Main components
- Industrial PLC
- Operator display
- PC based configuration tool
- Serial interfacing to DCS

Two invariant coordinate systems
- Reduced head (h_r) versus reduced flow (q_r)
- Compression ratio (RC) versus reduced flow (q_r)

Calculated variables
- Invariant coordinate values are used for control; the ACA foresees in calculation of the compressor engineering variables for display purposes to the operator

Four lines of protection
- Surge detect line
- Open loop response line
- Surge control line
- Predictive control line

Feed forward control
- Interactions between multiple antisurge control loops or between antisurge control loop and a performance control loop for increased stability at process disturbances

Sequencing
- Automatic loading and unloading of a compressor in conjunction with its companion performance controller

Projected flow algorithm
- Enables running without a functioning flow transmitter or even without a flow measurement

Compressor performance deviation alarming
- Expected and actual performance are compared and alarmed in case diverging

Fallback strategies
- Continued and stabilized compressor running when one or more of the measurements used for protection fail

Alarms and events
- Time stamped alarm and event reporting for signaling and troubleshooting purposes

Sequence of event history on control system hardware, time stamped
- Standard (x) points* history in stand alone mode

Critical event (such as a compressor surge) back-up on control system platform
- High resolution recording of critical parameters, (x) minutes* prior and (y) minutes* after the event

User friendly application configurator
- Upper screen provides for loop configuration settings
- Lower screen shows dedicated loop’s contribution to overall output

Surge tester
- Straight forward surge validation and testing
- Fully automatic configuration of tested surge points
- Easy interfacing for surge line modifications
- Password protected user level access

Application control functions are selectable
- Customize each application individually by enabling or disabling site specific functionality (no programming)

Configuration tool
- Hardware platform independent
- Compressor maps
- Faceplate
- Automated surge line testing and validation

*) Quantity is configurable