

# INNOVATIVE CONTROL SOLUTIONS FOR COMPRESSED AIR UTILITIES



- **Energy Efficiency Improvements Provide Rapid ROI**
- **Open Hardware Solutions – Proven Standard Building Blocks**
- **Unparalleled Support for Installed Systems**
- **Improved System Reliability • Utilizing IIoT Technologies**

**CASE<sup>®</sup>**  
**CONTROLS**  
*A Revolution in Compressor Automation*



### AIR MASTER<sup>®</sup>

For maximum energy efficiency, you need load sharing. Managing multiple compressors—particularly centrifugal compressors—for energy efficiency is a hot topic, and a complex one. One size does not fit all, as the OEM local controller is designed to control and protect one compressor without regard for what the rest of the system is doing. This leads to one inescapable fact: You cannot accomplish true load sharing without having an open local controller that is designed to dovetail with the master controller. AirMaster is a PLC software solution that will automatically start, stop and throttle multiple compressors

for the greatest energy savings without sacrificing reliability.

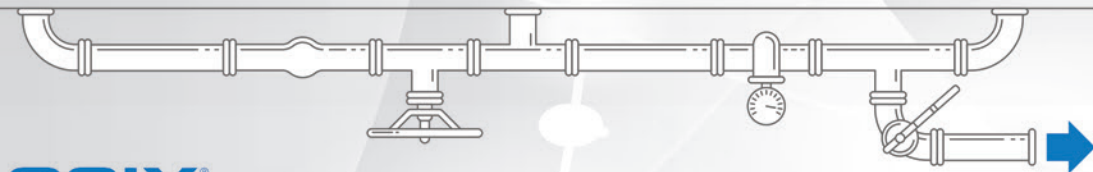
AirMaster eliminates unnecessary blow-off by utilizing the turn-down of all centrifugal machines in the system until maximum system turndown has been reached. In other words, you will see multiple machines throttle to prevent opening blow-off valves, until there is sufficient capacity to allow one machine to unload, timeout, and shutdown. Under the rules defined by you, an unloaded machine can be shut down and restarted automatically to further maximize energy savings.



### FLOATING MASTER



### MULTIPLE CENTRIFUGALS



### AIR LOGIX<sup>®</sup>

#### Proven PLC-Based Centrifugal Air Compressor Controls

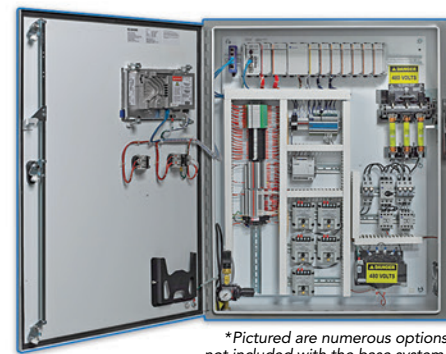
AirLogix is a widely proven, robust control solution for centrifugal compressors built on Allen-Bradley CompactLogix and ControlLogix PLCs utilizing PanelView HMIs.

This system is completely supportable with existing resources without any Case Controls proprietary components.

The control scheme completely automates the compressor, continuously adjusting to real-world scenarios and conditions.

#### AirLogix Features and Benefits:

- **Dynamic Throttle Limit (DTL™) Algorithm** utilizes air density compensation for better turn-down—which results in energy savings and improving surge protection.
- **Elaborate HMI Functionality** allows full configuration, tuning, troubleshooting, and operation of the compressor.
- **Any Allen-Bradley PLC and HMI Platforms** can be easily supported. No Case Controls proprietary parts required.
- **Plug and Play Retrokits for OEM Controllers** are available for fast installation in your existing enclosure.
- **Ethernet/IP Communication** is native and other protocols are optional for connection to any third-party system.
- **Program Back-up Copies** are provided on flash cards and shipped installed in the PLC and HMI for insurance against hardware failure.
- **Documentation** thoroughly addresses set-up, tuning, troubleshooting and operations.
- **24/7/365 Support**, by phone or remote connection is prompt and effective.



\*Pictured are numerous options not included with the base system.

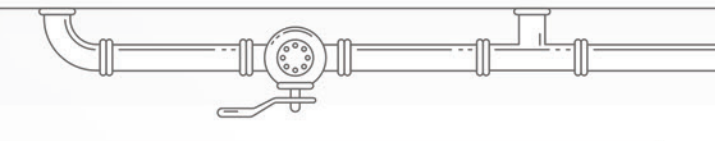
### AIR MASTER 3PX<sup>™</sup>

#### Fixed MASTER with 3<sup>RD</sup> Party Exchange

- All the Benefits of AirMaster PLUS the Integration of Rotary Screw and Reciprocating Compressors
- Provides Data Concentration to an Allen-Bradley PLC for Ease of Sharing Data with the Plant's DCS



### MULTIPLE CENTRIFUGALS



### AIR VIEW<sup>™</sup>

#### Compressed Air System Visualization

The compressor room is usually not the most convenient or hospitable environment to operate your compressors or monitor your compressor data. Early detection of compressor performance issues is key to avoiding costly repairs and downtime.

With Case Controls AirView data visualization systems, the possibilities for compressor data monitoring are numerous.

#### AirView Features and Benefits:

- Real-time Data Monitoring from a Central/Remote Location
- Monitor All Compressor Controllers Simultaneously
- Scalable to Monitor Other Utility Systems

#### A Platform to Fit Your Needs:

- **AirViewSRP (Supervisory Redundant PanelView)** configures a PanelView unit to monitor all compressors from one location (local controller PanelView remains).
- **AirViewME (Machine Edition)** is a PC-based FactoryTalk View system that allows you to view the local compressor controllers.
- **AirViewSE (Site Edition)** is a Server Class FactoryTalk View system for viewing the local compressor controllers and long-term historical data.
- **AirViewCloud (Remote Access)** provides web-based monitoring of your compressors for viewing historical data or events from any web browser enabled device. \*Please contact Case Controls for further details.



#### AirStarPD

AirStarPD is the trusted aftermarket local controller to manage a Rotary Screw or Reciprocating compressor.

#### AirStarPD Features and Benefits:

- Built on an Allen-Bradley MicroLogix PLC platform to NEMA and NEC standards
- Housed in a NEMA 4/12 or 4X enclosure (OEM Retrokits are also available)
- Familiar PLC technology and there are no Case Controls proprietary components
- Well conceived screens provide the operator with detailed machine performance information

Allen-Bradley CompactLogix & ControlLogix Hardware available for substituting the MicroLogix hardware—branded: **AirLogixPD**  
AirStarPD can be applied to VFD machines—branded: **AirStarPD-VFD**

#### AirStarPD-SAS

AirStarPD-SAS controllers offer a unique control scheme for SullAir two-stage, rotary screw compressors with spiral valve.

#### AirStarPD-SAS Features and Benefits:

- Increased accuracy as demand changes, PID loop-controlled-tuning to plant-specific demand
- Better efficiency by fully utilizing the spiral valve, thereby minimizing use of the inlet valve throttle
- Reduced maintenance by eliminating pneumatic solenoids, shuttle valves, regulators, and filters
- Allen-Bradley PLC improves reliability, flexibility and supportability
- Tighter pressure tolerance
- Quick response to demand changes
- Eliminates need for regular adjustments

#### AirStarDC

AirStarDC is a robust control solution for air compressor dryers built on Allen-Bradley PLCs. This system is completely supportable with your own resources.

#### AirStarDC Features and Benefits:

- The control scheme completely automates the dryer cycle
- Well conceived screens provide the operator with detailed performance information
- All system data is available for remote access for existing connected enterprise
- Energy Management System (EMS)
  - Matches Drying Capacity to the Process Demands of the Dryer
  - Increases the Life of the Desiccant



### OEM BLACK BOX



### AIR STAR DC<sup>™</sup>

Allen-Bradley CompactLogix & ControlLogix Hardware available for substituting the MicroLogix hardware—branded: **AirLogixDC**

COMPRESSED AIR OUT TO THE PLANT



## AIR SUPPORT™

### Remote Support for Compressed Air Systems

Case offers 24-hour support that is professional, prompt and results driven. Prepaid AirSupport packages offer discounted support hours and eliminates purchasing or administrative hurdles in downtime emergencies. AirSupport-E (Enhanced) programs offer unlimited Help Desk support and other proactive services that provide machine performance data for preventive and predictive maintenance activities.

### Remote Administration

AirSupport can be administered remotely. If VPN access is not available, Case will provide a cellular modem giving access to all networked compressor controllers. You have control over the modem and must turn it on to allow access. Case can then make diagnostic service calls to all compressor controllers on the network at your request.

### Services Performed:

- PLC Hardware & Instrument Troubleshooting
- Troubleshooting Compressor Mechanical Issues
- Inlet & Bypass Valve Performance Analysis
- Live Trending of All Compressor Variables
- Review of Historical Trends (Kept on-board the PLC)
- Throttle Surge Testing
- PID Loop Tuning
- Monitor On-Site Commissioning Services
- Custom PLC and HMI Programming
- On-Site Services Available



## AIR WATCH™

AirWatch keeps you aware of developing issues in your compressor's operation allowing you to forecast maintenance needs. Avoid downtime due to unforeseen failures and minimize costs with AirWatch. AirWatch services can be performed on demand as part of a comprehensive AirSupport program.

Using a remote connection, Case retrieves data stored in the PLC generating a complete report that includes tabular data and graphical trends. The report is then reviewed by one of our engineers who adds comments and recommendations helping you make informed decisions about predictive compressor operation maintenance.

### AirWatch Features and Benefits:

A typical AirWatch Report consists of several pages of recorded data pulled directly from the controller(s). The following reports are included:

- Cover Page with Contact Info, Machine ID, and Case Serial Number
- Recommendations Page with Comments About the Collected Data
- Compressor Data Page shows Overall Compressor Design Nameplate Data
- Configuration Page shows Analog Input Scaling, Surge and PID Parameters, Alarm, and Trip Setpoints
- AirMaster Load Sharing Configurations / Event History / Surge Graphs / Trip Graphs / 30 Day History of All Analog Variables

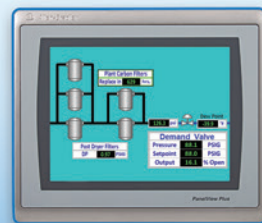
## AIR GATE™

AirGate is a valve controller that allows compressed air to be shared between headers. It is tightly integrated and implemented as part of a Case Controls AirMaster system to provide optimization to a facility with multiple headers. The AirGate solution can be applied as a simple cross over valve or implemented as a pressure flow controller system.

AirGate will help improve overall system efficiency and also provide improved reliability and pressure stability.

### Five Modes of Operation:

- Manual Setpoint Control
- Bypass Reduction Mode
- Low Pressure Control Only
- Low Pressure Control with High Pressure Protection
- Low Pressure Control with High and Low Pressure Protection



## HISTORY

Case Engineering has a long history with innovation. Since 1986, Case Controls has served a variety of industries with automation systems for manufacturing and process control. We earned our reputation for quality and integrity as an Authorized Allen-Bradley Systems Integrator. In 1992, we developed our first centrifugal compressor controller.

Vision, hard work, and our commitment to innovation sparked a revolution in compressor automation that has become Case Controls. Today, Case Controls is dedicated exclusively to the development of leading-edge control technologies for centrifugal compressed air machines.

Given the chance to tell our story, we are convinced you will agree. Case Controls is the obvious choice for your Compressor Automation Systems.



## SOLUTIONS

Case Controls is a suite of innovative solutions for managing centrifugal air compressors of any make or size. You will benefit from a common platform approach that utilizes familiar programmable logic controller (PLC) technology. However, rugged hardware in a non-proprietary package is just the beginning. The real solution is software.

Case is more than controls—it's a philosophy that puts you in charge. Break the cycle of obsolescence and dependence on a single source OEM. Connect easily to your plant network with the most open communication protocols available. Gain easy access to responsive, phone, modem, and on-site technical support—24 hours a day.

### Case Offers Robust Software Solutions, Open Architecture, and Flexibility You Won't Find Anywhere Else:

- Capture Energy Dollars Lost to Inflexible "Black Box" Systems
- Reduce Downtime and Overhauls with Superior Surge Protection
- Simplify Your Daily Operations with Sophisticated Automation

Case is a group of dedicated professionals committed to building the best controls for your compressor. Take a closer look and you will agree ...

***Case Controls is a Revolution in Compressor Automation!***

**AIR MASTER**

**AIR MASTER 3PX**

**AIR SUPPORT**

**AIR WATCH**

**AIR GATE**

**AIR LOGIX**

**AIR LOGIX PD**

**AIR LOGIX DC**

**AIR VIEW**

**AIR VIEW CLOUD**

**AIR STAR PD**

**AIR STAR PD-SAS**

**AIR STAR PD-VFD**

**AIR STAR DC**

**AIR SEQUAL**

**CASE CONTROLS®**  
*A Revolution in Compressor Automation*

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