

Beamex Case Story

Airbus
Filton, United Kingdom



Flight safety starts on the ground:

a calibration system of an aircraft manufacturer
has to maintain high quality standards.

beamex

AN AIRBUS AIRCRAFT TAKES OFF OR LANDS EVERY 4 SECONDS.

An Airbus aircraft takes off or lands every 4 seconds. The Airbus workforce in the UK consists of around 12,000 employees and the company has operations in two locations: Broughton (North Wales) and Filton (Bristol). Among many other things, Filton is the place where wings for all Airbus aircraft are designed. Wing technology is a key factor in aircraft performance. Airbus is a leader in wing technology, thanks to its continuous progress in manufacturing processes.

Aircraft manufacturing must abide by high quality standards as well. Calibrating process instruments is a function that helps in maintaining high quality standards in the manufacturing process. Senior Instrumentation Engineer, Richard Salmon (Airbus UK, Filton) has been in the Airbus instrumentation department since 1987. The department is part of the site's facilities and services group and is responsible for all areas of instrumentation and control used within the manufacturing process.



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The situation

Calibration itself has brought many positive changes to the instrumentation department. "In the past we would swap instruments, which means having to keep a very large spares storeroom, but we have reduced this greatly with on-site calibrations", Richard points out. Calibration documentation plays a major role, as all calibration data must be documented for the life of an aircraft plus 10 years. The early version of the calibration database could store what instruments were installed, where and what were the calibration dates, but not the actual calibration record.

With regards to calibration, all pressure and vacuum gauges, as well as transmitters, are generally brought to the workshop for calibration. Most temperature calibrations are done on site. Temperatures on site run from -80°C to $+1150^{\circ}\text{C}$, and handheld calibrators are used for weekly checks.

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The solution and main benefits

“At a QM6 demo day, we not only saw a system we could use, but also that problems we had in our prevailing calibration system had been addressed within QM6”, Richard says. The demo day was in 1995 and soon after that QM6 was in use at the Filton site. At the moment, QM6 is being upgraded to CMX, the new calibration management software by Beamex. QM6 is used as the database at the main site and all instruments used on site, which affect the manufacturing of aircraft parts, are on QM6. It is a part of the site’s main audit trail (JAR21G) and it forms part of the site’s license to produce.

Calibration management software saves time and means less paperwork: even the calibration work lists are downloaded electronically to each calibrator. “There is no other calibration system that talks to calibrators as well as Beamex’s does”, Richard comments. With a system providing excellent calibrator communication, Airbus is able to automate the pre-defined calibration procedures. In addition, calibration management software is used for producing dispatch sheets, position labels, work lists for each area and the weekly and monthly report sheets. The workshop utilizes a Beamex calibration bench system with panel-mounted calibrators. Portable calibrators, such as the MC5 multifunction calibrator, are used for calibrations on site.



The workshop utilizes a Beamex calibration bench system with panel-mounted calibrators.

“The QM6 calibration management software showed us the attention Beamex gives to the needs and demands of customers, and also their willingness to adapt according to them”, Richard states.

CASE STORY IN BRIEF

Customer profile

Airbus

Filton, United Kingdom

Business Situation

The calibration of process instruments in an aircraft manufacturing company is all about precision and accuracy. Calibration documentation plays a major role, as all calibration data must be documented for the life of an aircraft plus 10 years. Calibration documentation must be complete with the actual calibration records included. Massive amounts of paperwork can be avoided with a good calibration system.

Solution description

- Beamex calibration bench system with panel-mounted calibrators
- QM6 calibration management software
- CMX calibration management software
- Portable MC5 calibrators
- Accessories: calibration hand-pumps, etc.

Main benefits

- Possibility to automate certain calibration procedures due to excellent communication between calibrators and calibration management software
- A calibration system that meets the high standards
- Electronic storage of calibration data is easy and safe

Beamex Oy Ab

Ristisuonraitti 10
FI-68600 Pietarsaari
Finland

Tel. +358 6 7840 111
Fax +358 6 7840 404
info@beamex.com

www.beamex.com

Beamex Limited

Newtown Grange Farm Business Park
Desford Road
NEWTOWN UNTHANK
Leicestershire LE9 9FL
United Kingdom

Tel. 01455 821 920
Fax 01455 821 923
beamex.ltd@beamex.com

Beamex, Inc.

2270 NW Parkway
Suite 165
Marietta, GA 30067
U.S.A.

Toll free 800 888-9892
Tel. +1-770-951-1927
Fax +1-770-951-1928
beamex.inc@beamex.com

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