

Making compressed air consumption visible

With Festo's energy efficiency module

Electricity and compressed air play an important role in the ice cream production process, for everything from mixing and extruding the ingredients (milk, chocolate, sugar and vanilla beans), to deep-freezing to -25°C, dipping in chocolate, and final packaging. But without knowing how much compressed air was being used, it was difficult to know where and how to make savings.

However, with each of the five lines at the customer's plant extruding one ice cream core per second, and over 20,000 of the ice creams on a stick being produced every hour, the guess was that consumption would be high.

Challenge

The ice cream manufacturer wanted to maintain their high-volume production levels, but at the same time reduce their compressed air consumption. However, part of the problem was not knowing just what that consumption was. The big problem with compressed air, is that air is not visible, so it is not immediately obvious if consumption is too high. So an essential part of the specification for any Festo solution was to make information on compressed air usage fully visible.

Solution

The requirement was for a device which could be incorporated into a new system and retrofitted into existing systems, not only to automatically regulate the compressed air supply but also to measure leaks and provide a continuous stream of process-relevant data.

Festo's MSE6-E2M energy-efficiency module incorporates on-board intelligence – similar to the start-stop system in a car – which, when it detects a standby mode in the equipment it's supplying, automatically shuts off the compressed air supply. This has the additional benefit of making it possible to see how quickly the system empties when individual consumers are switched off, making it easier to locate leaks.

The MSE6-E2M reports immediately to the system controller if there is an unusually fast drop in pressure. It also reports continually on flow, pressure and consumption – in effect making compressed air visible.

Result

Converted into cold, hard cash, the Festo MSE6-E2M energy-efficiency module saved more than £500 per annum on one production line alone, and when you have five production lines that savings mount up. Which for the makers of the ice creams, is energy efficiency that can't be licked.

Industry sector:
Food & Beverage



Application:
Ice cream production line

Actual saving:
£25,000

Payback period:
Unavailable

FESTO

Product/Service:

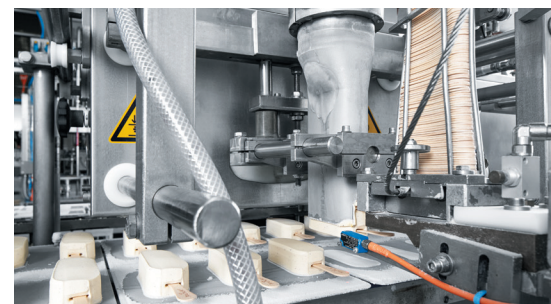
- Energy efficiency module
- Monitoring and automation
- Retrofit to existing systems

Customer Benefits:

- Reduced compressed air usage
- Lower energy bills
- Improvements in production process sustainability



Festo's MSE6-E2M energy module



Measuring compressed air consumption