



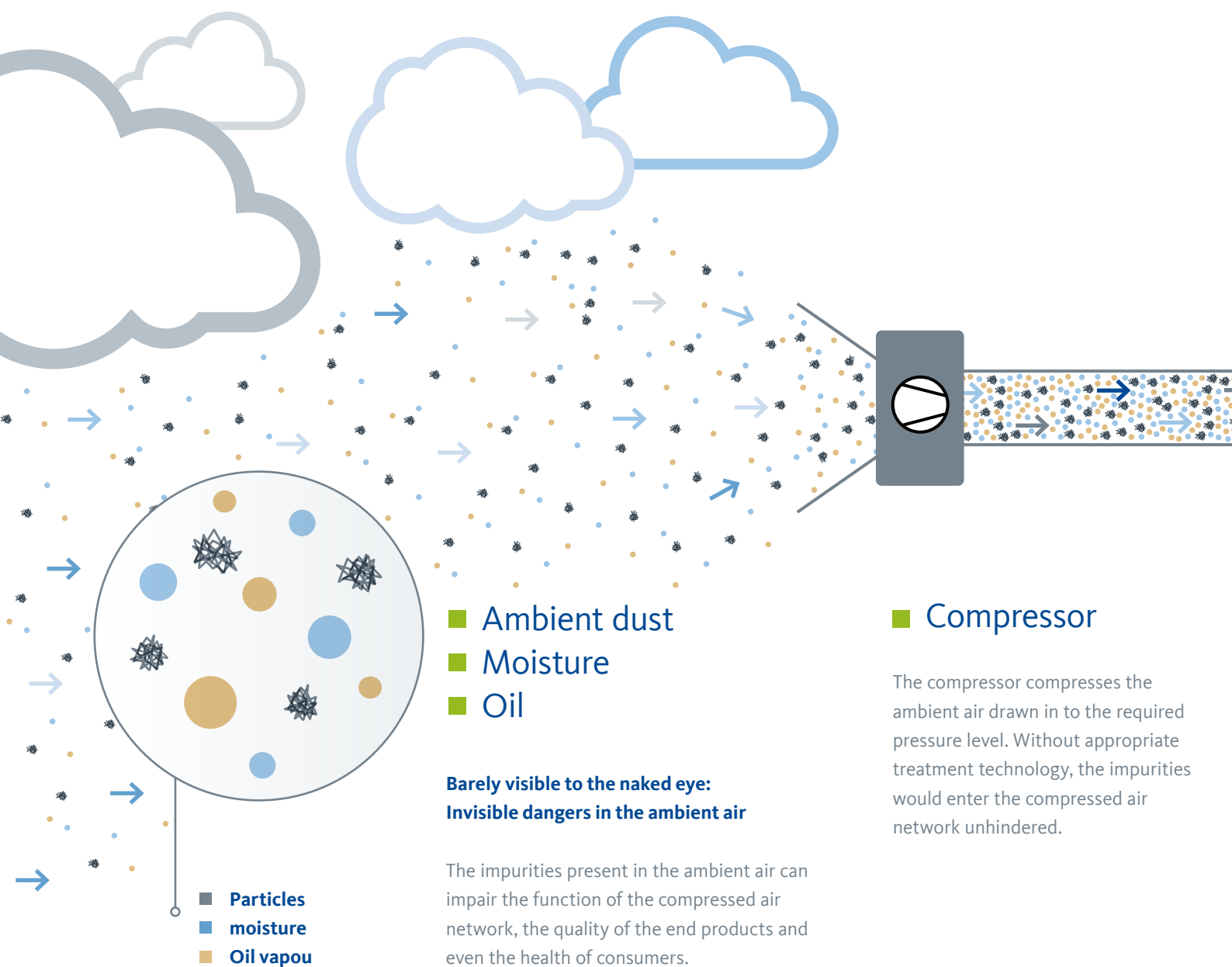
Compressed air and compressed gas technology

Efficient compressed air treatment: everything from a single source



Quality is success: compressed air treatment made in Germany

Modern production technology needs compressed air. Depending on the application, the requirements range from dry and oil-free to absolutely sterile. We offer the right treatment technology for every compressed air quality.



The right compressed air treatment: safety and efficiency for your production

Compressed air is an indispensable energy source in almost every industry. The quality requirements vary depending on the sector and application, but the goal remains the same: optimised production processes, safe systems and cost-efficient operation.

With our proven and reliable treatment technology, we ensure that your compressed air meets the highest standards - from the compressed air generator to the application. This is how we ensure your success and strengthen your competitiveness!



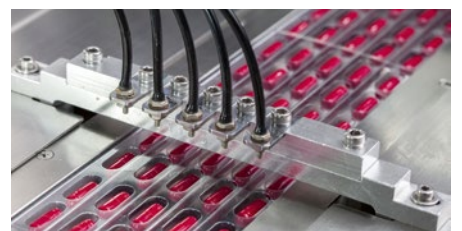
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e.g. automotive and production industries



e.g. food industry



e.g. chemical and pharmaceutical industries



Condensate drainage and condensate treatment: **clean, safe, better**

Condensate is produced at almost all stations in the compressed air treatment process. It usually contains oil and dirt particles. This is why condensate drainage plays a key role in ensuring optimum compressed air quality for every application.

Condensate drainage

5 Million
BEKOMAT®
condensate drains
sold worldwide



BEKOMAT® 16 | 20 | 12 | 13 | 14

Innovative condensate drainage: Setting standards with BEKOMAT®

With the **BEKOMAT®**, the world's first electronically level-controlled condensate drain, we are setting new standards in condensate drainage. It adapts to the amount of condensate and minimises energy consumption and costs thanks to intelligent electronics.

The **BEKOMAT®** i4.0 series extends the proven functionality with the advantages of the digital world: networkability, remote monitoring, flexibility and, above all, future-proofing.

For every application

- Quantity-adjusted condensate drainage thanks to capacitive sensor
- Customised solutions for every application thanks to comprehensive product range
- Reduces compressed air losses and lowers energy costs
- Fully automatic function with monitoring and self-cleaning
- Durable and robust in aluminium, CO and high-pressure versions
- No mechanical components prone to failure
- Simple installation and operation

Condensate treatment

The professional handling of discharged condensate is an important contribution to environmental protection. Our **ÖWAMAT®** and **Qwik-Pure®** oil-water separation systems ensure the safe and cost-effective disposal of non-emulsified condensates.

Our **BEKOSPLIT®** emulsion splitting systems process emulsified condensates reliably and economically. In both cases, the treated condensate can then be channelled into the sewage system as purified water.

For safe preparation on site

- Oil-water separation systems for non-emulsified condensates
- Available in various sizes to suit the system
- Fast and clean, proven for decades
- Reliable operation even with fluctuating condensate volumes
- Intuitive operation and easy handling



ÖWAMAT® 10 | 11



QWIK-PURE® 15 | 30 | 60 | 90



BEKOSPLIT® 12 | 14

For real hardship cases
























- Best-selling emulsion separation system for compressed air condensates
- Effective treatment of emulsion-containing condensates and water-insoluble organic contaminants such as oils and solids
- Ideally suited for compressor condensates
- Fully automatic operation
- Highly effective reaction separating agent eliminates the need for continuous pH value adjustment
- Drastic reduction of waste quantities to less than 0.5%

In use around the world: our tried-and-tested condensate technology solutions, which have been installed millions of times.



Compressed air filtration: always the right quality

Before the compressed air is used, it must be cleaned of aerosols, oil and particles. This is because the impurities introduced by the ambient air and compressor operation can damage the production equipment and contaminate the product. **CLEARPOINT®** compressed air filters provide energy and cost-saving clean compressed air - in every quality class and pressure level

Filter stages							
	Water separator CLEARPOINT® W H₂O	Coarse Filter CLEARPOINT® C 25 µm 4 . - . 4	Fine filter CLEARPOINT® F 1 µm 2 . - . 2	Ultra-fine filter CLEARPOINT® S 0.01 µm 1 . - . 2*	Activated carbon filter CLEARPOINT® A/V Oil vapour Odours - . - . 1	Sterile filter CLEARPOINT® SR Bacteria, viruses, Micro-organisms	Vapour filter CLEARPOINT® ST 25 - 1 µm
Compressed air class (ISO 8573-1)							
Pressure level Up to 16 bar							
50 bar							
100 - 500 bar							

* Depending on the ambient and operating conditions, class 1 can also be achieved

Up to 16 bar

Depending on the specification of the system, **CLEARPOINT®** filters with a robust aluminium housing and threaded connection or, for larger capacity ranges, as a welded container with a flange connection are suitable. Always integrated: 3eco filter elements that significantly reduce pressure loss.



CLEARPOINT® flange filter with BEKOMAT®



CLEARPOINT® Threaded filter with BEKOMAT®



Up to 50 bar

Great performance under high pressure

- Streamlined housing
- Optimum protection against corrosion and aggressive condensates thanks to seawater-resistant aluminium, complete anodisation and powder coating
- Absolutely tight thanks to special locking mechanism
- Warning signal for opening attempts under pressure



100 up to 500 bar

Designed for extreme conditions

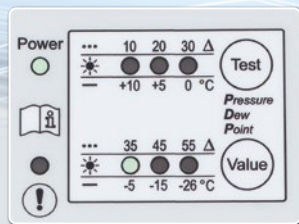
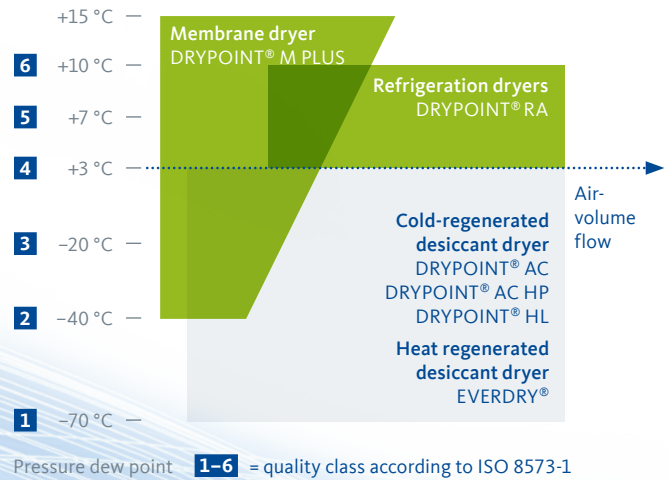
- Robust stainless steel housing for a long service life and effective protection against corrosion and aggressive condensates
- High temperature resistance of up to 120 °C
- Element replacement possible even in confined spaces

Optimised for highest possible safety.
Our quality promise from the processing chain to the product.



Compressed air drying: **the optimum solution** for every application

Moisture in compressed air networks poses a permanent threat to operational processes. With our extensive range of refrigeration, membrane and adsorption dryers, we cover a wide spectrum of drying degrees and quality classes and can achieve pressure dew points between +15 and -70 °C for any volume flow. This means we always have exactly the right dryer solution - including maximum process reliability.



Membrane dryer

Compact and reliable: The membrane dryer dries the compressed air using highly selective membranes and achieves pressure dew points from +15 to -40 °C. This enables a wide range of applications, even under changing operating conditions.

The versatile all-in-one solution:

- Demand-orientated product design thanks to a finely graduated range
- Nanofilter and dryer combined in one housing
- No power requirement for the drying process alone
- Compact design, ideal for use where space is limited conditions
- Suitable for demanding system technology, e.g. as end point drying at decentralised extraction points
- **DRYPOINT® M eco control** – the first controllable membrane dryer: The operating mode and degree of drying can be optimised to the application

Refrigeration dryer

Refrigeration dryers:

Efficiency and reliability in compressed air drying

Today, refrigeration dryers are the standard in compressed air networks and the most economical method for drying compressed air. Modern, environmentally friendly refrigerants, energy-saving refrigerant compressors, innovative heat exchangers, simple operation, integrated **BEKOMAT®** condensate drain and various control concepts.

Convincingly efficient

- **Wide range of models:** From intelligent cycling dryers and frequency-controlled cycling dryers to tried-and-tested standard solutions
- **Wide range of applications:** For volume flows from 20 to 13,200 m³/h
- **Reliable, safe and cost-effective**



DRYPOINT® RA eco



DRYPOINT® RA III

Cold regenerating adsorption dryers

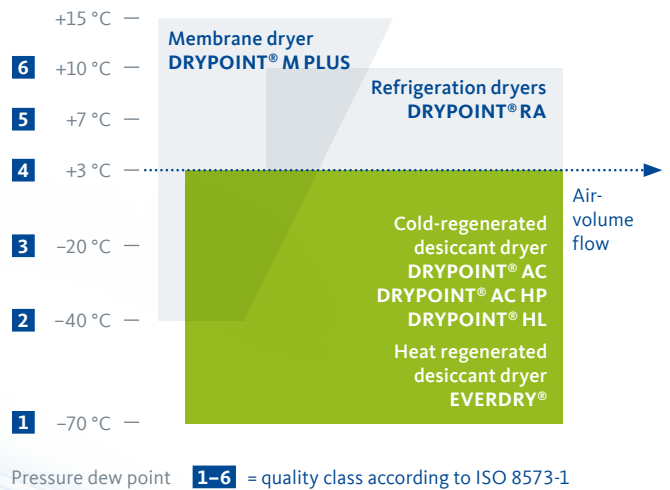
The more challenging the conditions and the greater the air volume flows, the higher the requirements for compressed air drying. Our cold-regenerating adsorption dryers fulfil these requirements effortlessly. Thanks to first-class components, they are particularly robust and durable, so that you can rely on your compressed air being dried reliably even under difficult conditions.



DRYPOINT® AC HP

Efficient for all requirements

- **Broad programme:** For volume flows from 10 to 8,200 m³/h and a pressure range from 4 to 420 bar
- **Safe and reliable:** For smooth and economical production processes
- **Reduced operating costs:** Thanks to consistently low compressed air waste



DRYPOINT® AC 410-495

Heat-regenerating adsorption dryers

The heat-regenerating **EVERDRY®** adsorption dryers perfectly complement our comprehensive portfolio for compressed air drying. With **EVERDRY®**, we offer you customised system solutions based on standardised, high-performance concepts. This enables us to solve complex requirements for drying large volume flows particularly economically and efficiently. The focus is not only on the use of state-of-the-art technology, but above all on developing the optimum solution for your specific requirements.



EVERDRY® HOC-R



EVERDRY® FRL

As individual as the task

- Customised solutions based on proven, standardised system concepts
- **Three flexible basic concepts:**
 - Regeneration with blower air
 - Combination of refrigeration and adsorption dryer
 - Desorption through compression heat.
- Perfectly customised: Optimised adaptation to industry and application-specific requirements
- Can be used globally: Adapted to different climate zones, local operating conditions, acceptance regulations and economic conditions worldwide

Reliability based on experience: the complete drying programme for small to large volume flows from one source.



Measurement technology: knowledge is the basis for correct decisions

Quality is no coincidence, but the result of controlled processes. Only when all relevant influencing variables of the compressed air are known can quality and energy management gain decisive transparency, responsiveness and additional safety. The measurement technology from **BEKO TECHNOLOGIES** precisely records all relevant compressed air parameters - an important basis for well-founded decisions on energy and cost savings.

Sensor technology



Dew point measurement
METPOINT® DPM



Pressure monitoring
METPOINT® PRM



Leak detection
METPOINT® CID



Volume flow measuring
METPOINT® FLM

Residual moisture, pressure, volume flow, leakages: Four important parameters for greater efficiency

The sensor technology from **BEKO TECHNOLOGIES** precisely records all relevant parameters at the critical control points of the compressed air - an important basis for energy and cost-saving decisions. cost-saving decisions.

For precise measurement of all influencing variables

- Monitors every critical influencing variable in compressed air treatment and thus increases efficiency and safety
- Helps to prevent possible malfunctions and compressed air losses
- Enables clear cost allocation of individual production processes
- Supports the economic dimensioning and optimisation of system components



Monitoring

Compressed air contaminated with oil is a danger to production facilities, the environment and even health - a risk that should not be underestimated, especially in sensitive production areas. The **METPOINT® OCV compact** monitoring system permanently monitors the flowing compressed air and thus helps to analyse and control the compressed air quality.

Oil-free processes, oil-free products

- Continuous monitoring of the oil vapour content in the compressed air down to thousandths of a mg/m³
- Identification of contamination sources
- Certainty about the purity of the compressed air at all times



METPOINT® OCV compact

Oil-free

Production processes can be optimised with pioneering process technology from **BEKO TECHNOLOGIES**. For economical plant operation and shorter cycle times.

Increases productivity

- Compressed air cooler **BEKOBLIZZ® LC** for economical cooling with +5 °C cold compressed air
- pioneering **BEKOKAT®** catalysis technology for constant oil-free compressed air in highly sensitive applications
- Activated carbon adsorber **CLEARPOINT® V** for efficient oil vapour adsorption



Visualising and data logging

You can see quality - by capturing it

Our data loggers translate the process data into clear statistics and graphics. This means that the measured values can be tracked easily and in real time and, if necessary, the necessary measures can be initiated immediately. From any location, at any time.



METPOINT® BDL

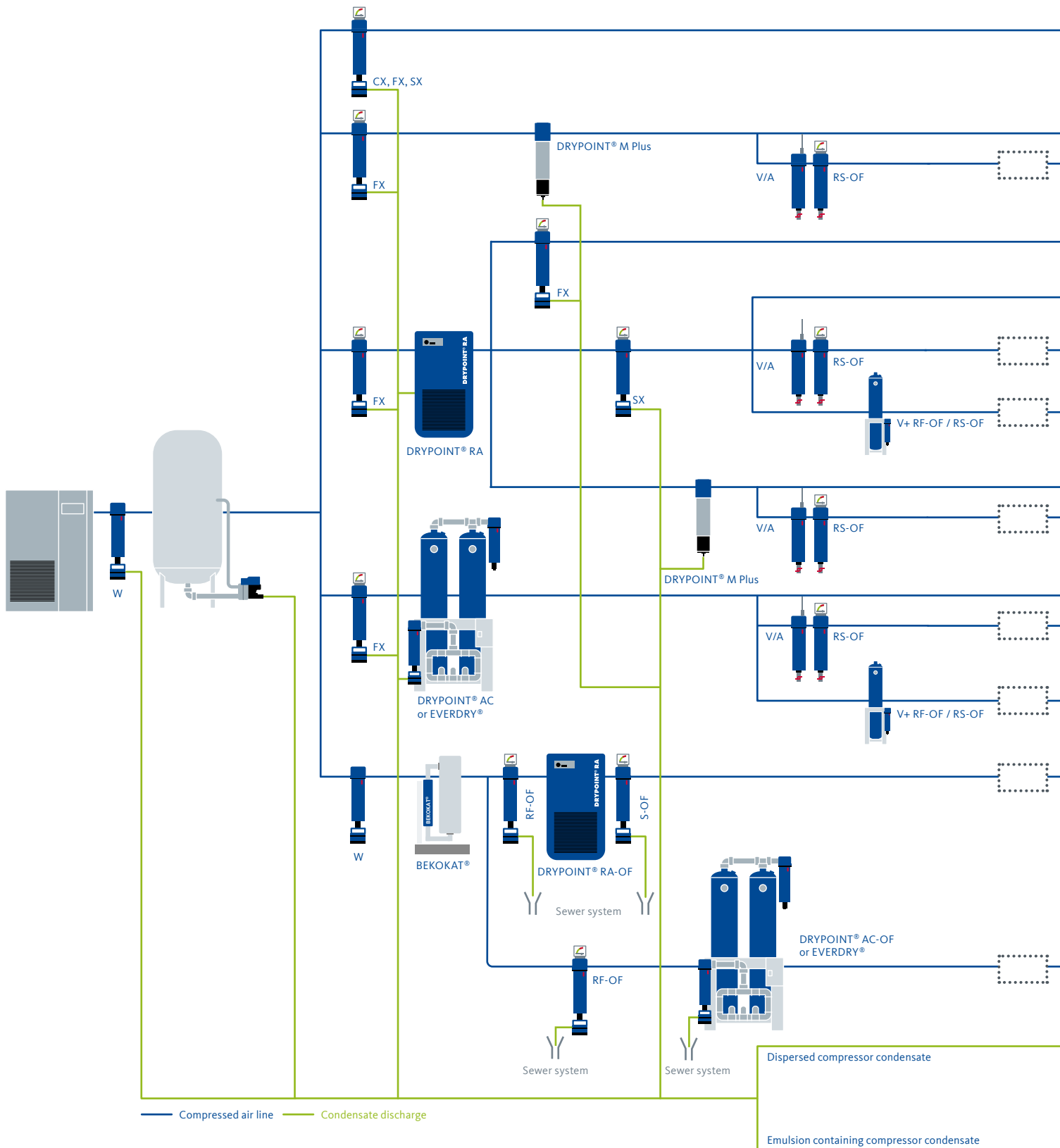
Making the invisible visible

- **Central signal processing unit:** Complete monitoring with just one device
- **Stand-alone solution:** Can be integrated into existing systems and retrofitted and expanded at any time
- **Fully networked:** For worldwide and cross-system data transmission

We can make the compressed air quality visible – and also solutions for it!

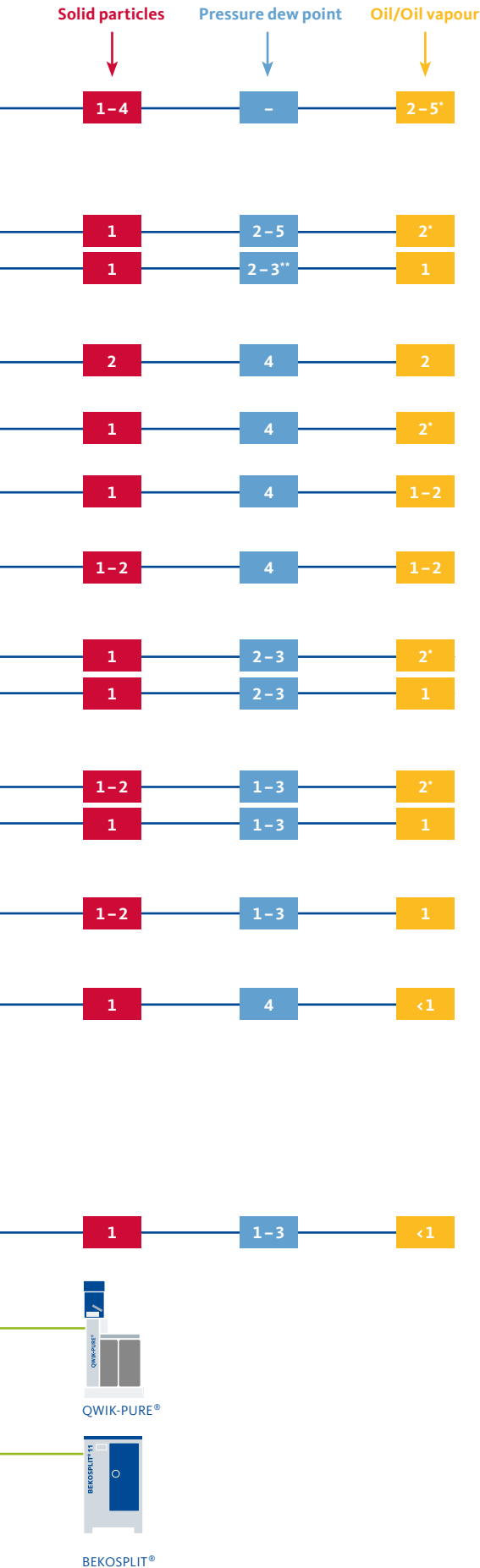
The compressed air schedule:

All possibilities at a glance



* Class 1 can also be achieved depending on the ambient and operating conditions (aspiration air, ambient temperature, type of compressor, type of oil etc.),

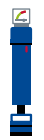



** Relative humidity at inlet of activated carbon filter (temperature-dependent) maximum 30%



Air quality according to ISO 8573-1:2010

Class	Solid particles, max. number of particles per m ³			Pressure dewpoint °C	Oil content (liquid, aerosol, oil vapour) mg/m ³
	0,1 µm < d ≤ 0,5 µm	0,5 µm < d ≤ 1,0 µm	1,0 µm < d ≤ 5,0 µm		
0	In accordance with the device operator's or supplier's specification, stricter requirements than class 1				
1	≤20,000	≤400	≤10	≤-70	≤0.01
2	≤400,000	≤6,000	≤100	≤-40	≤0.1
3	-	≤90,000	≤1,000	≤-20	≤1
4	-	-	≤10,000	≤+3	≤5
5	-	-	≤100,000	≤+7	>5
6	-	-	-	≤+10	-

- Measured according to ISO 8573-4, reference conditions 1 bar absolute 20 °C, 0% rel. humidity
- Measured according to ISO 8573-3
- Measured according to ISO 8573-2 and ISO 8573-5, reference conditions 1 bar absolute, 20 °C, 0% rel. humidity
- Sterile filter as an option for sterile compressed air

	CLEARPOINT® 3eco coalescing filter CX/FX/SX with BEKOMAT® Option: Differential pressure gauge or BEKOMAT® 20 with filter management		DRYPOINT® RA Refrigeration dryer with BEKOMAT® PDP +3 °C
	CLEARPOINT® Dust filter RF/RS-OF with manual drain oil-free cleaned Option: Differential pressure gauge		DRYPOINT® M Plus Membrane dryer with integrated nanofilter DTP +15 ... -40 °C
	CLEARPOINT® A Activated carbon filter Option: Oil indicator		CLEARPOINT® Sterile filter PIT/PIF/PIW +FE ... SR
	CLEARPOINT® V Activated carbon cartridge Option: Oil indicator		DRYPOINT® AC Desiccant dryer with inlet- and dust filter
	CLEARPOINT® V Activated carbon adsorber with RF-dust filter		BEKOSPLIT® Emulsion splitting plant for emulsion containing compressor condensates
	CLEARPOINT® W Water separator with BEKOMAT®		BEKOKAT® Catalytic converter
	QWIK-PURE® Activ Oil/water separator For dispersed compressor condensate		Compressed air vessel with BEKOMAT®
	EVERDRY® Heat regenerated desiccant dryer		

At home in every application – worldwide!

For over four decades we have represented products, systems and solutions which ensure the desired compressed air quality in our customer's production processes and make them more efficient. Reliable, high-performing and tried and tested worldwide!

 Condensate technology



 Filtration



 Drying



 Measurement technology



 Oil-free



This is **BEKO TECHNOLOGIES**:

- › Established by Berthold Koch in Germany in 1982
- › Independent, family-owned company
- › Head quarters based in Neuss, Germany
- › Operates production plants in Germany, the USA, India and China
- › Global sales network
- › Quality made in Germany

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