

# Model FD-S 56 | Drying and heating chambers with forced convection

The new products in the Solid.Line impress with their tried-and-tested BINDER quality and reliability. They are suited to drying and heating. The attributes of the Solid.Line are geared towards the application in question and therefore used in research and quality assurance.

## BENEFITS

- Easy handling
- Accurate temperature control
- Simple and ergonomic door opening



Model 56

## MAIN FEATURES

- Temperature range: ambient temperature +10 °C to 250 °C
- APT.line™ preheating chamber technology
- Forced convection
- Adjustable exhaust air flap
- Controller with timer function
- 1 chrome-plated rack, incl. shelf supports
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm

## ORDERING INFORMATION

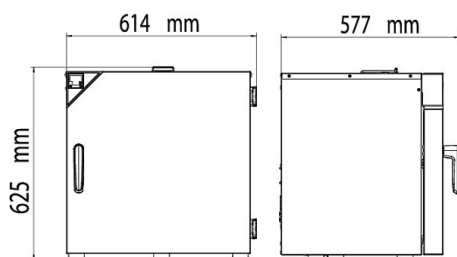
Interior volume [L]	Voltage	Option model	Version	Art.-No.
Model FD-S 56				
55	230 V 1~ ph 50/60 Hz	Standard	FDS056-230V	9090-0018
	120 V 1~ ph 60 Hz	Standard	FDS056UL-120V	9090-0019

## TECHNICAL DATA

Description	FDS056-230V	FDS056UL-120V
Article Number	9090-0018	9090-0019
Performance Data Temperature		
Temperature range 10 °C above ambient temperature to [°C]	250	250
Temperature variation at 150 °C [± K]	2.6	2.6
Temperature fluctuation at 150 °C [± K]	0.5	0.5
Heating-up time to 150 °C [min]	20	20

Description	FDS056-230V	FDS056UL-120V
Article Number	9090-0018	9090-0019
Air change data		
Air change (approx.) at 100 °C [x/h]	80	80
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	6.3
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume [L]	55	55
Net weight of the unit (empty) [kg]	35.5	35.5
permitted load [kg]	30	30
Load per rack [kg]	15	15
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Doors		
Unit doors	1	1
Internal Dimensions		
Depth [mm]	310	310
Height [mm]	440	440
Width [mm]	400	400
Housing dimensions not incl. fittings and connections		
Width net [mm]	614	614
Height net [mm]	625	625
Depth net [mm]	577	577
Environment-specific data		
Energy consumption at 150 °C [Wh/h]	290	290
Sound-pressure level [dB(A)]	43	43
Fixtures		
Number of shelves (std./max.)	1/3	1/3

## DIMENSIONS incl. fittings and connections [mm]



## OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
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
Grid shelf	Incl. shelf supports chrome plated	–	8012-1807

\* Notes › See last page

Designation	Description	*	Art.-No.
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Rubber pads	set anti-slip feet	–	8012-1887

\* Notes › See last page

## SERVICES

Designation	Description	*	Art.-No.
<b>Installation services</b>			
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL10-0100
Instruction	unit function instructions for operation and programming of the controller	18	DL10-0500
<b>Preventive maintenance</b>			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0200
<b>Calibration services</b>			
Calibration temperature incl. certificate	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL30-0101
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	14, 16, 17, 18	DL33-0000
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL30-0127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL30-0109
<b>Warranty service</b>			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	–	DL00-3041

\* 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 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 the item of the IQ/OQ folder.  
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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