

Intelligence is in the air

CONVENTIONAL SERVICE UNITS FOR COMPRESSED AIR SYSTEMS ARE SEVERELY LIMITED IN HOW MUCH THEY CAN DO. BUT AN INNOVATIVE NEW SERVICE UNIT SYSTEM FROM FESTO AUTOMATICALLY MONITORS AND REGULATES YOUR SYSTEM, TO MAKE IT EASY TO SAVE ENERGY.

There's stupid, there's smart, and then there's intelligent. And the new Festo MS6-E2M is definitely the last one of those. Because it doesn't just do the absolute minimum (stupid), or even just do what it's told (smart). It actually thinks for itself (intelligent).

Better still, this new service unit for compressed air systems uses its intelligence to do something really useful: save energy. So the more it does, the less you have to, to save energy and cut costs.

No wonder the E2M was a finalist for the German Energy Efficiency Award 2014.

It's also equally effective whether you want to add it to a new, already energy-efficient machine – to make it more energy-efficient than ever – or whether you want to retrofit it to an older installation that needs to meet increasing demands for energy-saving productivity.

Downtime efficiency

Just because a machine isn't producing, doesn't mean it's not consuming energy – either by idling or – in the case of compressed air – through leakage. But with the E2M module it's possible to make even downtime more energy-efficient.

When setting up, you can quickly and easily specify parameters using an MMI manual input device or Profibus, to allow the module to detect at any time whether the machine it's connected to is in production operation or not. If the module establishes that the machine is not operating, it can shut off the compressed air supply. That means there's no possibility of expensive compressed air escaping through any leaks that may exist in the system.

It's the same principle as the automatic stop/start system in many of today's cars, and it helps to save energy and money just as effectively.

Looking for leaks

Given that so many compressed air systems do run with a low level of 'acceptable' leakage, a shut-off of the air supply is clearly a simple and effective way to save energy. However, prevention is even better than cure, so the E2M also detects leaks so you don't have to.

Unlike a human operator, the E2M works even when it's not working. Or in other words, even when it's in shut-off mode, it continually checks the compressed air system for leaks.

All you have to do is pre-define a value for a pressure drop, and if the module detects it, it will signal an alert to the plant control system. This means that leaks are detected before too much air, energy and money is wasted, and repairs or maintenance can be carried out in good time to maintain productivity and efficiency.

An additional option – useful if the E2M is connected to particularly complex production processes – allows the compressed air to be switched on and off manually. Plant operators can deactivate automatic standby detection and instead specify via a PLC when a machine is or isn't in production operation.

The power of information

Real-time information about your compressed air system gives you the power to act to maintain its efficiency and productivity. So the MS6-E2M incorporates an active condition monitoring feature.

The module can be fully integrated into a machine control system, via Profibus, so that it can regularly exchange information such as energy consumption data and machine availability. With up-to-date energy- and process-related data available at all times, any changes in the system's performance or energy consumption will soon be spotted, and the cause can be quickly found and dealt with.

Measured values for flow rate, air consumption and pressure can all be called up at any time, as the basis for continuous intelligent energy monitoring of a machine.

For example, do you know whether your plant is consuming more air flow today than it was, say, at this time last year? With the E2M installed, you can use the data it gathers to help you make exactly that kind of comparison. Or you can use it to tell you how much compressed air is needed for a particular production batch, or whether the air pressure is correctly adjusted.

And if the worst happens and a machine breaks down, the data will tell you how high the pressure and flow rate were at the time of failure, which can help you to identify the cause of the breakdown more quickly.

Simple isn't simple

It takes a highly intelligent piece of equipment to make things look simple. But that's exactly what the Festo MS6-E2M energy-efficiency module does.

It uses innovative intelligence to make it simple to use compressed air more efficiently, which reduces your energy consumption and cuts your fuel bills.

So you don't have to be a genius to see the benefits of the E2M. But you'd be daft if you didn't take advantage of them.

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