CALIBRATION SOLUTIONS

An introduction to Beamex and its products, services and solutions

beamex
WORLD-CLASS CALIBRATION SOLUTIONS

About Beamex

WORLD-CLASS INTEGRATED CALIBRATION SOLUTIONS

Since the establishment of Beamex in 1975, the company has focused strongly and consistently on calibration. Beamex is a technology and service company that develops, manufactures and markets high-quality calibration equipment, software, systems and services for the calibration and maintenance of process instruments. The company is a leading worldwide provider of integrated calibration solutions for improving quality and efficiency.

Beamex offers a comprehensive range of products and services – from portable calibrators to workstations, calibration accessories, calibration software, industry-specific solutions and professional services. Through Beamex's global and competent partner network, Beamex products and services are available in more than 80 countries. Beamex is certified in accordance with the ISO 9001:2008 quality standard.

Almost forty years of experience in manufacturing and developing calibration equipment and systems, close co-operation with customers that have high requirements and uncompromising quality standards, shared by the people working at Beamex, are things that have made Beamex's calibration solutions world-class. As a proof of Beamex's success, there are more than 10,000 companies worldwide utilizing its calibration solutions.

Beamex's ISO 17025 calibration laboratory has been accredited and approved by Finnish Accreditation Service (FINAS). FINAS is a member of all Multilateral Recognition Agreements/Mutual Recognition Arrangements (MLA/MRA) signed by European and other international organizations, i.e. European co-operation for Accreditation (EA), International Laboratory Accreditation Cooperation (ILAC) and International Accreditation Forum Inc. (IAF).

MISSION STATEMENT

No. 1 for the Customers:
World-class calibration solutions for improving quality and efficiency.

No. 1 for the Employees:
Inspiring and rewarding culture, great place to work.

VISION

The world's leading brand for integrated calibration solutions.

VALUES

PRECISION:
World-class accuracy and precision in products, services and operations.

PERFORMANCE:
High performance products in terms of accuracy, reliability and functionality.

PARTNERSHIP:
Adding customer value, enabling the use of the latest technologies and providing efficient, flexible and high quality manufacturing.

Why Beamex

INTEGRATED CALIBRATION SOLUTIONS
Beamex calibrators, workstations, calibration software and professional services form an integrated, automated system for improving quality and efficiency.

INDUSTRIAL PIONEER WITH GLOBAL PRESENCE
A forerunner in developing high-quality calibration equipment and software, with a global customer base and partner network.

HIGH CUSTOMER SATISFACTION
Constantly improving understanding of customer needs and developing solutions to meet them.

SUPPORT
Installation, training, validation, integration, helpdesk and recalibration services.

Key customer segments

Beamex serves the calibration needs of various industries:

- Power & Energy
- Oil & Gas
- Pharmaceutical
- Petrochemical & Chemical
- Pulp & Paper
- Food & Beverage
- Industrial Maintenance Services
- Metal & Mining

WHAT THE CUSTOMERS SAY

According to the Beamex Customer Survey 2012:

- **95%** will probably recommend Beamex to a colleague.
- **95%** say that using Beamex products has improved the efficiency of their calibration procedures.
- **90%** say that using Beamex products has resulted in cost-savings.
- **97%** claim that using Beamex products has improved the quality of their calibration system.

BEAMEX CUSTOMER SURVEY 2012

Beamex worldwide

Beamex's products, support and services are available in over 80 countries through our headquarters, subsidiaries, branch offices and an extensive network of independent distributors. These worldwide sites offer access, resources and information on all of our products and services. For an up-to-date listing of Beamex's subsidiaries, branch offices and independent distributors, please visit www.beamex.com/contacts.

SUCCESS STORIES

PHARMACEUTICAL AND HEALTHCARE AstraZeneca, Sweden

AstraZeneca is one of the world's leading biopharmaceutical companies with 30 manufacturing sites in 20 countries.
In 2004, Beamex made a corporate agreement with AstraZeneca Sweden Operations. AstraZeneca decided to implement a completely new calibration system including Beamex's CMX calibration management software licenses, training and software support. After implementing the new calibration management process, the entire process takes place digitally, from measurement to signing and archiving. The company performs about 22,000 calibrations annually, which previously engaged 50 employees. Today, the same work can be accomplished with only 15 people.

Solution
- Beamex CMX calibration software
- Beamex MC5 multifunction calibrators

Main benefits
- 1 year pay-off
- Number of databases reduced from 12 to 1
- All paperwork replaced by an electronic calibration process
- Less frequent calibration intervals
- Less labor intense
- Improved overall quality of the calibration process

SERVICE AND AUTOMATION Endress+Hauser, Germany

Endress+Hauser is the leading international supplier of measuring instruments, services and solutions for process automation. In the past E+H on-site service teams used single signal calibration tools; those tools had long recalibration turn-around-time and caused high internal management effort. Now, however, there is just one multifunction calibration device, one supplier and one certificate replacing 3 to 5 previous devices, certificates and supplier. Since 2006, Endress+Hauser has relied on Beamex process calibrators as well as the services provided by GERMEX GmbH, the exclusive distributor and Premium Partner of Beamex products in Germany.
Endress+Hauser has chosen Beamex MC-calibrators as global standard tools to be used for improved efficiency in on-site calibration services and start-up commissioning.

Solution
- Beamex MC6 advanced field calibrator and communicator
- Beamex MC5 multifunction calibrators with Foundation Fieldbus communication
- Beamex MC2 calibrators
- Beamex CMX calibration management software

Main benefits
- Streamlined calibration process
- Short investment payback time
- Decrease in downtime
- Less maintenance costs, due to reduction of calibration tools
- Equipment easy to use
- Reliability, quality and efficiency of services

FOOD AND BEVERAGE   Heineken España, Spain

The new Heineken España S.A. (JUMBO) brewery in Sevilla is the most modern and productive plant in Europe, allowing the company to remain Spain's market leader in beer. The new plant needed a tool to make calibration work easier, store all calibration results, indicate the calibration history trend and provide quick access to calibration data. These factors led Heineken to choose the Beamex CMX calibration software with the Beamex MC5 multifunction calibrator.

Each instrument that is calibrated regularly has its calibration procedure including the initial calibration date, due date and all calibration related information. Calibration work orders are automatically generated and entered into the SAP PM management system. Once the calibrations are completed, the data is stored in the CMX.

Solution
- Beamex CMX calibration software (with Pocket PC option)
- Beamex MC5 multifunction calibrator

Main benefits
- Streamlined and automated calibration procedures (e.g. documentation, calibration work procedures)
- Efficient, practical and accurate working methods, minimizing the possibilities for human errors
- Safe calibration system that adheres to regulations (ISO 9001, ISO 14001)
- Improved quality, cost savings and fast ROI for the new calibration system

WATER AND WASTE WATER SERVICE   Miami-Dade WASD, USA

One of the largest public utilities in the United States, the Miami-Dade Water and Sewer Department (WASD), a department of Miami-Dade county, provides direct service to more than 420,000 customers and employs more than 2,500 workers.

Miami-Dade WASD utilizes the documenting Beamex MC5 multifunction calibrators and Beamex CMX Professional calibration management software, part of the Beamex integrated calibration solution. The MC5 calibrators calibrate the most important plant instruments. CMX is integrated into Miami-Dade WASD's maintenance management software, Infor EAM Enterprise edition, to schedule, perform maintenance and document results.

Solution
- Beamex MC5 multifunction calibrators
- Beamex CMX Professional calibration management software

Main benefits
- Major improvements in efficiency
- Traceability and accountability
- Safety
- Enhanced quality
- Robust and reliable software
- Integrated system

ACCREDITATIONS AND CERTIFICATIONS

At Beamex, quality is a total concept. Quality does not mean just the quality of the products; it is the ability of all our operations to meet our customers' needs.

Accreditations and Certifications

ISO 9001:2008

Beamex Quality System has been continuously ISO 9001-certified since 11th May 1992. In October 2009, Beamex received ISO 9001:2008 certification.

ISO 17025

According to ISO/IEC 17025, Beamex Calibration Laboratory has been continuously FINAS-accredited since 19th December 1993.

COMPLIANCE WITH ATEX/IECEX

The Beamex MC5-IS and MC2-IS intrinsically safe multifunction calibrators as well as EXT-IS and EXT-s-IS pressure modules are certified in accordance with the ATEX Directive and IECEx scheme.

CSA APPROVAL

The Beamex MC5-IS intrinsically safe multifunction calibrator and Beamex EXT-IS pressure modules are certified in accordance with the CSA regulations.

CUSTOMER AUDITS

Beamex's production, product development and calibration laboratory are also regularly audited by Beamex's customers.

CUSTOMER SATISFACTION

Customer feedback is highly valuable to Beamex because it allows to improve operations and serve customer needs better. That is why Beamex performs customer satisfaction studies on a regular basis.

Beamex ICS
INTEGRATED CALIBRATION SOLUTION

A streamlined calibration process for improving efficiency and quality of calibrations

What is the Beamex ICS

The Beamex ICS integrated calibration solution is unique compared to any other calibration system due to its seamless communication between calibrators and calibration software, integration possibility into a maintenance management system (ERP/CMMS), multifunctional calibrators that can perform automated calibrations fast and efficiently as well as calibration software that allows smart analysis and management of all calibration data.

Beamex ICS is not just a product or even a set of products and services – it is a new process of performing and managing calibrations in a way that provides efficiency and quality improvements as well as cost-savings.

What is the Beamex ICS made of

The Beamex ICS integrated calibration solution may include one or more elements of the following:

1) calibration equipment (field/workshop);
2) standard software packages;
3) customer-configured software components, which, when integrated with Beamex's standard software products (or customer's other software, e.g. SAP), form a functional software system;
4) documentation related to the above-mentioned products (e.g. user guides, project plans);
5) the provision of services related to the supply of the system, such as consulting, project management, validation, system integration, software configuration, installation and training; and/or
6) maintenance and support services for both hardware and software products.

Benefits of the Beamex ICS

IMPROVE EFFICIENCY	SAVE COSTS	IMPROVE QUALITY
Beamex calibrators and calibration software are fast and easy to use	Analyze whether you need to increase or decrease calibration frequency	Regulatory compliance (e.g. ISO 17025, ISO 9001, cGMP, 21 CFR Part 11)
Simplify and automate calibration work from start to finish	Replace paper with electronic records, share database with plants worldwide	Create, manage and store calibration data safely and efficiently
Cut production down-time	Cut recalibration costs with Beamex multifunctional calibrators	Minimize human errors related to documentation of calibration data
Minimize duplicate work due to system integration with ERP/CMMS		

Beamex ICS integrated calibration solution

The most integrated, automated calibration system available

COST-SAVINGS

CALIBRATION EQUIPMENT

Compatibility

Connectivity

ICS

CALIBRATION SOFTWARE

Multifunctionality

Modularity

SERVICES

ACCESSORIES

IMPROVED QUALITY

IMPROVED EFFICIENCY

A wide concept of integration

With the Beamex ICS, integration is a broad concept meaning different things. First and foremost, integration stands for *multifunctionality, modularity, connectivity and compatibility.*

Integration means multifunctionality
Beamex equipment and software are multifunctional, integrating many different functions into a single product or device. For instance, the MC6 is a device with five different operational modes and a process calibrator and a communicator at the same time.

Integration means modularity
Typically, Beamex equipment and software have a long operating life, and therefore they have been designed to be very modular. For instance, new modules can be purchased and installed into a Beamex multifunction calibrator to meet changing requirements. The same applies to Beamex software as well – Beamex calibration management software may be completed at a later point with new added features and options.

Integration means connectivity
Beamex equipment and software are designed to work seamlessly with each other, forming an automated and integrated calibration system that streamlines the entire process of calibration tasks and activities. The connectivity between Beamex equipment and software facilitates seamless lines of data flow, making the entire calibration process faster and even more accurate, leading to improved overall quality, productivity, efficiency and cost-savings.

Integration means compatibility
For process manufacturers today, having a reliable, seamlessly integrated set of IT systems throughout the plant or multiple sites is critical to business efficiency, profitability and growth. Beamex CMX can be integrated into several of the leading ERP/CMMS systems used in the processing industry.

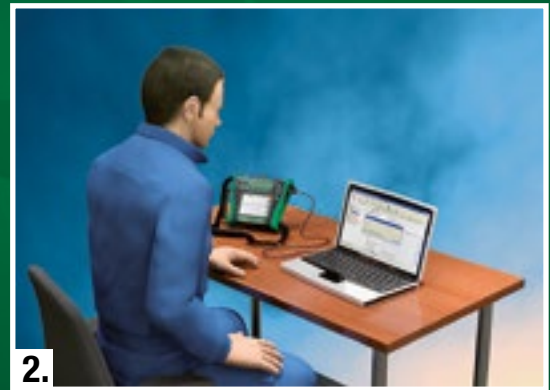# STEP-BY-STEP

BEAMEX ICS INTEGRATED CALIBRATION SOLUTION

THE CALIBRATION PROCESS

1.
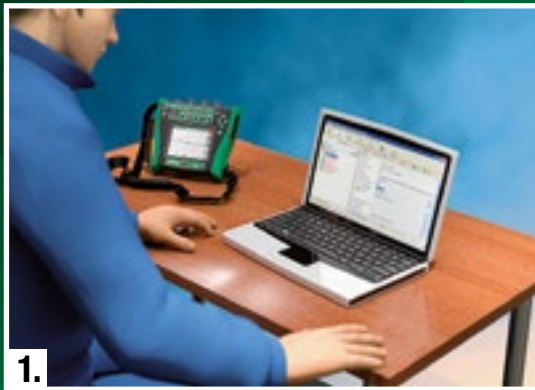
The Beamex CMX alerts what needs to be calibrated and when

- Easy, fast and efficient
- No need to search archived paper files

2.

Download calibration procedures and instructions from the software to the MC6

- Fast procedure
- No pen, paper or notepads needed

5.

Create, store and manage calibration information safely and efficiently with the software

- All calibration data is stored and managed in the CMX database
- Calibration certificates, reports and labels in electronic format, on paper or both
- All documentation in the CMX is auditable and traceable (e.g. ISO 17025, cGMP, 21 CFR Part 11)

Integration to a maintenance management system

- Plant hierarchy and work orders are stored in ERP/CMMS (e.g. SAP, Maximo) and from there transferred to the CMX, which stores all calibration procedures, standards and results
- When calibration work has been performed, the CMX sends acknowledgement of the calibration back to ERP/CMMS

3.

Perform instrument calibration and data collection with the MC6

- The MC6 replaces many individual measurement devices and calibrators
- Automated calibration is fast

4.

Upload calibration results to the software

- Automatically download calibration results back to the software
- Data transfer is fast and efficient, writing mistakes are eliminated

Beamex products and se

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Beamex MC6
Advanced field calibrator and communicator

MORE THAN A CALIBRATOR

- High accuracy calibrator for pressure, temperature and electrical signals
- Full multi-bus communicator for HART, FOUNDATION Fieldbus and Profibus PA instruments
- Five operational modes: meter, calibrator, documenting calibrator, data logger and communicator
- Combines advanced functionality with ease-of-use
- Automates calibration procedures for paperless calibration management

Beamex MC4
Documenting process calibrator

DOCUMENT AS YOU GO

- Automated and documented calibrations made quickly and easily
- Calibration capabilities for pressure, temperature, electrical and frequency signals
- Compact size and design
- Documenting – communicates with Beamex calibration software

Beamex MC2 series

PRACTICALITY IN CALIBRATION

- Available in three versions:
  - ° MC2 temp./electrical calibrator
  - ° MC2 multifunction calibrator
- Internal/external pressure modules
- Compact size and design
- User-friendly

CALIBRATION SOLUTIONS

Beamex MC5-IS intrinsically safe calibrator

MADE FOR EXTREME ENVIRONMENTS

- High accuracy all-in-one calibrator
- Designed for use in potentially explosive environments
- Calibration capabilities for pressure, temperature, electrical and frequency signals
- Certified in accordance with the ATEX directive and IECEx scheme
- Documenting - communicates with calibration software

Beamex MC2-IS
Intrinsically safe multifunction calibrator

PRACTICAL TOOL FOR CALIBRATION
IN HAZARDOUS ENVIRONMENTS

- ATEX-certified intrinsically safe multifunction process calibrator
- Connects to almost 20 available Beamex intrinsically safe external pressure modules
- Compact size and design
- User-friendly

CALIBRATION SOLUTIONS

Beamex MB
Metrology temperature block

**PORTABLE TEMPERATURE DRY BLOCK THAT PROVIDES
BATH-LEVEL ACCURACY FOR INDUSTRIAL APPLICATIONS**

- High accuracy: a dry block that provides bath-level accuracy
- Built-in high-accuracy reference probe input (in R model)
- Immersion depth up to 200 mm
- Wide temperature range from −45 °C to +700 °C
- Accredited calibration certificate included as standard
- Part of the Beamex ICS integrated calibration solution
- Warranty: 1 year

Beamex FB
Field temperature block

**LIGHTWEIGHT, HIGH-ACCURACY TEMPERATURE DRY BLOCK
FOR INDUSTRIAL FIELD USE**

- Lightweight, portable and fast field block
- High accuracy
- Built-in high-accuracy reference probe input (in R model)
  supporting plug-and-play smart probes
- Temperature ranges from −25 °C to +660 °C
- Accredited calibration certificate included as standard
- Part of the Beamex ICS integrated calibration solution
- Warranty: 1 year

Beamex POC6 automatic pressure controller

PRESSURE CALIBRATION MADE FAST AND EASY

- Part of the Beamex ICS integrated calibration solution
- Can be used as a stand-alone pressure controller
- Automatic pressure calibrations
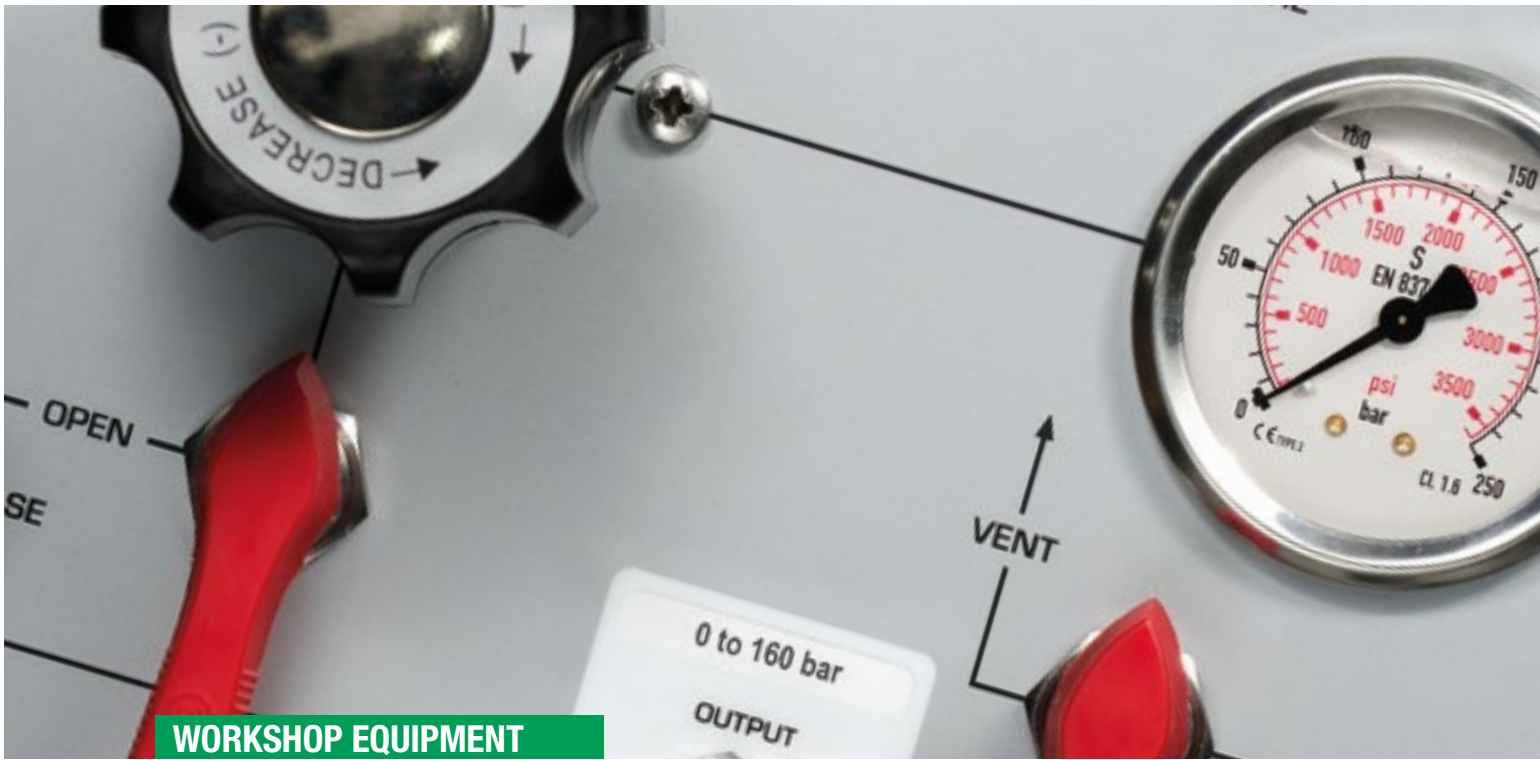- Portable or bench mounted
- User-friendly

Beamex PG pressure generation

PRESSURE AND VACUUM SOURCES FOR FIELD USE

The PG-series includes hand-held, lightweight pressure
and vacuum sources for field use. The PG-series of hand
pumps are ideal pressure/vacuum generators to be used
as accessories for pressure and vacuum calibration.

CALIBRATION SOLUTIONS

Beamex MCS200
Calibration test bench

THE CALIBRATION WORKSHOP SOLUTION

- Ideal when most maintenance and calibration tasks are performed in the workshop
- Modular design allows configuration based on user-specific requirements
- Many different types of applications
- Safe, ergonomic and versatile workstation
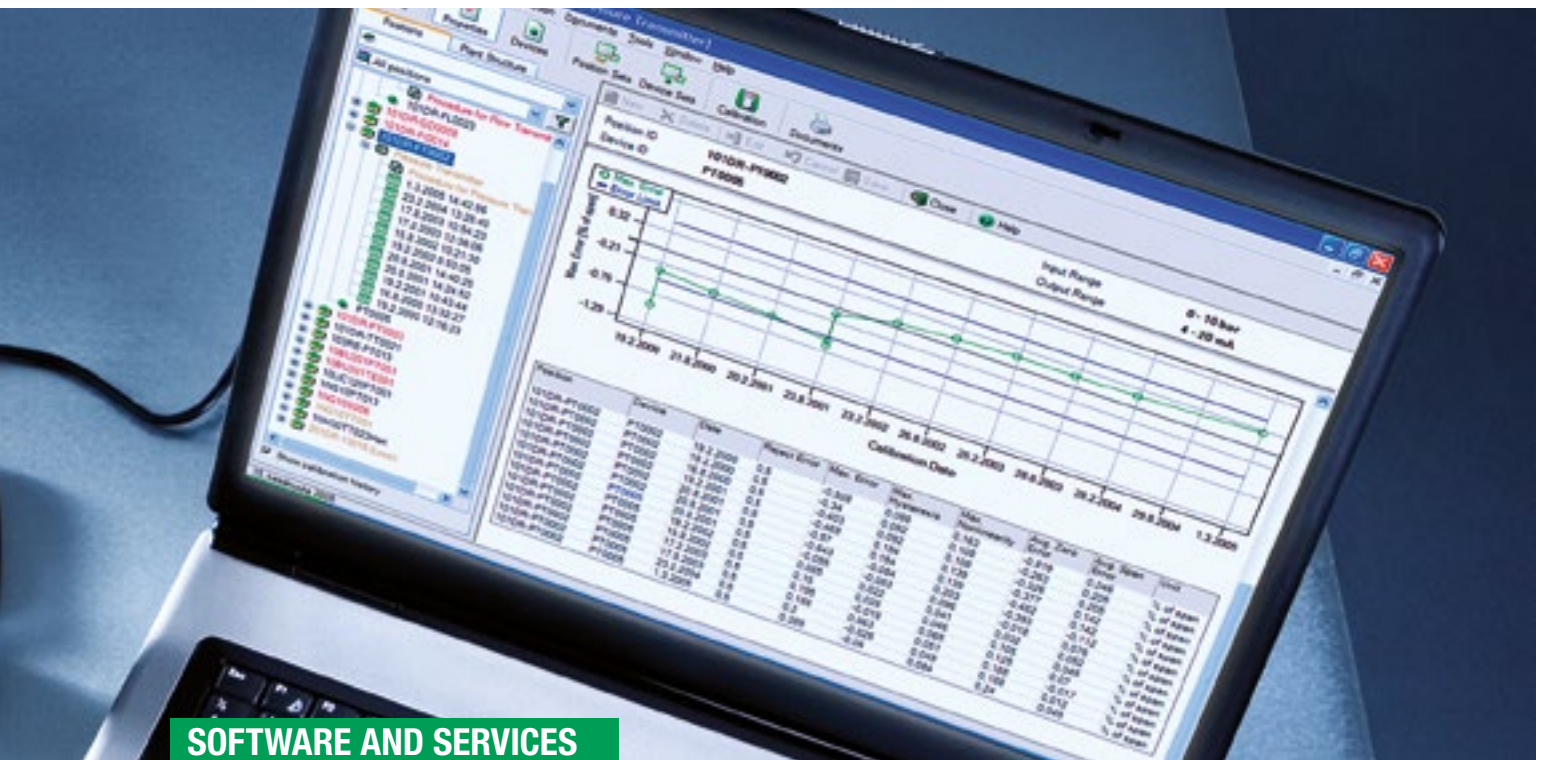
Beamex CMX
Calibration software

MAXIMIZE QUALITY AND PRODUCTIVITY OF CALIBRATION ASSET MANAGEMENT

- Easy, modern way to manage all calibration assets and information
- Improves cost-efficiency and quality of the entire calibration system
- Communicates with calibrators, integration into a maintenance management system
- Available in three versions: CMX Light, CMX Professional, CMX Enterprise
- User friendly, robust software
- Data management and storage
- Plan and schedule calibrations
- Analyze and optimize calibration frequency
- Produce reports and certificates

SOFTWARE SYSTEM SUPPLY PROJECTS AND SERVICES

Beamex provides all of the services required for the efficient supply, implementation and maintenance of a calibration management system.

Services offered related to system supply projects:
- Beamex Business Bridge
- Customer-specific system delivery
- Software implementation
- System integration
- Database conversion
- Validation
- Report design and user-interface configuration
- Training courses

SOFTWARE SUPPORT AND MAINTENANCE PROGRAMS

Maintain reliable operations and leverage innovation to maximize return on your software investment.

Key features:
- Fixed term 1-, 2- or 3-year agreement, or automatically renewed agreements
- Scope of services include periodic program updates and upgrades as well as remote help-desk services for diagnosing and correcting errors
- Standard remote help-desk services are accessible by email, phone and/or fax
- Available for standard software products as well as for customized software components

SERVICES FOR EQUIPMENT

RE-CALIBRATION

Beamex offers service and re-calibrations through its accredited calibration laboratory. We can provide traceable calibration services in pressure, temperature, DC current, DC voltage, resistance and frequency.

EQUIPMENT SERVICE PLAN

Maintain accuracy and reliability throughout equipment's lifetime. Beamex Equipment Service Plan is a long-term contract for the maintenance and support of Beamex equipment. Throughout the period of the contract, customers are entitled to various services and support as specified in more detail in the contract. Equipment Service Plans are available only on selected markets.

REPAIR AND SERVICE

Beamex offers high-quality equipment repair and spare parts services through its accredited calibration facility and service partners to customers worldwide with Beamex-branded calibration equipment.

INSTALLATION

Beamex's installation services ensure that your calibration system will be up and running in no time. Installation is an essential and integral element of an investment made into a calibration system. Beamex's service team offers high-quality and efficient installation services for various products and complete calibration systems.

TRAINING

Training ensures that both the users of the equipment and the managers obtain the necessary skills to use the calibration system to its fullest potential. The training courses combine hands-on workshops with classroom lectures and presentations.

BEAMEX CALIBRATION FACILITY

Beamex's calibration facility (K026) has been ISO 17025 accredited and approved by Finnish Accreditation Service (FINAS). FINAS is a member of all Multilateral Recognition Agreements/Mutual Recognition Arrangements (MLA/MRA) signed by European and other international organizations, i.e. European Co-operation for Accreditation (EA), International Laboratory Accreditation Cooperation (ILAC) and International Accreditation Forum Inc. (IAF).

FINAS
Finnish Accreditation Service
K026 (EN ISO/IEC 17025)

ilac-MRA

Beamex EXT
External pressure modules

INCREASE CONFIGURATION POSSIBILITIES

- Possibility to calibrate more pressure ranges with just one calibrator
- Pressure ranges from vacuum to 1000 bar / 14500 psi

Other accessories

Beamex offers a wide range of accessories and spare parts for its products, including:

- Carrying cases
- Battery packs and chargers
- Pressure connectors
- Pressure tubing kits
- Pump spare parts and accessories
- Test leads and accessories

SOLUTIONS
PAPERLESS CALIBRATION

A paperless calibration system comprising documenting calibrators and calibration software improves quality and cuts costs. The business benefits are significant for companies that use software-based calibration systems. The entire calibration process – from initial recording of calibration data to historical trend analysis – will take less time, whilst virtually eliminating mistakes and manual errors.

RELATED PRODUCTS

Beamex MC6 calibrator

Beamex MC5-IS calibrator

Beamex MC4 calibrator

Beamex CMX Light calibration software

Beamex CMX Professional calibration software

Beamex CMX Enterprise calibration software

Beamex Business Bridge

Traditional paper-based systems

While using a manual, paper-based system requires little or no investment in new technology or IT systems, it is extremely labor-intensive and means that historical trend analysis of calibration results becomes very difficult. In addition, accessing calibration data quickly is not easy. Paper systems are time consuming, they soak up lots of company resources and manual (typing) errors are commonplace. Dual effort and the re-keying of calibration data into multiple databases become significant costs to the business.

Business benefits of paperless calibration

The business benefits of a paperless calibration system are significant. The entire calibration process – from initial recording of calibration data to historical trend analysis – will take less time, virtually eliminating mistakes and manual errors. In turn, this means that operators, engineers and management will have more confidence in the data, particularly when it comes to plant audits. In addition, this greater confidence in calibration data leads to a better understanding and analysis of business performance and KPIs (particularly if the calibration software is integrated into other business IT systems such as a CMMS) leading to improved processes, increased efficiency and reduced plant downtime.

SOLUTIONS
CALIBRATION IN HAZARDOUS AREAS

There are industrial environments where calibrations should not only be made accurately and efficiently, but also safely. When safety becomes a top priority in calibration, intrinsically safe calibrators are required. Intrinsic safety (IS) is a protection technique for the safe operation of electronic equipment in explosive environments. The idea behind intrinsic safety is to be assured that the available electrical and thermal energy in the system is always low enough that ignition of the hazardous atmosphere cannot occur.

RELATED PRODUCTS

Beamex MC5-IS calibrator

Beamex MC2-IS calibrator

CALIBRATION SOLUTIONS

Intrinsically safe calibrators

An intrinsically safe calibrator is designed to be incapable of causing ignition in the surrounding environment with flammable materials, such as gases, mists, vapors or combustible dust. Intrinsically safe calibrators are also often referred to being "Ex calibrators" or "calibrators for Ex Areas".

Where is intrinsically safe calibration required

Many industries require intrinsically safe calibration equipment. Intrinsically safe calibrators are designed for potentially explosive environments, such as oil refineries, rigs and processing plants, gas pipelines and distribution centres, petrochemical and chemical plants, as well as pharmaceutical plants. Basically, any potentially explosive industrial environment can benefit from using intrinsically safe calibrators.

Benefits of using intrinsically safe calibrators

Safest possible technique. Intrinsically safe calibrators are safe for employees, as they can be safely used in environments where the risk of an explosion exists. In addition, intrinsically safe calibrators are the only technique permitted for Zone 0 environments (explosive gas and air mixture is continuously present or present for a long time).

Performance and functionality. Multifunctional intrinsically safe calibrators provide the functionality and performance of regular industrial calibration devices, but in a safe way. They can be used for the calibration of pressure, temperature and electrical signals. A documenting intrinsically safe calibrator, such as the Beamex MC5-IS, provides additional efficiency improvements with its seamless communication with calibration software. This eliminates the need of manual recording of calibration data and improves the quality and productivity of the entire calibration process.

SOLUTIONS
CALIBRATION AND CONFIGURATION OF SMART INSTRUMENTS

Fieldbus is becoming more and more common in today's instrumentation and fieldbus transmitters must also be calibrated. The fieldbus functionality includes reading the digital output of the fieldbus transmitter, changing the configurations of transmitters and trimming of transmitters.

RELATED PRODUCTS

Beamex MC6 calibrator

Beamex MC5-IS calibrator

Fieldbus transmitters must also be calibrated

Are you aware that fieldbus transmitters need to be calibrated just like any other transmitters? The main difference between fieldbus and conventional transmitters is that the output signal is a fully digital fieldbus signal. Although modern fieldbus transmitters have been improved compared to older transmitter models, it does not eliminate the need for calibration. Major time-savings can also be achieved by using the MC6 HART and/or Fieldbus functionality to enter transmitter data into the MC6 memory where the data can then be populated to the CMX calibration software instead of manually entering the data into the calibration database.

There are no such instruments, neither digital nor analog, that would remain stable indefinitely. Therefore, the "digitality" of an instrument does not mean that calibration is unnecessary. There are also many other reasons, such as quality systems and regulations, that make the periodic calibrations compulsory.

Beamex's fieldbus calibration solution

Beamex offers two products for calibrating fieldbus transmitters: MC5-IS (intrinsically safe) and MC6. The MC6 is a one-of-a-kind measurement device being an advanced field calibrator and full multi-bus communicator. The MC5-IS and MC6 can be used to calibrate HART, FOUNDATION Fieldbus H1 and Profibus PA instruments.

HART COMMUNICATION PROTOCOL

PROFI BUS

CALIBRATION SOLUTIONS

SOLUTIONS
WEIGHING INSTRUMENT CALIBRATION

Weighing instruments are typically very accurate, but they still need to be calibrated frequently to ensure that measurement values and uncertainty meet requirements. Weighing instruments as tools for measuring are highly common in industrial environments. Accurate weighing is required whenever invoicing and production depend on the precise weight of masses.

RELATED PRODUCTS

Beamex CMX Professional calibration software

Beamex CMX Enterprise calibration software

Beamex's solution for weighing instrument calibration

The Beamex CMX calibration software includes eccentricity tests, repeatability tests, weighing tests, and minimum capability weighing tests to assist in complying with all calibration requirements. The CMX also stores other compulsory information, such as traceability to used weight sets and weights, environment temperature before and after calibration, environment pressure and humidity, date and time, as well as information about who performed the calibration. All of this information can be entered into the PC at the workstation or a mobile Pocket PC (optional feature). The CMX also automatically produces traceable and auditable calibration certificates of all performed calibrations. The CMX calculates combined standard uncertainty and expanded uncertainty at calibration of the weighing instrument.

SUMMARY OF THE BENEFITS:

- Perform various different tests to comply with all weighing instrument calibration requirements
- Store all compulsory information
- Produce automatically traceable and auditable calibration reports
- Pocket PC interface (optional feature)

SOLUTIONS
COMMISSIONING

Successful commissioning of process instrumentation is an essential requirement for ideal plant performance. A plant, or any defined part of a plant, is ready for commissioning when the plant has achieved mechanical completion. Plant commissioning involves activities such as checking to ensure plant construction is complete and complies with the documented design or approved (authorized and recorded) design changes. In general, commissioning activities are those associated with preparing or operating the plant or any part of the plant prior to the initial start-up and are frequently undertaken by the owner or joint owner/contractor team.

RELATED PRODUCTS

Beamex MC6 calibrator

Beamex MC4 calibrator

Beamex CMX Professional calibration software

Beamex CMX Enterprise calibration software

Calibration and commissioning of instrumentation

New process instrumentation is typically configured and calibrated by the manufacturer prior to installation. However, instruments are often recalibrated upon arrival at the site, especially if there has been obvious damage in transit or storage. There are also many other reasons why instruments should be calibrated during the commissioning phase before start-up.

Assuring transmitter quality
First of all, the fact that an instrument or transmitter is new does not automatically mean that it is within required specifications. Calibrating a new instrument before installing or using it is a quality assurance task. You can check the overall quality of the instrument to see if it is defective and to ensure it has the correct, specified settings.

Reconfiguring a transmitter
The new uninstalled instrument or transmitter may have the correct, specified settings. However, it is possible that the original planned settings are not valid anymore and they need to be changed. By calibrating an instrument you can check the settings of the instrument. After you have performed this task, it is possible to reconfigure the transmitter, when the initial planned specifications have been changed. Calibration is therefore a key element in the process of reconfiguring an uninstalled transmitter.

Monitoring the quality and stability of a transmitter
When calibration procedures are performed for an uninstalled instrument, the calibration serves also future purposes. By calibrating the transmitter before installation and on a regular basis thereafter, it is possible to monitor the stability of the transmitter.

Entering the necessary transmitter data into a calibration database
By calibrating an instrument before installation it is possible to enter all the necessary instrument data into the calibration database, as well as to monitor the instrument's stability, as was explained in the previous paragraph. The transmitter information is critical in defining the quality of the instrument and for planning the optimal calibration interval of the instrument.

SOLUTIONS
COMPLETE INSTRUMENT WORKSHOP

Beamex is a world-class specialist when it comes to supplying complete instrument and electrical workshops to new industrial plants and to existing plants looking to modernize their workshops. There are hundreds of Beamex workshops installed and in use in more than 50 countries. Our workshops are highly popular especially in oil, gas, petrochemical and chemical plants, on offshore platforms and in thermal and combined power plants.

RELATED PRODUCTS

Beamex MCS200

MC6 Workstation

Total supplier of instrument and electrical workshops

The ideal instrument and electrical workshop is designed to meet the specific needs of an industrial plant. In addition, it has high-performing, reliable measurement equipment and systems that deliver improved efficiency and quality. Whether it is a single workstation or an entire workshop, Beamex will be your partner in the different phases regarding design, planning, detailed specifications and documentation, installation, training, supplying of high-quality equipment and accessories, and finally after sales services.

SUMMARY OF THE BENEFITS:

- Total supplier, turn-key solutions
- Efficient and reliable partner
- A combination of equipment, accessories and services
- For calibration, electrical and electronic maintenance, and motor testing

beamex

WORLD-CLASS CALIBRATION SOLUTIONS

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