Model FED 56 | Drying and heating chambers Avantgarde.Line with forced convection and enhanced timer functions

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 56

Model 56

MAIN FEATURES

- Temperature range: ambient temperature plus 10 °C to 300 °C
- High temperature accuracy thanks to APT.line™ technology
- Adjustable fan speed
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Stackable
- Class 2 independent temperature safety device (DIN 12880) with visual temperature alarm
- Ergonomic handle design
- Ethernet interface
- USB port for recording data

ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
Model FED 56				
60	230 V 1~ 50/60 Hz	Standard	FED056-230V	9010-0295
	120 V 1~ 60 Hz	Standard	FED056UL-120V	9010-0296

TECHNICAL DATA

Description	FED056-230V	FED056UL-120V
Article Number	**9010-0295**	**9010-0296**
Performance Data Temperature		
Temperature range 10 °C above ambient temperature to [°C]	300	300
Temperature uniformity at 150 °C [± K]	1.4	1.4
Temperature fluctuation at 150 °C [± K]	0.3	0.3
Heating-up time to 150 °C [min]	15	15
Recovery time after 30 seconds door open at 150 °C [min]	5	5

Description	FED056-230V	FED056UL-120V
Article Number	**9010-0295**	**9010-0296**
Electrical data		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	1.1	1.1
Unit fuse [A]	6.3	12.5
Phase (Nominal voltage)	1~	1~
Measures - Outer dimensions		
Width net [mm]	560	560
Height net [mm]	625	625
Depth net [mm]	565	565
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Measures - Doors		
Unit doors	1	1
Measures - Internal Dimensions		
Width [mm]	400	400
Height [mm]	440	440
Depth [mm]	345	345
Measures		
Interior volume [L]	60	60
Net weight of the unit (empty) [kg]	40	40
Load per rack [kg]	15	15
Environment-specific data		
Energy consumption at 150 °C	290 W	290 W

OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
Access port with silicone plug	10 mm, left	01	8012-0388
	10 mm, right	01	8012-0387
	10 mm, top	01	8012-0386
	30 mm, left	01	8012-1016
	30 mm, right	01	8012-1015
	30 mm, top	01	8012-0539
	50 mm, left	01	8012-1020
	50 mm, right	01	8012-1019
	50 mm, top	01	8012-0545
	100 mm, top	01, 10	8012-1029
Calibration certificate, expanded	each measurement at additional measuring point or testing temperature	–	8012-0022
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	–	8012-0030
	temperature measurement incl. Certificate and 27 measuring points at specified temperature	–	8012-0921
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	–	8012-0918
	temperature measurement incl. certificate, 9 measuring points at specified temperature	–	8012-0915
Cart	stable cart, casters with locking brakes	–	9051-0018
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	04, 12	8012-0985
Clock, battery-backed	Real-time clock	–	8012-0981

* Notes › See last page

Designation	Description	*	Art.-No.
Data Logger Kit	T 350: temperature logging from 0 °C to 350 °C	19	8012-0714
Data Logger Kit, 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	8012-1008
Door lock	lockable door handle	–	8012-1025
Instrument tray	large	–	4022-0124
	small	–	4022-0123
Interior lighting	with 1x 15 W (not available in combiantion with interior socket)		
	120 V option model	–	8012-0971
	230 V option model	–	8012-0969
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	–	8012-0195
Overheating alarm	audible, can be switched off, adjustable limit on the independent temperature safety device	–	8012-0979
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Rack	chrome plated	–	6004-0166
	stainless steel	–	6004-0150
Rubber pads	set of 4 anti-slip feet, for safe stacking of unit	10	8012-0001
Shelf, perforated	stainless steel	–	6004-0182
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	viewing window in door	–	8012-0973

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL100100
Instruction	unit function instructions for operation and programming of the controller	18	DL100400
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL200200
Calibration services			
Calibration temperature	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			
Execution of IQ/OQ	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

* Notes › See last page

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Designation	Description	*	Art.-No.
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
Warranty service			
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

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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.
05 Attention: The pump is delivered separately. The electric connection for the pump (230 V/1~/50 Hz) must be carried out by an authorized electrician.
06 Heating-up time may increase as a result of the lower heat conductivity.
07 The additional heat input may affect the temperature behavior.
08 The pump (packaged separately) is ready for connection.
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.
21 ATEX conformity:
Pumping chamber (pumped gases): II 2G IIC T3 X
Environment with inert purge gas: II 2G IIB T4 X
Environment without inert purge gas: II 3G IIB T4 X
Motor: II 2G Ex d IIB T4 Gb

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