

Technical Data: BINDER Series KBW

KBW series	KBW 240	KBW 400	KBW 720
Exterior dimensions			
Width (mm)	1034	884	1234
Height (inclusive feet/castors) (mm)	1142	1850	1816
Depth (mm)	746	716	867
plus door handle, I-panel, connection (mm)	100	100	100
Interior dimensions			
Width (mm)	800	650	1000
Height (mm)	600	1308	1168
Depth (mm)	500	470	600
Interior volume (l)	240	400	700
Shelves (number standard/max)	2/7	3/15	3/15
Load per shelf (kg)	30	20	45
Permitted total load (kg)	70	100	120
Temperature range 0% illumination (°C) ¹⁾	- 10 – 60.0	- 10 – 60.0	- 10 – 60.0
Temperature range 100% illumination (°C) ¹⁾	14 – 60	14 – 60	30 – 60
Temperature variation			
at 0 °C/0 % illumination (± °C)	0.7	0.7	0.7
at 25 °C/0 % illumination (± °C)	0.4	0.5	0.5
at 25 °C/100 % illumination (± °C)	3.6	4	–
Temperature fluctuation during heating operation (≤ ± °C)	0.1	0.1	0.1
Temperature fluctuation during cooling operation (≤ ± °C)	0.3	0.3	0.3
max. illumination intensity/daylight illumin. tubes ⁴⁾ (Lux)	9000	12000	13000
max. illumination intensity/daylight illumin. tubes ⁴⁾ (µE)	95	125	225
max. illumin. intensity/daylight illumin. tubes ⁴⁾ (W/m ²) UVA	0.70	0.65	1.17
max. illumination intensity / cool white illumination tubes/increased illumination ⁴⁾ (Lux)	25000	28600	30000
max. illumination intensity / cool white illumination tubes/increased illumination ⁴⁾ (µE)	370	430	774
max. illumination intensity / cool white illumination tubes/increased illumination ⁴⁾ (W/m ²) UVA	2.2	2.3	4.1
max. illumination intensity / growth lamps ⁴⁾ (Lux)	4000	6300	7200
max. illumination intensity / growth lamps ⁴⁾ (µE)	75	77	138
Nominal voltage (10 %) 50/60 Hz (V)	230	230	230
Nominal power (W)	1100	1350	2000
Number of door(s)	2	1	2
Optional			
Safety device class 3.3. acc. to DIN 12880 ²⁾	●	●	●
Shelf, stainless steel	●	●	●
Reinforced shelves, stainless steel	●	●	●
Perforated shelf, stainless steel	●	●	●
Lockable door	●	●	●
Access ports with silicone plug	●	●	●
Increased illumination	●	●	●
Water-proof interior socket 230 VAC	●	●	●
Programming of gradual light ramps (OFF/25%/50%/100%)	●	●	●
Printer Hybrid for numerical and graphical temperature registration for connection to a printer interface	●	●	●
Calibration certificate	●	●	●
Measuring protocol acc. to DIN 12880, Part 2	●	●	●
Light scattering disc	●	●	●

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 +22°C

● Optional – not available

²⁾ Not possible in connection with the use of the timer functions

³⁾ These energy consumption values can be used upon calculation of air conditioning systems

⁴⁾ Mean values based on 25 measuring points. The distance between the measuring plain and each illuminated shelf is 12 cm.



Plant growth chambers with optimal conditions

BINDER Series KBW: The most advanced method of plant cultivation

New features: The KBW offers a maximum flexibility for all growth parameters. A modern program controller ensures variable and definable alternative temperature and light control.

The new plant growth chambers in the KBW series already show today where the demands of tomorrow will lie: in safe cell and tissue production, observing all the international guidelines and regulations. With their impressive performance, the new KBW plant growth chambers fulfil all the demands for optimum light and temperature conditions, for being able to define culture processes exactly and reproduce them. Precision combined with maximum dynamics are the outstanding properties for keeping the balance of the growth parameters constant under any circumstances due to minimum reaction times.

The KBW series is ideal if you also wish to have results that are safe in the future.

► Operative ranges:

Plant biotechnology, gardening agricultural industry, forestry and timber industry, pharmaceutical and chemical industry, basic research, quality assurance

► Performance features:

- $-10\text{ }^{\circ}\text{C}$ to $60\text{ }^{\circ}\text{C}$ (without lighting)
- Digitally adjustable air turbine
- Patented APT-Line® preheating chamber technology with DCT® cooling system
- Environmentally friendly refrigerant R134a
- Calibrations and validations possible

► Equipment:

- Microprocessor program controller with LED-display with two programs with 10 sections each, or switch over to one program with 20 sections
- Adjustable ramp function via program editor
- Adjustable fan rate (0 – 100 %)
- Temperature cycle and illumination control by digital program timer with weekly program
- Communication interface RS 422

- Flexible adjustable illumination cassettes each with 4 Daylight-illumination tubes (KBW 720 8 with tubes)
- Inner glass door with smooth inner side
- Temperature safety device Cl. 3.1
- Leadthroughs \varnothing 29 mm right side top and bottom
- Counter of operating hours
- Shelves, stainless steel: KBW 240 – 2 pcs; KBW 400 720 – 3 pcs
- KBW with dimming of lighting (optional)
- Equipment as above, but with digital electronic dimming of the lighting device from 0 – 100 %
- Inner chamber volume in litres: 240; 400; 700