

Model FD 720 | Drying and heating chambers with forced convection

A BINDER FD series Avantgarde.Line heating oven is always used when fast drying and sterilization is required. Thanks to its fully homogeneous temperature distribution, quick dynamics and powerful fan, this heating oven saves valuable time.

BENEFITS

- Best energy efficiency on the market
- Excellent temporal and spatial temperature accuracy
- USB connection for recording data
- Temperature range up to +300 °C



Model 260

IMPORTANT FEATURES

- Temperature range: +10°C above ambient temperature to +300 °C
- High temperature accuracy thanks to APT.line™ technology
- Forced convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Units up to 115 L are stackable
- Class 2 independent temperature safety device (DIN 12880) with visual temperature alarm
- Ergonomic handle design
- USB port for recording data

ORDERING INFORMATION

Interior volume		Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
[L]	[L]					
Model FD 720						
741	741	400 V 3~ 50/60 Hz -16,0 A	CEE 16 / 6 H plug 5-pin	Standard	FD720-400V	9010-0311

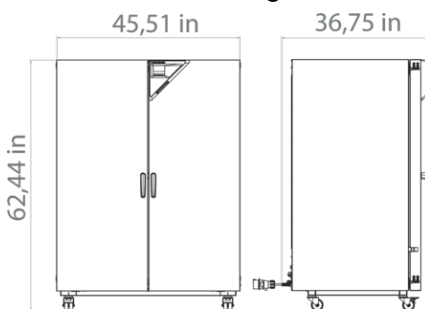
TECHNICAL DATA

Data	
Designation	FD720-400V
Article Number	9010-0311
Option model	Standard
Performance Data Temperature	
Temperature range	+12 °C above ambient temperature to 300 °C
Temperature uniformity at 150°C	2,5 ± K
Temperature fluctuation at 150°C	0,6 ± K
Heating up time to 150°C	25 min
Recovery time after door was opened for 30 s at 150°C	6 min
Air change data	
Air change rate at 100°C	5 x/h
Electrical data	
Rated Voltage	400 V
Power frequency	50/60 Hz
Nominal power	4,5 kW
Unit fuse	16,0 A
Phase (Nominal voltage)	3~
Dimensions and weights	
Interior volume	741 L
Net weight of the unit (empty)	166 kg
Load per rack	45 kg
Permitted load	315 kg
Wall clearance back	160 mm
Wall clearance sidewise	100 mm
Housing dimensions not incl. fittings and connections	
Width net	1,165 mm
Height net	1,590 mm
Depth net	870 mm
Internal Dimensions	

Interior width	1,000 mm
Interior height	1,300 mm
Interior depth	570 mm
Unit doors	2
Environment-specific data	
Sound-pressure level	43 dB(A)
Energy consumption at 100°C	480 Wh/h
Energy consumption at 150°C	800 Wh/h
Fixtures	
Number of shelves (std./max.)	2/16

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 to BINDER factory standard following DIN 12880, observing the recommended wall clearances of 10 % of the height, width, and depth of the inner chamber. Technical data refers to 100 % fan speed. 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	*	Art.-No.
	left		
	10 mm	01	8012-1276
	30 mm	01	8012-1016
	50 mm	01	8012-1020
Access port with silicone plug	100 mm	01	8012-1027
	right		
	10 mm	01	8012-1269
	30 mm	01	8012-1015
	50 mm	01	8012-1019

Designation	Description	*	Art.-No.
	100 mm	01	8012-1028
	top		
	10 mm	01	8012-1263
	30 mm	01	8012-1364
	50 mm	01	8012-1380
	100 mm	01	8012-1671
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	-	8012-1636
Analog output 4-20 mA	for temperature values (output not adjustable)	02	8012-1624
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1116
	for temperature, measurement in center of chamber at specified temperature	-	8012-1135
Calibration certificate, temperature	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1552
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1573
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1594
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	-	8012-1643
Clock	battery-backed	-	8012-1641
Door lock	lockable door handle	-	8012-1818
Ethernet interface	for Multi Management Software APT-COM™	-	8012-0989
Fan, reinforced	for increased air change rates, incl. uprated heat output for faster heating up time and improved recovery time; max. 300°C; not in conjunction with load management option		
	400 V option model	-	8012-1062
Heating output, reinforced	For faster heating up time and improved recovery time; max. 300°C		
	400 V option model	-	8012-1061
HEPA air filter	On fresh air supply for unit; filter classification H14 (acc. to. EN 1822-1:2009, > 99.995% at 0.3 µm); not in conjunction with reinforced heating output, reinforced fan	-	8012-1099
Inner chamber, reinforced	max. total load 350 kg	-	8012-1821
Interior lighting	with two 27 W light bulbs		
	400 V option model	-	8012-1825
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	-	8012-1195

Designation	Description	*	Art-No.
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1620
Viewing window and interior lighting	viewing window (triple insulating glass) in door, 300 x 480 mm, and 30 W interior lighting		
	400 V option model	-	8012-1831

ACCESSORIES

Designation	Description	*	Art-No.
	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.		
	version 4, PROFESSIONAL edition	-	9053-0040
	for simple logging and documentation requirements with up to 5 networked units.		
APT-COM™ 4	version 4, BASIC edition	-	9053-0039
	for working under GLP-compliant conditions. Measured values are documented in a tamper-proof way in line with the requirements of FDA Regulation 21 CFR 11.		
	version 4, GLP edition	-	9053-0042
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	8012-2250
	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	-	7007-0005
Qualification documents	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
	Hard copy inside folder	-	7007-0001
	max. load per rack 45 kg		
Rack	chrome plated	-	8012-2044
	stainless steel	-	8012-2170
	max. load per rack 70 kg		
Rack, heavy load	Stainless steel	-	8012-2185
	max. load per rack 40 kg		
Shelf, perforated	Stainless steel	-	8012-2178

SERVICES

Designation	Description	*	Art.-No.
Calibration services			
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	–	DL33-0000
Temperature calibration	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate Travel to be quoted separate.	–	DL30-0120
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate Travel to be quoted separate.	–	DL30-0102
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	–	DL30-0109
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 2 shelves are required.	–	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	–	DL30-0127
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) Travel to be quoted as separate.	–	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming. Travel to be quoted as separate Limited to 3 hours.	–	DL10-0500
Maintenance services			
BRONZE 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate. 10% Discount on Spare Parts and Labor for any additional Services needed Wear + tear parts to be purchased or billed to customer. Travel to be quoted as separate.	–	DL20-0720
GOLD 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate of Temperature. 25% Discount on Spare Parts and Labor for any additional Services needed. One additional courtesy visit per year can be used for service visit or operator. Wear + tear parts to be purchased or billed to customer. Travel to be quoted separate.	–	DL20-0910
Preventive maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Checking a test temperature specified by the user in center of usable space without certificate. Wear + tear parts need to be purchased or billed to customer. Travel to be quoted as separate.	–	DL20-0602
SILVER 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate 15% Discount on Spare Parts and Labor for any additional Services needed One additional courtesy visit per year can be used for service visit or operator training. Wear + tear parts to be purchased or billed to customer. Travel to be quoted separate.	–	DL20-0810
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder. Travel to be quoted separate.	–	DL40-0100
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder. Travel to be quoted separate.	–	DL44-0500

Designation	Description	*	Art.-No.
Warranty service			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0010

NOTES

- 01 Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.
- 02 UL mark is not granted when this option is used.

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