

# Datasheet

This product datasheet has been provided by  
John Godrich & SJ Electronics in Partnership  
with BINDER



Best conditions for your success

# Model FED 260 | Drying and heating chambers Avantgarde.Line 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 260

## 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
- 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.
Model FED 260				
9.1	230 V 1 ph 50/60 Hz	Standard	FED260-230V	9010-0299
	240 V 1 ph 60 Hz	Standard	FED260UL-240V	9010-0300

## TECHNICAL DATA

Description	FED260-230V <sup>1</sup>	FED260UL-240V <sup>1</sup>
Article Number	9010-0299	9010-0300
<b>Performance Data Temperature</b>		
Temperature range 10 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	1.6	1.6
Temperature fluctuation at 150 °C [± K]	0.4	0.4
Heating-up time to 150 °C [min]	19	19
Recovery time after 30 seconds door open at 150 °C [min]	5	5
<b>Electrical data</b>		
Rated Voltage [V]	230	240
Power frequency [Hz]	50/60	60
Nominal power [kW]	2.3	2.5
Unit fuse [A]	12.5	16
Phase (Nominal voltage) [ph]	1	1
<b>Outer dimensions</b>		
Width net [mm]	810	810
Height net [mm]	965	965
Depth net [mm]	760	760
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
<b>Doors</b>		
Unit doors	1	1
<b>Internal Dimensions</b>		
Width [mm]	650	650
Height [mm]	780	780
Depth [mm]	515	515
<b>Measures</b>		
Interior volume [L]	259	259
Net weight of the unit (empty) [kg]	85	85
permitted load [kg]	270	270
Load per rack [kg]	40	40
<b>Environment-specific data</b>		
Energy consumption at 150 °C [Wh/h]	410	410
Sound-pressure level [dB(A)]	43	43
<b>Fixtures</b>		
Number of shelves (std./max.)	2/8	2/8

<sup>1</sup> 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.

## OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
Access port with silicone plug	left		
	10 mm	01	8012-1278
	30 mm	01	8012-1655
	50 mm	01	8012-1657
	100 mm	01	8012-1669
	right		
	10 mm	01	8012-1271
	30 mm	01	8012-1654
	50 mm	01	8012-1656
	100 mm	01	8012-1670
	top		
	10 mm	01	8012-1264
	30 mm	01	8012-1365
50 mm	01	8012-1381	
100 mm	01, 10	8012-1672	
Analog output, 4 – 20 mA	for temperature values (output not adjustable)	02	8012-1625
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
Cart	Cart – stable cart, casters with locking brakes, dimensions: W 1,300 x D 800 x H 780 mm	–	9051-0019
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	04, 12	8012-1644
Clock	battery-backed	–	8012-1642
Data Logger Kit	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
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
Door gasket	made of FKM, silicone-free	03	8012-1653
Door lock	lockable door handle	–	8012-1666
Gas-tight option model	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	09	8012-1688
HEPA air filter	On fresh air supply for unit; filter classification H14 (acc. to. EN 1822-1:2009, > 99.995% at 0.3 µm)	–	8012-1697
Inert gas connection	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	–	8012-1694
Inner chamber, reinforced	including 2 reinforced racks (max. total load 250 kg, max. load per rack 70 kg)	–	8012-1715
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		
Interior lighting	large	–	4022-0124
	with 15 W light bulb 230 V option model	–	8012-1629
Load management	to comply with EMC requirements in accordance with EN 61326-1:2013-07 (IEC 61326-1:2012)	–	8012-1647
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	–	8012-1197
Overheating alarm	audible, can be switched off, adjustable limit on the independent temperature safety device	–	8012-1637
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016

\* Notes › See last page

Designation	Description	*	Art.-No.
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1621
Rack	chrome plated	-	6004-0169
	stainless steel	-	6004-0153
Rack, heavy load	Stainless steel (1.4301/AISI 304), max. load per rack 80 kg, max. total load 270 kg	-	6004-0200
Rubber pads	set of 4 anti-slip feet, for safe stacking of unit	10	8012-0001
Shelf, perforated	stainless steel	-	6004-0185
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 (triple insulating glass) in door, 370 x 370 mm, and 15 W interior		
	230 V option model	-	8012-1709
	240 V option model	-	8012-1711

\* Notes › See last page

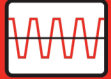
## SERVICES

Designation	Description	*	Art.-No.
<b>Installation services</b>			
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
<b>Preventive maintenance</b>			
Preventive maintenance	Execution of equipment inspection according to maintenance plan	14, 18	DL200200
<b>Calibration services</b>			
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
<b>Validation services</b>			
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
<b>Warranty service</b>			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	-	DL003041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	-	DL003042

\* 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.
- 06 Heating-up time may increase as a result of the lower heat conductivity.
- 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 (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.



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