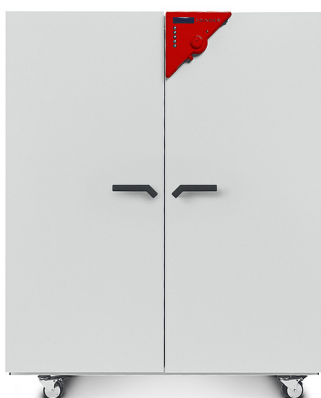**▶BINDER**

Model FED 720 | Drying and heating chambers Classic.Line with forced convection and enhanced timer functions

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

BENEFITS

- Uniform drying conditions thanks to APT.line™ technology
- Identical test conditions throughout the chamber interior independent of sample size and quantity
- Outstanding thermal insulation saves operation costs

Model 720

MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Adjustable fan speed
- Adjustable exhaust air flap
- Controller with expanded timer functions
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880)
  with visual alarm
- Computer interface: RS 422

ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
Model FED 720				
25.4	400 V 3 ph 50/60 Hz	Standard	FED720-400V	9010-0218
	208 V 3 ph 60 Hz	Standard	FED720UL-208V	9010-0219

BINDER Data Sheet | As of: 03.01.2017
Technical specifications are subject to change.

Page 1 / 6

BINDER

TECHNICAL DATA

Description	FED720-400V[1]	FED720UL-208V[1]
Article Number	9010-0218	9010-0219
Performance Data Temperature		
Temperature range 5 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	3	3
Temperature fluctuation at 150 °C [± K]	0.3	0.3
Heating-up time to 150 °C [min]	29	29
Recovery time after 30 seconds door open at 150 °C [min]	8	8
Air change data		
Air change (approx.) at 150 °C [x/h]	12	12
Electrical data		
Rated Voltage [V]	400	208
Power frequency [Hz]	50/60	60
Nominal power [kW]	5	5
Unit fuse [A]	3 x 16	3 x 16
Phase (Nominal voltage) [ph]	3	3
Measures - Outer dimensions		
Width net [mm]	1235	1235
Height net [mm]	1530	1530
Depth net [mm]	865	865
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Measures - Doors		
Unit doors	2	2
Measures - Internal Dimensions		
Width [mm]	1000	1000
Height [mm]	1200	1200
Depth [mm]	610	610
Measures		
Interior volume [L]	720	720
Net weight of the unit (empty) [kg]	195	195
permitted load [kg]	120	120
Load per rack [kg]	45	45
Environment-specific data		
Energy consumption at 150 °C	1320 Wh/h	1320 Wh/h
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. 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.

BINDER Data Sheet | As of: 03.01.2017
Technical specifications are subject to change.

Page 2 / 6

▶BINDER

OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
Access port with silicone plug	back		
	10 mm	01	8012-1285
	30 mm	01	8012-1369
	50 mm	01	8012-1385
	left		
	10 mm	01	8012-1278
	30 mm	01	8012-1361
	50 mm	01	8012-1377
	100 mm	01, 11	8012-1509
	right		
	10 mm	01	8012-1271
	30 mm	01	8012-1356
	50 mm	01	8012-1373
	100 mm	01, 11	8012-1506
	top		
	10 mm	01	8012-1264
	30 mm	01	8012-1365
	50 mm	01	8012-1381
	100 mm	01, 10	8012-1388
Analog output, 4 – 20 mA	for temperature values (output not adjustable)	02	8012-0433
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	–	8012-1118
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	–	8012-1137
	temperature measurement incl. certificate and 27 measuring points at specified temperature	–	8012-1596
	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
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	04, 12	8012-1148
Door gasket	made of FKM, silicone-free	03	8012-1313
Door lock	lockable door handle	–	8012-1254
Fan, reinforced	to increase air change rates		
	400 V option model	–	8012-0201
Inner chamber, reinforced	including 2 reinforced racks (max. total load 250 kg, max. load per rack 70 kg)	–	8012-0340
Instrument tray	with lid made from 18/8 stainless steel, stackable, dimensions: 230 x 133 x 45 mm		
	small	–	4022-0123
	with lid made from 18/8 stainless steel, stackable, dimensions: 315 x 215 x 60 mm		
	large	–	4022-0124
Interface converter	RS 422 cable set and RS 232 / RS 422 interface converter for connection to 10-way plug distributor or for connection to a unit		
	120 V, 60 Hz option model	–	8012-0557
	230 V, 50/60 Hz option model	–	8012-0556
	RS 422 cable set and RS 422 / Ethernet interface converter for connection to 10-way plug distributor or for connection to a unit		
	120 V, 60 Hz option model	–	8012-0405
	230 V, 50/60 Hz option model	–	8012-0380
Interface converter, USB / RS422	RS 422 cable set and RS 422 / USB interface converter for connection to 10-way plug distributor or for connection to a unit (USB-powered converter)	–	8012-0665
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	–	8012-1197

* Notes › See last page

BINDER Data Sheet | As of: 03.01.2017
Technical specifications are subject to change.

Page 3 / 6

Designation	Description	*	Art.-No.
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Pt 100 temperature sensor	additional flexible Pt 100, interior, with external connection incl. LEMO connector (3-pin)	–	8012-1176
Rack	chrome plated	–	6004-0006
	stainless steel	–	6004-0010
Rack accessories	Rack accessories – fasteners (1 set of 4) for additional security of racks	–	8012-0531
Rack, reinforced	stainless steel, with 1 set of 4 fasteners, max. load 70 kg	–	8012-0374
RS 422 interface	modular plug distributor for 10 RS 422 interfaces	–	8012-0295
RS 422 interface, cable (15 m)	RS 422 connection cable (15 m) between plug distributor and RS 422 interface	–	5023-0036
RS 422 interface, cable (50 m)	RS 422 extension cable (50 m) between interface converter and unit or RS 232 / RS 422 plug distributor	–	5023-0117
Shelf, perforated	stainless steel	–	6004-0033
Software	APT-COM™ communications software		
	version 2 to 3, GLP edition	19	9053-0016
	version 3, BASIC edition	19	9053-0014
	version 3, GLP edition	19	9053-0015
	version 3, STANDARD edition	19	9053-0013
	APT-COM™ communications software, price: for free		
	version 3, GLP DEMO Edition	19	9053-0008
Viewing window and interior lighting	viewing window in each door, 470 x 290 mm, and 30 W interior lighting		
	208 V option model	–	8012-1242
	400 V option model	–	8012-1240

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Data Logger Kit installation service	unit function instructions for operation and programming of the controller	18	DL100400
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL100100
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL200200
Calibration services			
Data Logger Kit calibration service	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL300101
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	14, 16, 17, 18	DL330000
Temperature measurement 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL300118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL300127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL300109
Validation services			
Data Logger Kit validation service	in accordance with qualification folder	15, 18, 20	DL400100
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL440500
Qualification folder IQ/OQ	supporting documents for validation performed by customer, consisting of: IQ/OQ checklists, unit schematics, QM certificate in accordance with ISO 9001	15, 18, 20	8012-0855
Qualification folder IQ/OQ/PQ	supporting documents for validation performed by customer, in accordance with customer's requirement, extension of Qualification folder IQ/OQ by chapter PQ	15, 18	8012-0944

* Notes › See last page

BINDER Data Sheet | As of: 03.01.2017
Technical specifications are subject to change.

Page 4 / 6

Designation	Description	*	Art.-No.
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	–	DL004041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	–	DL004042

* Notes › See last page

Warranty service			

BINDER Data Sheet | As of: 03.01.2017
Technical specifications are subject to change.

Page 5 / 6

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.
06	Heating-up time may increase as a result of the lower heat conductivity.
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 (see the chapter on BINDER Service) 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.
20	When ordering IQ/OQ qualification folders and associated IQ/OQ execution on one order, we offer a 15 % discount for both items.
	When ordering IQ/OQ/PQ qualification folders and associated IQ/OQ/PQ execution on one order, we offer a 15 % discount for the item of the IQ/OQ/PQ folder.

BINDER Data Sheet | As of: 03.01.2017
Technical specifications are subject to change.

Page 6 / 6