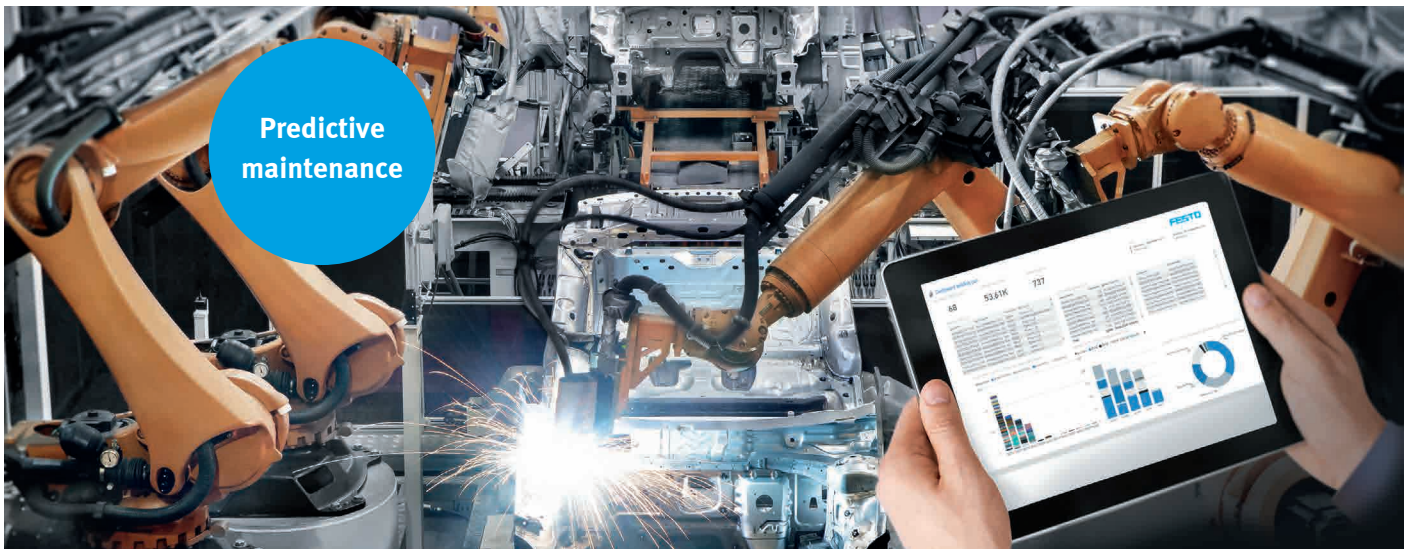


Festo Welding Gun Maintenance System



20% reduction in downtimes

Highlights

- Reduced downtimes thanks to predictive maintenance
- Lower maintenance costs
- Greater overall equipment effectiveness
- Early detection of gun faults and gun breakages
- Transparency over all welding guns in the factory
- Database for process optimisations

Respond to failures? Or predict them? A predictive maintenance strategy will make your welding guns more productive. Because welding guns need to work with precision, reliability and efficiency to be economical. Change is worth it. As an add-on to the Festo drive solutions for welding guns, the Festo Welding Gun Maintenance System monitors all welding guns in the factory. The software solution helps you to detect process anomalies in good time, optimise maintenance and save energy – thanks to Industry 4.0.

Optimised maintenance

Condition monitoring and predictive maintenance enable you to detect faults early on and trigger maintenance orders in good time. This means you can schedule maintenance at a time that best suits you, without disrupting the production flow.

Complete data transparency

With the maintenance app, you gain transparency over all the welding guns in the factory. As well as asset management information, more than 30 characteristic values for each welding gun plotted over time are shown.

Flexible software solution

The Festo Welding Gun Maintenance System consists of three packages:

- Interface for structured data provision
- Test function with on-the-fly condition monitoring
- Data analysis, analytics with trend visualisation via cockpit on-premises or in the cloud

We work with you to tailor the solution to your individual needs.

Festo Welding Gun Maintenance System

Industry 4.0 in the automotive industry

Especially in the automotive industry, costly downtimes can now be avoided with condition monitoring and predictive maintenance. Both are essential elements in the context of Industry 4.0.

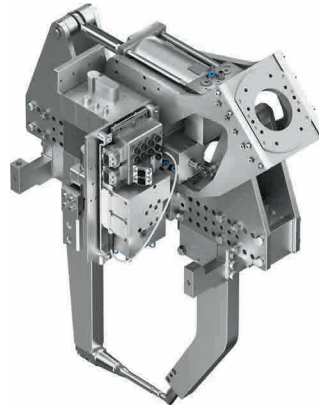
Intelligent components and systems communicate with each other over networks. By analysing the condition data and changes in it, reliable predictions are made about the future failure of system components – and as a result of entire production facilities. In addition, better data availability and evaluation provide an insight into the performance of the components in the production environment. This leads to system optimisations, and thus increases availability.

With the Festo Welding Gun Maintenance System, you also reduce the maintenance costs in the welding process.

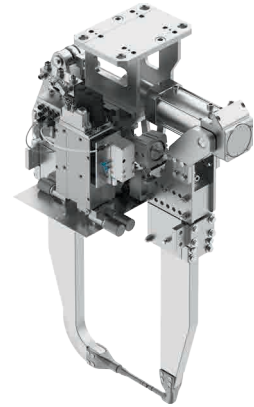
A hierarchical model of the factory is shown via a browser-based cockpit, and the condition of the welding guns together with the historical sensor data is visualised. This allows you to manage all of your welding guns with ease, and for example identify incorrectly parameterised guns or faulty components.

If you have linked the app to your factory maintenance system, “predictive” maintenance orders are triggered in your usual environment and, if desired, sent by SMS to the maintenance technician’s mobile phone.

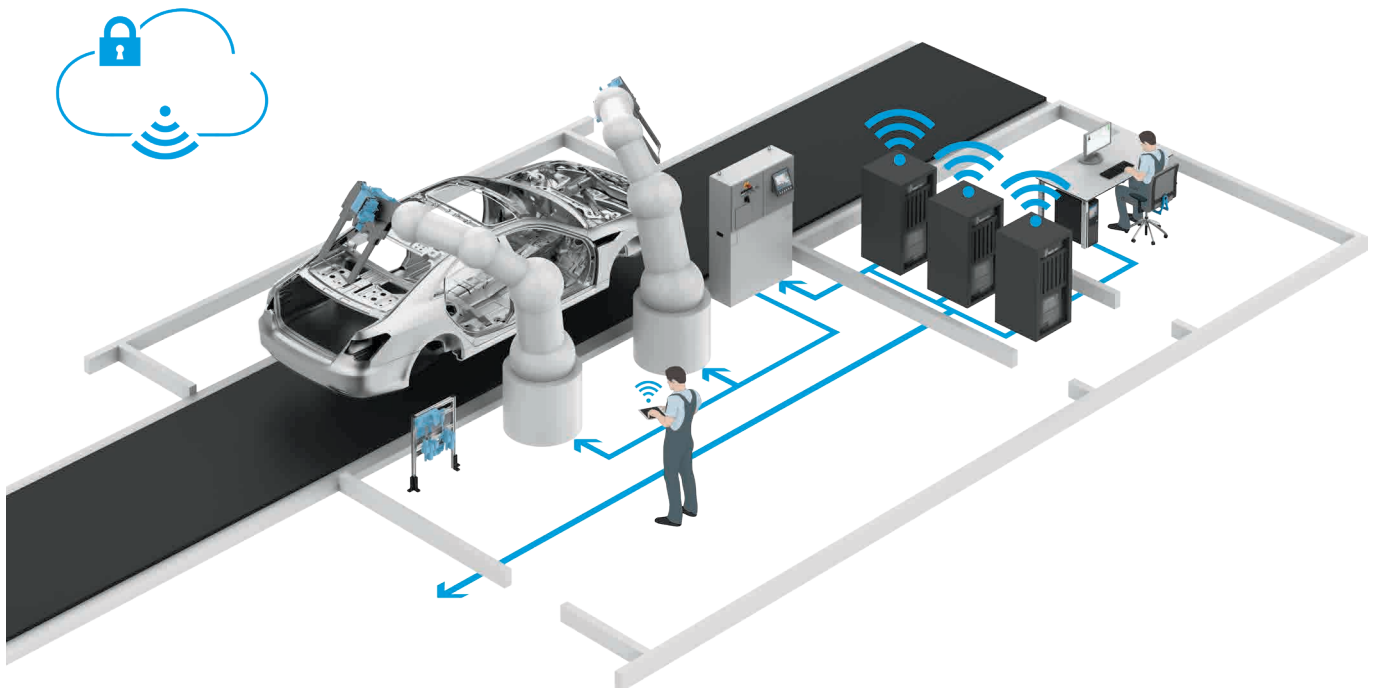
Servo-pneumatic drive solution *
High speed and dynamic response



Electric drive solution *
High energy efficiency for high forces



*The Festo Welding Gun Maintenance System is an add-on for servo-pneumatic welding guns. The software solution can be upgraded for electric welding guns.



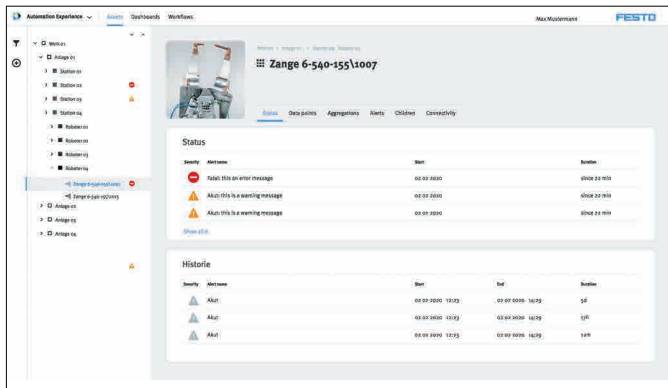
Connecting the welding gun to the cloud via the plant PC

The welding gun’s process data is transferred to the maintenance app in order to evaluate and predict component failures, and assessed using condition monitoring methods.

Festo Welding Gun Maintenance System

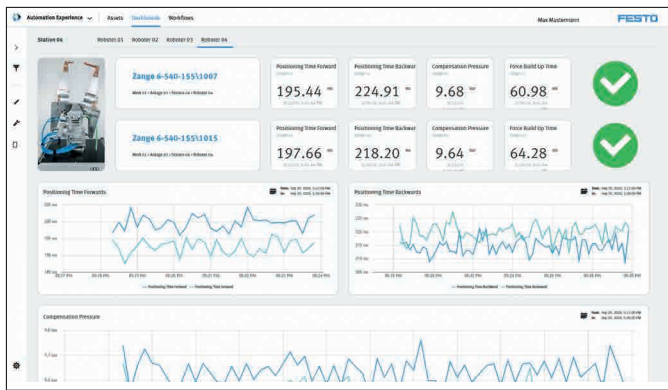
The maintenance technician's cockpit: available worldwide and 24/7

The cockpit of the Festo Welding Gun Maintenance System shows actual data, system states and trends. The system uses a so-called responsive design, which reproduces the data correctly and without any loss of information on standard PCs as well as on mobile devices.



Factory-level view

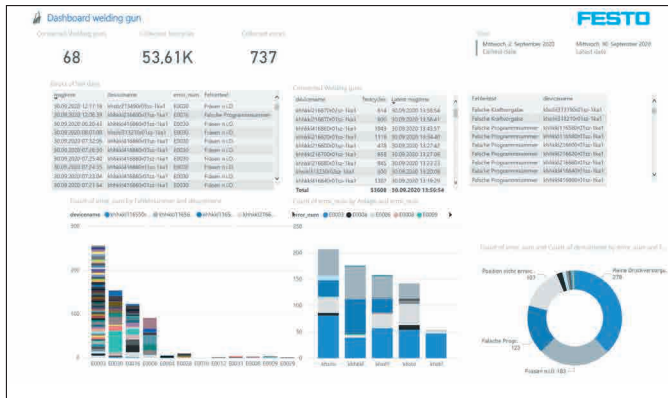
With the factory view you can keep an eye on the many thousands of guns in the factory and immediately identify where action is needed. All connected welding guns are shown in a hierarchical structure. This allows you to track the plant, the production line, the cell and the welding gun itself. From the higher-level factory view you can navigate to each individual gun's detailed information.



Detailed view for a particular welding gun

This view shows the data for a selected welding gun. It includes asset data, actual data and historical data as well as characteristic gun data over time such as

- Hardware serial number
- Software/firmware version
- Date of commissioning
- Calibration data
- Various control parameters
- Pressure/air consumption values
- Number of cycles completed
- Positioning times
- Force build-up times
- Main cylinder wear
- System leaks
- Valves that are jammed



Extended views

What data do you want to monitor? Configuring your individual cockpit couldn't be easier. You can also compare several welding guns to learn which gun is performing well/badly and extrapolate optimisation measures on the basis of this information. Or visualise a trend so that you can arrange maintenance or have components replaced in good time.

Festo Welding Gun Maintenance System

Software solution in three packages – for greater flexibility and individuality

The Festo Welding Gun Maintenance System is introduced in your company using a multi-stage model. We work with you step by

step to customise the optimum solution for you, tailored precisely to your needs. The individual stages reduce the complexity

and risks associated with implementation. With each step, we generate new added value together for the maintenance

technicians on the journey to the long-term goal of predictive maintenance.

