

# 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

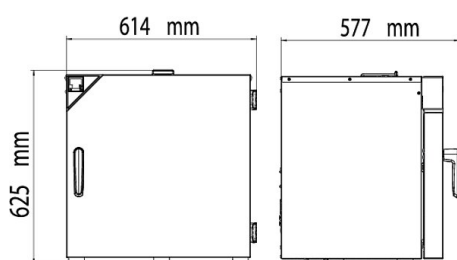
| Interior volume [L] | Voltage              | Option model | Version       | Art.-No.  |
|---------------------|----------------------|--------------|---------------|-----------|
| 55                  | 230 V 1~ ph 50/60 Hz | Standard     | FDS056-230V   | 9090-0018 |
|                     | 120 V 1~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

## TECHNICAL DATA

| Description  | FDS056-230V | FDS056UL-120V |
|--|-------------|---------------|
| Article Number   | 9090-0018   | 9090-0019     |
| <b>Performance Data Temperature</b>                        |             |               |
| 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            |
| <b>Air change data</b>                                     |             |               |
| Air change (approx.) at 100 °C [x/h]                       | 80          | 80            |

| Description  | FDS056-230V | FDS056UL-120V |
|--|-------------|---------------|
| Article Number   | 9090-0018   | 9090-0019     |
| <b>Electrical data</b>                                       |             |               |
| 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~            |
| <b>Measures</b>  |             |               |
| Interior volume [L]  | 55          | 55            |
| Net weight of the unit (empty) [kg]                          | 36          | 34            |
| Permitted load [kg]  | 30          | 30            |
| Load per rack [kg]   | 15          | 15            |
| Wall clearance back [mm]                                     | 160         | 160           |
| Wall clearance sidewise [mm]                                 | 100         | 100           |
| <b>Internal Dimensions</b>                                   |             |               |
| Width [mm]   | 400         | 400           |
| Height [mm]  | 440         | 440           |
| Depth [mm]   | 310         | 310           |
| <b>Doors</b>   |             |               |
| Unit doors   | 1           | 1             |
| <b>Housing dimensions not incl. fittings and connections</b> |             |               |
| Width net [mm]   | 614         | 614           |
| Height net [mm]  | 625         | 625           |
| Depth net [mm]   | 577         | 577           |
| <b>Environment-specific data</b>                             |             |               |
| Energy consumption at 150 °C [Wh/h]                          | 290         | 290           |
| Sound-pressure level [dB(A)]                                 | 43          | 43            |
| <b>Fixtures</b>  |             |               |
| Number of shelves (std./max.)                                | 1/3         | 1/3           |

## DIMENSIONS incl. fittings and connections [mm]



## 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<br>chrome plated  | -  | 8012-1807 |
| 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>                 |  |                   |           |
| Unit installation                            | Unpacking and setting up of unit, connecting to existing connections, and checking function                                  | 13, 18            | DL10-0100 |
| Unit instructions                            | Unit function instructions for operation and programming of the controller   | 18                | DL10-0500 |
| <b>Preventive maintenance</b>                |  |                   |           |
| Maintenance                                  | Functional testing of all electrical and mechanical components, short calibration, documentation in the maintenance schedule | 14, 18            | DL20-0200 |
| <b>Calibration services</b>                  |  |                   |           |
| Measurement of air exchange rate             | including certificate (in accordance with ASTM D5374)  | 14, 16,<br>17, 18 | DL33-0000 |
| Temperature calibration                      | Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature        | 14, 16,<br>17, 18 | DL30-0102 |
|  | Temperature calibration with 1 measuring point in center of chamber at a specified test temperature, including certificate   | 14, 16,<br>17, 18 | DL30-0101 |
| Temperature measurement, 27 measuring points | Temperature measurement with 27 measuring points at a specified test temperature, including certificate                      | 14, 16,<br>17, 18 | DL30-0127 |
| Temperature measurement, 9 measuring points  | Temperature measurement with 9 measuring points at a specified test temperature, including certificate                       | 14, 16,<br>17, 18 | DL30-0109 |
| <b>Warranty service</b>                      |  |                   |           |
| Warranty extension from 2 to 3 years         | The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded                                   | –                 | 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.
- 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.

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