

Air guns deliver cost-effectiveness and operator safety

Based on a Department of Energy study, every 0.14 bar decrease of system pressure equates to nearly a 1% energy saving. When applied to the manufacturing pressures of a Tier 1 automotive assembly supplier, these savings are compounded.



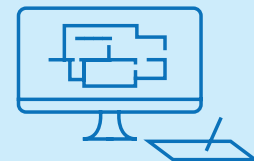
FESTO

Industry Sector:

GENERAL ENGINEERING

Application:

**MANUFACTURE OF VEHICLE
AXLE ASSEMBLIES**



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system pressure equates to
nearly a 1% energy saving.**

Optimise cost effectiveness and safety
with Festo Air Guns and Nozzles

Problem:

Tier 1 automotive assembly suppliers operate hundreds of machine tools to produce automotive axle components. When a component is manufactured, wastage is removed via air gun, which results in a large amount of compressed air being vented into the atmosphere.

This vented air is costly. Furthermore, noise levels up to 80 dba, coupled with the effects of blasted debris, present a risk to operators. A shield is therefore required when carrying out clearing.

Solution:

ERIKS and Festo application engineers compared the current cost of the current air guns against what Festo could offer. With reference to the BCAS standard of 2.5 p/m³, Festo calculated that:

- Competitor gun = 329 l/min [0.329 m³/min] which equates to £0.49 per hour to run
- Festo standard = 109 l/min [0.109 m³/min] which equates to £0.16 per hour to run

Potential savings typically could be $(0.49 - 0.16) \times 5 \text{ minutes/hour} \times 150 \text{ guns}$. Furthermore, a saving of £0.83/hour $\times 24 \text{ hours} \times 320 \text{ days a year}$ **resulted in a potential overall saving of £6336 annually.**

Compared to the competitor air guns, the Festo devices cost £10 more, with payback achieved in 30.3 hours of operation based on tests at 6 bar. If pressure is reduced to 2 bar, this return on investment (ROI) is expedited. ERIKS and Festo engineers therefore recommended that air gun pressure be reduced to 2.1 bar, an industry safe standard.

Another benefit is the inclusion of the Festo Air Nozzle, which features a nozzle generated air shield to ensure operators are protected from loose waste material during clearing.