

Microbiological incubators



Incubators
BD | BF series

Cooling incubators
KB | KT series



Avantgarde.Line:

Best in class

The newly developed **BD and BF** incubators impress with their **unparalleled performance**. The spatial temperature accuracy is the **best on the market**. The units supports **convenient operation** and **efficient working**.

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Incubators | Avantgarde.Line

Reproducible incubation conditions are crucial when working with micro-organisms. BINDER's reliable incubators, featuring natural or forced convection, provide the perfect way of achieving this. Not only does the state-of-the-art design of this new generation of incubators ensure convenient

operation, its exceptional efficiency and absolutely perfect temperature accuracy thanks to the very latest APT.line™ technology also give it real appeal.



AVANTGARDE.LINE WITH UNPARALLELED PERFORMANCE

- Temperature distribution – perfect and precise
- Disinfection routine at 100 °C
- Innovative unit design
- Simple and ergonomic door opening

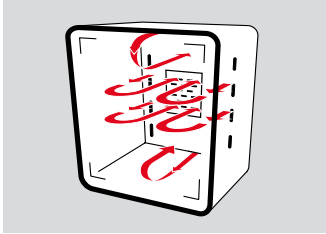
BF 56

AVAILABLE SIZES

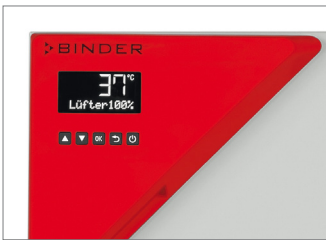
Liters	23	56	115	260	400	720
BD series	Classic.Line	Avantgarde.Line	Avantgarde.Line	Avantgarde.Line	Classic.Line	Classic.Line
BF series	-	Avantgarde.Line	Avantgarde.Line	Avantgarde.Line	Classic.Line	Classic.Line

For information on Classic.Line, see page 8.

Get ahead with BINDER technology



- + **Completely homogeneous temperature distribution with excellent spatial and temporal temperature accuracy** thanks to the all-new generation of APT.line™ technology.



- + **Easy, intuitive handling** thanks to state-of-the-art controller with LCD display, excellent readability, and various functions. The alphanumeric display makes it easier to communicate with the unit and read the data. Choice of languages as standard: English, German and French.



- + **Simple data recording** via the USB port which comes as standard.



- + **Excellent energy efficiency and low connected load** thanks to low heat dissipation and economical heating system.
Figure: BD series



- + **Ergonomic door opening** based on a window handle principle: 6 o'clock = closed, 4 o'clock = open.

BD series | Avantgarde.Line with natural convection

The BD series is specially designed for gentle incubation of organisms, as well as conditioning of heat-sensitive media. The new design of the units and the homogeneous temperature distribution ensure the very best results.



BD 56

STANDARD FEATURES

- Homogeneous temperature accuracy thanks to APT.line™ technology
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Stackable up to 115L
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- USB port for recording data

EXCERPT FROM OPTIONS AND ACCESSORIES

- Access ports with silicone plug
- Racks, chrome plated or stainless steel
- Door lock
- Ethernet interface

TECHNICAL DATA FOR THE BD SERIES

Description	BD 56	BD 115	BD 260
Basic data			
Interior volume [L]	57	112	253
Housing dimensions not incl. fittings and connections W x H x D [mm]	560 x 625 x 565	710 x 735 x 605	815 x 965 x 760
Technical data: Temperature			
Temperature range from 5 °C above ambient temperature to [°C]	100	100	100
Temperature variation at 37 °C [± K]	0,5	0,4	-
Temperature fluctuation at 37 °C [± K]	0,2	0,1	-
Heating up time to 37 °C [min]	45	55	-
Recovery time after door was opened for 30 sec. at 37 °C [min]	14	-	-
Energy consumption at 37 °C [Wh/h]	20	25	-

BF series | Avantgarde.Line with forced convection

The BF series is suitable for demanding incubation tasks, particularly for full loads and large batch throughputs. The latest APT.line™ technology provides completely homogeneous temperature distribution. With enhanced timer functions and the adjustable fan, temperature and forced convection conditions are easily controlled.



Modell 115

STANDARD FEATURES

- Homogeneous temperature accuracy thanks to APT.line™ technology
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Stackable up to 115 L
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- USB port for recording data

EXCERPT FROM OPTIONS AND ACCESSORIES

- Access ports with silicone plug
- Racks, chrome plated or stainless steel
- Door lock
- Ethernet interface

TECHNICAL DATA FOR THE BF SERIES

Description	BF 56	BF 115	BF 260
Basic data			
Interior volume [L]	59	114	257
Housing dimensions not incl. fittings and connections W x H x D [mm]	560 x 625 x 565	710 x 735 x 605	810 x 965 x 760
Technical data: Temperature			
Temperature range from 7 °C above ambient temperature to [°C]	100	-	100
Temperature range from 5 °C above ambient temperature to [°C]	-	100	-
Temperature variation at 37 °C [± K]	0,3	0,3	0,3
Temperature fluctuation at 37 °C [± K]	0,1	0,1	0,1
Heating up time to 37 °C [min]	8	8	12
Recovery time after door was opened for 30 sec. at 37 °C [min]	5	5	5
Energy consumption at 37 °C [Wh/h]	60	60	70

> 250.000
sold units of
this technology

Incubators | Classic.Line

The Classic.Line incubators are the perfect solution for stable incubation processes. With their excellent technical profiles, a BINDER incubator produces reliable incubation of microbiological cultures and guarantee reproducible results in every routine test in the laboratory – even under

high batch throughputs in long-term operation. A BD Series incubator functions with natural convection; in a BF Series incubator, convection ensures rapid temperature equalization after the door is opened.



CLASSIC.LINE WITH TRIED-AND-TESTED PERFORMANCE

- Temperature range: ambient temperature plus 5 °C to 100 °C
- Disinfection routine at 100 °C
- Inner glass door for a stable atmosphere
- Homogeneous temperatures in the inner chamber

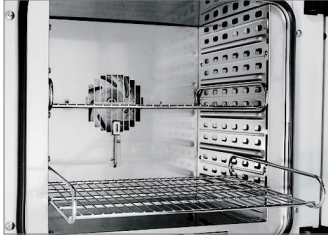
BF 400

AVAILABLE SIZES

	Liters	23	56	115	260	400	720
BD series	Classic.Line		Avantgarde.Line	Avantgarde.Line	Avantgarde.Line	Classic.Line	Classic.Line
BF series	-		Avantgarde.Line	Avantgarde.Line	Avantgarde.Line	Classic.Line	Classic.Line

For information on Avantgarde.Line, see page 4.

Get ahead with BINDER technology



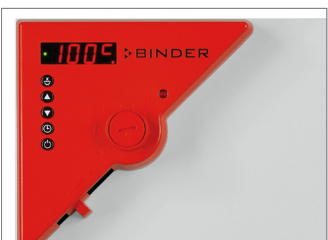
- + **Convenient work environment** thanks to the BINDER inner chamber concept: rack with tilt protection, no permanent fixtures, stainless-steel inner chamber.



- + **Homogeneous incubation conditions** thanks to tried-and-tested APT.line™ preheating chamber technology, gentle temperature distribution with natural convection. (BD series)



- + **Effective incubation with forced convection** and homogeneous temperature conditions even under full load thanks to tried-and-tested APT.line™ preheating chamber technology. (BF series)



- + **Reliable decontamination** thanks to the disinfection routine at 100 °C.

BD series | Classic.Line with natural convection

The BD series is specially designed for gentle incubation of organisms, as well as conditioning of heat-sensitive media. The new design of the units and the homogeneous temperature distribution ensure the very best results.



BD 23

STANDARD FEATURES

- Adjustable exhaust air flap
- Controller with timer functions
- Inner door made of tempered safety glass
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm

EXCERPT FROM OPTIONS AND ACCESSORIES

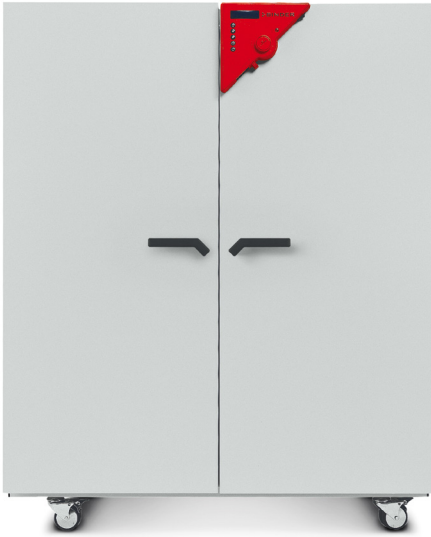
- Access ports with silicone plug
- Racks, chrome plated or stainless steel
- Door lock
- Ethernet interface

TECHNICAL DATA FOR THE BD SERIES

Description	BD 23	BD 400	BD 720
Basic data			
Interior volume [L]	20	400	720
Housing dimensions not incl. fittings and connections W x H x D [mm]	435 x 495 x 520	1.235 x 1.025 x 765	1.235 x 1.530 x 865
Technical data: Temperature			
Temperature range from 5 °C above ambient temperature to [°C]	100	100	100
Temperature variation at 37 °C [± K]	0,5	0,5	0,5
Temperature fluctuation at 37 °C [± K]	0,2	0,1	0,1
Heating up time to 37 °C [min]	59	120	110
Recovery time after door was opened for 30 sec. at 37 °C [min]	20	10	15

BF series | Classic.Line with forced convection

The BF series is suitable for demanding incubation tasks, particularly for full loads and large batch throughputs. The latest APT.line™ technology provides completely homogeneous temperature distribution. With enhanced timer functions and the adjustable fan, temperature and forced convection conditions are easily controlled.



BF 720

STANDARD FEATURES

- Electromechanical control of the exhaust air flap
- Controller with timer functions
- Inner door made of tempered safety glass
- Class 3.1 independent temperature safety device (DIN 12880) with visual alarm

EXCERPT FROM OPTIONS AND ACCESSORIES

- Access ports with silicone plug
- Racks, chrome plated or stainless steel
- Door lock
- Ethernet interface

TECHNICAL DATA FOR THE BF SERIES

Description	BF 400	BF 720
Basic data		
Interior volume [L]	400	720
Housing dimensions not incl. fittings and connections W x H x D [mm]	1.235 x 1.025 x 765	1.235 x 1.530 x 865
Technical data: Temperature		
Temperature range from 5 °C above ambient temperature to [°C]	100	100
Temperature variation at 37 °C [± K]	0,4	0,4
Temperature fluctuation at 37 °C [± K]	0,1	0,1
Heating up time to 37 °C [min]	12	17
Recovery time after door was opened for 30 sec. at 37 °C [min]	5	4

Cooling incubators

Incubation chambers from BINDER are the expert equipment of choice when it comes to stable incubation processes. They work reliably and are characterized by their homogeneous temperature distribution thanks to APT.line™ technology. In particular, the food and beverage industry as well as large-scale test laboratories rely on cooling incubators from BINDER.

Every KB series cooling incubator thus makes safe, reproducible incubation possible, even at high ambient temperatures. The KT series combines exceptional performance with low energy consumption. Additionally, every BINDER incubator offers true added value with its exemplary environmental friendliness.



EXPERTS IN STABLE INCUBATOR PROCESSES

- Disinfection routine at 100 °C
- Safe and reproducible incubation
- Robust construction and long-lasting quality

KT 170



KB 240

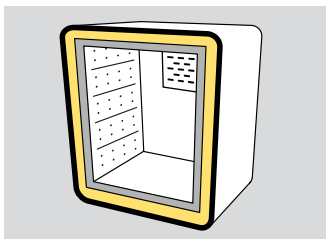
Get ahead with BINDER technology



- **Reliable decontamination** thanks to the disinfection routine at 100 °C. High-quality stainless-steel reinforced inner chamber makes it easy to clean.



- **Reliable and reproducible incubation conditions** thanks to APT. line™ preheating chamber technology. This enables homogeneous temperature distribution thanks to a horizontal airflow on both sides, even when fully loaded.



- **Extremely robust and long-lasting quality – made in Germany**, as there is a layer of foam between the boiler and the housing which provides permanent protection. This ensures maximum stability and low-particle, cold bridge-free thermal insulation. (KT series)



- **Flexible, mixed stacking options** thanks to a stacking adapter and the same base dimensions as the KT 115. (KT series)

KB series | With compressor technology

These refrigerated incubators are all-rounders for the incubation of microorganisms. The KB series controls a temperature range to 100 °C. With their comprehensive program functions, they offer a wide range of capabilities and deliver reproducible test results.



STANDARD FEATURES

- Temperature range to 100 °C
- Cooling with compressor cooling unit
- Adjustable fan speed
- Controller with time-segment and real-time programming
- Inner door made of tempered safety glass

EXCERPT FROM OPTIONS AND ACCESSORIES

- Access ports with silicone plug
- Analog output, 4 – 20 mA for temperature values
- Interior socket
- Reinforced shelves, e.g. for shaker
- Ethernet interface

KB 115

TECHNICAL DATA FOR THE KB SERIES

Description	KB 23	KB 53	KB 115	KB 240	KB 400	KB 720
Basic data						
Interior volume [L]	20	53	115	247	400	698
Housing dimensions not incl. fittings and connections W x H x D [mm]	435 x 620 x 520	635 x 835 x 580	835 x 1.025 x 650	925 x 1.465 x 800	925 x 1.950 x 805	1.250 x 1.925 x 885
Technical data: Temperature						
Temperature range [°C]	0 ...100	-5...100	-5...100	-5...100	-5...100	-5...100
Temperature variation at 37 °C [± K]	0,3	0,3	0,2	0,2	0,3	0,2
Temperature fluctuation max. [± K]	0,1	0,1	0,1	0,1	0,1	0,1
Recovery time after door was opened for 30 sec. at 5 °C [min]	2	1	1	1	2	3

KT series | With thermoelectric cooling

The KT series combines outstanding performance with impressive energy efficiency and environmental friendliness. The new KT 170 unique in its class – there is nothing quite like it anywhere else in the world. It combines maximum usable space with a minimal footprint.



KT 170

STANDARD FEATURES

- Temperature range: 4 °C to 100 °C
- Electric cooling with Peltier module
- Adjustable fan speed
- Controller with time-segment and real-time programming
- Inner door made of tempered safety glass
- Data recording and USB interface
- Stackable
- KT 170: a size that's unique worldwide

EXCERPT FROM OPTIONS AND ACCESSORIES

- Access ports with silicone plug
- Analog output, 4 – 20 mA for temperature values
- Interior socket
- Door heating

TECHNICAL DATA FOR THE KT SERIES

Description	KT 53	KT 115	KT 170
Basic data			
Interior volume [L]	53	102	163
Housing dimensions not incl. fittings and connections W x H x D [mm]	660 x 635 x 630	860 x 715 x 655	860 x 1.025 x 655
Technical data: Temperature			
Temperature range [°C]	4...100	4...100	4...100
Temperature variation at 37 °C [± K]	0,3	0,3	0,4
Temperature fluctuation max. [± K]	0,1	0,1	0,1
Recovery time after door was opened for 30 sec. at 37 °C [min]	2	3	3



BINDER GmbH
Tuttlingen, Germany

Tel +49 7462 2005 0
Fax +49 7462 2005 100
info@binder-world.com
www.binder-world.com

Representative Office for CIS
Moscow, Russia

Tel +7 495 988 15 16
Fax +7 495 988 15 17
russia@binder-world.com
www.binder-world.ru

BINDER Inc.
Bohemia, NY, USA

Tel +1 631 224 4340
Fax +1 631 224 4354
usa@binder-world.com
www.binder-world.us

BINDER Asia Pacific (Hong Kong) Ltd.
Kowloon, Hong Kong, P.R. China

Tel +852 39070500
Fax +852 39070507
asia@binder-world.com
www.binder-world.com

**BINDER Environmental Testing Equipment
(Shanghai) Co., Ltd.**
Shanghai , P.R. China

Tel +86 21 685 808 25
Fax +86 21 685 808 29
china@binder-world.com
www.binder-world.com