

**BEKOKAT®**

**TOP QUALITY,  
OIL-FREE COMPRESSED AIR**



## BEKOKAT® FOR EXACTING SPECIFICATION

With highly sensitive applications, conventional compressed air treatment has certain technical and economic limits.

This calls for a fresh approach and different technologies. BEKO's catalyst technology sets new standards in compressed air treatment.

Intensive development work to exploit the theoretical possibilities of catalyst technology has resulted in the BEKOKAT® – a device that combines superior efficiency with high reliability.

The new BEKOKAT® represents a real breakthrough.



### + 1 :

**OIL FREE COMPRESSED AIR,  
EVERY TIME. BETTER THAN  
ISO8573-1, CLASS 1 OIL CONTENT**

### + 2 :

**INDEPENDENT OF AMBIENT  
CONDITIONS**

### + 3 :

**ENVIRONMENTALLY FRIENDLY,  
NO HAZARDOUS WASTE.  
NO CARTRIDGES.  
CLEAN, OIL-FREE CONDENSATE**

### + 4 :

**PARTIAL LOAD OPERATION  
WITHOUT RESTRICTION.  
GRANULATE LIFETIME  
≥ 20,000 OPERATING HOURS**

### + 5 :

**FOR ABSOLUTE  
PROCESS SAFETY.  
FAST RESPONDING CONTROL**



BEKOKAT®

## FUNCTION

### COMPLETE TRANSFORMATION

The compressed air of oil-lubricated compressors contains hydrocarbons in the form of lubricants and oil as well as air constituents in the form of gas, vapour and aerosols. The BEKOKAT® system completely transforms hydrocarbons by total oxidation to produce carbon dioxide and water.

### CONSTANT, EVEN TEMPERATURE

For compressed air treatment using a BEKOKAT® unit, a pressure vessel is filled with a specially developed granulate. The entire vessel is heated to an operating temperature of 150 °C. The oil particles in the compressed air that flows through the heated vessel are completely transformed inside the pores of the catalyst granulate, resulting in water and carbon dioxide.



### SUCCESSFUL TEST

In April 2007, a BEKOKAT® CC - 060 underwent intensive testing at the facilities of the renowned Midland Medical Services Ltd. Birmingham, UK. The compressed air was produced using an oil-lubricated compressor. The following values were measured at the outlet:

- **Oxygen** **21.1 % v/v**
- **Carbon dioxide** **410 ppm**
- **Carbon monoxide** **0 ppm**
- **Nitrogen monoxide/dioxide** **0 ppm**
- **Sulphur dioxide** **0 ppm**
- **Water** **1080 ppm**
- **Oil** **< 0.1 mg/m<sup>3</sup>**

The existing measurement tools could not register residual oil content. All the time BEKOKAT® delivers almost oil-free compressed air ( $\leq 0,003 \text{ mg/m}^3$ ).

### EVEN IN PARTIAL LOAD OPERATION: COMPRESSED AIR OF BREATHING AIR QUALITY

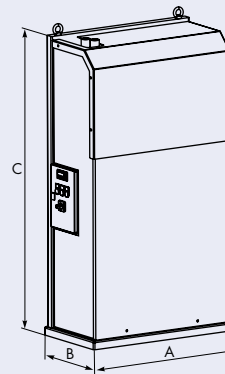
After treatment the clean compressed air is cooled in a heat exchanger down to a temperature of approx. 10 °C to 15 °C above inlet and is then available for the desired application.

The BEKOKAT® operates independent of ambient conditions, inlet temperature, oil inlet concentration and relative humidity of the compressed air. The compressed air discharged from the BEKOKAT® unit possesses breathing air quality.

Likewise, the condensate produced during cooling of the compressed air is absolutely oil-free and can be fed into the sewer system without further treatment. The exceptionally long lifetime of the special BEKOKAT® granulate is a great advantage economically: it only needs to be replaced after some 20,000 operating hours.

BEKOKAT®

## TECHNICAL DATA



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Model	Flow rate			Pressure bar (psi)	Connection	Weight kg (lb)	Size in mm (inch)			Installed capacity kW
	Nm <sup>2</sup> /min	Nm <sup>2</sup> /h	scfm				B	T	H	
CC - 060	1	60	35	16 (232)	1"	130 (290)	800 (32)	420 (17)	1440 (57)	1.15
CC - 120	2	120	75	16 (232)	1"	200 (440)	950 (38)	450 (18)	1440 (57)	1.6
CC - 180	3	180	106	16 (232)	1"	300 (665)	1200 (48)	520 (21)	1540 (61)	2.1
CC - 360	6	360	212	12 (174)	1½"	600 (1325)	1300 (52)	750 (30)	1600 (63)	3
CC - 720	12	720	424	12 (174)	2"	900 (1985)	1500 (60)	880 (35)	1700 (67)	6.5
CC - 1200	20	1200	706	12 (174)	DN65	1600 (3530)	1800 (71)	1030 (41)	2100 (83)	13
CC - 2400	40	2400	1408	12 (174)	DN80	1900 (4190)	2500 (99)	1150 (46)	2400 (95)	28.5
CC - 3000	50	3000	1765	12 (174)	DN100	2200 (4850)	2500 (99)	1150 (46)	2400 (95)	29

Attainable oil residue  $\leq 0.003$  mg/m<sup>3</sup>, under optimum conditions 0.001 mg/m<sup>3</sup>

The residual oil content can be monitored continuously using BEKO's OIL CONTROL

Mains voltage: type 060-120: 230 V/1Ph./50Hz, type 180-3000: 400 V/3Ph./50Hz

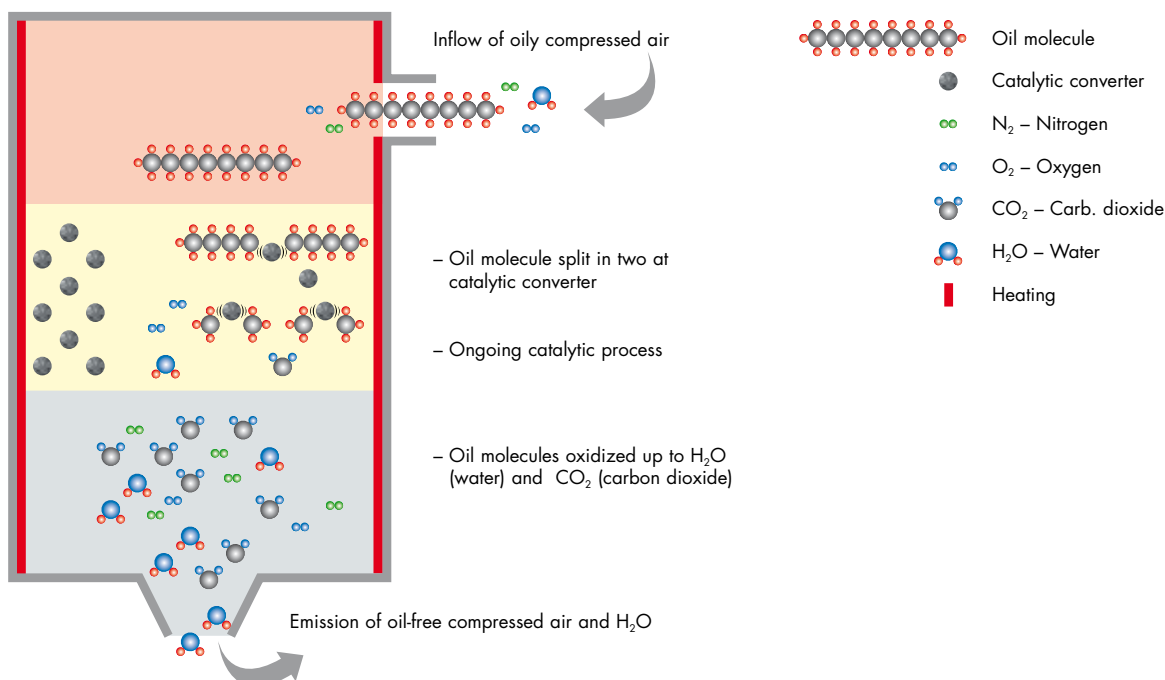
Other models or voltages upon enquiry. Model CC - 360 or higher without housing.

Operating pressure (e)	4	5	6	7	8	9	10	11	12	13	14	15	16
Operating pressure psi (g)	58	72.5	87	101.5	116	130.5	145	159.5	174	188.5	203	217.5	232
Correction factor (coefficient)	0.63	0.75	0.88	1	1.13	1.25	1.36	1.5	1.63	1.75	1.88	2	2.1

All BEKOKAT® units are rated for an operating pressure of 7 bar (g) and a max. operating pressure of 16 bar (g) as standard.

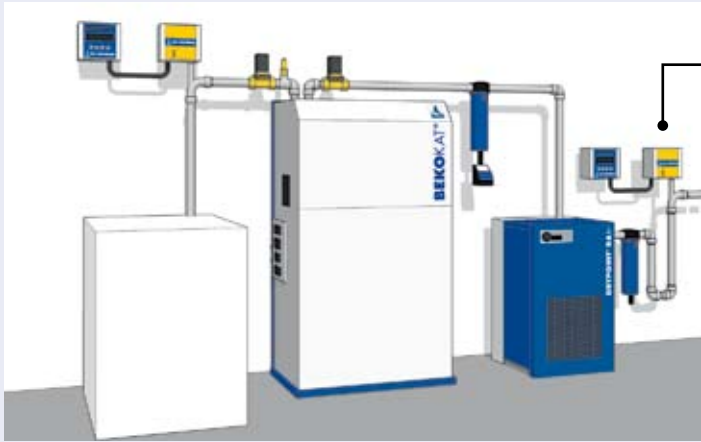
The performance values refer to an inlet pressure of 7 bar (g). In the case of a different inlet pressure, please multiply by the respective correction factor.

## CATALYST FUNCTION



**BEKOKAT® -**

**CONSTANT SUPPLY OF OIL-FREE COMPRESSED AIR FOR:**



**ALWAYS ACCURATELY  
INFORMED: OILCONTROL  
ALLOWS PERMANENT  
MONITORING OF THE OIL  
CONTENT IN COMPRESSED  
AIR FLOWS.**



**PHARMACEUTICAL  
INDUSTRY**



**CHEMICAL INDUSTRY**



**FOOD, BEVERAGES AND  
TOBACCO INDUSTRY**



**MEDICAL TECHNOLOGY**



**SURFACE TECHNOLOGY**



**PACKAGING INDUSTRY**

**BEKO**

**HIGH-QUALITY COMPRESSED AIR**

**BEKOMAT®**

The convincing concept for condensate discharge

**ÖWAMAT®**

Clean & safe oil-water separation.  
Super efficient with OEKOSORB® replacement filters

**BEKOSPLIT®**

Splitting plants for the reliable, economic and environmentally friendly treatment of oil-water emulsions

**DRYPOINT®**

The complete product range for compressed air drying:  
refrigeration dryers, adsorption dryers, membrane dryers

**EVERDRY®**

Compressed air for large volume flows

**CLEARPOINT®**

Flow-optimised, reliable filters and water separators for compressed air and industrial gas

**BEKOKAT®**

Catalytic oil retention.  
The optimum solution for the highest requirements in compressed air treatment

**BEKOFLOW®**

Innovative, cost-cutting compressed air pipe system

**BEKOBLIZZ®**

Optimised cooling processes using deep-cooled, dry compressed air

**OILCONTROL**

Monitoring system for residual oil in compressed air

**MEDBAC**

Medical Breathing Air Control

OILCONTROL, MEDBAC – Engineered by BEKO Instruments GmbH.  
EVERDRY® – Engineered by EverAir GmbH.  
Members of the BEKO Group of Companies.



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