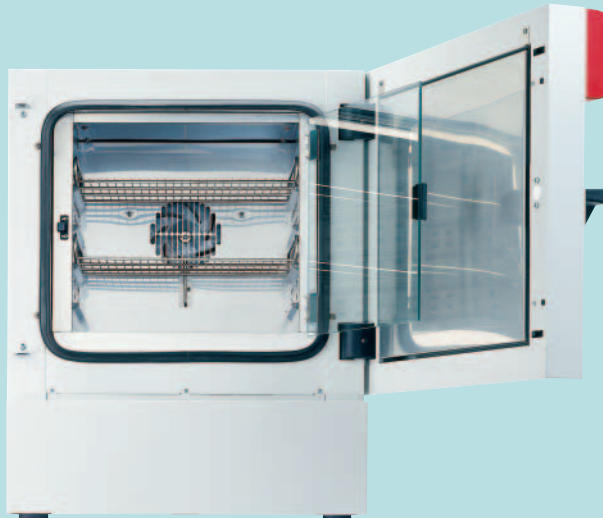


## KB series: more dynamic, safer, superior

Cooled incubators are mainly used for incubation tasks below room temperature or in cases where high ambient temperatures cannot be excluded. The patented DCT® cooling system, in conjunction with the APT.Line temperature technology, creates the ideal prerequisites for highly accurate and constant temperature conditions. The enormous cooling capacity allows a final temperature of approx.  $-10\text{ }^{\circ}\text{C}$ . This considerable reserve capacity and the high level of outfitting enable the performance of many applications from the most diverse areas and the compensation of additional heat loads, such as those, for example, due to devices in the inner chamber. The DCT® cooling system and the controllable air turbine guarantee high levels of humidity even during cooling operation or long-duration tests, reliably preventing samples from drying out.

The KB series is optimally suitable for all those who also require safe incubation at unstable ambient temperatures and highest cooling capacities, even on hot days. It is also excellently suited for storing blood products, e.g. as thrombocyte storage cabinets.



### ► Operative ranges:

Pharmaceutical and chemical industry, cosmetics industry, biotechnology, foodstuffs industry, animal food industry, paper and textile industry, academic research at universities, academies, research institutes: biology, medicine, pharma science, education at schools, hygienics and water analysis (fresh water and sewage), environmental technology, state-accredited control institutes

### ► Performance features:

- temperature range:  $-10\text{ }^{\circ}\text{C}$  to  $100\text{ }^{\circ}\text{C}$  at ambient temperature  $< 20\text{ }^{\circ}\text{C}$
- Maximum temperature precision  $\pm 0,5\text{ }^{\circ}\text{C}$
- Fastest temperature recovery time
- Minimum moisture loss at cooling operation through extensive DCT®-cooling system
- During cooling operation no condensation in the inner chamber
- Optimum reliability, even during long term cooling operation
- Powerful cooling system, for operation of big shaking devices
- Calibrations and validations possible

### ► Equipment:

- Patented APT-Line® preheating chamber technology
- Microprocessor with LED-display with two programs with 10 sections each, or switch over to one program with 20 sections
- Numerous temperature and time functions
- Adjustable ramp function via program editor
- Adjustable fan speed (0 - 100%)
- Counter of operating hours
- Visual and acoustic temperature alarm
- Interface RS 422 for communication software APT-COM® 3 DataControl-System
- Temperature safety device class 3.1 (DIN 12880)
- Inner glass door
- 2 shelves, stainless steel
- Inner chamber volume in litres: 20, 53; 115; 240; 400; 700

KB series	KB 23	KB 53	KB 115	KB 240	KB 400	KB 720
<b>Exterior dimensions</b>						
Width (mm)	433	634	834	1034	884	1234
Height (inclusive feet/castors) (mm)	601	837	1022	1142	1850	1816
Depth (mm)	516	576	646	746	716	867
plus door handle, I-panel, connection (mm)	73	100	100	100	100	100
<b>Interior dimensions</b>						
Width (mm)	222	400	600	800	650	1000
Height (mm)	330	400	480	600	1308	1168
Depth (mm)	277	330	400	500	470	600
Interior volume (l)	20	53	115	240	400	700
Shelves (number standard/max)	2/3	2/4	2/5	2/7	2/15	2/15
Load per shelf (kg)	12	15	20	30	20	45
Permitted total load (kg)	25	40	50	70	50	120
Temperature range <sup>1)</sup> (°C)	4–60	–10–99.9	–10–99.9	–10–99.9	–10–99.9	–10–99.9
Temperature variation						
at 10 °C (± °C)	0.8	0.5	0.5	0.6	0.6	0.6
at 37 °C (± °C)	0.4	0.4	0.4	0.5	0.3	0.4
Temperature fluctuation during heating operation (≤± °C)	0.1	0.1	0.1	0.1	0.1	0.1
Temperature fluctuation during cooling operation (≤± °C)	0.3	0.3	0.3	0.3	0.3	0.3
Nominal voltage (10% 50/60 Hz (V)	230	230	230	230	230	230
Nominal power (W)	300	460	460	930	1100	1350
Number of doors	1	1	1	2	1	2
<b>Optional</b>						
Temperature safety device cl. 3.3 acc. to DIN 12880 <sup>2)</sup>	–	●	●	●	●	●
Stainless steel shelves	●	●	●	●	●	●
Reinforced shelves, stainless steel	–	–	–	●	●	●
Perforated shelf with additional fixation for shaker operation	–	●	●	●	●	●
Lockable door	●	●	●	●	●	●
Interior lighting	–	●	●	●	●	●
Access ports with silicone plug	–	●	●	●	●	●
Rubber pads for safe stacking	●	●	●	●	–	–
Reinforced cooling	–	–	–	●	●	●
Program timer with week program with Temperature cycling device <sup>3)</sup>	–	●	●	●	●	●
Additional PT 100 temperature sensor. fix or flexible with external connection incl. 3 pin LEMO plug	–	●	●	●	●	●
Temperature measurement acc. to DIN 12880-2 at 37°C or at specified temperature with measuring protocol and certificate	●	●	●	●	●	●
Temperature measurement with 9 measuring points at one temperature with measuring protocol and certificate	●	●	●	●	●	●
Calibration certificate and extension for calibration certificate	●	●	●	●	●	●
Water-proof interior socket 230 V	–	●	●	●	●	●
Analogue outputs for temperature 4 to 20mA with DIN bushing 6 poles	–	●	●	●	●	●
Protocol printer for a numerical and graphical temperature recording	–	●	●	●	●	●

Based on the ice increase on the evaporators the refrigerating capacity decreases at a set value of < 0° C. For this reason the chambers have to be defrosted regularly (approx. once a week).

<sup>1)</sup> at ambient temperature < 20 °C

<sup>2)</sup> Not possible in connection with the use of the timer functions

<sup>3)</sup> Not possible in connection with the use of the temperature safety device 3.3

● Optional

– not available

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