve allowed Emerson's engineers to reduce the size to that of a business card.

Delivering ultra-reliable, compact form factor valves, Emerson replaced 25-year-old valves with innovative pneumatics, accelerating conversions with pre-assembled, tested, and ready-to-install modules.

With more than two hundred air tubes needing to be installed correctly and matched with the corresponding electric control signals, the conversion was extremely complicated. To make things easier for Claviag AG, Emerson engineers pre-assembled the valves on aluminum plates according to the company's specifications, sending the ready-to-install modules to Switzerland. They also provided assistance during the conversion.

Reduced hardware requirements by more than 80%

The AES series hardware controls up to 64 valves with two coils, reducing the hardware requirements for electronics by more than 80 percent over the old Bosch valve systems—which only had space for 12 valves—and reliably achieving up to 75 million switching cycles. In addition to the PROFIBUS DP, AES supports PROFINET IO, EtherCAT, DeviceNet, CANopen, Ethernet/IP, POWERLINK, and IO-Link protocols.

“We delivered the valve systems pre-assembled and tested, which saved valuable time during commissioning.”

Daniel Boner
Sales Engineer at Emerson



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