

Model BF 720 | Standard-Incubators with forced convection

The BINDER incubator of the BF Avantgarde. Line series with forced convection is suitable for all gentle incubation applications, particularly under a full load and large batch throughputs. This incubator is extremely homogeneous and has quick recovery times.

BENEFITS

- Excellent temporal and spatial temperature accuracy
- High process reliability
- 100 °C disinfection routine



Model 720

MAIN FEATURES

- Temperature range (model 56 | 260): +7 °C above ambient temperature to
- Temperature range (model 115): +8 °C above ambient temperature to +100 °C
- High temperature accuracy thanks to APT.line[™] technology
- · Forced convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass

- 2 chrome-plated racks
- Units up to 115 L are stackable
- 4 stable castors, two with brakes, from 720 liters
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- · USB port for recording data

ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	ArtNo.
25.9	230 V 1~ 50/60 Hz	Standard	BF720-230V	9010-0321
	240 V 1~ 60 Hz	Standard	BF720UL-240V	9010-0322



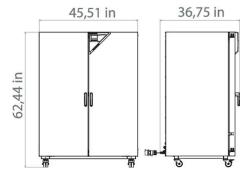
TECHNICAL DATA

Performance Data Temperature Section of the performance of PCI of the performance	Description	BF720-230V ¹	BF720UL-240V ¹
Temperature range +10 °C above ambient temperature to [°C] 500 100 Temperature variation at 37 °C [x [x]] 0.3 0.3 Temperature fluctuation at 37 °C [x [x]] 15 15 Recovery time after 30 seconds door open at 37 °C [min] 4 4 Electrical data ************************************	Article Number	9010-0321	9010-0322
Temperature variation at 37 °C[± K] 0.3 0.3 Temperature fluctuation at 37 °C[± K] 0.1 0.1 Heating-up time to 37 °C[min] 15 15 Recovery time after 30 seconds door open at 37 °C[min] 4 4 Electrical data ************************************	Performance Data Temperature		
Temperature fluctuation at 37 °C [rk] 0.1 0.1 Heating-up time to 37 °C [min] 15 15 Recovery time after 30 seconds door open at 37 °C [min] 4 4 4 Electrical data ************************************	Temperature range +10 °C above ambient temperature to [°C]	100	100
Recovery time after 30 seconds door open at 37 °C [min] 15 45 Recovery time after 30 seconds door open at 37 °C [min] 4 4 Electrical data 330 240 Recovery time after 30 seconds door open at 37 °C [min] 50/60 60 Readed Voltage [V] 50/60 60 Nominal power [kW] 1.75 1.85 Phase (Rominal voltage) 1- 1- Measures 5.9 5.9 5.9 Net weight of the unit (empty) [lbs] 364 364 364 Permitted load [lbs] 694 694 364	Temperature variation at 37 °C [± K]	0.3	0.3
Recovery time after 30 seconds door open at 37 °C [min] 4 4 Electrical data 230 240 Power frequency [Nz] 50/60 60 Nominal power [kW] 1.75 1.85 Phase (Nominal voltage) 1- 1- Measures The control of the curit (empty) [Ibs] 364 364 Net weight of the unit (empty) [Ibs] 364 364 364 Permitted load [Ibs] 694 99 99 Wall clearance back [in] 3.94 3.94 3.94 Wall clearance sidewise [in] 39.4 39.4 3.94 Height [in] 39.4 39.4 39.4 Height [in] 39.4 39.4 39.4 Height [in] 39.4 39.4 39.4 Height [in] 39.2 2.26 22.6 Doors 30.2 2.26 2.26 Housing dimensions not incl. fittings and connections 45.9 45.9 45.9 Height net [in] 45.9 45.9 45.9 45.9 <t< td=""><td>Temperature fluctuation at 37 °C [± K]</td><td>0.1</td><td>0.1</td></t<>	Temperature fluctuation at 37 °C [± K]	0.1	0.1
Electrical data Rated Voltage [V] 330 240 Power frequency [Hz] 50/60 60 Nominal power [kW] 1.75 1.85 Phase (Nominal voltage) 1- 1- Measures 25.9 25.9 Net weight of the unit (empty) [lbs] 364 364 Permitted load [lbs] 99 99 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 3.94 3.94 Wilth [in] 39.4 39.4 Height [in] 39.2 51.2 Doors 2 2.26 Unit doors 2 2 Housing dimensions not incl. fittings and connections 45.9 45.9 Hei	Heating-up time to 37 °C [min]	15	15
Rated Voltage [V] 230 240 Power frequency [Hz] 50/60 60 Nominal power [kW] 1,75 1.85 Phase (Nominal voltage) 1- 1- Wessures ***********************************	Recovery time after 30 seconds door open at 37 °C [min]	4	4
Power frequency [Hz] 50/60 60 Nominal power [kW] 1.75 1.85 Phase (Nominal voltage) 1- 1- Measures 1- 1- Interior volume [cu.ft.] 25.9 25.9 Net weight of the unit (empty) [lbs] 364 364 Permitted load [lbs] 694 694 Load per rack (lbs] 99 99 Wall clearance back [in] 6.3 6.3 Wall clearance sidewise [in] 3.94 3.94 Height [in] 51.2 51.2 Upoth [li] 51.2 51.2 Doors 2 2 Inner doors 2 2 Unit doors 2 2 Unit doors 2 2 Unit doors 45.9 45.9 Height net [in] 45.9 45.9 Height net [in] 42.2 45.9 Height net [in] 45.9 45.9 Height net [in] 45.9 45.9 Height net [in] <td>Electrical data</td> <td></td> <td></td>	Electrical data		
Nominal power [kW] 1.75 1.85 Phase (Nominal voltage) 1- - Measures For example of the unit (empty) [lbs] 25.9 25.9 Net weight of the unit (empty) [lbs] 364 364 Permitted load (lbs) 694 694 Load per rack (lbs] 99 99 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 3.94 3.94 Height [in] 51.2 51.2 Upth [in] 51.2 51.2 Doors 51.2 51.2 Inner doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 45.9 45.9 Width net [in] 45.9 45.9 Height net [in] 6.2 6.2 Depth net [in] 3.2 3.2 Environment-specific data 45.9 45.9 Environment-specific data 5.2 5.2 Environment-specific data 130 130	Rated Voltage [V]	230	240
Phase (Nominal voltage) 1- 1- Measures 25-9 25-9 Net weight of the unit (empty) [lbs] 364 364 Permitted load [lbs] 694 694 Load per rack [lbs] 99 99 Wall clearance back [in] 3-94 3-94 Wall clearance sidewise [in] 39-4 39-4 Wall thing 39-4 39-4 Height [in] 51-2 51-2 Depth [in] 22-26 22-26 Doors 3-4 3-4 Unit doors 2 2-2-26 Housing dimensions not incl. fittings and connections 45-9 45-9 Width net [in] 45-9 45-9 45-9 Height net [in] 62-6 3-2 3-2 Height net [in] 45-9 45-9 45-9 Height net [in]	Power frequency [Hz]	50/60	60
Measures Interior volume [cu.ft.] 25.9 25.9 Net weight of the unit (empty) [lbs] 364 364 Permitted load [lbs] 694 694 Load per rack [lbs] 99 99 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 39.4 39.4 Wall clearance sidewise [in] 39.4 39.4 Height [in] 51.2 51.2 Permitterion Dimensions 2.26 22.6 Doors 2.26 22.6 Unit doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 45.9 45.9 Width net [in] 62.6 62.6 Depth net [in] 9.28 30.28 Energy consumption at 37 °C [Wh/h] 30 30 Sound-pressure level [dB(A)] 43 30	Nominal power [kW]	1.75	1.85
Interior volume [cu.ft.] 25.9 25.9 Net weight of the unit (empty) [lbs] 364 364 Permitted load [lbs] 694 694 Load per rack [lbs] 99 99 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 3.94 39.4 Internal Dimensions ************************************	Phase (Nominal voltage)	1~	1~
Net weight of the unit (empty) [lbs] 364 364 Permitted load [lbs] 694 694 Load per rack [lbs] 99 99 Wall clearance back [in] 3.94 3.94 Internal Dimensions 39.4 Width [in] 39.4 39.4 Height [in] 51.2 51.2 Depth [in] 22.26 22.26 Doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 2 2 Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data 130 130 Environment-specific data 2 3.3 Environment-specific data 30 43	Measures		
Permitted load [lbs] 694 694 Load per rack [lbs] 99 99 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions \$1.2 Width [in] \$1.2 \$1.2 Depth [in] \$2.2.26 \$2.266 Doors 2 2 Unit doors \$2 \$2 Housing dimensions not incl. fittings and connections 2 \$2 Width net [in] \$45.9 \$45.9 Height net [in] \$62.6 \$62.6 Depth net [in] \$4.28 \$4.28 Environment-specific data \$2 \$3.4.28 Environment-specific data \$3.0 \$3.0 <	Interior volume [cu.ft.]	25.9	25.9
Load per rack [lbs] 99 99 Wall clearance back [in] 6.3 6.3 Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions Width [in] 39.4 39.4 Height [in] 51.2 51.2 Depth [in] 22.26 22.26 Doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 2 Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43	Net weight of the unit (empty) [lbs]	364	364
Wall clearance back [in] 6.3 6.3 Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions 39.4 39.4 Width [in] 39.4 39.4 39.4 Height [in] 51.2 51.2 51.2 Depth [in] 22.26 22.6 Doors 2 2 2 Unit doors 2 2 2	Permitted load [lbs]	694	694
Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions Width [in] 39.4 39.4 Height [in] 51.2 51.2 Depth [in] 22.26 22.26 Doors 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 45.9 45.9 Height net [in] 45.9 45.9 45.9 Height net [in] 42.8 34.28 34.28 Environment-specific data 130 30.3 Sound-pressure level [dB(A)] 43 43 43	Load per rack [lbs]	99	99
Internal Dimensions Width [in] 39.4 39.4 Height [in] 51.2 51.2 Depth [in] 22.26 22.26 Doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 2 2 Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures 43 43	Wall clearance back [in]	6.3	6.3
Width [in] 39.4 39.4 Height [in] 51.2 51.2 Depth [in] 22.26 22.26 Doors Inner doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections V Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data Inner you consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Wall clearance sidewise [in]	3.94	3.94
Height [in] 51.2 51.2 Depth [in] 22.26 22.26 Doors Inner doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43	Internal Dimensions		
Depth [in] 22.26 22.26 Doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 2 2 Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Width [in]	39.4	39.4
Doors Inner doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections 45.9 45.9 Width net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures 45.9 43	Height [in]	51.2	51.2
Inner doors 2 2 Unit doors 2 2 Housing dimensions not incl. fittings and connections VIII Appear on the property of the pr	Depth [in]	22.26	22.26
Unit doors 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Doors		
Housing dimensions not incl. fittings and connections Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Inner doors	2	2
Width net [in] 45.9 45.9 Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data **** Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Unit doors	2	2
Height net [in] 62.6 62.6 Depth net [in] 34.28 34.28 Environment-specific data 34.28 34.28 Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Housing dimensions not incl. fittings and connections		
Depth net [in] 34.28 34.28 Environment-specific data Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Width net [in]	45-9	45.9
Environment-specific data Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Height net [in]	62.6	62.6
Energy consumption at 37 °C [Wh/h] 130 130 Sound-pressure level [dB(A)] 43 43 Fixtures	Depth net [in]	34.28	34.28
Sound-pressure level [dB(A)] 43 43 Fixtures	Environment-specific data		
Fixtures	Energy consumption at 37 °C [Wh/h]	130	130
	Sound-pressure level [dB(A)]	43	43
Number of shelves (std./max.) 2/16 2/16	Fixtures		
	Number of shelves (std./max.)	2/16	2/16

¹ All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10%. The temperature data is determined in accordance to BINDER factory standard following DIN 12880, observing 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 change technical specifications at any time.



DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]



OPTIONS

Designation	Description	*	ArtNo.
	left		
	10 mm	01	8012-1274
	30 mm	01	8012-1156
	50 mm	01	8012-1164
	right		
	10 mm	01	8012-1267
Access port with silicone blug	30 mm	01	8012-1153
nus	50 mm	01	8012-1162
	top		
	10 mm	01	8012-1261
	30 mm	01	8012-1150
	50 mm	01	8012-1159
	100 mm	01	8012-1166
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	-	8012-1634
Analog output 4-20 mA	for temperature values (output not adjustable)	02	8012-1622
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1111
	for temperature, measurement in center of chamber at specified temperature	-	8012-1130
Calibration certificate,	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1590
emperature	temperature measurement incl. certificate, 15-18 measuring points at specified temperature	-	8012-1569
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1548
Clock	battery-backed	_	8012-1639
Door lock	lockable door handle	_	8012-1816
Ethernet interface	for Multi Management Software APT-COM™	-	8012-099
nner chamber, reinforced	max. total load 350 kg	-	8012-1829
Interior lighting	with two 15 W light bulbs		
	230/240 V option model	-	8012-1823
nterior socket	Waterproof, switched flush-mounting box (CA3GD) for nominal voltage in unit interior, with cover and corresponding plug (nominal voltage; max. 500 W; max. 90 °C; protection class IP67)	-	8012-1638
oad management	to comply with EMC requirements in accordance with EN 61326-1:2013-07 (IEC 61326-1:2012)	-	8012-1820
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1618

^{*} Notes > See last page



ACCESSORIES

Designation	Description	*	ArtNo.
Data Logger Kit	T 220: For continuous temperature logging from -90 °C to 220 °C. The kit includes 1 data logger, Pt 100 sensor with 2 m extension cable and 1 magnetic fixture for mounting to the BINDER unit	_	8012-0715
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	-	8012-0821
	Multi Management Software APT-COM™		
Multi Management	version 4, BASIC edition	-	9053-0039
Software	version 4, GLP edition	-	9053-0042
	version 4, PROFESSIONAL edition	-	9053-0040
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO_2 , O_2 , pressure, depending on unit		
	Digital in PDF format	-	7057-0001
Ouglification documents	Hard copy inside folder	-	7007-0001
Qualification documents	$IQ/OQ/PQ$ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/OQ ; parameters: temperature, CO_2 , O_2 – or pressure, depending on unit		
	Digital in PDF format	_	7057-0005
	Hard copy inside folder	-	7007-000
Rack	chrome plated	-	6004-0171
	stainless steel	-	6004-015
Rack, heavy load	Stainless steel, max. load per rack 70 kg		6004-020
			6004-024
Shelf, perforated	Stainless steel	-	6004-018
* Notes \ See last nage			

^{*} Notes > See last page

SERVICES

Designation	Description	*	ArtNo.
Installation services			
Unit installation	Connect the unit to the customer-side connections (electricity, water, wastewater, gas), basic functions check, brief operating instructions. (excl.: unpacking, setup, controller instructions, programming, installation work)	05	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0500
Maintenance services			
Maintenance	Maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Calibration of a test temperature specified by the user in center of chamber without certificate	05	DL20-0200
Calibration services			
Temperature calibration	Calibration of one (1) test temperature specified by the user in center of chamber including certificate	03, 04, 05	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	03, 04, 05	DL30-0102
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0127
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-010
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL40-0100
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	DL44-050

^{*} Notes > See last page



NOTES

- Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge. UL mark is not granted when this option is used.
- 02
- Sensor calibration is performed in an accredited calibration laboratory. 03
- Calibration is performed according to the BINDER factory standard.
- Quoted prices do not include travel costs. Please refer to the chapter on BINDER Service for travel costs for your region. Quoted prices for services performed in Switzerland do not include a country-specific added fee (available on request).

BINDER GmbH

Tuttlingen, Germany TEL +49 7462 2005 0 FAX +49 7462 2005 100 info@binder-world.com www.binder-world.com

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

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.com

BINDER Inc. Bohemia, NY, USA

TEL +1 631 224 4340 FAX +1 631 224 4354 usa@binder-world.com www.binder-world.us