

AIR MASTER™

Load Sharing Solution for Multiple Air Compressors

Unless you are the exception to the rule, your demand profile does not perfectly match your supply side capacity. For maximum energy efficiency, you need load sharing (also called load shedding or load balancing). 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.



FLOATING-MASTER ARCHITECTURE

When Case Controls AirLogix local controllers are used, AirMaster does not require a dedicated Master PLC. Under our proprietary Floating Master scheme, the logic resides redundantly in each local controller; the controller “in charge” executes logic to manage the entire system via network communications.

Should the controller “in charge” be lost for any reason, the next priority controller takes over and manages the remaining machines. Each machine retains its local system pressure transmitter for use by the entire system. All networked controllers powered by AirMaster can be configured from any local controller or remote HMI.

FEATURES AND BENEFITS

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.

AUTO PRIORITY ROTATION

AirMaster can be configured to rotate the run time priority of some or all compressors at various intervals giving you even run time on like-sized machines.



A Revolution in Compressor Automation

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DEDICATED MASTER ARCHITECTURE

When AirLogix local control systems are not installed on all compressors, Case meets the challenge of managing multiple compressors of different compressor types and varying local control systems with AirMaster 3PX. AirMaster 3PX requires a dedicated Master PLC in which the system management and control is executed. This solution is designed to manage centrifugal, rotary screw, and reciprocating compressors with original OEM or Case supplied local control systems.

MANAGING THIRD-PARTY CONTROLLERS

AirMaster can be installed on a Case Controls 3PXBackBone™ controller, allowing communication to third party OEM proprietary control systems. The OEM systems can then be incorporated into the AirMaster control scheme without replacing all of the existing local controllers.

This makes AirMaster benefits available to a growing list of OEM local controllers on positive displacement and centrifugal machines alike.



AIRMASTER FOR NON-CENTRIFUGALS

When Rotary Screws, Variable Speed Screws, or Reciprocating Compressors are in the mix, with or without centrifugals, an engineered approach is taken to gain the best energy efficiency possible. Contact Case for a control solution designed specifically to your needs.



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