

BF 53 - Microbiological incubator with forced convection

Premium equipment for all gentle incubation applications, including processing large numbers of samples at high throughput. Outstanding dynamics keep the required temperature virtually stable with homogenous distribution, irrespective of how many times the door is opened.



► Performance features and equipment:

- Electronical controlled APT.line™ preheating chamber assuring temperature accuracy and reproducible results
- Temperature range 5 °C (41 °F) above ambient up to 100 °C (212 °F)
- Digital temperature setting with an accuracy of a tenth of a degree
- MS controller with several timer functions
- Time functions:
 - 0 to 99 h 59 min delayed ON
 - 0 to 99 h 59 min delayed OFF
 - 0 to 99 h 59 min temperature-dependent
 - delayed OFF
- Adjustable fan speed
- Adjustable ventilation by means of rear exhaust duct, Ø 50 mm (1.97 inch) with ventilation flap and front ventilation slide
- Inner glass door
- Independent adjustable temperature safety device class 3.1, providing full protection against chamber over-temperature, with visual alarm
- RS 422 interface for use with optional GMP/GLP and FDA guideline 21 CFR Part 11 compliant APT-COM™ DataControlSystem software, 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 chrome-plated racks included
- BINDER test certificate



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Exterior dimensions	
Width (mm/inch)	634 / 25.0
Height (inclusive feet) (mm/inch)	617 / 24.3
Depth (mm/inch)	575 / 22.6
plus door handle and exhaust duct (mm/inch)	90 / 3.5
Wall clearance rear (mm/inch)	100 / 3.9
Wall clearance side (mm/inch)	160 / 6.3
Exhaust duct outer- Ø (mm/inch)	52 / 2.1
Steam space volume (l/cu.ft.)	70 / 2.5
Number of doors	1
Interior dimensions	
Width (mm/inch)	400 / 15.8
Height (mm/inch)	400 / 15.8
Depth (mm/inch)	330 / 13.0
Interior volume (l/cu.ft.)	53 / 1.9
Racks, chrome-plated (number standard/max.)	2 / 5
Load per rack (kg/lbs.)	15 / 33
Permitted total load (kg/lbs.)	40 / 88
Weight of the unit (empty) (kg/lbs.)	43 / 95
Temperature data	
Temperature range, 5 °C (9 °F) above ambient up to (°C/°F)	100 / 212
Temperature variation 1)	
at 37 °C (± °C)	0.4
at 50 °C (± °C)	0.7
Temperature fluctuation	
at 37 °C (± °C)	0.2
at 50 °C (± °C)	0.2
Heating up time 2)	
to 37 °C (Min.) 98 %	12
to 50 °C (Min.) 98 %	20
Recov. time after door was opened for 30 sec. 2)	
at 37 °C (Min.)	1
at 50 °C (Min.)	1.5
Air change at 70 °C (x/h)	59
Electrical data	
Housing protection acc. to EN 60529	IP 20
Nominal voltage (±10 %) 50 / 60 Hz (V)	230
Nominal power (kW)	0.4
Energy consumption at 37 °C (98.6 °F) (W) 3)	11

1) value without window

2) up to 98 % of the set value

All technical data are specified for units with standard equipment at an ambient temperature of 25 °C and a voltage fluctuation of ±10 %. The temperature data are 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 indications are average values, typical for units produced in series. We reserve the right to alter technical specifications at all times.



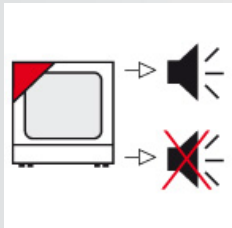
▶ **Waterproof interior power socket in the inner chamber**

Connected to the main switch. To connect ancillary equipment inside the chamber.



▶ **Additional PT 100 temperature sensor**

In situ or flexible installation for exact temperature measurement within the specimen material; connects to a special plug on the back wall of the inner chamber.



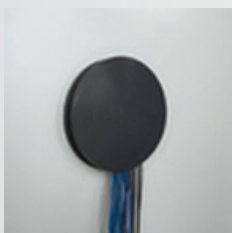
▶ **Acoustic alarm**

Activates in the event of excess temperature, with adjustable setpoint at the temperature controller. Acoustic alarm can be switched off.



▶ **Lockable door**

Prevents unauthorized access and interference with processes in the chamber.



▶ **Access ports**

With silicon plugs for inserting external measuring devices into the chamber. Access ports with 10, 30, 50 mm (0.4, 1.2, 2 inch) diameter.

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Access port with silicone plugs, 10 mm (0.39 inch), 30 mm (1.18), 50 mm (1.97), 100 mm (3.94)	<input type="radio"/>
Over temperature alarm, acoustic, can be switched off. Temperature limit can be set at the independent, adjustable temperature safety device class 2	<input type="radio"/>
Switchable waterproof interior socket 230 V AC (max. 500 W), IP65 protected, with corresponding plug (IP 66 protected)	<input type="radio"/>
Additional PT 100 temperature sensor, flexibly installed, with external connection, including LEMO connector (3 - pin)	<input type="radio"/>
Temperature measurement acc. to DIN 12880 (27 measuring points) at 37 °C (98.6 °F) or at specified temperature with measuring protocol and certificate	<input type="radio"/>
Factory calibration certificate. Measurement in center of chamber at 37 °C (98.6 °F) or at specified testing temperature	<input type="radio"/>
Extension to factory calibration certificate. Each additional measurement at an additional measuring point or temperature.	<input type="radio"/>
Rack, chrome - plated or stainless steel	<input type="radio"/>
Shelf, perforated, stainless steel	<input type="radio"/>
Lockable door	<input type="radio"/>