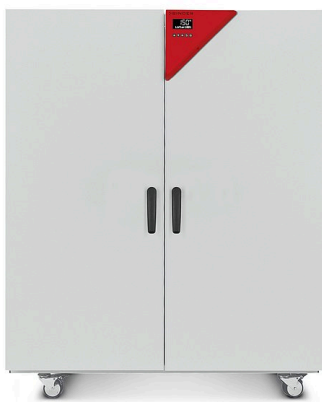


# Model FED 720 | Drying and heating chambers with forced convection and enhanced timer functions

BINDER heating chambers of the FED Avantgarde.Line series provide almost unlimited capacity and are particularly adaptable. With advanced timing functions and a controllable fan, temperature and convection conditions are easily controlled.

## 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 720

## MAIN FEATURES

- Temperature range: ambient temperature plus 10 °C to 300 °C
- Up to 30% lower energy consumption compared to conventional units on the market
- High temperature accuracy thanks to APT.line™ technology
- Adjustable fan speed
- Controller with LCD display and enhanced time functions
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Units up to 115 liters are stackable
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- Ethernet interface
- USB port for recording data

## ORDERING INFORMATION

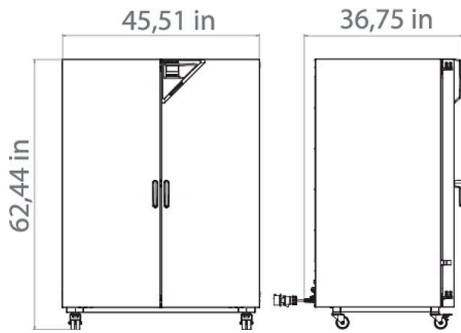
Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
26.2	400 V 3~ 50/60 Hz	Standard	FED720-400V	9010-0301
	208 V 3~ 60 Hz	Standard	FED720UL-208V	9010-0302

**TECHNICAL DATA**

Description	FED720-400V <sup>1</sup>	FED720UL-208V <sup>1</sup>
Article Number	9010-0301	9010-0302
<b>Performance Data Temperature</b>		
Temperature range +12 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	2.0	2.0
Temperature fluctuation at 150 °C [± K]	0.6	0.6
Heating-up time to 150 °C [min]	25	25
Recovery time after 30 seconds door open at 150 °C [min]	6	6
<b>Air change data</b>		
Air change (approx.) at 100 °C [x/h]	5	5
<b>Electrical data</b>		
Rated Voltage [V]	400	208
Power frequency [Hz]	50/60	60
Nominal power [kW]	4.5	4.5
Unit fuse [A]	3 x 16	3 x 16
Phase (Nominal voltage)	3~	3~
<b>Measures</b>		
Interior volume [cu.ft.]	26.2	26.2
Net weight of the unit (empty) [lbs]	357	357
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
<b>Internal Dimensions</b>		
Width [in]	39.4	39.4
Height [in]	51.2	51.2
Depth [in]	22.46	22.46
<b>Doors</b>		
Unit doors	2	2
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [in]	45.9	45.9
Height net [in]	62.6	62.6
Depth net [in]	34.28	34.28
<b>Environment-specific data</b>		
Energy consumption at 150 °C [Wh/h]	800	800
Sound-pressure level [dB(A)]	43	43
<b>Fixtures</b>		
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. 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.	
<b>Calibration certificate, temperature</b>	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1596	
	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1621	
	battery-backed	-	8012-1642	
	For faster heating up time and improved recovery time; max. 300 °C; not in conjunction with load management option 400 V option model	-	8012-1780	
	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	-	8012-1781	
	for temperature values (output not adjustable)	02	8012-1625	
	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1118	
	in accordance with ASTM D5374, definition and protocol according to ambient temperature	-	8012-1197	
	left			
	10 mm	01	8012-1278	
	30 mm	01	8012-1655	
	50 mm	01	8012-1657	
	100 mm	01	8012-1669	
	lockable door handle	-	8012-1819	
	made of FKM, silicone-free	03	8012-1834	
	max. total load 350 kg	-	8012-1822	
	Measurement in center of chamber at specified temperature	-	8012-1137	
	<b>Options/Accessories</b>	On fresh air supply for unit; filter classification H14 (acc. to EN 1822-1:2009, > 99.995% at 0.3 µm)	-	8012-1835
		right		
		10 mm	01	8012-1271
		30 mm	01	8012-1654
		50 mm	01	8012-1656
		100 mm	01	8012-1670
Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device		-	8012-1637	
temperature measurement incl. certificate, 15- 18 measuring points at specified temperature		-	8012-1575	
temperature measurement incl. certificate, 9 measuring points at specified temperature		-	8012-1554	
top				
10 mm		01	8012-1264	
30 mm		01	8012-1365	
50 mm		01	8012-1381	
100 mm		01, 10	8012-1672	
viewing window (triple insulating glass) in door, 300 x 480 mm, and 30 W interior 208/400 V option model		-	8012-1832	
with two 15 W light bulbs 208 V option model		-	8012-0972	
400 V option model		-	8012-1826	
with visual alarm (DIN 12880)	04, 12	8012-1644		

\* Notes › See last page

**ACCESSORIES**

Designation	Description	*	Art.-No.
<b>Multi Management Software</b>	Multi Management Software APT-COM™ version 4, BASIC edition	19	9053-0039
	version 4, GLP edition	19	9053-0042
	version 4, PROFESSIONAL edition	19	9053-0040

\* Notes › See last page

Designation	Description	*	Art.-No.
	chrome plated	-	6004-0171
	Stainless steel	-	6004-0187
	stainless steel	-	6004-0155
	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 <sub>2</sub> , O <sub>2</sub> , pressure, depending on unit		
	Digital in PDF format	-	7057-0001
	Hard copy inside folder	-	7007-0001
<b>Options/Accessories</b>	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 <sub>2</sub> , O <sub>2</sub> – or pressure, depending on unit		
	Digital in PDF format	-	7057-0005
	Hard copy inside folder	-	7007-0005
	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
	Stainless steel, max. load per rack 70 kg	-	6004-0204
	T 350: For continuous temperature logging from 0 °C to 350 °C; kit includes 1 data logger, Pt 100 sensor with 2 m extension cable and 1 magnetic fixture for mounting to the BINDER unit	19	8012-0714
	with lid made from 18/8 stainless steel, stackable, dimensions: 230 x 133 x 45 mm	-	4022-0123
	with lid made from 18/8 stainless steel, stackable, dimensions: 315 x 215 x 60 mm	-	4022-0124

\* Notes › See last page

## SERVICES

Designation	Description	*	Art.-No.
<b>Installation services</b>			
Services	Unit function instructions for operation and programming of the controller	18	DL10-0500
	Unpacking and setting up of unit, connecting to existing connections, and checking function	13, 18	DL10-0100
<b>Preventive maintenance</b>			
Services	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0200
<b>Calibration services</b>			
Services	Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature	14, 16, 17, 18	DL30-0102
	including certificate (in accordance with ASTM D5374)	14, 16, 17, 18	DL33-0000
	Temperature calibration with 1 measuring point in center of chamber at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0101
	Temperature measurement with 18 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0118
	Temperature measurement with 27 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0127
	Temperature measurement with 9 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0109
<b>Validation services</b>			
Services	Execution of IQ/OQ in accordance with qualification folder	15, 18	DL40-0100
	Execution of IQ/OQ/PQ in accordance with qualification folder	15, 18	DL44-0500
<b>Warranty service</b>			
Services	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	-	DL00-4041
	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	-	DL00-4042

\* Notes › See last page

**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.
- 03 Heat resistant only to max. 200 °C.
- 04 Only available on units rated for 230 V.
- 07 The additional heat input may affect the temperature behavior.
- 09 Not in conjunction with the optional access port, door with window and interior lighting.
- 10 Not available on 23-liter units.
- 11 Not available on 23- or 53-liter units.
- 12 Only available on units rated for 230 V or 400 V.
- 13 Installation and connections take place at unit location; transport within the company only upon consultation.
- 14 We recommend a BINDER service contract to cover unit inspections, calibrations and validations.
- 15 OQ according to Yellow Paper = completed factory validation documentation of all OQ checklists.
- 16 Sensor calibration is performed in an accredited calibration laboratory.
- 17 Calibration is performed according to the BINDER factory standard.
- 18 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).
- 19 For additional accessories, refer to the Process documentation chapter.

**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

**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 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

**BINDER Inc.**

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