

# Calibration

Spring/Summer 2012

# WORLD



## Customer Success Stories

Absolut Company, Sweden

Spectra Automation Ltd, US

## Configuring and Calibrating Smart Instruments

Introducing a new industry benchmark  
**MC6 Advanced Field  
Calibrator and Communicator**

## CEO's Letter

In spring 2009, Beamex conducted a wide global survey of process manufacturing companies to identify the main challenges in calibration in various industrial sectors. The main points of the results were published in our Calibration World issue 2 in 2009 (Current market trends in calibration). When it comes to calibrating instruments, the results from the survey indicated that the greatest challenge for companies is to be able to carry less equipment when calibrating instruments.

Another important challenge is in fieldbus instruments, which, although growing in popularity, are simply not being calibrated by some companies. A high proportion of the respondents also agreed that documentation related to instrument calibration takes much time and effort. More than a third of respondents said that 'documentation errors' were an issue for their organization which closely relates to the overall quality and accuracy of calibration records.

After Beamex launched the MC6 – More than a calibrator - in February this year, it is very obvious why we have paid so much attention to analyzing calibration (and asset management) market trends, customer perspectives and opinions during the last few years. The development of MC6 was actually a very unique project in many other respects also. We have never put so much effort into successfully combining advanced functionality with ease-of-use, accuracy and versatility. Our IPR activities have been more extensive than ever before. We have never allocated such an amount of resources to any single development project, and we have never had such immediate and positive feedback and sales success after the launch of a new product!

In addition to case stories, this Calibration World issue contains news about Beamex and our recent activities. One of the news articles reveals that we at Beamex are firm believers of hands-on demonstrations. From February to May this year we have made a Road Show together with our partners covering 17 countries in Europe. During the Road Show we met nearly 1000 visitors face-to-face and were able to show and demonstrate to them our complete product range and get feedback about their future needs. Already now, we know that the Road Show was a great success and a big part of the success was due to our excellent sales and support partners in Europe.

Enjoy your reading and remember that we appreciate your feedback very much!



Raimo Ahola  
CEO, Beamex Group



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# Configuring and Calibra





# ting Smart Instruments

**So called “smart” instruments  
are ever more popular in the  
process industry.**





The vast majority of delivered instruments today are smart instruments. These new smart instruments bring new challenges to the calibration and configuration processes. But what are these smart instruments and what is the best way to configure and calibrate them?

Beamex has recently introduced a new revolutionary tool, the Beamex® MC6 – Advanced Field Communicator and Calibrator, that will help to overcome these challenges.

## What is a “Smart” transmitter?

A process transmitter is a device that senses a physical parameter (pressure, temperature, etc.) and generates an output signal proportional to the measured input. The term “smart” is more of a marketing term than a technical definition. There is no standardized technical definition for what smart really means in practice.

Generally, in order for a transmitter to be called smart, it will utilize a microprocessor and should also have a digital communication protocol that can be used for reading the transmitter’s measurement values and for configuring various settings in the transmitter. A microprocessor-based smart transmitter has a memory that can perform calculations, produce diagnostics, etc. Furthermore, a modern smart transmitter typically outperforms an older type of conventional transmitter regarding measurement accuracy and stability.

In any case, for the engineers who need to configure and calibrate the transmitter, the digital communication protocol is the biggest difference compared to conventional transmitters. Engineers can no longer simply measure the output analog signal, but they need to have the possibility to communicate with the transmitter and read the digital signal. That brings a whole new challenge – how can the digital output be read?

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*The term “smart” is more of a marketing term than a technical definition.*

*There is no standardized technical definition for what smart really means in practice.*

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Thinking of the opposite of a smart transmitter, i.e. a non-smart transmitter, would be a transmitter with a purely analog (or even pneumatic) output signal.

## Smart transmitter protocols

There are various digital protocols that exist among transmitters considered smart. Some are proprietary protocols of a certain manufacturer, but these seem to be fading out in popularity and favor is being given to protocols based on Open Standards because of the interoperability that they enable.

Most of the protocols are based on open standards. The most common transmitter protocol today is the HART (Highway Addressable Remote Transducer) protocol. A HART transmitter contains both a conventional analog mA signal and a digital signal superimposed on top of the analog signal. Since it also has the analog signal, it is compatible with conventional installations. Recently the HART protocol seems to be getting more boosts from the newest *WirelessHART* protocol.

The fieldbuses, such as FOUNDATION Fieldbus and Profibus, contain only a digital output, no analog signal. FOUNDATION Fieldbus and Profibus are gaining a larger foothold

on the process transmitter markets.

This article will discuss “smart” transmitters, including HART, *WirelessHART*, FOUNDATION Fieldbus and Profibus PA protocols.

## Configuration

One important feature of a smart transmitter is that it can be configured via the digital protocol. Configuration of a smart transmitter refers to the setting of the transmitter parameters. These parameters may include engineering unit, sensor type, etc. The configuration needs to be done via the communication protocol. So in order to do the configuration, you will need to use some form of configuration device, typically also called a communicator, to support the selected protocol.

It is crucial to remember that although a communicator can be used for configuration, it is not a reference standard and therefore cannot be used for metrological calibration. Configuring the parameters of a smart transmitter with a communicator is not in itself a metrological calibration (although it may be part of an Adjustment/Trim task) and it does not assure accuracy. For a real metrological calibration, by definition a traceable reference standard (calibrator) is always needed.

## Calibration of a smart transmitter

According to international standards, calibration is a comparison of the device under test against a traceable reference instrument (calibrator) and documenting the comparison. Although the calibration formally does not include any adjustments, potential adjustments are often included when the calibration process is performed. If the calibration is done with a documenting calibrator, it will automatically document the calibration results.

To calibrate a conventional, analog transmitter, you can generate or measure





the transmitter input and at the same time measure the transmitter output. In this case calibration is quite easy and straight forward; you need a dual-function calibrator able to process transmitter input and output at the same time, or alternatively two separate single-function calibrators.

But how can a smart transmitter, with output being a digital protocol signal, be calibrated? Obviously the transmitter input still needs to be generated/measured the same way as with a conventional transmitter, i.e. by using a calibrator. However, to see what the transmitter output is, you will need some device or software able to read and interpret the digital protocol. The calibration may, therefore, be a very challenging task; several types of devices may be needed and several people to do the job. Sometimes it is very difficult or even impossible to find a suitable device, especially a mobile one, which can read the digital output.

Wired HART (as opposed to *WirelessHART*) is a hybrid protocol that includes digital communication superimposed on a conventional analog 4-20mA output signal. The 4-20mA output signal of a wired HART transmitter is calibrated the same way as a conventional transmitter. However, to do any configuration or trimming, or to read the digital output signal (if it is used), a HART communicator is needed.

## The solution

The new Beamex® MC6 is a device combining a full field communicator and an extremely accurate multifunctional process calibrator. With the MC6, the smart transmitter's input can be generated/ measured at the same time as reading the digital output. The results can be automatically stored into the memory of the MC6 or uploaded to calibration software.

The Beamex® MC6 can be used both as a communicator for the configuration and as a calibrator for the calibration of



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*When it comes to configuration of the smart transmitters, the MC6 includes a full field communicator for HART, WirelessHART, FOUNDATION Fieldbus H1 and Profibus PA protocols. All required electronics are built-in, including power supply and required impedances for the protocols.*

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### About Beamex® MC6

Beamex® MC6 is an advanced, high-accuracy field calibrator and communicator. It offers calibration capabilities for pressure, temperature and various electrical signals. The MC6 also contains a full fieldbus communicator for HART, FOUNDATION Fieldbus and Profibus PA instruments.

*Beamex® MC6 is an advanced, high-accuracy field calibrator and communicator.*

The usability and ease-of-use are among the main features of the MC6. It has a large 5.7" color touch-screen with a multilingual user interface. The robust IP65-rated dust- and water-proof casing, ergonomic design and light weight make it an ideal measurement device for field use in various industries, such as the pharmaceutical, energy, oil and gas, food and beverage, service as well as the petrochemical and chemical industries.

The MC6 is one device with five different operational modes, which means that it is fast and easy to use, and you can carry less equipment in the field. The operation modes are: Meter, Calibrator, Documenting Calibrator, Data Logger and Fieldbus Communicator. In addition, the MC6 communicates with Beamex® CMX Calibration Software, enabling fully automated and paperless calibration and documentation.

In conclusion, the MC6 is more than a calibrator.

smart instruments with the supported protocols. The MC6 supports all of the protocol commands according to the transmitter's Device Description file. Any additional communicator is therefore not needed.

There are some other "smart" process calibrators on the market with limited support for different protocols, typically only for one protocol (mostly HART) and offering very limited support. In practice, a separate communicator is needed in any case.



### WHY CALIBRATE?

■ A modern transmitter is advertised as being smart and extremely accurate and sometimes sales people tell you they don't need to be calibrated at all because they are so "smart". So why would you calibrate them?

First of all, the output protocol of a transmitter does not change the fundamental need for calibration. There are numerous reasons to calibrate instruments initially and periodically. A short summary of the main reasons include;

- Even the best instruments and sensors drift over time, especially when used in demanding process conditions.
- Regulatory requirements, such as quality systems, safety systems, environmental systems, standards, etc.
- Economical reasons – any measurement having direct economical effect.
- Safety reasons – employee safety as well as customer/patient safety.
- To achieve high and consistent product quality and to optimize processes.
- Environmental reasons.

# Absolut Company, Sweden

### Absolut Company upgrades its' paperless calibration process with Beame

**The Absolut Company has the worldwide responsibility for the production, innovation and strategic marketing of ABSOLUT VODKA, MALIBU, KAHLÚA, Wyborowa, Luksusowa and Frís. ABSOLUT VODKA is the world's fourth largest premium spirits brand.**

Every bottle of ABSOLUT VODKA is produced in Åhus in southern Sweden. Producing its vodka in one location using local raw materials gives The Absolut Company complete control of all stages of production and ensures that every drop meets our high quality standard. The Absolut Company is a company within the Pernod Ricard group, which holds one of the most prestigious brand portfolios in the sector.

The first Beamex calibrator, MC5, was purchased in 2005 in order to start in-house calibrations. Before that, the calibration process was outsourced to a service company. Absolut Company had no scheduled calibrations and the traceability was limited. There used to be a yearly calibration process of all of the 2000 instruments during the shut-down in summer. No calibrations were performed outside the annual shut-down, only in cases of deviation or failure reports.

Pär Björklund, an engineer in the automation department, is responsible for control systems, instruments and calibration at Absolut Company. Björklund works in close, efficient cooperation with another engineer and a technician who work in the service department. He and his team were eager to improve the calibration process, knowing that inaccuracy would affect the total quality of the product. They saw the need for functional and robust high quality calibration equipment. In

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*"Nowadays calibration is crucial to our production processes. If we don't calibrate regularly, we might have unplanned line shut-downs creating huge losses. We both need and want to have accurate measurements."*

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2005, the company purchased the first MC5 and in 2007 CMX Calibration Software was acquired.

#### **New quality regulations increased the demand for accurate calibrations**

The Absolut Company was quality certified, which increased the requirements for traceability and calibration. Absolut Company is certified according to several different standards; BS EN ISO 22000:2005 (Food Safety Management System), SS 62 77 50 (Energy Management System), ISO9001, ISO14001 and OHSAS 18001 (Health and Safety Management System). These certificates are audited regularly and the calibration team needs to be able to prove that calibration intervals are followed and that all calibration results are documented in a traceable way.

"Nowadays calibration is crucial to our production processes. If we don't calibrate regularly, we might have unplanned line shut-downs creating huge losses. We both need and want to have accurate measurements," Mr Björklund points out.

#### **The in-house calibration process**

Absolut Company calibrates temperature, pressure, flow and level



**Engineer Pär Björklund performing pressure calibrations.**



*“We can save a huge amount of costs by performing the calibrations in-house with Beamex calibration equipment. The payback time for the investment is short and after a couple of years using the equipment we will have all of the knowledge we need.”*

on all possible process equipment, including both analog and digital instruments. The calibration intervals

for every single instrument have been agreed upon with the production department. They are evaluated every year and, if needed, also adjusted. All the necessary work can be done with Beamex calibrators.

“We can save a huge amount of costs by performing the calibrations in-house with Beamex calibration equipment. The payback time for the investment is short and after a couple of years using the equipment we will have all of the knowledge we need. We can easily show any calibration result, if needed,” Mr Björklund describes.

**Beamex calibrators are very accurate and reliable**

According to Mr Björklund, the Absolut Company finds the calibrators accurate and reliable. Thanks to the CMX Software Support and Maintenance Program, the company gets regular software updates and support from the Beamex help desk team if problems arise. “We find the Beamex® CMX Calibration Software easy to use and it is essential for our planning and documentation,” he adds.

Working with potentially combustible substances, it’s important to be able to use the calibrators in an Ex environment, which is possible with the MC5-IS. The Absolut Company uses several products from Beamex product range: CMX, MC5 compatible with HART and Profibus PA, POC6, PG series pumps, temperature dry blocks and now also the new MC6.

“The quality and accuracy of our measurements have improved after using Beamex calibration equipment, resulting in increased efficiency and productivity in our department as well as in our facility. We are very satisfied with our calibration equipment and looking forward to using the new Beamex® MC6,” Mr Björklund concludes.

**→ ABOUT ABSOLUT VODKA**

- ABSOLUT VODKA, introduced in the US in 1979, is the fourth largest international premium spirit in the world and is available in more than 150 markets. ABSOLUT VODKA is the number two brand of premium vodka worldwide. (Source: Impact International)
- ABSOLUT VODKA is produced from winter wheat, a hardy wheat grain that gives ABSOLUT VODKA its smooth grain character. Every year approximately 80,000 tons are used to produce ABSOLUT VODKA. Over one kilo (two pounds) of grain is used for every one-liter bottle.
- ABSOLUT VODKA uses a unique process called continuous distillation, introduced in the nineteenth century by “The Vodka King”, Lars Olsson Smith. ABSOLUT VODKA is distilled hundreds of times until all impurities have been removed.
- More than 400 years of vodka-making tradition stands behind every bottle of ABSOLUT VODKA.
- ABSOLUT VODKA and the other 14 members of the ABSOLUT VODKA family are distilled hundreds of times before they can be called ABSOLUT VODKA.



# Spectra Automation Ltd, US

## Streamlining and automating the calibration process with Beamex® CMX



**Spectra Automation (Spectra) is an engineering and instrumentation organization that offers a wide scope of services, such as design engineering, project management, and calibration. Calibration services provide added value to customers that aim to maximize their operations. Spectra's primary customers are found in the life sciences, educational institutes, food and beverage, power, water and waste sectors.**

The role Spectra fulfills to their customers is critical. Instrumentation and control teams are often-times short-staffed. As a result of this phenomenon, they require a service to complete calibration work. The calibration needs of Spectra's customers are many and varied, tailored to suit specifications. Spectra calibrates a variety of instruments including pressure transmitters, temperature transmitters and switches.

Hakon Dybwad is the Service Manager at Spectra. He is responsible for several facets in operations; customer service, managing service

personnel, and deploying staff to assist customers with their implementation or maintenance needs. Many calls for assistance require verifying correct functionality of devices as a result of the facility's operational personnel's concerns.

### Vast and varied calibration

After evaluating other options and considering past experience with Beamex products, the Beamex® MC4 and MC5 multifunction documenting calibrators were selected based on their ease of use and modularity. The

design of the MC5 permitted Spectra to acquire additional functionality at later dates, such as Foundation Fieldbus, PROFIBUS and data logging capabilities. CMX Professional software was also purchased to manage the various customer calibration databases.

The procedures for which Beamex equipment is utilized are vast and varied. The ability to produce consistent test methods resulting in reliable test data, no matter which instrument and control service an engineer uses to execute the task at hand, is critical. The test procedures are defined in the CMX calibration database. Referencing the respective customer database enables the Spectra staff to be pro-active and generate "devices due" reports. These reports are used to schedule maintenance tasks associated with various systems and processes.

Prior to the calibration crew members completing their assignments, the appointed technical lead populates the devices required to be tested. These position sets are in essence "calibration routes" which are sent to the documenting calibrators. Typically, Spectra can complete the testing of 450 devices in 15 working days utilizing a work crew comprising four individuals and a technical lead. The crew, as described, are assigned MC5 Multifunction Calibrators. If a HART or Foundation Fieldbus device requires calibration, the appropriate functionality of these calibrators is used. This accomplishment is tantamount to 510 work hours, and all of the test results are safely stored in the CMX calibration database, ready for printing when required.

### Major time savings with CMX database management

After uploading all test results from the MC4 or MC5 calibrators, a "positions calibrated" report is generated from



# Calibration Software



*“Millennium Power has utilized the services of Spectra Automation for several years for I&C support during our outages. Spectra’s utilization of Beamex® CMX Professional in conjunction with their documenting MC5 Multifunction Calibrator has been especially useful. Over the years we have identified several critical transmitters that have shown a propensity to drift, necessitating their replacement, while also showing which transmitters have remained rock-steady. This has allowed us to push out their calibration frequency. The reports provided are clear, providing the necessary information in an easy-to-grasp format.”*

Tim Sheehan, Systems Superintendent

## → ABOUT SPECTRA AUTOMATION

■ Spectra Automation has been providing process solutions for the automation industry since 2005. The company was founded with one goal in mind; to provide exceptional service using experienced engineers. Working with some of the most successful companies in the world, Spectra’s services range from small retrofits and expansions to multi-million dollar Greenfield projects. Spectra offers a comprehensive range of services including consulting, design, automation, commissioning and qualification.

The company is located in the United States, Canada and in the United Arab Emirates and provides engineering services to the following industries:

- Life Science
- Power / Utilities
- Water /Waste Water
- Manufacturing
- Pulp and Paper

CMX. This report is referenced by the customer to identify where, if any, replacement devices are required. Any device with a failed test result can be replaced at the customer’s discretion and is usually retested if replaced. Spectra offers customers reliable test data reports, which comprises a hard copy of calibration certificates for all devices tested and “pass or fail” status reports.

“We eliminated administrative task previously used for generating and delivering calibration certificates using EXCEL which was time-consuming and prone to typographical errors. Customer satisfaction with Spectra Automation calibration work processes and results delivered rose, resulting in an increase of work from word of mouth amongst customers. New hires learn to use the equipment at hand in little time and relatively easily,” Hakon describes.

### **Streamlining and automating the calibration process**

Spectra maintains autonomous calibration databases for every customer. Through CMX, the amount of storage space required for each customer is tremendously reduced and functionality is optimized. Previously, storing archived hard copy calibration records in filing boxes or cabinets resulted in difficult retrieval of calibration records while making the comparison of archived calibration data next to impossible.

“The combination of Beamex equipment and software creates the ability and means to complete previously exhaustive and time-consuming tasks within short periods of time, while streamlining the procedure utilized to compile the calibration documents that we give our customers upon completion of calibration tasks,” Hakon states.

## Introducing a new measurement industry benchmark

### Beamex introduces a new measurement industry benchmark – an advanced field calibrator and communicator.

■ The processing industry is going through significant changes and is affected by several industry trends. Mr. Raimo Ahola, CEO of Beamex Group says, “we have conducted extensive market- and customer-related studies worldwide during the past few years by interviewing thousands of instrumentation and calibration professionals, and based on those studies, and also on direct feedback we have received from our customers, several industry trends are evident, which pose new demands on devices and systems used for performing and managing calibrations. This feedback was the starting point for our product development project a few years ago when we decided to develop a device that will be the next measurement industry benchmark”.

Instrumentation and calibration technicians are required to carry more and more measurement equipment on the field, there is demand for increasingly accurate and stable measurements due to more accurate transmitter technology and there is an increased demand for measurement equipment that automates procedures and guides the user on the field. Furthermore, plants are looking to decrease measurement equipment lifecycle costs by replacing several individual measurement devices with multifunctional devices.



The new Beamex® MC6 Advanced Field Calibrator and Communicator is a solution to the new process industry requirements. “We are extremely proud of the new MC6; it is the end-result of the largest product development project in Beamex’s nearly forty-year history”, Ahola summarizes the product development project. The MC6 is an advanced, high-accuracy field calibrator and communicator. It offers calibration capabilities for pressure, temperature and various electrical signals. The MC6 also contains a full fieldbus communicator for HART, FOUNDATION Fieldbus and Profibus PA instruments. The usability and ease-of-use are what really makes the MC6 unique. It has a large 5.7” color touch-screen with a multilingual user-interface. The robust IP65-rated dust- and water-proof casing, ergonomic design and light weight make it an ideal measurement device for field use in various industries, such as the

pharmaceutical, energy, oil and gas, food and beverage, service as well as the petrochemical and chemical industries.

The MC6 is one device with five different operational modes, which means that it is fast and easy to use, and technicians can carry less equipment in the field. The operation modes include Meter, Calibrator, Documenting Calibrator, Data Logger and Fieldbus

Communicator. In addition, the MC6 communicates with Beamex® CMX Calibration Software, enabling fully automated and paperless calibration and documentation. The MC6 is more than a calibrator.

Beamex is also introducing a new version of the CMX Calibration Software that, together with the MC6, offers new and improved possibilities for paperless calibration management. Mr. Heikki Laurila, Product Manager of Beamex Group, summarizes the features and functionality of the MC6 by saying, “the MC6 takes a unique and unoccupied position on the market, as it is a calibrator and communicator that combines advanced functionality and accuracy with usability. This is groundbreaking, because, typically products with many functions are not very easy to use”.

# Beamex Calibration Road Show in Europe 2012



■ *“There is no better way to experience calibration equipment, software and systems than to do so hands-on”.* That is how Beamex promoted its 2.5-month-long Road Show in Europe to all its contacts. The Road Show idea was introduced in spring 2011. Beamex distributors were immensely interested in participating, so the planning and implementation continued during autumn 2011. In November 2011 most things were set up.

The Road Show visited 17 different countries in total throughout Europe in order to provide instrumentation and calibration professionals with an opportunity to learn and experience the entire Beamex product range, including the recently launched MC6. One of the main reasons for this Road Show was to introduce the MC6 Advanced Field Calibrator

and Communicator directly to the end user. Peter Sundqvist, Beamex Area Sales Manager and main organizer of the Road Show, says, “We wanted to make it easy for the customers to visit us, and therefore we were parked near their own facility”.

The Road Show began 28 February 2012 and ended 16 May 2012. During this time, there were a total of 45 days of exhibitions and 18 Beamex people demonstrating the calibration solutions in the exhibition truck. “The Road Show has been an interesting experience. We have learned more about our customers and they have learned more about us. We had nearly 1000 visitors altogether,” Mr Sundqvist states after 23 days on the road.

The Road Show was followed and reported on Beamex Calibration Facebook site as well.

“ *The communicator in MC6 looks great; it will be a strong calibration tool. I expect that it will be a successful product for Beamex.*

Mr. Ludovít Mičko  
Transpetrol Šahy

“ *I was very happy to take part in this kind of exhibition. I took the chance to learn what kind of company Beamex is and to experience all the products they offer. I am very satisfied with using the MC5-IS in my company. This product is very robust, accurate and can be used in the difficult environments in the field. I was very impressed by the new calibrator Beamex® MC6.*

Mr. Krzysztof Breier  
Metrology Specialist  
at GAZ-SYSTEM SA Oddział Wrocław



## Beamex distributors worldwide gathered for International Sales Meeting (ISM)

■ Beamex regularly organizes international sales meetings called ISMs (International Sales Meeting) to strengthen and support its distributor network. The first ISM was held in 1996. The ISMs involve training for product sales and marketing. In the evenings, there are social events together with Beamex employees.

Beamex ISM2012 was the sixth ISM, and it was held in Pietarsaari in January 2012. The interest in participating was greater than ever before; almost 80 distributors from 40 different countries participated. Vice President, Sales and Marketing Jan-Henrik Svensson proudly states, "These



people stand for a major part of Beamex total sales. It's important that all our distributors know the Beamex way of thinking and that we work towards common goals. The great amount of participants shows that we have very

committed distributors". The ISM lasted for 2.5 days and consisted of 8 different workshops.

The Beamex distributor network develops constantly, and the newest partners are distributors in Denmark, Switzerland and Brazil. Long-term relationships with the distributors are very important and highly appreciated, and many of Beamex distributors have been there for a long time.

An excellent example is the Spanish distributor Gometrics, distributor since 1978, which obtained its own facility before Beamex. Gometrics received an award during the ISM as one of the best suppliers.

## Kuwait National Petroleum Company using Beamex calibration solutions

■ The Kuwait National Petroleum Company (KNPC) is the national oil refining company of Kuwait. Established in October 1960, KNPC handles the responsibility of oil refining, gas liquefaction and distribution of petroleum goods within the local market.

Their site in Mina Abdullah will be equipped with a new Instrument Testing Unit for testing, maintenance and calibration of process instruments. The Instrument Workshop will be equipped with state-of-the-art calibration equipment comprising both calibration workstation and calibration software.

A delegation from KNPC visited Beamex HQ in Pietarsaari in March for the Factory Acceptance Test and also to participate in training.



**Mr. Ahmad Q. N. M. Q. Alsarraf, Mr. Hassan A. A. H. Al-Kandari, Mr. Ali Ali Abdelrahman Ismail and Ahmad Q. E. A. Fairouz from Kuwait National Petroleum Company visited Beamex in to participate in the Factory Acceptance Test and training.**



# Petroleum Development Oman chooses Beamex Calibration System

■ PDO is the premier hydrocarbon exploration and production company in the Sultanate of Oman. Their site in Saih Rawal will be equipped with a new Instrument Testing Unit for testing maintenance and calibration of control and safety valves, as well as other process instruments.

The Instrument Workshop will be equipped with the latest calibration technology comprising:

- Calibration Management Software
- Calibration Work Stations
- Intrinsically Safe Portable Documenting Calibrators

The calibration system from Beamex automates the entire calibration process, from scheduling to documentation. The actual calibration work of pressure and temperature instruments is also fully automated as the system includes automated pressure regulation and automated temperature generation.

Mr. Mohammed Al Maskari and Mr. Tamlarasan Muthiah from PDO as well



**Mr. Mohammed Al Maskari and Mr. Tamlarasan Muthiah from PDO as well as Mr. Jayant Chauhan from United Engineering Services LLC participated in the Factory Acceptance Test in April to give final approval for shipment of Beamex calibration system.**

as Mr. Jayant Chauhan from United Engineering Services LLC participated in the Factory Acceptance Test in April

to give final approval for shipment of the Beamex calibration system.

## Beamex in Pharmaceutical Online's Guest Column Series

■ Pharmaceutical Online ([www.pharmaceuticalonline.com](http://www.pharmaceuticalonline.com)) is the premier sourcing site for the pharmaceutical manufacturing industry. It specializes in presenting the latest pharmaceutical innovations to a focused audience of engineering, plant management, and manufacturing professionals. Topics covered include tablets and capsules, patient safety, process innovation, liquid dose manufacturing, standards and compliance, solid dose manufacturing, and analytical instrumentation.

Beamex is proud to announce that it will take part in the Guest Column

Series regularly published in the Pharmaceutical Online website and eNewsletters. Pharmaceutical Online Guest Column Series provide industry executives and other experts with an outlet to regularly share their views on emerging trends, challenges, and technologies. Authors are typically high-ranking representatives from companies, associations, analyst firms, and other organizations. "We are very happy to be involved with the Pharmaceutical Online's Guest Column Series. Calibration has great importance in the life of science industry, so we value highly the opportunity to share

our thoughts regarding some of the best practices in calibration with the Pharmaceutical Online audience. Hopefully we will be able to answer some of the questions the readers have concerning calibration and metrology", explains Sami Koskinen, Beamex's Life Science Account Director.

Beamex will write four calibration-related columns on Pharmaceutical Online during 2012. The columns will appear on Pharmaceutical Online's website ([www.pharmaceuticalonline.com](http://www.pharmaceuticalonline.com)) as well as in their eNewsletter.

## Beamex calibration seminars and webinars



■ Learn about calibration best practices by attending a Beamex seminar or webinar. Beamex has started to organize different kinds of seminars and webinars on a regular basis for process automation, calibration, metrology and instrumentation professionals, especially in Finland, the UK and the USA.

The topics of the seminars and webinars have ranged from industry-specific calibration best practices (e.g. power and energy, life science) to establishing a paperless calibration system. The target group of the seminars varies from operative management to engineers, technician and IT support professionals. The seminars and webinars also provide an excellent forum for the attendees to share ideas and experiences through best practice discussions. The

seminars and webinars are interactive by nature, which means that attendees are encouraged to present questions and comments throughout the seminar or webinar. Typically the seminars and webinars also include real-life scenarios and interactive product or system demonstrations. Participating in a Beamex seminar or webinar is an excellent way to gain new ideas of calibration best practices and to learn how to use Beamex calibration solutions in an efficient way.

For further information regarding upcoming training events or for watching past webinars, please visit [www.beamex.com/seminars-webinars](http://www.beamex.com/seminars-webinars). Please also find several calibration instruction videos posted at <http://www.youtube.com/BeamexCalibration>.

**“ Thank you for hosting the webinar today. It was very informative. As a business solution’s project manager, I search for the most ROI for my projects. A company that can provide not current needs in products and services but, be scalable for future expansion is a strong consideration in the equation. I share the thoughts of our technicians who use the MC5 and MC6 calibrators. Beamex Corp. provides the products and service, coupled with their technical knowledge of applications, which makes Beamex our choice of calibrators.**

Dwight Schombert  
Roquette America Inc.

**“ Thanks, glad you guys put these webinars on; the insight helps.**

Lance Neidecker  
Nestle USA

# Beamex Power & Energy User Group Forum gets excellent reviews



■ Beamex Ltd held the first of several 2012 Power and Energy Market segment user group meetings at the Leeds United Football Ground, England, on the 28<sup>th</sup> March 2012.

The idea for the successful series of Beamex Power and Energy User Group meetings was conceived by Beamex Ltd with the belief that that Engineers from different Power Stations would benefit from a calibration forum where best practice discussions could take place, a belief that has certainly been proven to be correct. The events were organized by Liz Fletcher, from Beamex Ltd.

The meeting was attended by Alex Maxfield, Mark Shepherd, Marcus Teague and Graham Bysouth from Beamex Ltd and a mixture of Power Station Engineers and Technicians, from different Power Station Owner Operators, with a wide range of experience in using Beamex solutions

attending to further their knowledge of Beamex solutions. The meeting was also attended by two Power Station IT support professionals there to understand the principles of calibration to help them better support the Beamex products.

The agenda was kept informal with a blend of theory, new product information and educational calibration best-practice application workshops. There were also significant opportunities at break times and lunch for delegates to participate in peer-to-peer networking and engage the Beamex team in application support questions.

The event was free to attend with a complimentary buffet lunch and an opportunity to wander around the historic Leeds United Football Club Elland Road hospitality suite and view years of football souvenirs.

The feedback from all attendees was

excellent. The event will be repeated later in the year. Please contact Beamex. [ltl@beamex.com](mailto:ltl@beamex.com) if you wish to attend future events.

**“After many years of calibrating one way, I have found a better way of calibrating”**

Connah’s Quay Power Station

**“Proved to be interesting and informative”**

Cristal Global.

**“We can now think smart about our calibration”**

Service Contractor



## Beamex expands and opens sales office in Saudi Arabia

■ “Beamex registration of a Sales and Support Office in Dammam, Saudi Arabia is very much welcome”, says Tariq Jafar, Beamex Sales Manager in Saudi Arabia. With Beamex’s main customer groups in the eastern region, Dammam is the perfect location, being so close to Jubail Industrial areas and Aramco’s sites around Dammam. This establishment will increase Beamex Technical support on several new projects taken up by Beamex, especially with regard to installation, commissioning and training. The office will also be able to support the existing customers with application and technical matters even better.

“We wanted to establish our own sales office in Saudi Arabia because of the country’s potential, its rapid development and huge oil recourses. Beamex is now expanding rapidly in Saudi Arabia thanks to beneficial and unique calibration solutions combined with competent personnel”, Sales Director Henrik Nystrand explains.

One of the main reasons for Beamex’s success in Saudi Arabia is the company’s unique know-how regarding the requirements for automating the calibration process, which is needed due to the high standard of industrial automation. Beamex provides complete comprehensive calibration solutions including Calibration Workstations, Portable Documenting Calibrators, Calibration Management Software interfacing with CMMS software like SAP plus consultation and related technical services. Beamex® Integrated Calibration Solutions provide beneficial cost-savings for the customers according to their own specific requirements. Beamex products have achieved a good reputation in Saudi Arabia, thanks to the high quality and functionality of not only its individual products, but of Beamex® Integrated



**Tariq Jafar, Beamex Sales Manager in Saudi Arabia.**

Calibration Solutions for industry-specific solutions.

“The future is very exciting with all the challenges and opportunities in Saudi Arabia. We are convinced that

the presence of the Beamex Sales and Support Office will further increase confidence among our valuable customers”, Mr. Jafar adds.



# Beamex releases version 2.7 of the Beamex® CMX Calibration Software

**Beamex has released new version of its Beamex® CMX Calibration Software (v2.7). The new version brings several new improvements and additions in terms of functionality and features of the product.**

#### **Support for Beamex® MC6 calibrator**

Support for the new Beamex® MC6 Advanced Field Calibrator and Communicator. Deeper integration than done ever before with any calibrator. For more information about MC6, see [www.beamex.com](http://www.beamex.com).

#### **Support for Beamex® Temperature Dry Blocks**

Specifications included in CMX. Supports both internal and external

reference sensor (“Controlled and Measured”). Specifications also for when Dry Blocks are used as heat source only (“Controlled”).

#### **Support for Combined Error Limits**

CMX now supports an error limit function that is a sum of the previously available constant error limit and a new error limit depending on reading (relative error).

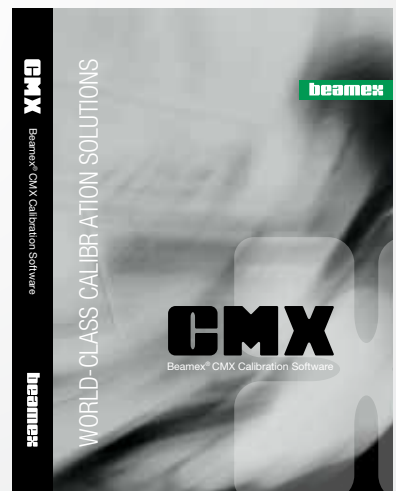
#### **Several calibration references per calibration point**

You may now add several calibration references to each calibration point. All Calibrators/Modules entered into CMX’s database are available for adding.

#### **CMX default Report layouts are now multilingual**

No need to have different language

versions of the report layouts in a multilingual setup. The field names are now coming from CMX user interface. Any change of labels in the CMX user interface is automatically updated to CMX default report layouts.



## Beamex’s YouTube channel

■ Learn about the features and functionality of Beamex products by watching videos on Beamex’s YouTube Channel. Beamex has recently uploaded many new videos on its YouTube channel concerning especially the new Beamex® MC6 Advanced Field Calibrator and Communicator. The MC6 videos cover the following topics:

- MC6 - General Introduction
- MC6 - Introduction to five user-interface modes
- MC6 - Introduction to documenting calibrator mode
- MC6 - Introduction to calibrator mode
- MC6 - Introduction to meter mode
- MC6 - Introduction to data logging mode
- MC6 - Introduction to HART communicator mode
- MC6 - Introduction to Foundation Fieldbus communicator mode
- MC6 - Introduction to Profibus communicator mode
- MC6 - How to calibrate and trim a HART transmitter

- MC6 - How to calibrate and trim a Foundation Fieldbus transmitter
- MC6 - How to calibrate and trim a Profibus PA transmitter in the documenting calibrator mode

Watch these and other videos online at Beamex’s YouTube channel!

[www.youtube.com/BeamexCalibration](http://www.youtube.com/BeamexCalibration)

## Like Beamex on facebook

■ Visit and push the “like” button for Beamex Calibration on Facebook. On Beamex FB site you will be able to follow Beamex, be updated on what is happening and read about all our news. You can also read about past events and happenings, for example the Beamex Road Show tour made in spring 2012.

# Reduce costs and improve quality of calibration

Beamex® documenting calibrators and software form an automated paperless calibration system.

*97% say that using Beamex products has improved the quality of their calibration system.*

*9 out of 10 customers say that using Beamex products has resulted in cost-savings.*

Beamex customer survey 2012



The heart of the Beamex® Integrated Calibration Solution is a powerful combination of calibration hardware: pressure, temperature and multifunction calibrators, automatic temperature blocks, automatic pressure regulators and Beamex® CMX Calibration Management Software. Facilitating seamless lines of data flow, from maintenance management systems to calibration technicians and back, the Beamex® Integrated Calibration Solution has proved its success again and again.

**beamex**  
WORLD-CLASS CALIBRATION SOLUTIONS®

[www.beamex.com](http://www.beamex.com)  
[info@beamex.com](mailto:info@beamex.com)

# Beamex in brief

Beamex is a leading worldwide provider of calibration solutions that meet even the most demanding requirements of process instrumentation. 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 partner network, their products and services are available in more than 60 countries.

## Learn more about Beamex products and services:

[www.beamex.com](http://www.beamex.com)

## Brochures, product demonstrations and quotations

[info@beamex.com](mailto:info@beamex.com)

[www.beamex.com/request](http://www.beamex.com/request) (online request form)

## Software support

[support@beamex.com](mailto:support@beamex.com)

## Re-calibration and service

[service@beamex.com](mailto:service@beamex.com)

## Find your local Beamex sales office at:

[www.beamex.com/contacts](http://www.beamex.com/contacts)

## Interested in submitting an article to CALIBRATION WORLD?

Contact: [pamela.skytte@beamex.com](mailto:pamela.skytte@beamex.com)

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# Beamex products and services

## Portable calibrators

Beamex's range of portable MC calibrators for field calibration is known for their accuracy, versatility and also for meeting both high and uncompromised quality standards.

- MC6 Advanced Field Calibrator and Communicator
- MC5 Multifunction Calibrator
- MC5-IS Intrinsically Safe Multifunction Calibrator
- MC2 Series
- MC4 Documenting Process Calibrator
- MC2-IS Intrinsically Safe Multifunction Calibrator
- FB/MB Temperature Dry Blocks

## Workstations

A workstation can be considered ideal when most of the maintenance and calibration tasks are performed in the workshop.

- MCS200 Workstation
- MCS100 Workstation
- MC5P Calibration Host Module

## Accessories

Beamex's calibration accessories complete your investment into calibration equipment.

- External pressure modules
- Calibration hand-pumps
- Spare parts

## Calibration software

Plan, manage and document all your calibrations efficiently and safely using Beamex's calibration software.

- CMX Light
- CMX Professional
- CMX Enterprise

## Professional services

An essential part of a total calibration solution is Professional Services — service and re-calibration, installation and training, software support, validation services and integration services.

- Re-calibration and service
- Installation and training
- Software Service Agreement (SSA)
- Validation services (pharmaceutical industry)
- Integration services





# The impossible made possible: combining advanced functionality with ease-of-use

## Beamex® MC6 Advanced Field Calibrator and Communicator

Touch-screen, 5.7" color-display with a user-friendly interface. Light-weight, robust (IP65) and long operating time. One device, five different operational modes: meter, calibrator, documenting calibrator, data logger and full multi-bus field communicator. Pressure, electrical, temperature and frequency signals. HART, Profibus PA, Foundation Fieldbus H1. Seamless communication with calibration software for paperless calibration management.



PROFIBUS



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Read more at  
[www.beamex.com](http://www.beamex.com)

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[info@beamex.com](mailto:info@beamex.com)

Portable calibrators  
Workstations  
Calibration software  
Professional services  
Industry solutions