

# A BETTER WAY TO CALIBRATE

An introduction to Beamex and its products, services and solutions



**beamex**  
A BETTER WAY TO CALIBRATE



# A better way to calibrate

Many times, calibration can be a minor part of a company's operation, but smart calibration makes a difference. Calibration means, that you care about the accuracy and quality of your processes. Calibration also means, that you care about improving your processes, because calibrations are traceable. Traceable in the sense that you can track history and traceable in the sense that they can help predict the future. With this knowledge, you can optimize the amount of calibrations needed and also the intervals between the calibrations of each instrument.

2

Calibrations performed correctly, will affect a great part of your business outcome in a positive way. The calibration can be integrated into companies' own ERP, calibration work orders can be automated and a paperless system with different integrations can be created. The combination of software, hardware and calibration expertise delivers an automated and paperless flow of your calibration data. Compared to a manual process, this typically decreases the time spent on the entire calibration process by 50%, while improving the quality of calibration records as well as ensuring a quick and easy retrieval for audits. Does this sound complicated? No, it's not, it can be done for every company.

Beamex is based in Finland, the land of advanced technology, with offices in the USA, France, UK, Germany, India, China, Saudi Arabia and UAE. The company was founded by four calibration technicians. They had discovered that in many companies only a third of the working time during instrument calibration was devoted to the actual calibration work, while the rest was spent on other activities.

At Beamex, it would be the other way around. They had very limited resources, but a lot of ideas on how to develop calibration. So, they started to develop a new, high accuracy calibrator aside of their own work as factory workers at the cellulose manufacturer Schauman (today UPM Group). Since the start in 1975, Beamex has always focused on developing the technology around calibration.

Precision, openness and enjoyment are the three core values of Beamex. We are convinced that, by living according to these values, Beamex personnel, also called the Beamex family, will be able to help you in any situation. The Beamex family has family members around the globe and we are all here, to provide you with **a better way to calibrate.**

## PEOPLE

At Beamex we believe that small teams and individuals can make a big impact. That's why we put people first and aim for a culture that encourages people to create new ideas, try, fail, and eventually succeed. We believe that motivation and a culture of innovation is key to both employee engagement and business success.

## PURPOSE

Our purpose is providing a better way to calibrate enabling accurate measurements, reduced uncertainties and trustable data and in our way help protecting the world, people and businesses.



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## 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:**

Existent in everything we do

### **OPENNESS:**

Driving change and innovation

### **ENJOYMENT:**

An energetic and rewarding environment

# BETTER WAYS TO CAL

## IMPROVED EFFICIENCY – TIME SAVED

“What used to take three or four of us to do in the past, can be done by one, maybe two of us. Just the Beamex MC6, is like having another technician on staff.”

**Senior Instrument and Control Technician, Cornell University Central Energy Plant, USA**

“Time is of the essence during an outage and the Beamex Integrated Calibration Solution allows technicians to maximize the amount of work accomplished in the shortest amount of time, while effectively performing vital tasks and managing workflows.”

**Senior Control Engineer, Alabama Power, USA**

“With the Beamex solution, we have complete flexibility, so we can perform many calibrations in between other daily tasks. This flexibility is important in a busy workplace where more urgent tasks often arise and need to be prioritized.”

**Engineer and Instrument Technician, Silkeborg CHP Plant, Denmark**

“I would estimate the savings in troubleshooting time and gain in loop check efficiency to be on the order of several weeks.”

**I&C Engineer, CH2M Hill, USA**

“After the incorporation of Beamex’s integrated calibration solutions, calibrations that would take all day are now performed in a couple hours.”

**XE&I Technician, Monsanto, USA**

“In line with the interval extensions defined by the calibration blueprint, CMX has identified over 100 hours of savings in the first 3 months of operation. There was also an 8% reduction in scheduled calibrations implemented during data transfer from the history system.”

**GlaxoSmithKline Ltd, Ireland**

## QUALITY, HIGH ACCURACY AND EASE-OF-USE

“In terms of calibration, these are excellent pieces of equipment and the support from Beamex’s distributor has been second to none.”

**Instrumentation Consultant, Aroona Alliance, Australia**

“Technicians from other plants within ATCO have come to our plant to help with shutdowns. They were really impressed with ease of use and plan to buy Beamex documenting calibrators to increase their plant performance.”

**Instrumentation Engineering Technologist, ATCO Power, Canada**

“The quality, accuracy, technical features, and ease-of-use made Beamex a strong alternative when assessing the different suppliers and calibration equipment.”

**General Manager of Instrumentation, Reliance Industries Limited, India**

“High accuracy, ease of use, reliability and costs were also considered important factors in making the decision, and Beamex’s solution was able to meet all of the requirements.”

**Deputy General Manager, Instrumentation, Essar Oil Limited, India**

## AUTOMATED CALIBRATION PROCESS

“After implementing the Beamex CMX calibration management system, GSK will be able to eliminate 21,000 sheets of printed paper on a yearly basis, as the entire flow of data occurs electronically, from measurement to signing and archiving.”

**GlaxoSmithKline Ltd, Ireland**



# LIBRATE

“Previously, the calibration was primarily done with manual and paper-based processes. The certificate was on paper, which was signed and stored in binders. After implementing the new calibration management process, the entire process takes place digitally, from measurement to signing and archiving.”

**AstraZeneca, Sweden**

“Information is available at your fingertips in order to make quick decisions about the overall calibration status of the instrumentation. The mobile electronic component of Beamex allows technicians to focus on their work without the hassle of paper and other distractions. The CMX product has proved to be both robust and reliable without much required maintenance at our facility for more than 3 years.”

**Boehringer Ingelheim, USA**

## **IMPROVED TRACEABILITY AND AUDITABILITY**

“Ability to trend, ease of review and ease of use for my team of Technicians. Auditors love this software so if you are using it right they have no doubt you are calibrating things right. Traceability, Auditability great functionality when used with the BEAMEX calibrators & strong support of systems on site.”

**Sterling Pharma Solutions, UK**

# A better way to calibrate

## INTEGRATED CALIBRATION SOLUTION

6

The Beamex integrated calibration solution is the combination of software, hardware and calibration expertise that delivers an automated and paperless flow of calibration data.

The **process** begins when a work-order is created in your maintenance management system and is automatically sent to the calibration software to select the associated calibration procedures.

Then, the **device information** and **calibration procedures** are sent to a documenting calibrator or tablet and the calibration work is performed.

Next, the device **automatically documents** the results. Finally, the results are transferred back to the calibration software for storage, and the work order is digitally closed in your maintenance management system.

When integrating your calibration system you **automate the calibration process** and eliminate all error-prone manual steps.

An integrated calibration solution typically **decreases the time spent on the entire calibration process** by 50%, while improving the quality of calibration records and ensuring quick and easy retrieval for audits.

### PLANNING



CMMS

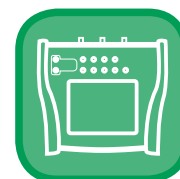
WORK  
ORDERS

RESULTS  
SUMMARY

### CALIBRATION PROCEDURE



BEAMEX CMX



CALIBRATION





## Main benefits

When you use an integrated calibration solution and digitalize your calibration process making it paperless, you can achieve many significant benefits:

**EFFICIENCY** Improve the **efficiency** of your calibration processes, **save time and money**.



- Efficiency is greatly improved by utilizing electronic data transfer and removing duplicate work through system integration. The calibration work is automated and simplified from start to finish.
- As a result of this, you can get more done with the same resources and save time and money. This is an investment that will pay itself back in a short time.

**QUALITY** Improve the **quality** of calibration results and **avoid human mistakes**.



- When calibration results are stored automatically/electronically, you save time and avoid human mistakes that are typical with manual processes.
- As a result of this, you can improve the quality of your calibration data.

**INTEGRITY** Ensure the **integrity** of the calibration data and save data you can **trust**.



- Utilizing user authentication, electronic signatures and means to avoid data manipulation you have calibration data you can trust.
- As a result of this, you improve the integrity of your calibration data.

# Beamex integrated calibration solution

## THE CALIBRATION PROCESS

8

### STEP-BY-STEP



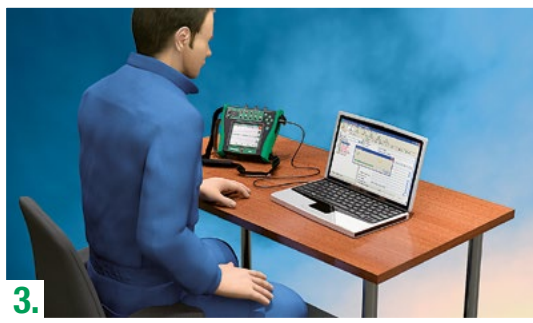
1.

Work order is created in CMMS/ERP and it is automatically/electronically transferred to Beamex CMX software.



2.

Plan your calibration work details in Beamex CMX.



3.

Download calibration and maintenance inspection tasks to a documenting calibrator or the mobile device.



4.

Perform calibrations/inspections in the field storing the results in a calibrator/mobile device.





5.

Upload the results from a calibrator/mobile device to CMX software.



6.

Store, print, analyze and manage results with CMX.



7.

Once completed, CMX automatically updates the work order status to CMMS/ERP.



# Beamex products and services

FIELD EQUIPMENT

10

## 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

**HART**  
COMMUNICATION PROTOCOL

**PROFIBUS**



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# 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 two versions:
  - MC2 temp./electrical calibrator
  - MC2 multifunction calibrator
- Compact size and design
- User-friendly





# Beamex MC6-Ex

## Intrinsically safe field calibrator and communicator



### MADE FOR EXTREME ENVIRONMENTS

- High-accuracy, advanced field calibrator and communicator.
- Combines advanced functionality with ease-of-use.
- Approved for Ex ia IIC T4 Ga – classification.
- Versatile functionality beyond traditional calibration applications.
- Full multi-bus communicator for HART, FOUNDATION Fieldbus and Profibus PA instruments.
- MC6-Ex features an internal loop supply for transmitters, so no additional supplies are needed.
- Automates calibration procedures for paperless calibration management





# 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  $-45\text{ }^{\circ}\text{C}$  to  $+700\text{ }^{\circ}\text{C}$
- Accredited calibration certificate included as standard
- Part of the Beamex integrated calibration solution



# 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  $-25\text{ }^{\circ}\text{C}$  to  $+660\text{ }^{\circ}\text{C}$
- Accredited calibration certificate included as standard
- Part of the Beamex integrated calibration solution



13

# Beamex POC8 automatic pressure controller

### PRESSURE CALIBRATION MADE FAST AND EASY

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



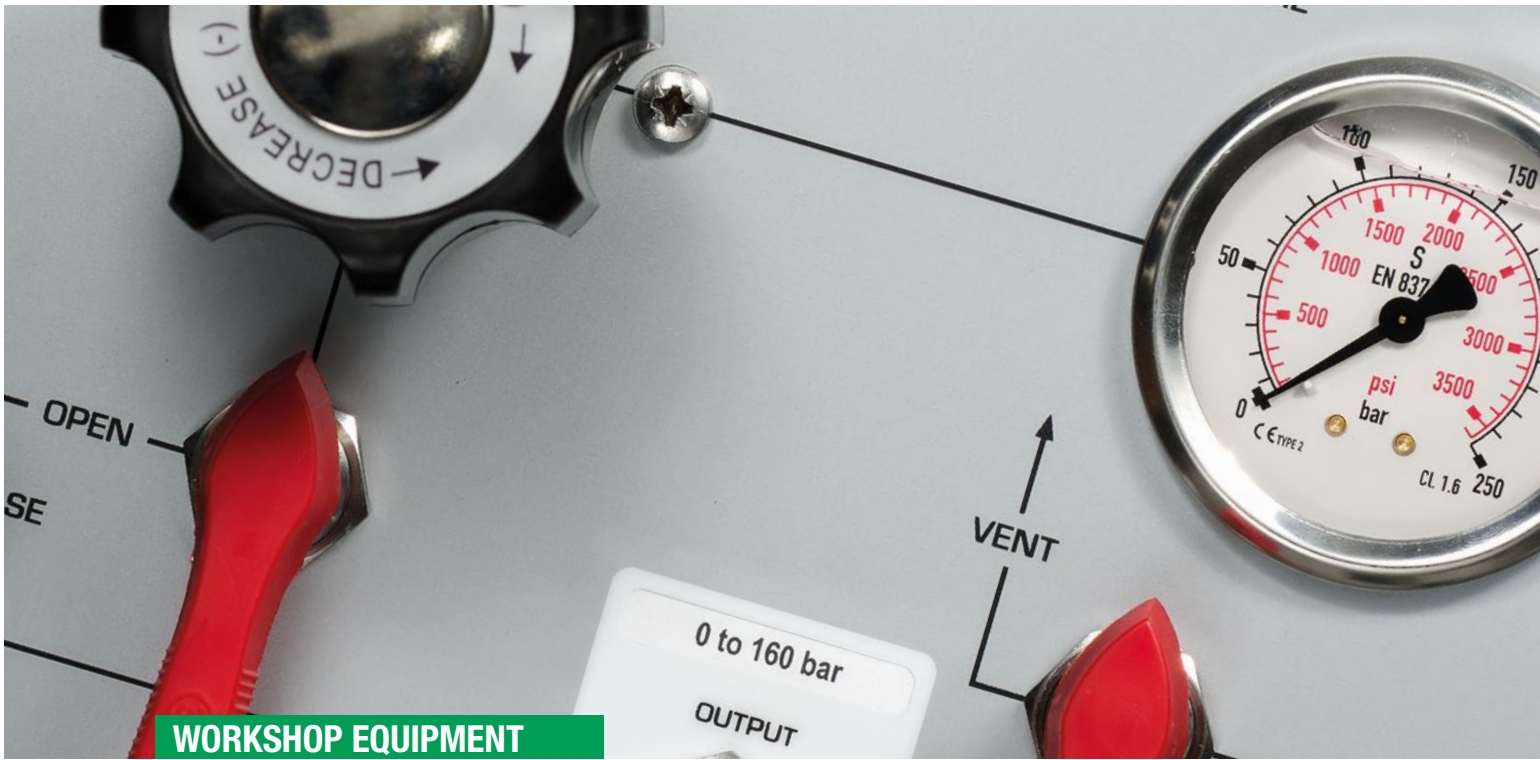
# Beamex PG pressure generation

### PRESSURE AND VACUUM SOURCES FOR FIELD USE

- Hand-held, lightweight pressure and vacuum sources for field use
- Ideal pressure/vacuum generators to be used as accessories for pressure and vacuum calibration



A BETTER WAY TO CALIBRATE



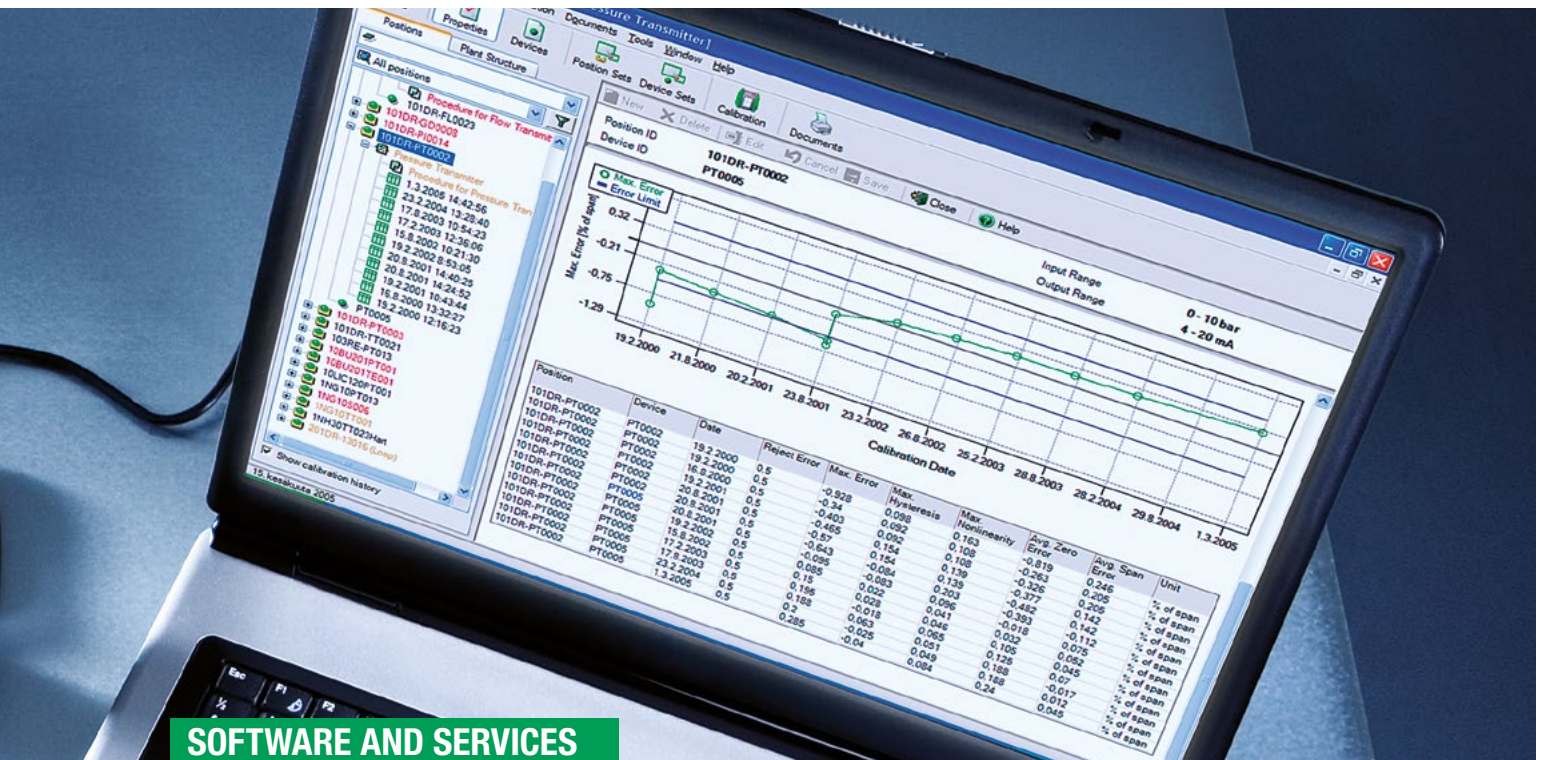
# Beamex MCS200 Calibration test bench

## 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





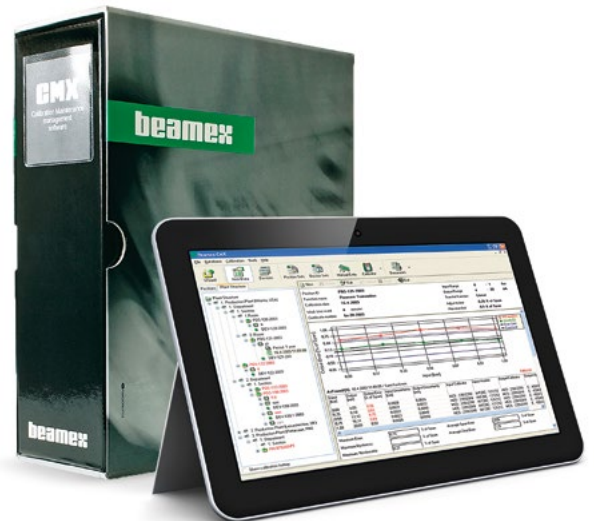


## SOFTWARE AND SERVICES

# 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
- User friendly, robust software
- Data management and storage
- Plan and schedule calibrations
- Analyze and optimize calibration frequency
- Produce reports and certificates
- Go paperless
- Guarantee data integrity
- Mobile multiplatform for calibration and maintenance inspections



## 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:

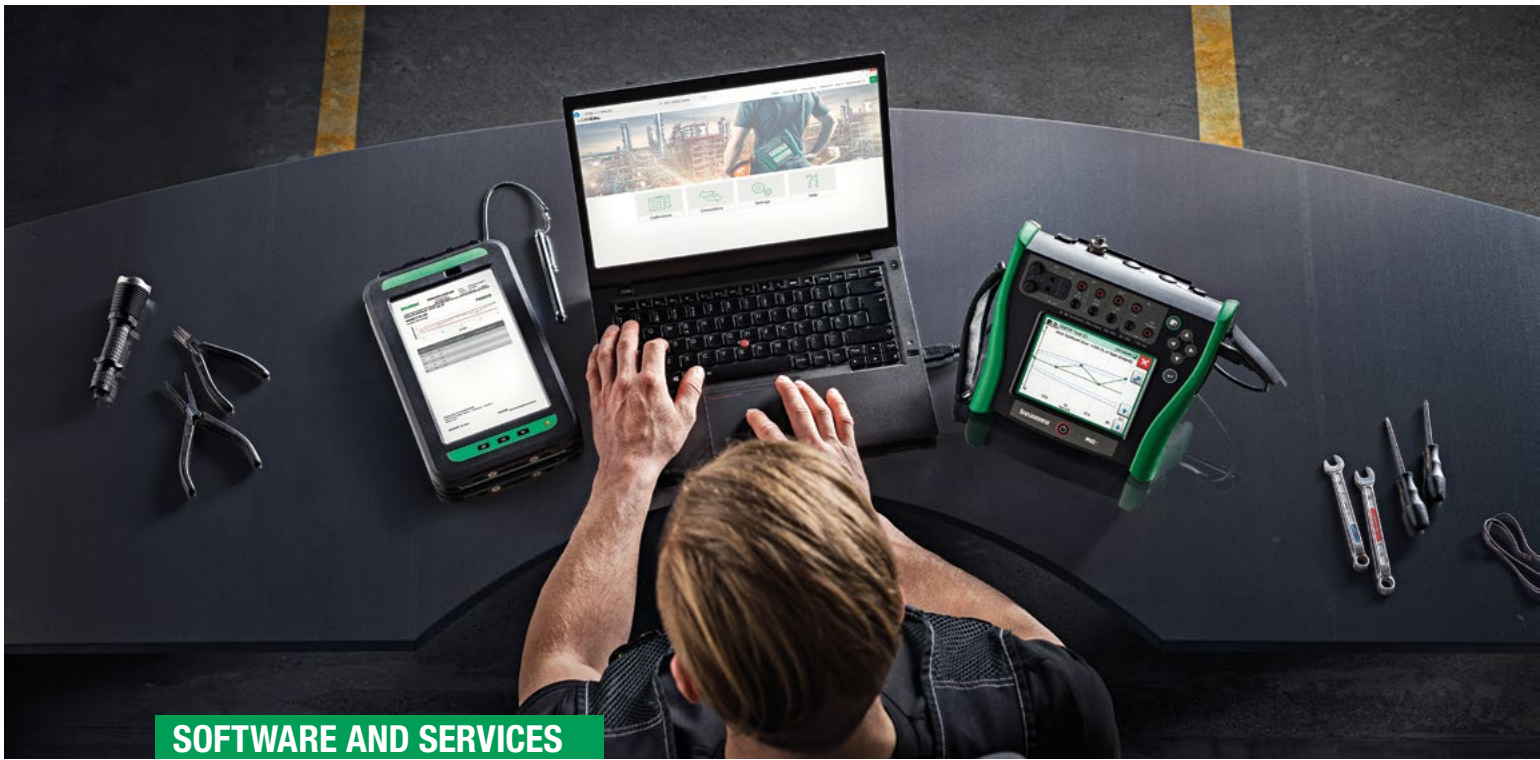
- Customer-specific system delivery
- Software implementation
- System integration
- Database conversion
- Validation
- Report design and user-interface configuration
- Training courses

## 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



## SOFTWARE AND SERVICES

16

# Beamex LOGiCAL

## Calibrations made LOGICAL

Beamex LOGiCAL is an advanced, free of charge, cloudbased calibration certificate generation software. It offers an affordable and easy way to document calibration results.

LOGiCAL reads the calibration results from selected Beamex documenting calibrators and presents the results on an electronic calibration certificate in PDF format.

### DOCUMENT YOUR CALIBRATIONS ANYWHERE ANYTIME

- Using a cloud-based software like LOGiCAL is extremely cost-effective
- The solution is completely free and IT involvement is not necessary
- Easily access the software anywhere an internet connection can be found
- No worries about version updates because the application updates automatically





## Beamex bMobile 2

### Mobile calibration application

Beamex bMobile 2 is an intuitive and powerful, multiplatform, mobile, paperless solution for executing and documenting process instrument calibrations, maintenance-related inspections and weighing instrument calibrations.

#### BEAMEX BMOBILE CALIBRATION APPLICATION

- Paperless solution for execution and documentation of calibration and inspection activities
- Works off-line
- Improves efficiency and reduces errors

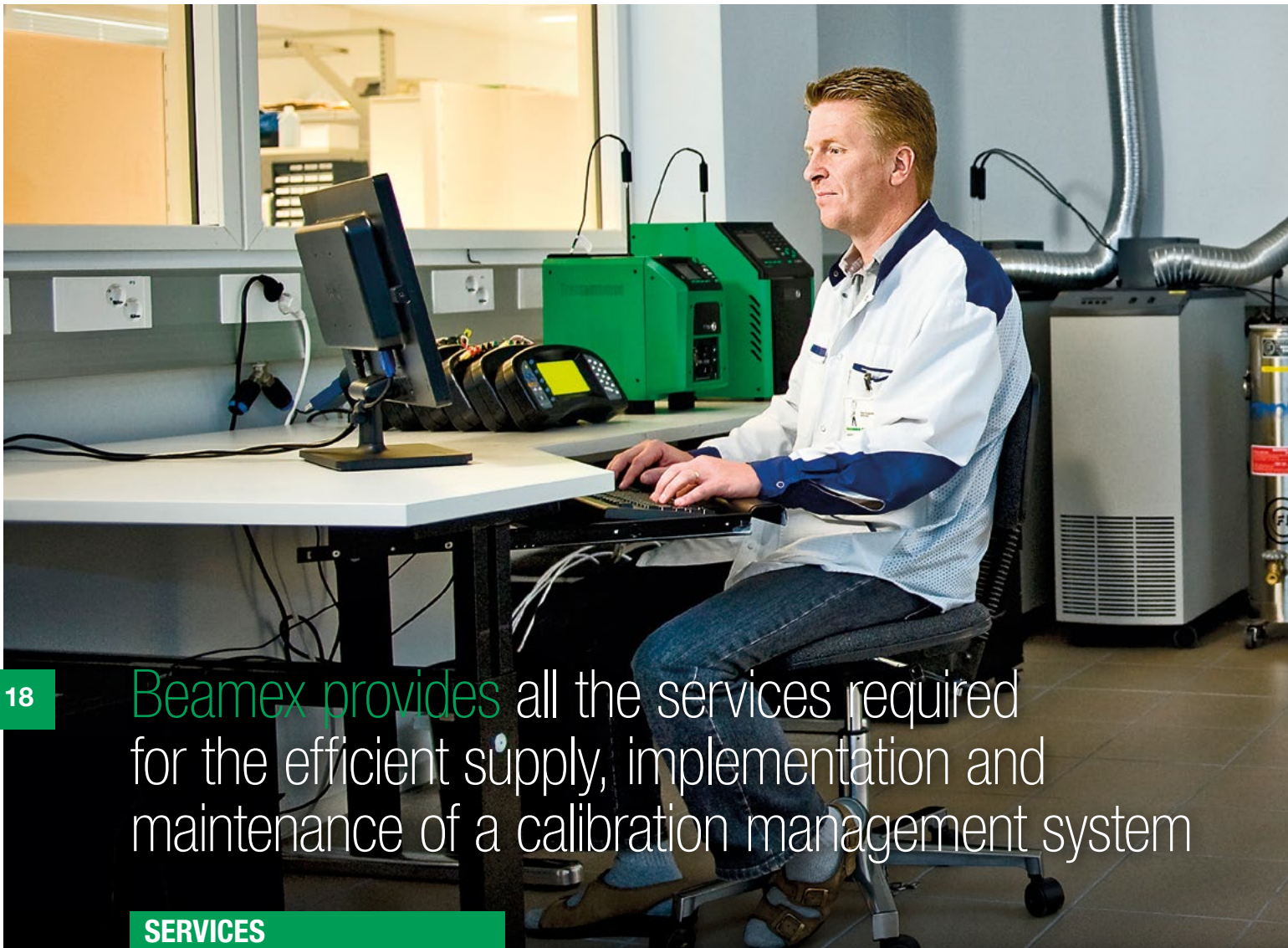
#### HOW DOES THE BMOBILE WORK?

Use the Beamex CMX calibration management software to plan and schedule all your calibration and inspection activities. When it is time to perform the calibration or inspection tasks, you can send the work orders wirelessly from CMX to the mobile device running the Beamex bMobile application and go out into the plant. At the point of work, the Beamex bMobile application guides you through all the activities step by step. The results are stored securely with traceable information and when you return to the office, you can upload the results wirelessly to the CMX software. The results are automatically stored in the database, where reports may be printed and scheduling is updated.



#### ENSURE THE INTEGRITY OF CALIBRATION AND INSPECTION DATA

When the Beamex bMobile is used in conjunction with the Beamex CMX software and Beamex's "Mobile Security Plus" technology, you have a paperless system that ensures the integrity of data to the very highest of standards and minimizes the risks of ALCOA violations.



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

## SERVICES

Choosing the right calibration software system with the right functionality and technical specifications is typically not enough. Once the calibration software has been chosen, a new calibration software system may require integration into other systems and customer-specific configuration. Existing data from old systems may need to be imported to the new system. The new software system needs to be tested and installed for production use. Finally, people need to be trained to use the new software.

### SOFTWARE IMPLEMENTATION

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.

### DATABASE CONVERSIONS

Are you using MS Excel or MS Access for managing calibration data? Or some older calibration software, which does not support modern operating systems? We are offering you a great opportunity to upgrade your existing calibration database or software to the modern and efficient Beamex

CMX calibration software. Beamex offers a range of services for database conversion and database migration.

### VALIDATION

Beamex's validation services perform factory type validation for CMX defines the requirements and relevant tests for the software to ensure product quality. Factory type validation confirms that the product functions as described in the Beamex functional design specification (FDS). Factory type validation includes IQ, OQ and PQ tests as well as a validation report. For software upgrades, an example risk assessment report is available and a software release note that describes the new and/or improved functionality.

### REPORT DESIGN AND USER-INTERFACE CONFIGURATION

The Beamex professional services team offers services for designing customized calibration report templates in Beamex CMX calibration software to meet your specific requirements. In addition, the CMX user interface can be modified to meet company-specific requirements, for instance in terms of terminology.





### TRAINING

Training ensures that both the users of the system 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 demonstrations. Training increases your knowledge and productivity. It can be provided by either a Beamex professional or one of Beamex's international partners that is able to offer courses in your local language.

### 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 SERVICES

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.

# 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.

20



## RELATED PRODUCTS

Beamex MC6 calibrator

Beamex MC6-Ex calibrator

Beamex MC4 calibrator

Beamex CMX calibration software





## 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.

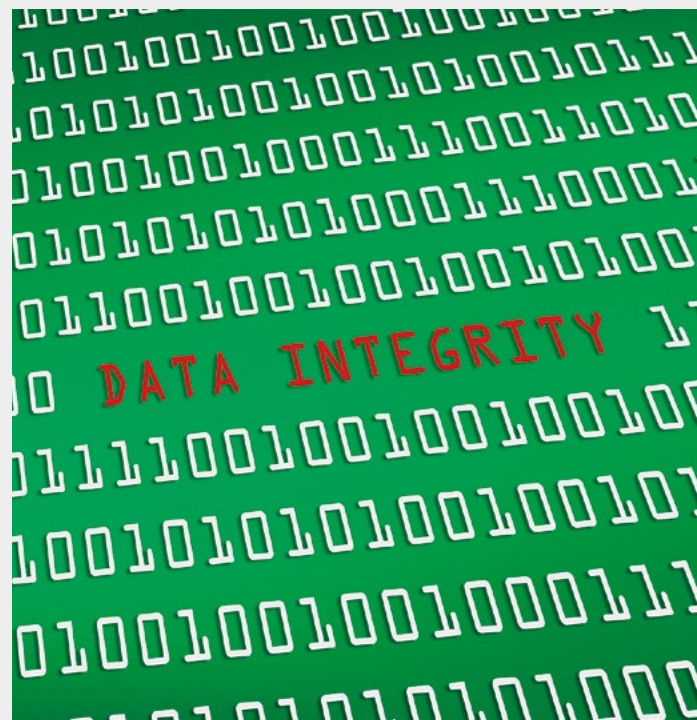
## Business benefits of paperless calibration

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 ENSURING THE INTEGRITY OF CALIBRATION DATA

22

Data integrity is the maintenance of and the assurance and consistency of the data over its life-cycle. ALCOA and ALCOA Plus acronyms are used when discussing data integrity. The integrity of calibration data is vital importance in many industries, specially regulated industries such as pharmaceutical. Updated regulation by FDA and MHRA is putting more focus on the data integrity in companies seeking compliance. The calibration data is critical in ensuring product quality, compliance to regulation and ultimately for patient safety.



## RELATED PRODUCTS

Beamex CMX calibration software

Beamex MC6 calibrator

Beamex MC6-Ex calibrator

Beamex bMobile 2 application







## Potential data integrity issues in traditional calibration processes

Traditional calibration processes are typically using non-documenting calibrators and a paper-based documentation of calibration results. The results may be entered into a calibration software manually.

In this kind of system there is often no proper user authentication, audit trail is not kept, it is possible to tamper calibration data (accidentally or intentionally), the data and time may be tampered, manual entry errors may happen, false interpretation of handwriting and many others.

## Beamex's solution for calibration data integrity – Mobile Security Plus

Beamex calibration system has been enhanced together with the calibration professionals from some of the world's most regulated companies, to ensure it fulfils the requirements for calibration data integrity.

Already in the past, the Beamex calibration solution fulfilled the requirements of 21 CFR Part 11 and relevant regulations. Now with our latest enhancements, Beamex system has been enhanced with a "Mobile Security Plus" technology. With this technology, the Beamex calibration solution further lowers the risk of ALCOA violations by identifying users on off-line mobile devices with their electronic signature and secures off-line data against potential data tampering. These mobile off-line devices include our MC6 family of documenting multifunction calibrators, and our bMobile 2 application for tablets and mobile phones. With the latest version of the Beamex calibration solution, including the Beamex CMX calibration management software, you can safely use these mobile devices to comply with the updated regulation also in the future.

# SOLUTIONS

## CALIBRATION AND CONFIGURATION OF SMART INSTRUMENTS

24

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 MC6-Ex 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: MC6-Ex and MC6.

The MC6 is a one-of-a-kind measurement device being an advanced field calibrator and full multi-bus communicator. The MC6-Ex and MC6 can be used to calibrate HART, FOUNDATION Fieldbus H1 and Profibus PA instruments.



# SOLUTIONS WEIGHING INSTRUMENT CALIBRATION

26

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 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 device (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
- Mobile device 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.

28



## RELATED PRODUCTS

Beamex MC6 calibrator

Beamex MC6-Ex calibrator

Beamex MC4 calibrator

Beamex CMX 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.

30



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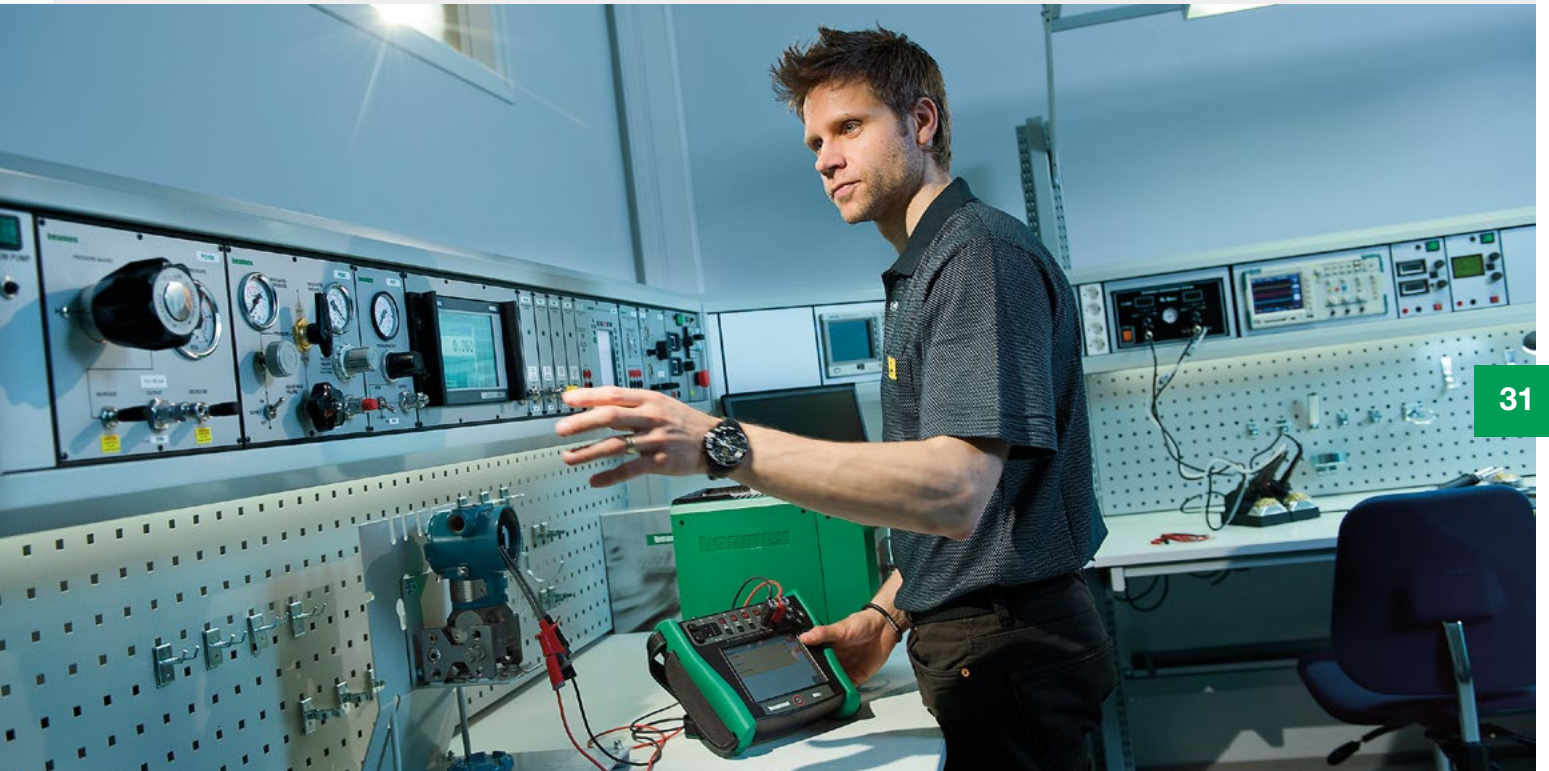


## RELATED PRODUCTS

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

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