

# Model FED 115 | 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 115

## 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

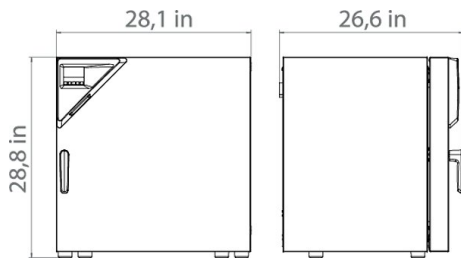
Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
4.1	230 V 1~ 50/60 Hz	Standard	FED115-230V	9010-0293
	120 V 1~ 60 Hz	Standard	FED115UL-120V	9010-0294

**TECHNICAL DATA**

Description	FED115-230V <sup>1</sup>	FED115UL-120V <sup>1</sup>
Article Number	9010-0293	9010-0294
<b>Performance Data Temperature</b>		
Temperature range +10 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	1.2	1.2
Temperature fluctuation at 150 °C [± K]	0.3	0.3
Heating-up time to 150 °C [min]	18	18
Recovery time after 30 seconds door open at 150 °C [min]	4	4
<b>Air change data</b>		
Air change (approx.) at 100 °C [x/h]	32	32
<b>Electrical data</b>		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	1.3	1.4
Unit fuse [A]	6.3	12.5
Phase (Nominal voltage)	1~	1~
<b>Measures</b>		
Interior volume [cu.ft.]	4.1	4.1
Net weight of the unit (empty) [lbs]	126	126
Permitted load [lbs]	331	331
Load per rack [lbs]	66	66
Wall clearance back [in]	6.3	6.3
Wall clearance sidewise [in]	3.94	3.94
<b>Internal Dimensions</b>		
Width [in]	21.67	21.67
Height [in]	21.67	21.67
Depth [in]	15.17	15.17
<b>Doors</b>		
Unit doors	1	1
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [in]	27.97	27.97
Height net [in]	27.78	27.78
Depth net [in]	23.84	23.84
<b>Environment-specific data</b>		
Energy consumption at 150 °C [Wh/h]	340	340
Sound-pressure level [dB(A)]	43	43
<b>Fixtures</b>		
Number of shelves (std./max.)	2/5	2/5

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 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 120/230 V option model	-	8012-1699
	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
	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	09	8012-1686
	left		
	10 mm	01	8012-1278
	30 mm	01	8012-1655
	50 mm	01	8012-1657
	100 mm	01	8012-1669
	lockable door handle	-	8012-1666
	made of FKM, silicone-free	03	8012-1651
	max. total load 170 kg	-	8012-1714
	Measurement in center of chamber at specified temperature	-	8012-1137
	On fresh air supply for unit; filter classification H14 (acc. to. EN 1822-1:2009, > 99.995% at 0.3 µm)	-	8012-1696
	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, 370 x 370 mm, and 15 W interior			
120 V option model	-	8012-1707	
230 V option model	-	8012-1705	
with 15 W light bulb			
120 V option model	-	8012-1633	
230/240 V option model	-	8012-1629	
With gas inlet and outlet, Ø 10 mm, incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	-	8012-1692	
with visual alarm (DIN 12880)	04, 12	8012-1644	
<b>Options/Accessories</b>			

\* 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
	chrome plated	–	6004-0167
	Stainless steel	–	6004-0183
	stainless steel	–	6004-0151
	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
	set of 4 anti-slip feet, for safe stacking of units	–	8012-1887
	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	–	9051-0018
	Stainless steel, max. load per rack 70 kg	–	6004-0199
	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

\* Notes › See last page

Designation	Description	*	Art.-No.
Warranty service			
Services	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	-	DLo0-4041
	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	-	DLo0-4042

\* Notes › See last page

**NOTES**

01	Hinweise
02	Hinweise
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