KB series:
Microbiological refrigerating incubators with forced convection

For demanding tasks and variable-temperature profiles in a wide range of temperatures.

► **Performance features and equipment:**

- Electronically controlled APT.line® preheating chamber technology with DCT® cooling system
- Temperature range: -10 °C to +100 °C
- MP-controller with 2 programs with 10 sections each, alternatively switchable to 1 program with 20 sections
- The time interval of single program sections can be adjusted up to a maximum of 99:59 hours or 999:59 hours. This adjustment applies to all program sections.
- Program controller timer functions: delayed ON, delayed OFF, and temperature-dependent delayed OFF
- Adjustable ramp function via program editor
- Adjustable fan speed (0 to 100 %)
- Elapsed time indicator
- Adjustable safety device, Class 3.1 (DIN 12880) with visual and acoustic alarm
- Inner glass door
- Environmentally friendly refrigerant R134a
- RS 422 interface for communication software APT-COM® DataControlSystem, or switch over to printer output with RS 232/RS 422 interface converter
- Adjustable intervals for printer
- Units up to 115 liters are stackable
- 2 stainless steel shelves

► **Only at BINDER: Precision regardless of size – the 20-liter bench-top units.**

	KB 23	KB 53	KB 115	KB 240	KB 400	KB 720
Exterior dimensions						
Width (mm/inch)	433 / 17.1	634 / 25.0	834 / 32.8	1034 / 40.7	884 / 34.8	1234 / 48.6
Height (incl. feet/roller) (mm/inch)	601 / 23.7	837 / 33.0	1022 / 40.2	1142 / 45.0	1850 / 72.8	1816 / 71.5
Depth (mm/inch)	516 / 20.3	576 / 22.7	646 / 25.4	746 / 29.4	716 / 28.2	867 / 34.1
Plus door handle, I-panel, connection (mm/inch)	73 / 2.9	100 / 3.9	100 / 3.9	100 / 3.9	100 / 3.9	100 / 3.9
Wall clearance (mm/inch)	100 / 3.9	100 / 3.9	100 / 3.9	100 / 3.9	100 / 3.9	100 / 3.9
Wall clearance with open door(s) (mm/inch)	100 / 3.9	160 / 6.3	160 / 6.3	160 / 6.3	160 / 6.3	160 / 6.3
Steam space volume (l/cu.ft.)	36 / 1.3	77 / 2.7	158 / 5.6	308 / 10.9	515 / 18.2	855 / 30.2
Number of doors	1	1	1	2	1	2
Number of inner glass doors	1	1	1	2	1	2
Interior dimensions						
Width (mm/inch)	222 / 8.7	400 / 15.8	600 / 23.6	800 / 31.5	650 / 25.6	1000 / 39.4
Height (mm/inch)	330 / 13.0	400 / 15.8	480 / 18.9	600 / 23.6	1308 / 51.5	1168 / 46.0
Depth (mm/inch)	277 / 10.9	330 / 13.0	400 / 15.8	500 / 19.7	470 / 18.5	600 / 23.6
Interior volume (l/cu.ft.)	20 / 0.7	53 / 1.9	115 / 4.1	240 / 8.6	400 / 14.3	700 / 25.1
Shelves (number standard/max.)	2 / 3	2 / 4	2 / 5	2 / 7	2 / 15	2 / 14
Load per shelf (kg/lbs.)	12 / 26	15 / 33	20 / 44	30 / 66	20 / 44	45 / 99
Load per pull-out rack (kg/lbs.)						
Permitted total load (kg/lbs.)	25 / 55	40 / 88	50 / 110	70 / 155	50 / 110	120 / 265
Weight (empty) (kg/lbs.)	44 / 97	72 / 159	105 / 232	147 / 325	216 / 477	262 / 578
Temperature data						
Temperature range (°C/°F)	0–100 / 32.0–212.0	-10–100 / 14.0 – 212.0	-10–100 / 14.0 –212.0	-10–100 / 14.0 –212.0	-10–100 / 14.0 – 212.0	-10–100 / 14.0 – 212.0
Temperature variation [1]						
at 10 °C (± °C)	1.3	0.5	0.5	0.6	0.6	0.6
at 37 °C (± °C)	1.3	0.4	0.4	0.5	0.3	0.4
Temperature fluctuation during heating operation (± °C)	0.4	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
Heating up time [2]						
to 37 °C (Min.)	36	22	23	27	26	28
Cooling down time from room temperature [2]						
to 10 °C (Min.)	80	35	35	38	35	45
Recovery time after door was open for 30 sec [1], [2]						
at 37 °C (Min.)	1.5	1	2	1	2	1
at 50 °C (Min.)	2	2	4	2	4	4
Electrical data						
Housing protection acc. to EN 60529	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Nominal voltage (± 10 %) 50/60 Hz (V)	230	230	230	230	230	230
Nominal power (W)	500	460	460	930	1100	1350
Energy consumption [3] at 37 °C (W)	64	64	77	100	90	160

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).
[1] at ambient temperature 20 °C
[2] not possible in connection with the use of the temperature safety device 3.3
[3] these energy consumption values can be used upon calculation of air conditioning systems

All technical data are specified for units with standard equipment at an ambient temperature of + 20 °C and a voltage fluctuation of ± 10 %. The temperature data are determinated in accordance to DIN 12880, part 2 respecting the recommended wall clearances of 10 % of the height, width and depth of the inner chamber. All indications are average values, typical for units produced in series. We reserve the right to alter technical specifications at all times.

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