Refrigerated incubator with Peltier technology

The new KT 115 combines outstanding performance with impressive energy efficiency and environmental friendliness. The KT 115 incubator is state-of-the-art in application and protects the samples.

Advantages:

- Energy efficient, environmentally friendly and secure
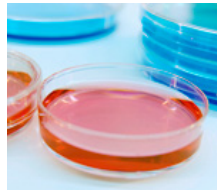- Disinfection at 100 °C
- Broad range of applications

Areas of application:

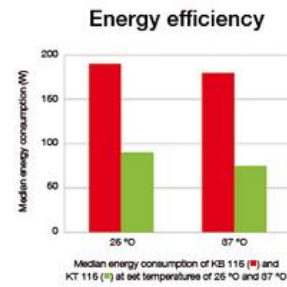Basic Research /
Research Institutes

Food / Beverage

Microbiology

Features	Customer benefits	Characteristics
APT.line™ Technology	• Rapid and constant growth of microorganisms • Reliable and reproducable incubation results even under full load	**APT.line™ for maximum precision** • Horizontal airflow on both sides for homogeneous temperature distribution • Temperature setting with an accuracy of a tenth of a degree • Long-term stability of conditions • High standard according to DIN 12880 (27-point measurement)
Disinfection and Cleaning	• Reduced risk of contamination • Simple and fast cleaning • Maximum occupational safety	• Disinfection routine at 100 °C • High-quality stainless steel inner chamber • Easily removable elements, no permanent fixtures
Interior Chamber Design	• More specimen storage with the same chamber volume • Minimal operating costs	• High energy efficiency • Very tight door closure with 2-point door closure • Low heat dissipation due to 60 mm insulation • Inner glass door • Condensation-free interior chamber
Cooling and Heating System	• Energy efficient • Environmentally friendly and secure (no refrigerant) • Short heating up times • High maximum of temperature of 100 °C	• Peltier cooling unit for finely controlled cooling up to 4 °C • Powerful conventional heating
Controller Input	• User-friendly input • Protection against accidental or unauthorized settings • The most important parameters at a glance (e.g. temperature set and actual value)	• Pushbutton/rotary knob • Key lock and password for access protection • Monochrome LCD monitor (5.7 inch)
Accessories and Service	• Broad range of applications • BINDER INDIVIDUAL for customer-specific solutions • Worldwide BINDER Service	• A variety of options: Access ports, shaker platform, interior power socket, outputs, shelves, door heating, interior lighting • Data Logger Kits • Communication and documentation APT-COM^{TM} software • Worldwide service network

21.01.2013

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BINDER
Best conditions for your success

- APT.line™ preheating chamber technology with Peltier cooling system and tubular heater
- Electronically controlled temperature range 4 °C to 100 °C
- BINDER controller with monochrome 5.7 inch LCD monitor and
  - Pushbutton/rotary knob
  - Easy-to-read menu guidance
  - Variable programming options
  - 100 programs with 2 GB internal memory
  - Weekday programming
  - USB port for easy data transfer
- Independent temperature safety device class 3.1 (DIN 12880) with visual and audio alarm
- Ethernet interface for communication software APT-COM™ DataControlSystem
- Inner glass door made of safety glass
- 2 stainless steel shelves
- Units are stackable
- BINDER test confirmation

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KT 115

▶

Exterior dimensions	
Width (mm)	860
Height (incl. feet) (mm)	715
Depth (plus door handle, I-panel and connection 100 mm) (mm)	720
Wall clearance, rear (mm)	100
Wall clearance, side (mm)	240
Number of doors (ea.)	1
Inner glass door(s) (ea.)	1

Energy efficiency

Median energy consumption of KB 115 (■) and KT 115 (■) at set temperatures of 25 °O and 37 °O

▶

Interior dimensions	
Width (mm)	600
Height (mm)	480
Depth (mm)	355
Interior volume (l)	102
Racks (number standard/max.)	2 / 6
Load per rack (kg)	40
Permitted total load (kg)	120
Weight (empty) (kg)	88

▶

Temperature data	
Temperature range (°C) 1)	4 - 100
Temperature variation	
at 4 °C (± °K)	0,3
at 25 °C (± °K)	0,1
at 37 °C (± °K)	0,3
Temperature fluctuation max. (± K)	0,1
Recovery time after door was opened for 30 sec 2)	
at 4 °C (min.)	8
at 25 °C (min.)	1
at 37 °C (min.)	1

KT 115

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►	Electrical data	
	IP protection class acc. to EN 60529	IP 20
	Voltage (± 10%) 50/60 Hz (V)	200-240, 1 N ~
	Nominal power (kW)	0,7
	Energy consumption 3)	
	at 4 °C (W)	250
	at 25 °C (W)	90
	at 37 °C (W)	75

1) Lower values are valid up to an ambient temperature of max. 25 °C.
2) To 98% of the set value
3) These values can be used for dimensioning air condition systems

The useable interior height depends on the position of racks.

All technical data are specified for units with standard equipment at an ambient temperature of 25 °C and a line voltage fluctuation of ±10%. The temperature data is determined in accordance to factory standard following DIN 12880, respecting the recommended wall clearances of 10% of the height, width and depth of the inner chamber. All figures are typical average values for series devices. We reserve the right to alter technical specifications at any time.
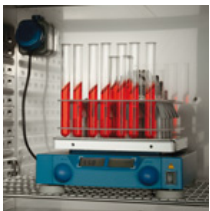
Numerous access ports

For introducing external measuring instruments into the chamber, access ports with silicone plugs in various diameters: 10, 30, 50, 100 mm

BINDER Data Logger Kits

For independent recording of temperature data.

The tailored product solution contains helpful accessories from mounting the logger to the BINDER unit to cable access assistance to the sensor mount.

Shaker platform

The stable shelf with additional mount is suitable for the operation of shakers.

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KT 115

Access port with silicone plugs 10, 30, 50, 100 mm	O
Securing elements for additional fastening of racks (1 set of 4 pieces)	O
Anti-slip rubber pads for safe stacking (1 set of 4 pieces)	O
Temperature measurement acc. to DIN 12880 (27 measuring points, at 23 liter units 15 measuring points) at 37 °C (98.6 °F) or at specified temperature with measuring protocol and certificate	O
Factory calibration certificate. Measurement in center of chamber at specified testing temperature	O
Extension to factory calibration certificate. Each additional measurement at an additional measuring point or temperature	O
Zero-voltage relay outputs accessible via 6-pin DIN socket. Additional module for controlling 2 relay outputs via 2 of the programmable controller's controller contacts. Outputs can be switched on and off either manually or automatically	O
Waterproof interior socket 230 V AC (max. 200 W), IP65 protected, with corresponding plug. Max. allowed operating temperature 50 °C (122 °F)	O
Additional PT 100 temperature sensor, flexible installation, with external connection, including LEMO connector (3-pin)	O
Analog temperature output, 4-20 mA, with 6-pin DIN socket (output not adjustable)	O
Data Logger Kit T 220: For the continuous temperature recording of -90 °C (-130 °F) to 220 °C (428 °F). Kit includes 1 data logger, PT 100 sensor with 2 m extension cable and 1 fixture for the connection at the BINDER unit	O
Data Logger Software: Configuration und evaluation software for all BINDER Data Logger Kits, incl. data cable (RS 232)	O
Interface RS422	O
Door heating	O
Rack, stainless steel	O
Shelf, perforated, stainless steel	O
Vibration compatible shelf / platform (positioned at bottom level) to be mounted inside the chamber for shaker / spinner / roller operation, max.load 67 kg	O
Reinforced rack, stainless steel, with 1 set of securing elements (1 set of 4 pieces), max. load 60 kg (154 lbs.)	O
Locking door handle with key	O
Temperature safety device, class 3.3 (DIN 12880) with visual alarm	O
Interior lighting (15 W)	O