

OPTIMIZE COMPRESSOR SYSTEMS

From the Valve to the Controller



IMPROVE RELIABILITY

The overall success of a refinery is often determined by a system's availability and reliability. A mechanical failure or malfunction, due to errors of equipment control systems, could lead to monetary consequences with costs reaching up to seven figures per day. A shutdown could be caused by a wet gas compressor or a main air blower trip in a fluidized catalytic cracker unit. Machine trip of additional equipment, such as the hydrogen recycle compressor in the catalytic reformer, could also lead to large production losses.

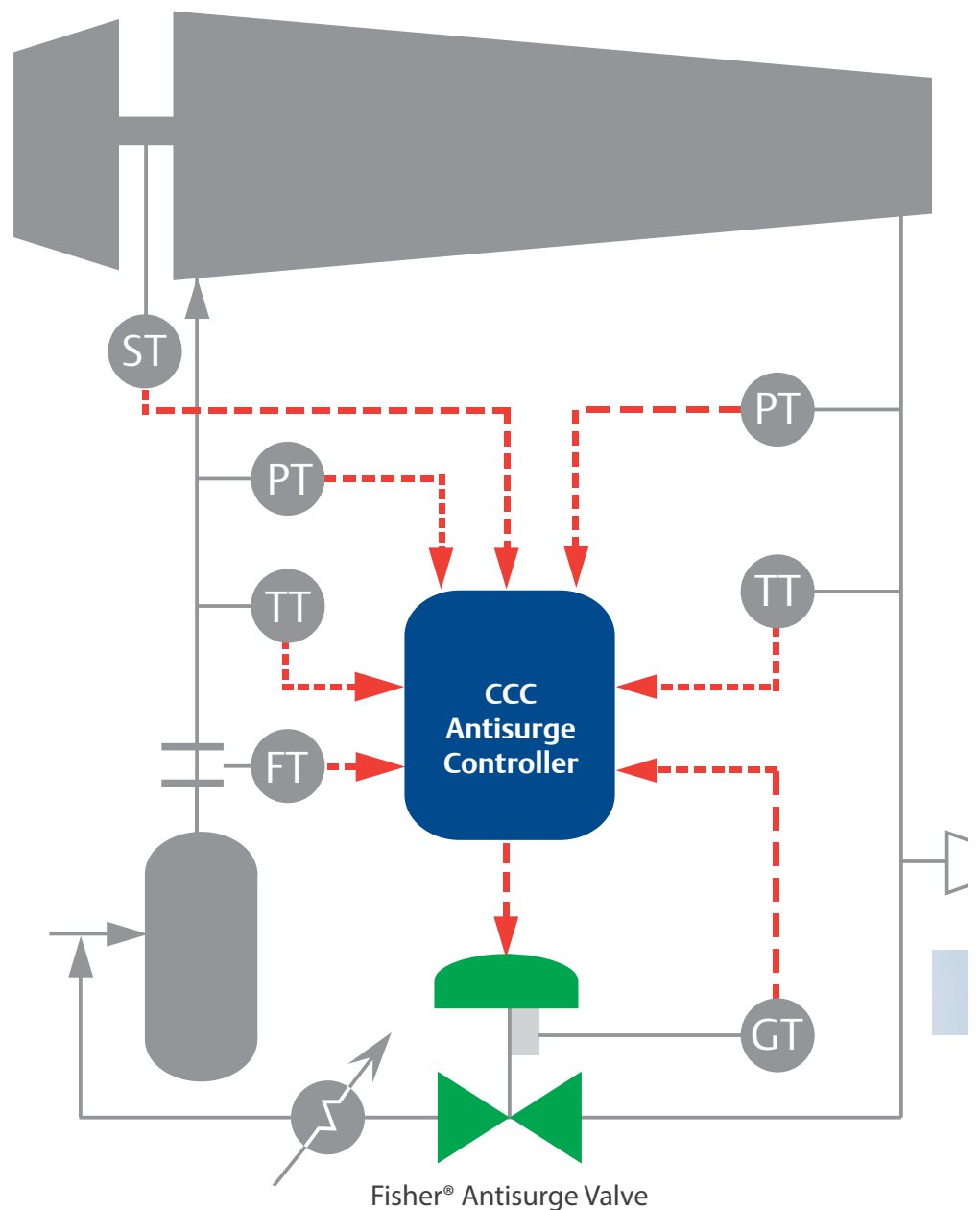
A well-designed antisurge control system must be configured in a manner where all components are working together to minimize the risks of mechanical failure or shutdown of the machine. Compressor Controls Corporation (CCC) engineers and Emerson valve engineers have worked together to do just that, provide a complete valve-to-controller, integrated solution.

REDUCE PLANT SHUTDOWNS

- Improve failure detection with quick and easy diagnostics
- Maintain your operation with fallback strategies that help you in case of transmitter failure
- Minimize risk of shutdown with embedded CCC control applications functionality and engineering solutions

IMPROVE PLANT EFFICIENCY

- Increase overall unit efficiency by reducing or eliminating unnecessary recycling
- Balance load between compressor trains with advanced and proven load sharing algorithms
- Reduce risk of trips with advanced control algorithms, including feed-forward control, Pressure Override Control (POC), and Loop Decoupling



OPTIMIZE PERFORMANCE

The wet gas compressor can be one of the most challenging machine control applications in a refinery. This is due to the significant changes in inlet gas composition coupled with the importance of precise pressure control. CCC provides the optimized balance between plant uptime, safety, and profitability. CCC antisurge algorithms are designed and selected to automatically adapt to gas composition changes. Combined performance and speed control solutions (on steam turbine driven units) provide unparalleled pressure control precision and stability. The result is a significantly expanded compressor operating envelope, offering maximized head production in a safe and controlled manner.

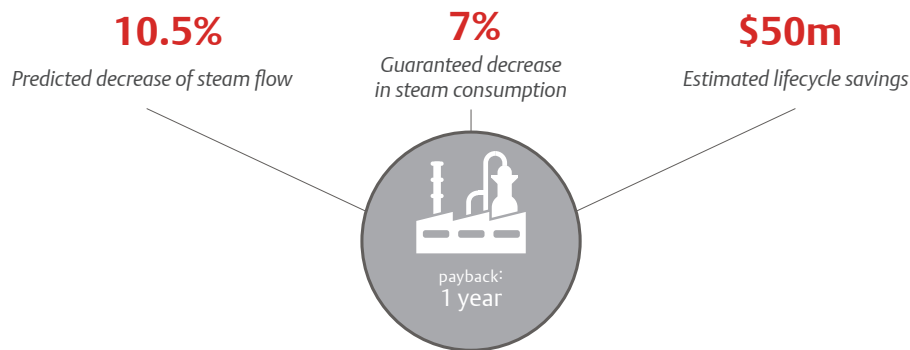
Antisurge valves are a critical component to protecting any compressor and downstream process. Repeatability and accuracy of these valves are key elements to any successful control system. In collaboration with CCC, Emerson valve engineers have a firm understanding of the controller requirements for antisurge valve performance and have developed factory and site test standards to fulfill those needs. These standards help enable repeatable and reliable performance, whether producing a new valve assembly at the factory or upgrading an existing Fisher® valve assembly.

CCC PROVES AND GUARANTEES ENERGY SAVINGS



The CCC and Emerson combined solution leads to substantial energy savings. The greatest value we provide you is our expertise around the entire process. Our unified, solution-oriented approach delivers the highest reliability and optimized performance to meet your specific needs.

Results recently achieved by a CCC customer:



How the Process Works



EXPERIENCE THE DIFFERENCE

Are you ready to achieve world-class compressor efficiency?

CONTACT US



Schedule a site assessment with a CCC expert and see the Optimized Antisurge Control Simulator in-person. Click or scan the QR code to learn more about the energy savings guarantee.



Set up an appointment with a Fisher expert and see the Optimized Antisurge Control Simulator in-person. Click or scan the QR code to find a local Emerson sales office near you.

LEARN MORE



Watch a video that highlights the precision and speed at which the Fisher valve and CCC control system work together to keep the process running at maximum efficiency.

Emerson Process Management, Fisher

Marshalltown, Iowa 50158 USA
Sorocaba, 18087 Brazil
Chatham, Kent ME4 4QZ UK
Dubai, United Arab Emirates
Singapore 128461 Singapore

www.Fisher.com

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