



Measurement technology

# Keeping standards, identifying optimisation

Recording, analysing, documenting

Better through Responsibility

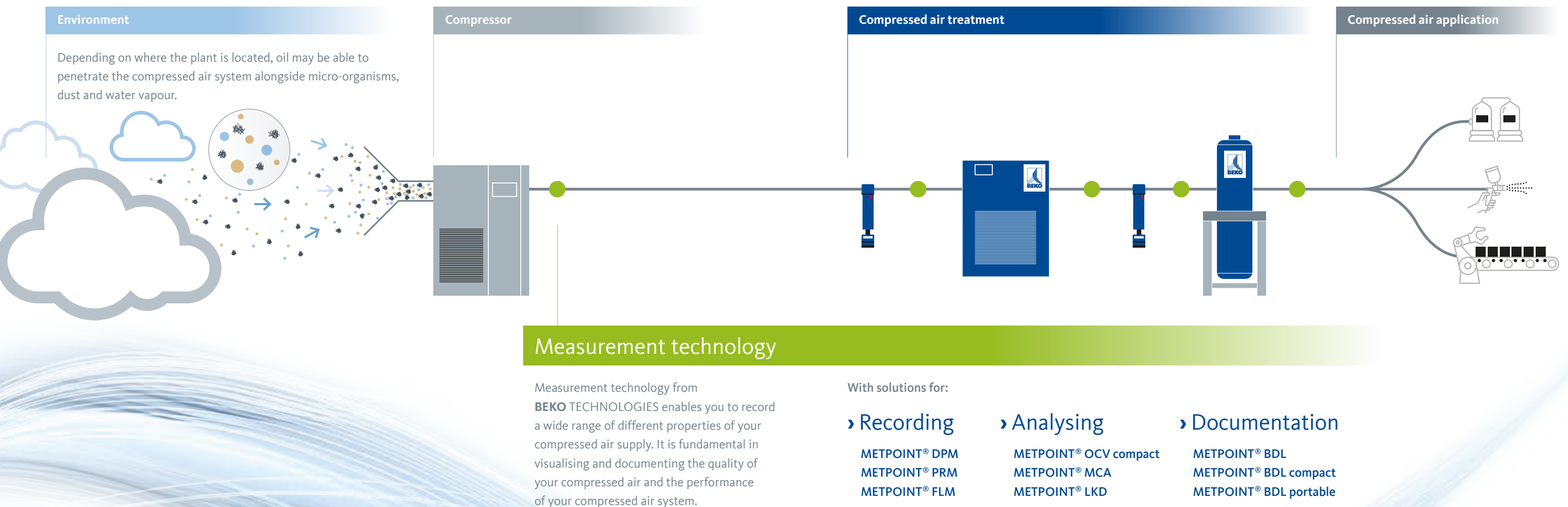


# Take your compressed air plant to the next level

Measurements mean clarity, because measurements enable you to precisely evaluate the condition of your plant, maintain an overview of functionality and quality and make sound decisions about the right steps to be taken in situations which require prompt action. In addition, measurement technology helps to identify optimisation potentials. Through the analysis and documentation of measured values you recognise which minor adjustments have to be made for your plant to achieve an even higher level of efficiency and for you to lower your production costs and ensures a constant supply with high-quality compressed air.

The measurement technology from **BEKO TECHNOLOGIES** supports you in designing your production line with even more economic efficiency and in meeting the highest of standards – both long-term and reliably.

**BEKO TECHNOLOGIES.** Better through responsibility





# The first step: determining the relevant measuring factors

The properties and the quality of the compressed air in your plant can be described with the aid of different factors. Depending on the required final product, it is important to define the relevant factors and then to check these using suitable measuring technology.



## Pressure (bar)

As a measure of the degree of compression, pressure – together with volume flow – is decisive for a sufficient supply to the production plants.



## Pressure dew point (°C)

The pressure dew point provides information about the humidity content of your compressed air. It is measured on the basis of relative humidity and temperature.



## Volume flow (m³/h)

The output of a compressor and the compressed air throughput in different sections of the installation can be evaluated on the basis of the volume flow.



## Consumption (m³)

Consumption measurements help to identify which operating costs are incurred in individual production steps, for example.



## Leakage (l/min)

Leaks in the compressed air system are at the expense of performance and economic efficiency. For this reason, leaks should be identified early and eliminated.



## Oil and oil vapour (mg/m³)

Even in the tiniest of quantities, oil in the compressed air can lead to significant problems. The high-resolution and continual measurement of the oil vapour content is extremely important, particularly for demanding processes.



## Dust and particles (ppm)

Despite intake filter, tiny particles can get into the compressed air system and lead to problems and contamination of the final product.



Pressure sensor



Pressure dew point sensor



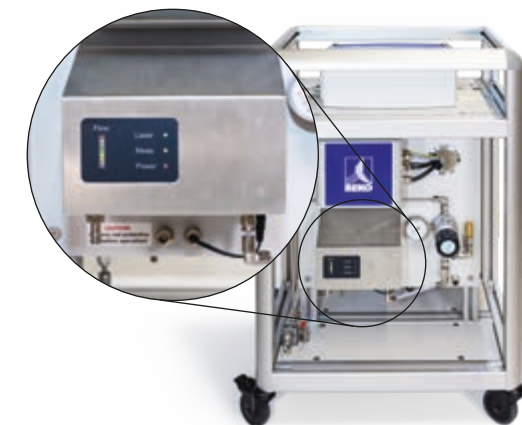
Volume flow meter



Leak measuring device



Oil vapour measuring device



Particle measurement unit



## Know what you can achieve

For each measuring factor, **BEKO TECHNOLOGIES** offers suitable sensors for measuring as well as products for analysis and documentation of the quality of your compressed air. So you can set the measured values in relation to one another, for example, and create transparency for your further planning.

Find out more about our measuring technology portfolio on the next pages.



Data logger

# Measuring and recording: precise monitoring of the current condition

Our sensor technology records the relevant influencing coefficients precisely, continually and reliably. This means you know exactly how effectively and efficiently your plant is currently working. And that is vital to ensure the quality of both your production and your final products in the long term.

## Immediate information with METPOINT® UD01/ UD02 plug-on display

The plug-on display can be attached directly to the sensor, so that you can read off the properties of your compressed air directly on site.



METPOINT® UD01/UD02



## Pressure dew point measurement with METPOINT® DPM

Keep yourself continuously informed about the dew point and thus the humidity content of your compressed air.

- › Suitable for mobile and stationary monitoring
- › Straightforward and fast integration
- › Solid stainless steel housing
- › For flexible integration thanks to compact size

METPOINT® DPM  
with additional measuring chamber



## Pressure monitoring with METPOINT® PRM

Always keep an eye on the system pressures in your compressed air system.

- › High measuring accuracy < 0.5 %
- › Sturdy workmanship
- › Flexible integration ability



METPOINT® PRM



## Volume flow measurement with METPOINT® FLM

Measure the volume flow to track what is being consumed where, and thus make sure that all downstream components are being supplied sufficiently. In addition, the reliable visualisation of volume flow, consumption and flow velocity creates the basis for cost transparency and optimisation.



METPOINT® FLM



# Precise oil vapour analyses make decisions possible

Tiny oil particles are an often underestimated risk in the processing of compressed air. Such particles occur in many places in the compressed air system in the form of oil vapour or aerosols and can lead to serious quality problems. The consequences are not only increased scrap or time-consuming rework: even the finest of oil vapour components can contaminate the final product or whole production plants.

Are prescribed limit values and quality standards being met? Or do counter-measures have to be initiated? Using the corresponding measurement technology, you can monitor just that continually.

## Monitoring and treatment solutions for oil-free compressed air

In the automotive and manufacturing industries, the food industry as well as the chemicals and pharmaceuticals industries, great importance is attached to process reliability and efficient

production workflows, which can be influenced by even the tiniest amount of oil entering the compressed air system.

Even when basically oil-free compressed air production is used, oil can get into the compressed air system. Possible sources of contamination are:

- › Environment and ambient air
- › Valves and fittings
- › Pipelines



Oil can occur in the compressed air plant not only in liquid form but also as aerosol or in an even finer form as oil vapour. For this reason, **BEKO TECHNOLOGIES** offers customised solutions with different processing methods in addition to measuring technology.

- › Coalescence filter
- › Activated-carbon adsorber
- › Catalytic converter



Find out more about the causes of oil contamination and the possibilities of oil-free compressed air treatment in our competence brochure "Oil-free solutions".



### Continual oil vapour monitoring with METPOINT® OCV compact

Check your compressed air for residual oil vapour content permanently and precisely. This way you can meet prescribed standards and meet your customers' trust with responsibility.

- › Reproducible accuracy of the measurement values thanks to integrated catalytic reference gas generation
- › Short measuring cycles and fast updating of the measuring value display
- › Output and forwarding of measurement values and alarm messages
- › Automatic monitoring for the reference gas and sensor electronics





# Saving and documenting: data logging for complete transparency

Our sensor system provides you with important data about your plant. Yet it is only through long-term documentation and the comparison of all values that you can recognise what is actually happening at what time in the plant and where are savings potentials available, towards which further measures should be oriented?

Our data logging components translate the process data collected into easy to view statistics and graphs. So you can understand, compare, interpret and document the measured data comfortably in real time. Not only on site but also from practically anywhere thanks to the integrated network interface.



**Analysis and logging with METPOINT® BDL and METPOINT® BDL compact**

Visualise your compressed air quality and make your process and cost analysis simple – through the straightforward visualisation and archiving of measured values.

- METPOINT® BDL**
- › Up to 12 METPOINT® sensors of any kind can be connected
  - › 7" colour display with touchscreen and multilingual menu navigation
  - › Integrated interface for the convenient forwarding of process data

METPOINT® BDL

METPOINT® BDL portable



- Mobile data logging directly on site with METPOINT® BDL portable**
- Visualise and analyse your compressed air quality directly at the plant with the practical hand-held device METPOINT® BDL portable.
- › On-site recording of all data via universal sensor input for different signals
  - › Flexible graphical representation and straightforward operation
  - › Integrated data memory with USB interface
  - › Sturdy transport case and integrated battery for mobile operations



METPOINT® BDL compact

- METPOINT® BDL compact**
- › Up to 4 METPOINT® sensors of any kind can be connected
  - › 3.5" colour display with touchscreen and multilingual menu navigation



# Mobile solutions: comprehensive flexibility

Continual monitoring is vital for your compressed air plant to work properly. However, measurements may be necessary at points where there is no stationary measuring technology installed (yet). Our mobile solutions are available for these cases.



## Mobile compressed air analysis with METPOINT® MCA

Check your complete compressed air system for oil vapour and find out where more intensive treatment is necessary – with our mobile measuring and analysis unit METPOINT® MCA, available in different equipment versions depending on requirements.

- › Sensor system for monitoring residual oil content
- › Built-in, network-capable data logger with touch display
- › Optionally available with integrated particle counter for the measurement of certain concentrations and sizes, with additional volume flow measuring device, dewpoint sensor, pressure sensor and temperature sensor for especially comprehensive analysis of the compressed air supply.



METPOINT® MCA



## Leak detection with METPOINT® LKD

Use ultrasonic technology to find leaks and avoid expensive compressed air losses.

- › Mobile, compact and easy to operate
- › Long battery running time and high-grade aluminium housing
- › User-friendly graphical display
- › With headphones for loud environments



METPOINT® LKD

# Services: Support with quality assurance

The greatest challenge as far as compressed air quality is concerned is in maintaining high standards in the long term. Here, too, **BEKO TECHNOLOGIES** provides support in the form of reliable services for assuring the quality of your compressed air.

## ... with our calibration service

“Technical devices must be well looked after so that they can be used long-term and in the optimum way. Measuring technology is no exception to this. What a lot of people are not aware of: dust, fluctuations in temperature or vibrations, for example, can misalign sensors over time. At first glance, this is only a case of nuances, but even the tiniest of deviations can mean differences in compressed air quality and plant safety. Which is why I recommend using our calibration service regularly – at least once a year. In a first step, we check the measuring devices in our calibration laboratory for deviations. Using recognised procedures, we test the entire spectrum of measuring technology for potential discrepancies. Then the devices are re-calibrated using state-of-the-art precision methods. This way, customers can rely on their measuring technology again and get the very best out of their plant.”

Calibration technician at **BEKO TECHNOLOGIES**



## ... with our Air Audit

“During my service work, operators of compressed air plants have told me time and time again that they are worried about upcoming audits. After all, in sensitive industries with high quality standards these are carried out regularly. It goes without saying that all operators wish to keep their plant in tip-top condition and meet standards and requirements. But it has to be said that many do not have the detailed specialist knowledge required to be able to assess the condition of the compressed air system and the chances of passing audits. Since we at **BEKO** wish to provide the best possible support for our customers, we have extended our range of services to include the ‘Air Audit’. During this audit, we service technicians check over your compressed air plant in a precautionary and forward-looking way, and in just as much detail as during an external audit. So you need not worry at all about your next audit.”

Service technician at **BEKO TECHNOLOGIES**







Scan this code for information about system technology from **BEKO TECHNOLOGIES**

System expertise

# Single Source Provider for your success!

When it comes to compressed air, no two applications are exactly the same. And each application comes with its very specific requirements regarding the quality of the compressed air. This is established on the way from the compressed air generator to the application. That is where our solutions come into play! For more than three decades, we have been providing companies with high-performance equipment in the field of compressed air and compressed gas technology. Our tried and tested products, systems and solutions help our customers to achieve the compressed air quality they need for their production processes – safely and efficiently. From filtration and drying to condensate processing technology and instruments for quality monitoring and verification. From small compressed air plants to sophisticated process technology. We are the only supplier on the market offering all components found along the processing chain. For our products, we only use components that meet our stringent quality standards. And combine these components so perfectly that they work together to produce that certain extra in terms of efficiency!

## Compressed air generator

As soon as the compressed air leaves the compressor, it must be treated very specifically for a wide range of applications.



Drying



Filtration



Condensate technology



Oil-free



## Measurement technology

Our measurement technology solutions play an important role in compressed air treatment as assistance systems for users. As fully connectable solutions they collect the process data of the various sensors, analyse and evaluate them and thus provide the basic data for important decisions. In the event of deviations from defined limit values they trigger automatically defined measures. This way they guarantee the high quality of your compressed air permanently.

## Why is the whole greater than the sum of its parts?

Our solutions combine the expertise of a leading system provider with the dedication of every single member of our staff. We listen to our customers and remain focused on practical applications. We want to protect the environment and value our partners in

business. We are proud of what we have achieved and make sure that our values guide us in all our product developments. And this is reflected in every single product that leaves our factories. **BEKO TECHNOLOGIES. Better through responsibility**



## Reliable long-term: appropriate maintenance

Even high-quality products can only perform accordingly when they are inspected and serviced regularly. The purity of the treated compressed air and e.g. reliable prevention of oil entering

the compressed air system can only be guaranteed through careful maintenance.

Scan this code to find out more about our services





# Do **you** have any questions on the subject of measurement technology?

We have the answers! We would be delighted to hear from you and show you the suitable solution for your specific compressed air plant.

## That is **BEKO** TECHNOLOGIES:

- › Established in 1982 by Berthold Koch
- › Independent, family-owned company
- › Based in Neuss, Germany
- › Operates production plants in Germany, the USA, India and China
- › Global sales network
- › Committed to the highest quality standards
- › Certified according to EN ISO 9001:2015

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