SPECIAL



COMPRESSOR MANAGEMENT

LICENSE TO EFFICIENCY

Compressed air is essential for many work steps in manufacturing companies. However, the system efficiency of compressed air generation is often not given enough attention. A compressor control system can provide lasting relief here.

During the lifespan of a compressed air system, various inefficiencies creep in. Reasons include incorrectly dimensioned or poorly controlled compressors, improper use, inefficient and incorrect filtering and leaks. As a result, there are significant hidden operating costs. And although many companies are aware that compressed air systems have great potential for energy savings, they are hesitant to solve this problem.

Although flow meters and monitoring systems are often installed to identify savings potential, the information available alone does not mean that energy is saved or the system is improved in any way.

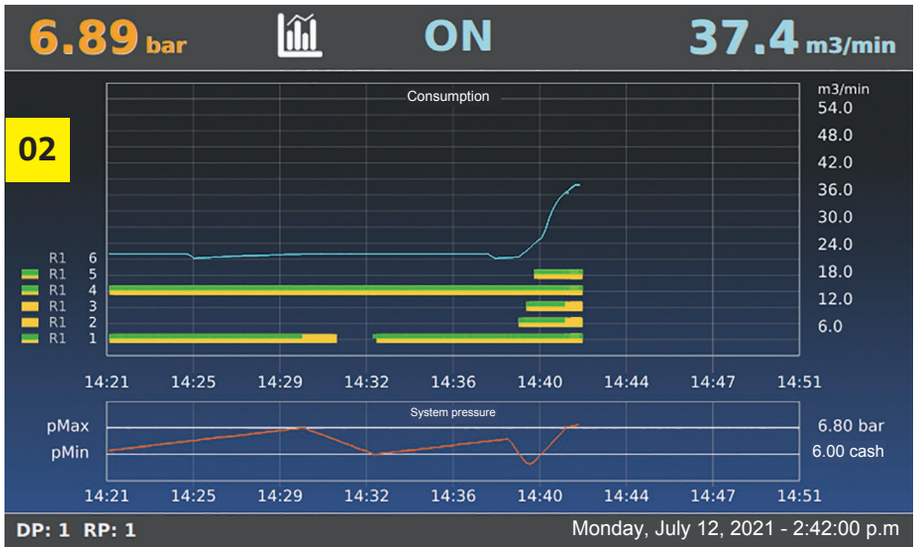
RELIABLE COMPRESSED AIR GENERATION AT A HIGH EFFICIENCY LEVEL

The solution to the problem is to install a compressor ren management system with which the compressed air generators can be managed to achieve the best performance at all times. Most compressed air experts agree that good control is the key to improving overall efficiency. When implementing a compressor control system, the goal is to ensure that the system responds in a predictable, reliable and efficient manner. This can be achieved with an intelligent controller that not only monitors the systems and provides operational data, but also takes control of the entire system. This ensures that the best possible compressor combination continuously and reliably produces compressed air at the most energy-efficient level.

COMPRESSOR OPERATION OPTIMALLY COORDINATED AND CONTROLLED

One such system is the Airleader Master Controller from WF Steuerungstechnik. The current version draws on more than





01 With the latest controller model Master II+ it is now also possible to actively control the speed of several speed-controlled compressors from any manufacturer to influence 01 This from the visualization of the Master II+ familiar overall diagram now also appears on the touch display

25 years of practical experience have been incorporated. Airleader focuses on the optimal combination of installed compressors to enable the lowest energy consumption for current needs. As demand changes, Airleader adjusts the combination to reflect the new level.

Additional sensors can be added to ensure the system responds immediately to new requirements or spontaneous changes in usage.

With the latest controller model Master II+, it is now possible to actively influence the speed of several speed-controlled compressors from any manufacturer. The new “FU-Control” function allows even greater energy savings. If several FU compressors are in use at the same time, a new algorithm monitors every five seconds

WITH THE CONTROLLER, THE BEST POSSIBLE COMPRESSOR COMBINATION GENERATES COMPRESSED AIR AT THE MOST ENERGY EFFICIENT LEVEL

the compressors are running in the “green” range. If not, the pressure specification (ACTUAL pressure) is changed dynamically in order to influence the speed of the compressors so that they operate in the optimal speed range if possible. This means that all compressors can be operated safely without interfering with the compressor's internal controller or frequency converter!

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In principle, Airleader can control practically any brand of compressor without affecting the control system in the unit and the current setup. With the control, the compressed air system is continuously optimized. The system is intrinsically safe: in the event of a failure or malfunction, the compressors operate according to their local settings - no longer as efficient, but still producing compressed air. Historical data is constantly recorded, allowing users to check how the system has been performing for months or even years.

If the compressors are running optimally, you can focus on other inefficiencies such as leaks and thus achieve further savings. The Airleader adapts to the respective circumstances while the user continually reduces his energy requirements.

Photos: Adobe Stock_nordroden, WF Steuerungstechnik

www.airleader.de

COMPANY

WF Steuerungstechnik GmbH
Zeppelinstraße 7-9, 75446 Wiernsheim
Telephone: +49 (0) 7044 911 100
E-Mail: info@airleader.de

ADDITIONAL CONTENT ON THE NET

bit.ly/3FKGHE2

ONLINE DIAGRAM NOW TOO ON TOUCH DISPLAY

The overall diagram familiar from the visualization of the Master II+ now appears also on the touch display and is integrated in the web interface. Not only can this be done directly on the control display Current status of compressed air generation read, but also the past half hour. The colored graphics known from web visualization allow this control of the dynamic behavior of the compressors directly in the station. The effect of a setting made is immediately visible and can be if necessary, be optimized immediately on site. The overall diagram on site is particularly large during commissioning Help to quickly optimize settings.