

Reliable | Efficient | Innovative



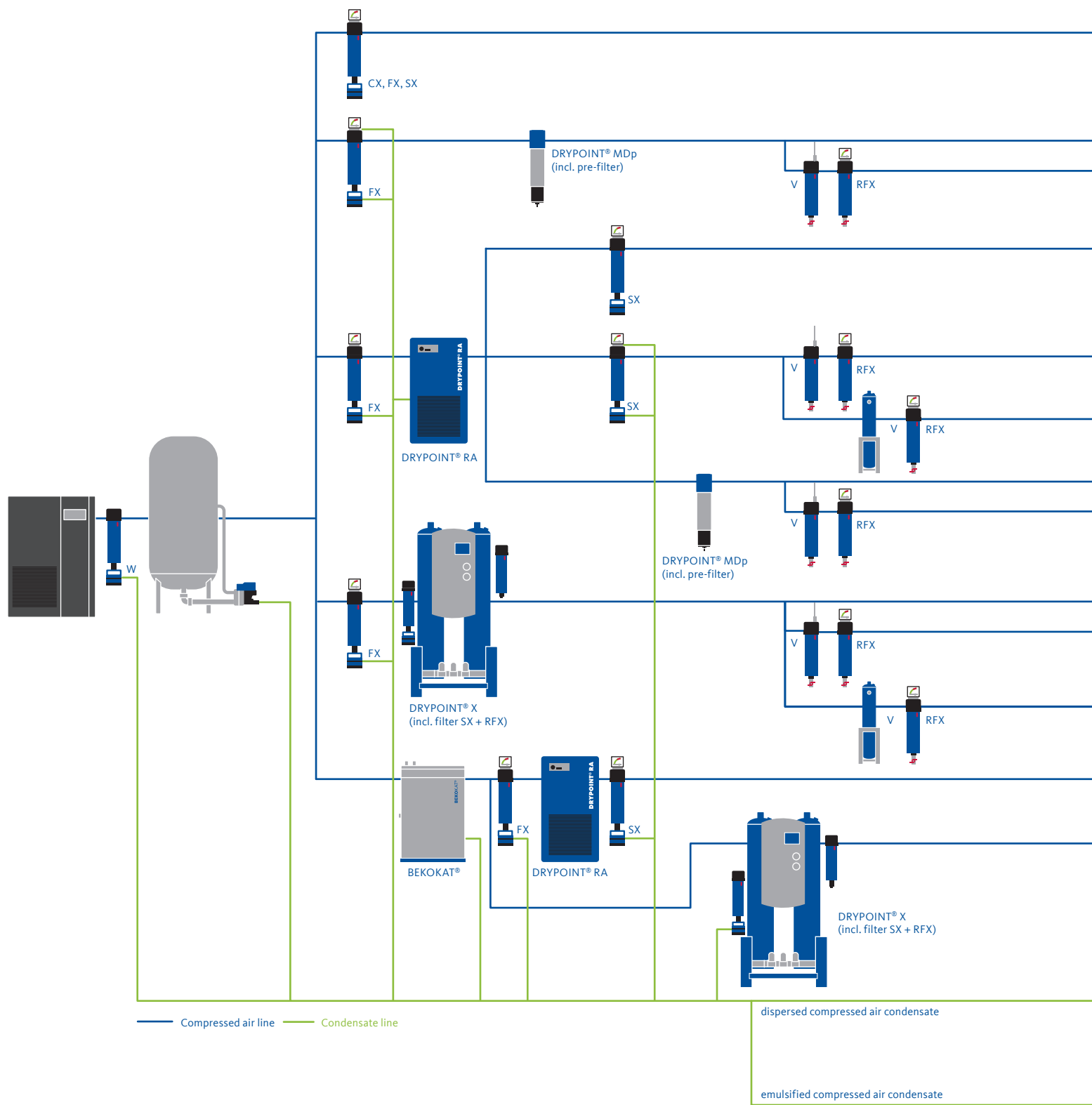
# Product Portfolio

components and engineered systems for compressed air and gas treatment

Truth in Compressed Air

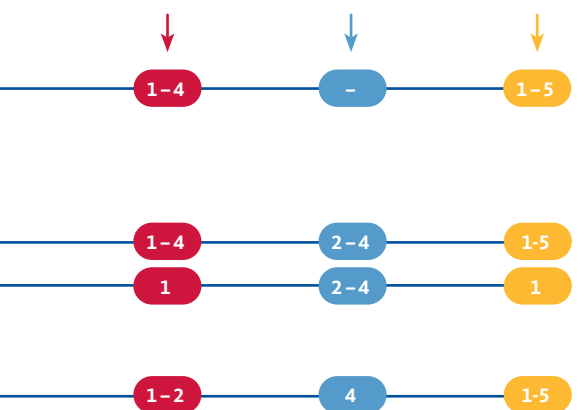


# Complete compressed air processing at a glance:



Your single source of supply and quality you can rely on.

Solid particles Pressure dew point Oil/oil vapor



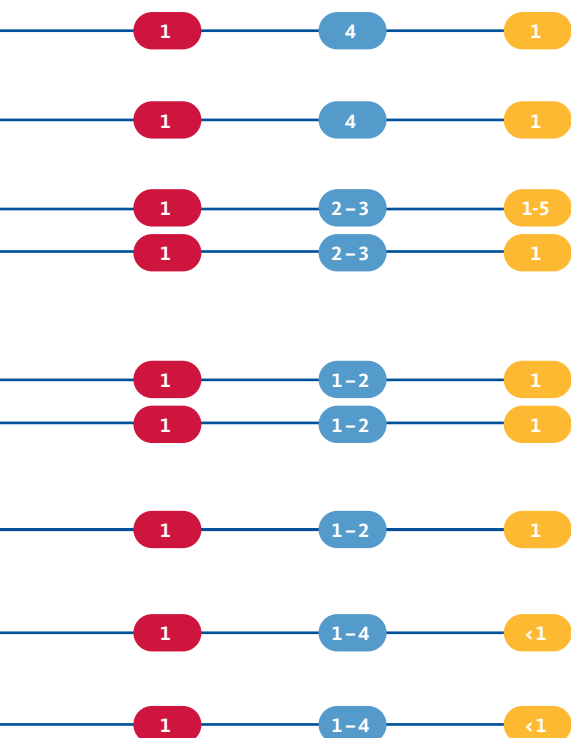
## Air quality classes in accordance with ISO 8573-1:2010

Class	Solid particles, max. number of particles per m <sup>3</sup>			Pressure dew point	Oil content (liquid, aerosol, oil vapor)
	0.1 μm < d ≤ 0.5 μm	0.5 μm < d ≤ 1.0 μm	1.0 μm < d ≤ 5.0 μm	°F	mg/m <sup>3</sup>
0	In accordance with the unit operator's or supplier's specifications, stricter requirements than class 1				
1	≤20,000	≤400	≤10	≤−100	≤0.01
2	≤400,000	≤6,000	≤100	≤−40	≤0.1
3	-	≤90,000	≤1,000	≤−4	≤1
4	-	-	≤10,000	≤37	≤5
5	-	-	≤100,000	≤45	> 5
6	-	-	-	≤50	-

■ Measured in accordance with ISO 8573-4, ref. conditions 14.5 psi [a] absolute, 68 °F, 0% RH

■ Measured in accordance with ISO 8573-3

■ Measured in accordance with ISO 8573-2 and ISO 8573-5, ref. conditions 14.5 psi [a] absolute, 68 °F, 0% RH



	<b>CLEARPOINT®</b> dust filter RFX/RSX with manual drain with differential pressure indicator		<b>DRYPOINT® RA</b> refrigeration dryer with BEKOMAT®
	<b>CLEARPOINT®</b> coalescence filter CX/FX/SX with BEKOMAT® with differential pressure indicator or filter management		<b>DRYPOINT® MDp / MDi</b> membrane dryer with an integrated nanofilter and adjustable PDP (MDi only)
	<b>CLEARPOINT® A</b> activated carbon filter Option: oil check indicator		<b>DRYPOINT® MDe</b> membrane dryer
	<b>CLEARPOINT® V</b> activated carbon cartridge with oil check indicator		<b>DRYPOINT® X</b> desiccant dryer with inlet and dust filter
	<b>CLEARPOINT® V</b> activated carbon adsorber		<b>BEKOSPLIT®</b> emulsion splitting plant for larger flow systems
	<b>CLEARPOINT® W</b> water separator with BEKOMAT®		<b>BEKOKAT®</b> catalytic converter for oil and bacteria free air
	<b>ÖWAMAT® / QWIK-PURE®</b> oil-water separation system for dispersed and emulsified condensates		<b>BEKOMAT®</b> intelligent zero air loss condensate drains

QWIK-PURE®

BEKOSPLIT®



We set the standard. With our expertise, our experience, and our passion.

### Prepared for the **future** by our past

For more than four decades, **BEKO** Technologies has been developing, manufacturing and selling high-quality, high-capacity and high-efficiency components and engineered systems for optimal compressed air and gas quality. Today, we offer a complete range of products for all tasks related to compressed air and gas engineering, transportation, and processing.

### Judge us by our **service** and **support**

For us, the best measure of all the things we do is the satisfaction of our customers. Your experience and requirements are the impulses that drive our innovations. Therefore, our constant readiness to enter into dialog and business partnership is very important to us. Our worldwide network of subsidiaries and experienced distributors ensure close and individualized customer support in all markets.

### What counts for us is **confidence**

Reliability and honesty are the basis of a true partnership and requirements in achieving a shared vision. As an independent company, **BEKO** Technologies stands for freedom of decision, professionalism, and consistency. We are focused on the concerns of our customers and partners, and are completely committed to achieving success together.

### **Definitive** quality products, cost effective, and innovative

Constantly evolving employment conditions and legal requirements create new and increased demands on compressed air and gas technology. **BEKO** Technologies transforms these requirements into successful and practical products and system solutions. Thanks to this expertise, we are recognized worldwide as a major innovator in our sector.

# CLEARPOINT®

## Filtration and Separation

The CLEARPOINT® filter technology guarantees low operating costs, long service life, outstanding process reliability, and the safe filtration of aerosols, oil and particles. This comprehensive range of products covers a performance spectrum from 25 to 21,000 scfm and includes threaded and flanged filters, as well as high-pressure filters up to 7,250 psig. With our innovative filter elements and flow optimized, corrosion protected housing construction, CLEARPOINT® offers safe and reliable filtration and qualitatively better compressed air at significantly reduced operating costs.

### CLEARPOINT® Coalescing and Particulate Filters

with float drain or BEKOMAT® with or without differential pressure gauge

### CLEARPOINT® Water Separators

with float drain or BEKOMAT®

### CLEARPOINT® Activated Carbon Filters

oil vapor removal filters or towers with cartridge or activated carbon fill

## Filtration and separation done the energy-efficient way

### CLEARPOINT® key features:

- › High-performance filtration; better compressed air quality and significantly reduced operating costs
- › Improved separation efficiency
- › High dirt and particulate absorption capacity
- › Super-low differential pressure
- › Performance optimized volume flow increase by up to 30%



CLEARPOINT®	Flow	Pressure
Threaded Series	25 to 1,900 scfm	up to 232 psig
Flanged Series	1,900 to 21,000 scfm	up to 232 psig
PN50 High Pressure Series	100 to 2,750 scfm	up to 725 psig
HP High Pressure Series	25 to 2,000 scfm	from 1,450 up to 7,250 psig
H In-line Heater Series	30 to 60 scfm	up to 232 psig



# DRYPOINT® RA and RA Eco Series

## Refrigerant Drying

The operating costs - and not the investment costs - determine the cost efficiency of refrigeration dryers. Using DRYPOINT® RA these crucial operating costs can be reduced by half over a 5-year period. The non-cycling DRYPOINT® RA line is available in two different series to satisfy every level of required performance.

**DRYPOINT® RAc Economy Refrigeration Dryers**  
economically priced with BEKOMAT® or timer drain in a compact frame

**DRYPOINT® RAx Premium Refrigeration Dryers**  
equipped with all premium features including BEKOMAT® as standard

The DRYPOINT® RA Eco series takes all of the best features from the standard RA series and combines them with innovative cycling and variable speed technology resulting in even greater operational cost savings. Specifically with the Eco Series dryers, users are provided with maximum energy savings from the cycling and variable speed technologies used.

**DRYPOINT® RA CT Series Refrigeration Dryers**  
ultra efficient dryers with cycling technology and standard BEKOMAT®

**DRYPOINT® RA VSD Series Refrigeration Dryers**  
ultra efficient dryers with variable speed technology and standard BEKOMAT®

### Efficiency pays off

#### DRYPOINT® RA key features:

- › Includes the patented Vario Flow hot gas by-pass valve
- › Compact design with low internal vibration
- › High efficiency heat exchanger for inlet temperatures up to 160 °F
- › BEKOMAT® inside

### Maximum efficiency combined with cycling technology

#### DRYPOINT® RA Eco Series key features:

- › All new, ground-up controller design
- › Includes the patented Vario Flow hot gas by-pass valve
- › Oversized heat exchanger with flow optimized profile
- › BEKOMAT® inside
- › Maximum energy savings through advanced cycling and variable speed technology



DRYPOINT® RA Non-cycling	Flow	Pressure
DRYPOINT® RAc	10 to 480 scfm	up to 232 psig
DRYPOINT® RAx	20 to 10,000 scfm	up to 232 psig



DRYPOINT® RA Eco Series	Flow	Pressure
DRYPOINT® RA CT	20 to 500 scfm	up to 232 psig
DRYPOINT® RA VSD	800 to 6,000 scfm	up to 200 psig

# DRYPOINT® RA HT and RS HP

## Refrigerant Drying

DRYPOINT® RA HT high temperature refrigerant air dryers are specifically designed to handle the extreme demand of inlet compressed air temperatures up to 210 °F. This level of performance is only possible with the integrated after cooler and filter combination found within the DRYPOINT® RA HT series dryers.

**DRYPOINT® RA HT High Inlet Temperature Refrigeration Dryers**  
with integrated aftercooler and BEKOMAT® or timer drain

With full counter flow heat exchangers of either copper tube-in-tube or stainless steel / copper brazed plate designs, the DRYPOINT® RS HP is capable of handling compressed air pressures up to 725 psig all while maintaining a tight outlet pressure dew point tolerance for maximum performance and reliability.

**DRYPOINT® RS HP High Pressure Refrigeration Dryers**  
stainless steel heat exchanger with BEKOMAT® or timer drain

### Minimal pressure drop, low operating costs

#### DRYPOINT® RA HT key features:

- › Significantly reduced operating costs
- › High operational reliability
- › Includes the patented Vario Flow hot gas by-pass valve
- › BEKOMAT® inside
- › Integrated after cooler complete with pre-filtration

### Refrigerant drying for high pressure systems

#### DRYPOINT® RS HP key features:

- › Additional stainless steel componentry
- › Very long service life
- › Advanced controller
- › High pressure rated BEKOMAT® inside
- › Easy handling and installation
- › Available in 17 different model sizes



DRYPOINT® RA HT	Flow	Pressure
Performance Range	20 to 350 scfm	up to 200 psig



DRYPOINT® RS HP	Flow	Pressure
Performance Range	15 to 3,500 scfm	up to 725 psig

# DRYPOINT® XC and AC HP

## Heatless Desiccant Drying

DRYPOINT® XC desiccant dryers are specifically designed to minimize air loss. With this design, air loss and back pressure are reduced resulting in an operationally efficient dryer. This feature rich line results in a dramatically quick economic payback period.

**DRYPOINT® ACC Compact Heatless Desiccant Dryers**  
with pre-filtration included and post-filter integrated

**DRYPOINT® XCe Economy Heatless Desiccant Dryers**  
with basic controller and slanted seat valves

**DRYPOINT® XCp Premium Heatless Desiccant Dryers**  
with standard humidity demand control and BEKOTOUCH interface

The DRYPOINT® AC HP desiccant dryer reliably removes humidity from the highest pressure compressed air systems. DRYPOINT® AC HP units are individually engineered, adjusted, and manufactured for the application and customer requirements providing maximum performance efficiency.

**DRYPOINT® AC HP Heatless High Pressure Desiccant Dryers**  
full stainless steel components with PLC controller

Minimal pressure drop, maximum savings

### DRYPOINT® XC key features:

- › Significantly reduced operating costs
- › High operational reliability
- › Electronic control offers operational flexibility
- › Designed with the user in mind - easy install and simple maintenance

Drying under high pressure

### DRYPOINT® AC HP key features:

- › Full stainless steel construction
- › Leak free connections
- › Intelligent, expandable PLC controller
- › Trouble-free and easy to maintain
- › Freeze-free purge air
- › Sized and engineered specifically for your application



DRYPOINT® XC	Flow	Pressure
DRYPOINT® ACC	4 to 110 scfm	up to 232 psig
DRYPOINT® XCe	80 to 800 scfm	up to 150 psig
DRYPOINT® XCp	80 to 2,800 scfm	up to 150 psig



DRYPOINT® AC HP	Flow	Pressure
Performance Range	35 to 480 scfm	up to 7,250 psig



# DRYPOINT® XF and ACH

## Heated Desiccant Drying

When a true system solution that delivers absolute maximum performance in all areas is required then DRYPOINT® XF is that solution. Heated, external blower operated desiccant dryers are at the top of the range in terms of product longevity, reliability and total energy savings.

**DRYPOINT® XFe Economy Heated Blower Desiccant Dryers**  
with high performance valves and BEKOTOUCH 2 interface

**DRYPOINT® XFi ecoIntelligent Heated Blower Desiccant Dryers**  
0-3% purge rate using auto-adjusting software and BEKOTOUCH 2 interface

External heated purge desiccant dryers provide the next level up in terms of energy savings when compared to heatless designs, and the DRYPOINT® ACH is no exception. The entire design from valves to controller were given careful consideration to save you money and improve operational reliability.

**DRYPOINT® ACH Heated Purge Desiccant Dryers**  
with standard PLC controller

When maximum efficiency is your goal

### DRYPOINT® XF key features:

- › Auto-purge rate and user modes
- › Advanced, auto-adjusting ecoIntelligent PLC
- › Up to 90% energy savings compared with a conventional dryer
- › Available with or without tower insulation
- › Demand specific sizing and engineered to your exact specifications

Optimized heated drying systems

### DRYPOINT® ACH key features:

- › Purge efficient design
- › Fully programmable PLC
- › Standard cycle failure alarm
- › Available with or without tower insulation
- › Demand specific sizing and engineered to your exact specifications



DRYPOINT® XF	Flow	Pressure
DRYPOINT® XFe	800 to 6,000 scfm	up to 150 psig
DRYPOINT® XFi	800 to 6,000 scfm	up to 150 psig

DRYPOINT® ACH	Flow	Pressure
Performance Range	70 to 4,050 scfm	up to 150 psig

# DRYPOINT® MDe, MDp, and MDi

## Membrane Drying

The DRYPOINT® MD is a super compact membrane air dryer that dries compressed air or gas stream down to the required dew point while self-adjusting to the ambient conditions. Along with filtration, compressed air drying contributes significantly to the enhancement of process reliability. The DRYPOINT® MD range is available without filtration as with the standard series, with an integrated pre-filter in the DRYPOINT® MDp series, and in the super energy saving, user adjustable MDi configuration. Being that the technology is 100% engineered and produced by BEKO Technologies means that we can handle your project through the entire project life cycle - from concept to prototyping, from benchmarking to serialized production, we have the optimal solution.

**DRYPOINT® MDe Economy Series Membrane Dryers**  
standard membrane air dryer with tubular or filter style housing

**DRYPOINT® FDR Membrane Dryers**  
pre-configured filter, dryer and pressure regulator packages

**DRYPOINT® MDp Premium Series Membrane Dryers**  
membrane air dryer with integrated pre-filter

**DRYPOINT® MDi ecoIntelligent Series Membrane Dryers**  
membrane air dryer with adjustable pressure dew point control

### A solution for every application

#### DRYPOINT® MD key features:

- › Reliable compressed air drying with low purge air demands
- › Zero electrical consumption, no desiccant, no moving parts, and no maintenance
- › TWIST 45 technology for high efficiency drying
- › No change in the compressed air composition or temperature
- › Optimum filtration included directly upstream of DRYPOINT® MDp
- › DRYPOINT® MDi with ecoIntelligent controller



DRYPOINT® MD	Flow	Pressure
DRYPOINT® MDe	2 to 130 scfm	up to 140 psig
DRYPOINT® MDp	2 to 130 scfm	up to 140 psig
DRYPOINT® MDi	12 to 130 scfm	up to 145 psig
DRYPOINT® FDR	2 to 17	up to 140 psig

# METPOINT®

## Measurement Technology

In the field of compressed air, specialized measurement technology provides the database used for the successful assessment and assurance of compressed air quality. Continuous monitoring of compressed air parameters offers process safety and the reliable identification of hidden expenses that are driving up costs unnecessarily. Possible overloading (i.e. excessive air velocities) or malfunctions can be detected quickly and reliably and this allows for the most economical optimization of plant components. Moreover, the exact consumption percentages at different stages of production is of great value in making fact-based business management decisions. The complete METPOINT® line of monitors, data loggers and sensors let you handle these tasks with ease:

### METPOINT® Instrumentation Monitors

data logging, touch screen display, and multiple sensor connections

### METPOINT® Compressed Air Sensors

available for dew point, flow, pressure, leak detection, temperature, and amperage

### A synergistic effect

#### METPOINT® key features:

- › Highly accurate instruments designed for compressed air
- › Reliable measurements that are independent
- › Multi-function displays that are easy to use
- › Completely modular system that expands as needed
- › Maximum flexibility with stationary and portable devices
- › No adjustments necessary



METPOINT®	Flow	Pressure
Monitors	No Restriction	No Restriction
Sensors	No Restriction	up to 725 psig

# METPOINT® OCV

## Hydrocarbon Measurement Technology

At many points in the processing of compressed air, there is the risk of contamination with hydrocarbons, particularly oil. In oil flooded compressors, oil vapor enters the compressed air system as a result of the compression process. Further contamination can occur where oil and grease are employed as lubricants and sealing compounds. Even oil-free compressors are no guarantee for oil-free compressed air, since oil vapor already exists in the air that is drawn into the compressor at the intake. Wherever contaminants may enter a production process, then the company needs to be sure that accurate monitoring is in place to detect even the smallest trace of contamination. The METPOINT® OCV and OCV compact completely takes over the requirement to constantly monitor your compressed air and performs this task to an accuracy of 0.003 mg/m³. The system ensures that you have contamination-free processes and therefore contamination-free products.

**METPOINT® OCV Compact Oil Vapor Monitoring Systems**  
inline oil vapor measurement device with integrated display

Two devices in one

**METPOINT® OCV key features:**

- › Worldwide exclusive technology
- › Exceeds ISO 8573-1 Class 1 standards
- › Self-adjusting reference air sample
- › Simplified calibration process eliminates downtime
- › Network ready with data logging and remote access
- › Easy to use and understand display



METPOINT® OCV Compact	Flow	Pressure
Performance Range	No Restriction	up to 232 psig

# BEKOKAT®

## Oil-free Process Technology

The main source for oil in compressed air is the compressor: some of the compressor oil from oil-lubricated machines always enters the compressed air stream. In order to prevent this, the installation of compressors with oil-free compression is often favored. This is a false sense of security! This compression method prevents additional lubricating oil from entering the compressed air, but, this is by no means a guarantee that the compressed air is free from oil. Hydrocarbons in the ambient air are the reason for this. Hence, compressed air of the highest quality according to ISO 8573-1 can only be guaranteed with oil-free compression combined with supplementary processing. The BEKOKAT® offers an ideal system solution for this! In a single process step, the BEKOKAT® breaks down hydrocarbons inside the compressed air stream. The residual oil content significantly outperforms the requirements of Class 1 according to ISO 8573-1 - proven and certified!

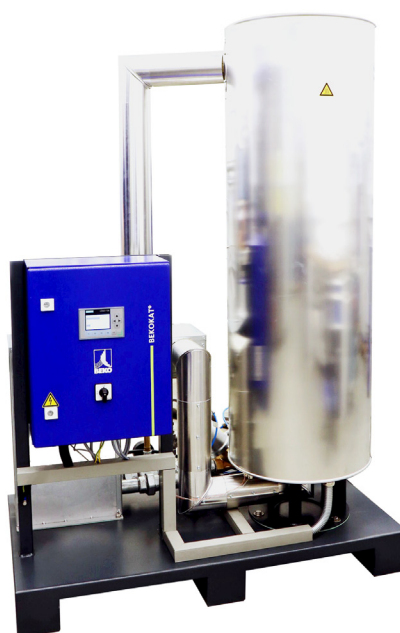
### BEKOKAT® Catalytic Conversion Systems

complete oil and bacteria removal systems for compressed air

#### Trendsetting catalysis technology

##### BEKOKAT® key features:

- › Oil-free and sterile compressed air that is better than ISO 8573-1 Class 1 oil content standard
- › Independent of ambient temperature, air humidity and oil inlet concentration
- › Clean and environmentally friendly
- › Partial-load operation is possible
- › Minimal maintenance with long service intervals



BEKOKAT®	Flow	Pressure
BEKOKAT® ICC 010	10 scfm	160 psig
BEKOKAT® ICC 035 - ICC 425	35 to 425 scfm	232 psig
BEKOKAT® ICC 705	705 scfm	160 psig



# BEKOMAT®

## Condensate Drainage

Generating compressed air always involves the formation of liquid condensate which, in most cases, contains oil. It is also contaminated with dirt particles which, if not removed, will disperse throughout an entire compressed air network. This is a very common problem and often results in elevated costs, damage and downtime. Using an electronically level-controlled BEKOMAT® the condensate in the compressed air system is drained automatically. The intelligent electronics prevent compressed air losses and minimize the energy input required. The return-of-investment installing a BEKOMAT® solution is usually less than 6-months.

**BEKOMAT® Standard Condensate Drains**  
for standard pressure applications

**BEKOMAT® CV and NLV Condensate Drains**  
for centrifugal compressors with check valve or no-load valve

**BEKOMAT® PN and E Condensate Drains**  
for high pressure systems and available in stainless steel

**BEKOMAT® Specialty Condensate Drains**  
for low pressure, vacuum systems, large volumes, or explosive atmospheres

Process-safe, reliable and efficient

**BEKOMAT® key features:**

- › Unique sensor detects all kinds of condensate
- › High dirt resistance
- › Low maintenance
- › Fully automatic monitoring
- › Saves energy, costs and lowers CO<sub>2</sub> emissions
- › Extensive portfolio of custom equipment for special applications



BEKOMAT®	Flow	Pressure
BEKOMAT® Standard Series	100 to 50,000 scfm	from 12 up to 232 psig
BEKOMAT® PN and E Series	280 to 50,000 scfm	from 12 up to 912 psig
BEKOMAT® CV and NLV Series	2,000 to 50,000 scfm	from 0 up to 360 psig
BEKOMAT® Specialty Series	4,500 to 50,000+ scfm	from 1.45 psia up to 232 psig

# QWIK-PURE® and ÖWAMAT®

## Condensate Processing

Located directly at the source, oil-water separation is a more cost-effective solution for environmentally compatible condensate management than centralized treatment. The QWIK-PURE® and ÖWAMAT® oil-water separators do not generate any energy costs, boast enormous filter service lives and can be retrofitted without problems in older facilities.

**QWIK-PURE® High-Efficiency Oil-Water Separators**  
with direct to cartridge filtration

**ÖWAMAT® Gravity Oil-Water Separators**  
with gravity pre-separation and cartridge filtration

**Sustainability with a savings potential**

**ÖWAMAT® and QWIK-PURE® key features:**

- › Processed condensate can be directly introduced into the sewer system as treated wastewater
- › Easiest handling through cartridge technology
- › Type approval for compressor condensates
- › No permit required according to most local laws on water quality
- › No energy costs under normal conditions



QWIK-PURE®   ÖWAMAT®	Flow	Suitable Lubricant Types
QWIK-PURE®	45 to 7,200 scfm	All - including Polyglycol lubricants
ÖWAMAT®	60 to 8,400 scfm	Mineral oils and PAO/Diester oils

# What do you know about compressed air?

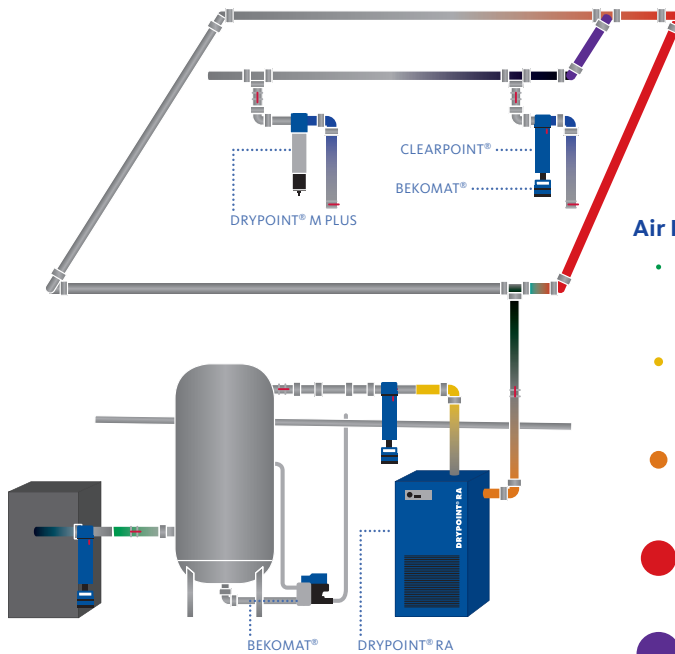
## Pressure Drop

Compressor Pressure 110 psig  
Point-of-use Pressure 85 psig

## How does this happen?

9%	10 psi	Compressor Controls
10%	1.0 psi	Main Pipe Work
10%	1.0 psi	Water Separator
10%	1.0 psi	Coalescing Filter
20%	2.0-6.0 psi	Air Dryer
5%	0.5 psi	Distribution Pipe Work
5%	0.5 psi	Connecting Lines
33%	5.0-8.0 psi	Point-of-use Connections

With 110 psig at the compressor, it is easy to lose up to 25 psi by the time the air is consumed. Each system component is crucial to the efficiency of the whole system.



## Air Leaks

HP	Loss	Annual Cost
0.5	1/32"	1.6 \$192
1.5	1/16"	6.5 \$577
7.5	1/8"	26 \$2,887
25	1/4"	104 \$9,625
50	3/8"	234 \$19,251
	1/2"	415 cu. ft. lost per minute \$38,503 annual cost

Annual cost based on 8,000 operating hours, power cost at \$0.06 kWh and motor efficiency of 93%.

$$\text{Annual cost} = \frac{(\text{BHP}) \times (.746) \times (\text{Hrs/Yr}) \times (\$/\text{kWh})}{\text{Motor Efficiency}}$$

## Condensate Drain Air Loss

\$10,000 - ∞	Cracked Ball Valve
\$800 - \$1,000	Pneumatic Ball Valve w/ Bleeding Nozzle
\$300 - \$400	Timer Solenoid
\$0	BEKOMAT® Zero Air Loss Drain

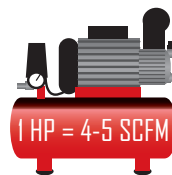
**ROI**  
**90 DAYS**  
Average Return on Investment

Condensate drain air loss is calculated using the same formula as air leaks.

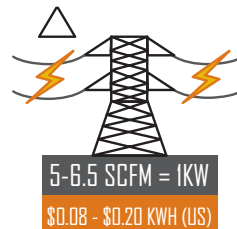
## Facts and Figures About Compressed Air

### Cost of Compressed Air (per SCFM)

1,000 SCFM of Air Generation	\$0.30 - \$0.60
1,000 SCFM of Drying	\$0.03 - \$0.20



1 HP = 4-5 SCFM



5-6.5 SCFM = 1KW  
\$0.08 - \$0.20 KWH (US)

Electricity

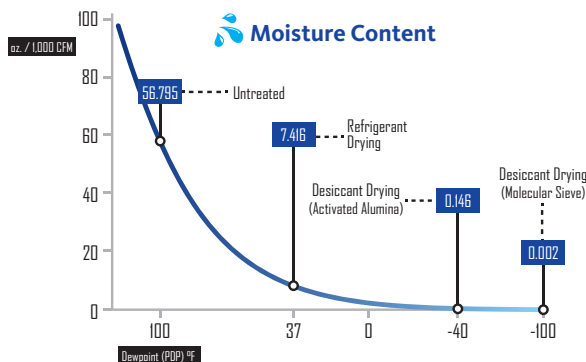


100 SCFM = 0.75 Gal./HR

Condensate



Rec. Tank Sizing  
1 Gal. / CFM



### Oil Carryover

(Gallons Entering System per Year)

PPM	Hours	Compressor Horsepower			
		25	50	100	200
2	4,000	0.5	1.0	2.4	4.8
4		1.0	2.4	4.8	9.6
6		1.4	3.6	7.2	14.4
8		1.9	4.8	9.6	19.2



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