Energy efficiency on the move in the automotive and Tier 1 supplier industry

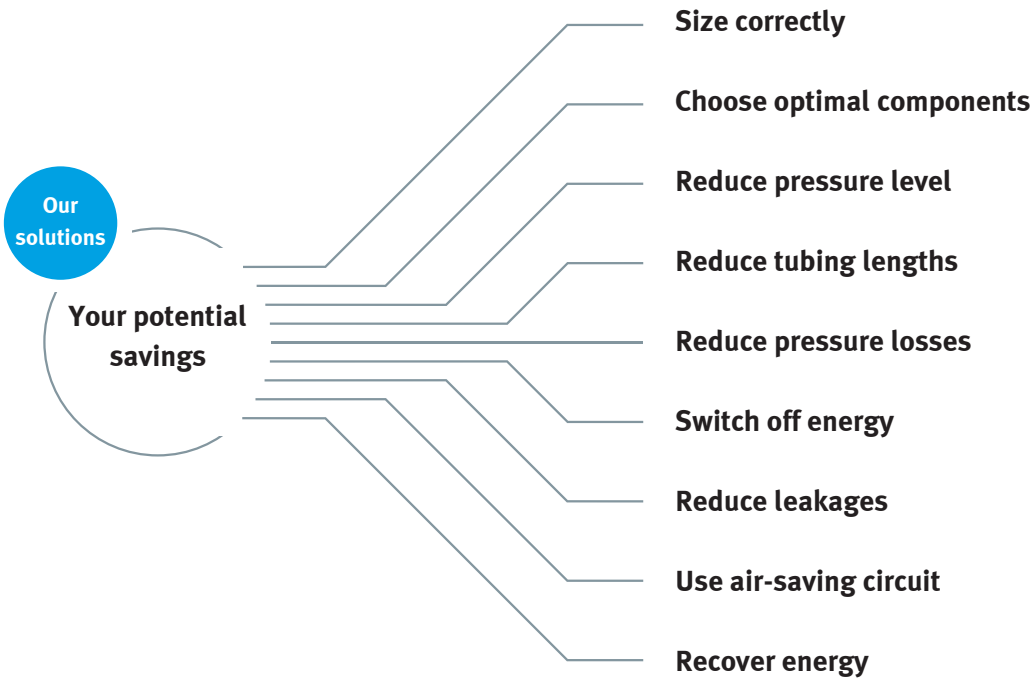
FESTO

Give your production a decisive efficiency boost – and achieve potential savings at the same time.

Save energy at almost every location!

You know yourself how important efficiency is at all stages of production, especially in the automotive and Tier 1 supplier industries. We will be happy to show you how easy it is to save energy while increasing productivity. Many of our products and solutions provide you with optimisations that are quick to realise and are often already integrated!

You should take a closer look at these topics if you want to avoid energy losses, from engineering to operation. The Festo engineering tools with practical calculation tools, simulations and configuration tools for pneumatics, mechanics and electrics help you right from the start, for example, by selecting and sizing components correctly.



Detecting, planning, acting with our Energy Saving Services

Reduce operating costs by up to 60% while increasing process reliability. Our experts will analyse your entire compressed air system, including pneumatic applications, and identify where you can save the most energy. We know from experience that our customers often achieve their return on investment within just a few months.

→ **www.festo.com/energysaving**

Products for a better energy balance

Vacuum generator OVEM

Increased process reliability
Vacuum sensor monitors negative pressure and pressurises as necessary

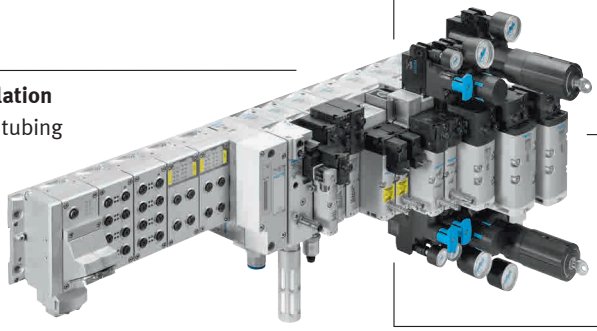
Integrated check valve
Prevents pressure drop after vacuum is switched off

Reduced switching times
Fast vacuum build-up with integrated solenoid valve

ISO valve terminal CPX/VTSA

Optimised flow
5 valve sizes on one valve terminal

Maintenance during operation
Changing valves also under pressure (hot-swap)



Decentralised installation
Optimised routing of tubing

Dual-pressure operation
Reversing with reduced force

Savings of up to 90%
Vacuum module with air-saving function

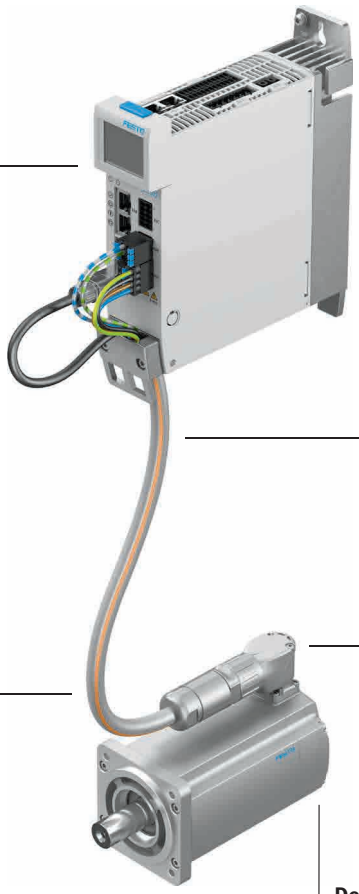
Energy efficiency module MSE6-E2M

Leakage measurement
Automatic detection and reporting of leakages

Energy monitoring
Continuous condition monitoring of pressure, flow rate and consumption, and provision of data via a fieldbus or a cloud

Stand-by detection
Automatic shut-off of the compressed air

Servo drive CMMT-AS



Highest energy efficiency class
IE2 to EN 50598-2

High efficiency
at the output stage > 98%

Return energy feed
via the intermediate circuit

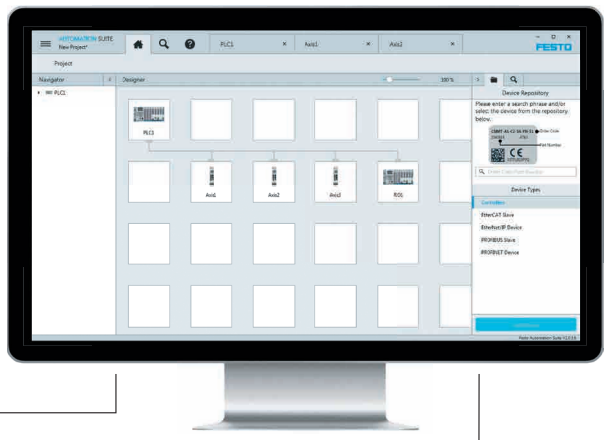
Servo motor EMMT-AS

Efficient engineering
thanks to suitable design tools
and 7 sizes with up to 4 lengths

Optimally matched
with drives and electromechanics
from Festo

Determination of efficiency according to IE4
in accordance with DIN IEC 60034-2
(e.g. size 60S to IE4V: Setpoint value
> 77.8 ⟷ Actual value = 84.1)

Festo Automation Suite



Commissioning assistant
In only five steps to a ready-to-use drive system

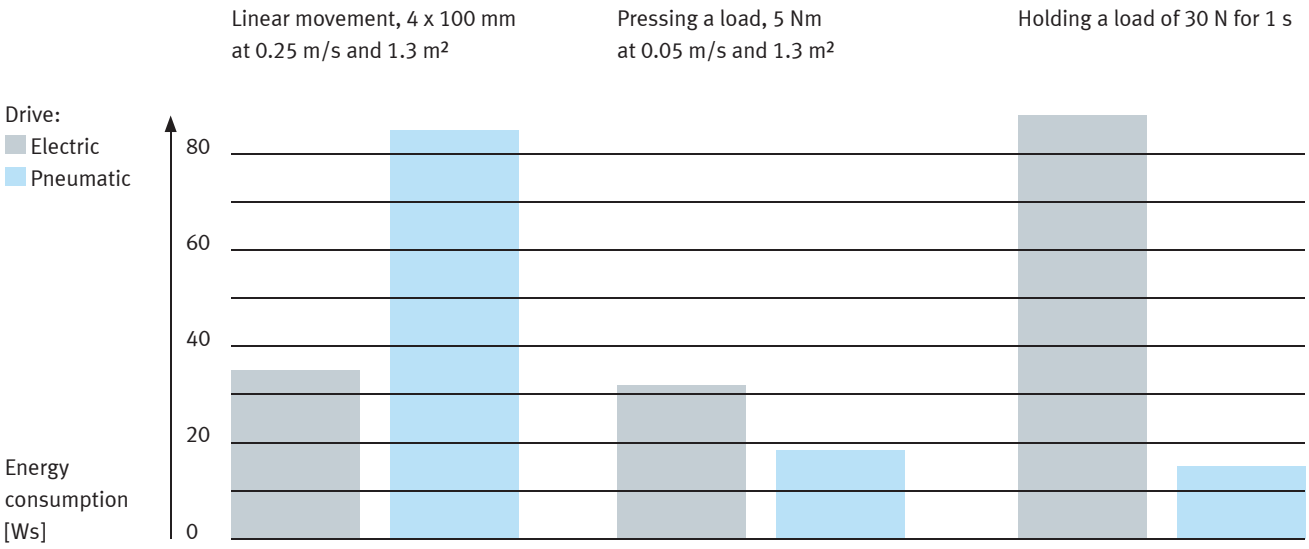
Simple and reliable
parameterisation and
programming of the complete
drive system

Everything always at a glance
Full access to all parameters at
all times

Electrics and pneumatics in perfect combination

It is easy to save energy when you choose the right components and size them correctly. Our expertise and our range of electric and pneumatic products are to your advantage since energy efficiency depends on many operating parameters. Our specialists know exactly when pneumatics, electrics or a mix is the most sensible solution – and can adjust our offer specifically in line with your requirements.

Examples of different levels of energy consumption when using electrics and pneumatics



Rule of thumb for assessing the energy efficiency of electrics and pneumatics:

- The longer the stroke,
- the smaller the end position force, and
- the shorter the holding time,

the more efficient electric drive technology is.

- The shorter the stroke,
- the greater the end position force, and
- the longer the holding time,

the more efficient pneumatic drive technology is.

A clever combination of the two technologies is, in many cases, the best solution!

Energy efficiency in commercial vehicle production

IVECO Madrid is both a research and a development centre of IVECO. To further reduce its carbon footprint, IVECO has introduced an energy efficiency solution that is based on the service unit series MS9 from Festo. This solution basically operates in the same way as the energy efficiency module MSE6-E2M, but works with the higher flow rates required.

The module automatically controls and regulates the supply of compressed air. The intelligent device permanently detects the amount of air consumed and automatically shuts off the air supply when the system is in stand-by mode. As a result, sustainable energy savings are achieved in the plant's mixing chamber for automotive coatings. The intelligent pneumatics of the energy efficiency module eliminates a constant pressure build-up. And it detects and reports costly leaks. The compactly designed module fits into an ATEX cabinet. It is operated via a CPX terminal by using a touchscreen, smartphone or tablet. IVECO is considering using the energy efficiency module as a benchmark for energy efficiency in other plants.

"With the energy efficiency module, we can now permanently monitor relevant process data for the first time – that is modern condition monitoring."
Miguel Ángel Daganzo, Maintenance Manager at IVECO Madrid

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