

THE CUSTOMER

Gardner Denver is a world leading manufacturer of compressors, construction equipment, mining rock excavation and industrial tools.



REQUIREMENTS

To design and install a production control system on the customer's compressor production facility to help them achieve IATF 16949 certification

RESULTS

- Controlled process with no faults forward
- Increased accuracy and quality of operations
- Electronic torque/angle tooling, gauge and test system integration
- Full traceability



THE CHALLENGE

Gardner Denver has selected Sorion for the implementation of a **complete control solution** at their compressor manufacturing plant in Redditch, Worcestershire.

The goal of the project was to improve the quality of the assembly processes to **help the customer achieve IATF (International Automotive Task Force) 16949 certification**.

The brief included incorporating operator control workstations, integration with Gardner Denver build schedules and overall traceability with archiving of historical data for the manufactured product.



THE APPROACH

Sorion was able to present a robust error-proofing solution based on their standard software and hardware products integrated with Gardner Denver's systems to guide, control and verify the assembly operations.

The compressor assembly line has **9 process areas**: 5 assembly stations, 2 test stations, 1 kitting station, 1 dispatch station and 1 rework station.

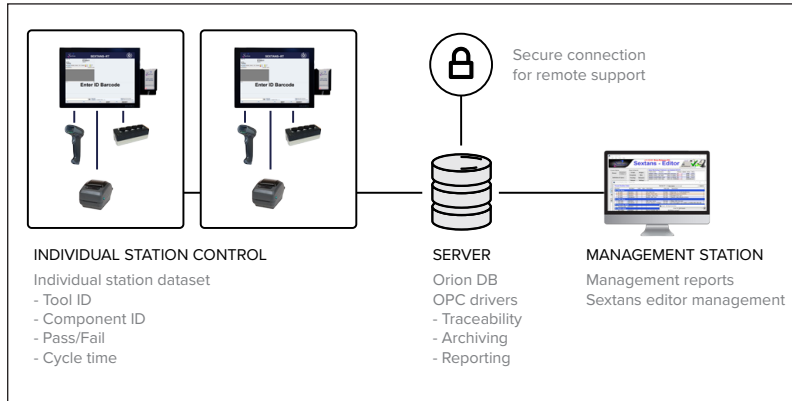
A management station is used for generating the build schedules on the assembly line.

Each station uses a separate all-in-one PC touch panel running **Sextans-RT**, Sorion's process control and test application. The flexibility of Sextans allows the Sorion software team to interface to the customer's existing Letia air end test and Mitutoyo gauge equipment to create a manufacturing system that is easy to control and run.

Electronic torque/angle tooling is integrated, allowing the system to automatically select the correct tool and fastening program for the product variant in the station.

THE SOLUTION

As the products progress through the assembly line, they are identified via barcode scanner. Once the item is identified the working procedures, material needs, and tool requirements are known by the system.



System architecture

Sextans provides an on-screen, step-by-step guidance for every product on the line to ensure that the correct component and tool is used in each process.

Sextans Editor is used to configure all process control stations, including user access rights, global barcode definition / MES Interfaces, creation of workflows, data tables and scripts.

Every step is recorded and any issues highlighted can be addressed immediately. The **results are automatically recorded** in the Orion database, creating a **clear audit trail** of every process that has been undertaken.

Since rolling out the solution, process accuracy and quality have increased significantly.

ABOUT SORION

Founded in 1990 and with equipment installed and operated by major OEMs and Tier 1 suppliers around the globe, Sorion Electronics has an established reputation for innovation, quality and reliability.

Your Partner for:

- Guided Assembly Process Control
- End of Line Test Systems
- Autonomous Mobile Robot Systems
- Ruggedised Electrical Connectors & Harnesses
- Quality and Traceability Reporting
- Electronic Product Design and Development



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THE SORION SOLUTION



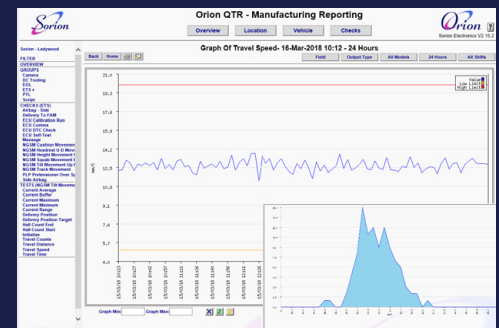
Sextans controls the process and provides step-by-step guidance



Electronic torque/angle tooling is integrated to record fastening data



Sextans interfaces with the customer's test equipment



Orion Quality and Traceability database

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