Data Sheet Model BD 115

Model BD 115 | Standard-Incubators with natural convection

The BD Avantgarde.Line series is specially designed for gentle incubation of organisms, as well as conditioning of heat-sensitive media. The new design of the units and the homogeneous temperature distribution ensure the very best results.

**BENEFITS**

- Excellent temporal and spatial temperature accuracy
- High process reliability
- 100 °C disinfection routine

**MAIN FEATURES**

- Temperature range: ambient temperature plus 5 °C to 100 °C
- High temperature accuracy thanks to APT.line™ technology
- Natural convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Stackable
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- USB port for recording data

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>230 V 1–ph 50/60 Hz</td>
<td>Standard</td>
<td>BD115-230V</td>
<td>9010-0325</td>
</tr>
<tr>
<td></td>
<td>120 V 1–ph 60 Hz</td>
<td>Standard</td>
<td>BD115UL-120V</td>
<td>9010-0326</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Description</th>
<th>BD115-230V</th>
<th>BD115UL-120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article Number</td>
<td>9010-0325</td>
<td>9010-0326</td>
</tr>
<tr>
<td>Performance Data Temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature range +5 °C above ambient temperature to</td>
<td>100 °C</td>
<td>100 °C</td>
</tr>
<tr>
<td>Temperature variation at 37 °C [± K]</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Temperature fluctuation at 37 °C [± K]</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Heating-up time to 37 °C [min]</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Recovery time after 30 seconds door open at 37 °C [min]</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

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. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

BINDER Data Sheet | As of: 08.09.2020
Technical specifications are subject to change
## Description

### Electrical data

<table>
<thead>
<tr>
<th>Description</th>
<th>BD115-230V²</th>
<th>BD115UL-120V²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Voltage [V]</td>
<td>230</td>
<td>120</td>
</tr>
<tr>
<td>Power frequency [Hz]</td>
<td>50/60</td>
<td>60</td>
</tr>
<tr>
<td>Nominal power [kW]</td>
<td>0.35</td>
<td>0.35</td>
</tr>
<tr>
<td>Unit fuse [A]</td>
<td>6.3</td>
<td>12.5</td>
</tr>
<tr>
<td>Phase (Nominal voltage)</td>
<td>1~</td>
<td>1~</td>
</tr>
</tbody>
</table>

### Measures

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Electrical data</td>
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<td></td>
<td></td>
<td></td>
<td>112</td>
<td></td>
<td>112</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Rated Voltage [V]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
<td></td>
<td>57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power frequency [Hz]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>150</td>
<td></td>
<td>150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal power [kW]</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>30</td>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit fuse [A]</td>
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<td></td>
<td></td>
<td></td>
<td>160</td>
<td></td>
<td>160</td>
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<tr>
<td>Phase (Nominal voltage)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
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<tr>
<td>Interior volume [L]</td>
<td>112</td>
<td></td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td>160</td>
<td></td>
<td>160</td>
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<tr>
<td>Net weight of the unit (empty) [kg]</td>
<td>57</td>
<td></td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td></td>
<td>100</td>
<td></td>
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</tr>
<tr>
<td>Permitted load [kg]</td>
<td>150</td>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>160</td>
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<td>160</td>
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<td></td>
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<tr>
<td>Load per rack [kg]</td>
<td>30</td>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td></td>
<td>100</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Wall clearance back [mm]</td>
<td>160</td>
<td></td>
<td>160</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Wall clearance sidewise [mm]</td>
<td>100</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td></td>
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</table>

### Internal Dimensions

<table>
<thead>
<tr>
<th>Description</th>
<th>Width [mm]</th>
<th>Height [mm]</th>
<th>Depth [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width [mm]</td>
<td>510</td>
<td>530</td>
<td>420</td>
</tr>
<tr>
<td>Height [mm]</td>
<td>510</td>
<td>530</td>
<td>420</td>
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<tr>
<td>Depth [mm]</td>
<td>420</td>
<td>420</td>
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### Doors

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit doors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit doors</td>
<td>1</td>
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</tbody>
</table>

### Housing dimensions not incl. fittings and connections

<table>
<thead>
<tr>
<th>Description</th>
<th>Width net [mm]</th>
<th>Height net [mm]</th>
<th>Depth net [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width net [mm]</td>
<td>710</td>
<td>705</td>
<td>605</td>
</tr>
<tr>
<td>Height net [mm]</td>
<td>710</td>
<td>705</td>
<td>605</td>
</tr>
<tr>
<td>Depth net [mm]</td>
<td>605</td>
<td>605</td>
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</tbody>
</table>

### Environment-specific data

<table>
<thead>
<tr>
<th>Description</th>
<th>Energy consumption at 37 °C [Wh/h]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy consumption at 37 °C [Wh/h]</td>
<td>25</td>
</tr>
</tbody>
</table>

### Fixtures

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of shelves (std./max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of shelves (std./max.)</td>
<td>2/5</td>
</tr>
</tbody>
</table>

### Fixtures

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of shelves (std./max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of shelves (std./max.)</td>
<td>2/5</td>
</tr>
</tbody>
</table>

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**DIMENSIONS incl. fittings and connections [mm]**

![Dimensions Diagram](image-url)
## OPTIONS

<table>
<thead>
<tr>
<th>Designation</th>
<th>Description</th>
<th>Art.-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art.-No.</td>
<td>03 8012-0390</td>
<td>03 8012-0390</td>
</tr>
<tr>
<td>back</td>
<td></td>
<td>03 8012-0390</td>
</tr>
<tr>
<td>10 mm</td>
<td></td>
<td>03 8012-0390</td>
</tr>
<tr>
<td>30 mm</td>
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<td>03 8012-0390</td>
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<tr>
<td>50 mm</td>
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<td>03 8012-0390</td>
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<td>left</td>
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<td>10 mm</td>
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<td>03 8012-0390</td>
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<td>30 mm</td>
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<td>50 mm</td>
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<tr>
<td>50 mm</td>
<td></td>
<td>03 8012-0390</td>
</tr>
<tr>
<td>100 mm</td>
<td></td>
<td>03 8012-0390</td>
</tr>
<tr>
<td>Alarm function for overclocking</td>
<td>Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device</td>
<td>8012-0979</td>
</tr>
<tr>
<td>Analog output 4-20 mA</td>
<td>for temperature values (output not adjustable)</td>
<td>02 8012-0941</td>
</tr>
<tr>
<td>Calibration certificate, temperature</td>
<td>for temperature; for extending the measurement in center of chamber to include another test temperature</td>
<td>8012-1110</td>
</tr>
<tr>
<td>Clock</td>
<td>battery-backed</td>
<td>8012-0981</td>
</tr>
<tr>
<td>Door lock</td>
<td>lockable door handle</td>
<td>8012-1025</td>
</tr>
<tr>
<td>Ethernet interface</td>
<td>for Multi Management Software APT-COM™</td>
<td>8012-0986</td>
</tr>
<tr>
<td>Interior lighting</td>
<td>with 15 W light bulb</td>
<td>8012-1630</td>
</tr>
<tr>
<td>120 V option model</td>
<td></td>
<td>8012-0969</td>
</tr>
<tr>
<td>230 V option model</td>
<td></td>
<td>8012-0980</td>
</tr>
<tr>
<td>Interior socket</td>
<td>Waterproof, switched flush-mounting box (CA3GD) for nominal voltage in unit interior, with cover and corresponding plug (nominal voltage; max. 500 W; max. 90 °C; protection class IP67)</td>
<td>8012-0940</td>
</tr>
<tr>
<td>Pt 100 temperature sensor</td>
<td>additional flexible Pt 100, interior, for displaying the temperature on the unit display</td>
<td>8012-0940</td>
</tr>
</tbody>
</table>

* Notes › See last page

## ACCESSORIES

<table>
<thead>
<tr>
<th>Designation</th>
<th>Description</th>
<th>Art.-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>APT-COM™ 4 BASIC-Edition</td>
<td>for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition</td>
<td>9053-0039</td>
</tr>
<tr>
<td>APT-COM™ 4 GLP-Edition</td>
<td>for working under GLP-compliant conditions. Measured values are documented in a tamper-proof way in line with the requirements of FDA Regulation 21 CFR 11. version 4, GLP edition</td>
<td>9053-0042</td>
</tr>
<tr>
<td>APT-COM™ 4 PROFESSIONAL-Edition</td>
<td>convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units. version 4, PROFESSIONAL edition</td>
<td>9053-0040</td>
</tr>
<tr>
<td>Data Logger Kit</td>
<td>T 220: For continuous temperature logging from -90 °C to 220 °C. The kit includes 1 data logger, Pt 100 sensor with 2 m extension cable and 1 magnetic fixture for mounting to the BINDER unit</td>
<td>8012-0715</td>
</tr>
<tr>
<td>Data Logger Software</td>
<td>LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)</td>
<td>8012-0821</td>
</tr>
</tbody>
</table>

* Notes › See last page
Data Sheet Model BD 115

Designation | Description | Art.-No.
--- | --- | ---
**pH-neutral detergent** | concentrated, for gentle remove of residual contaminants; 1 kg | – 1002-0016

**Qualification documents**

| Designation | Description | Art.-No.
--- | --- | ---
IQ/QO documents – supporting documents for validation performed by customers, consisting of: IQ/QO checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO₂, O₂, pressure, depending on unit | – 7057-0001

* Digital in PDF format
* Hard copy inside folder

IQ/QO/PQ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/QO; parameters: temperature, CO₂, O₂ – or pressure, depending on unit | – 7007-0005

* Digital in PDF format
* Hard copy inside folder

**Rack**

| Designation | Description | Art.-No.
--- | --- | ---
chrome plated | – 6004-0175

stainless steel | – 6004-0159

**Rack, heavy load**

Stainless steel, max. load per rack 70 kg | – 6004-0202

**Rubber pads**

set anti-slip feet | – 8012-1887

**Shelf, perforated**

Stainless steel | – 6004-0191

**Table on castors**

stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm | – 9051-0018

* Notes › See last page

SERVICES

**Designation**

| Description | Art.-No.
--- | ---
Installation services | Unpacking and setting up of unit, connecting to existing connections, and checking function | DL10-0100

Unit installation | DL10-0500

Unit instructions | Unit function instructions for operation and programming of the controller | DL10-0500

Preventive maintenance | Functional testing of all electrical and mechanical components, short calibration, documentation in the maintenance schedule | DL20-0200

Temperature calibration | Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature | DL30-0102

Temperature calibration with 1 measuring point in center of chamber at a specified test temperature, including certificate | DL30-0101

Temperature measurement, 18 measuring points | Temperature measurement with 18 measuring points at a specified test temperature, including certificate | DL30-0118

Temperature measurement, 27 measuring points | Temperature measurement with 27 measuring points at a specified test temperature, including certificate | DL30-0127

Temperature measurement, 9 measuring points | Temperature measurement with 9 measuring points at a specified test temperature, including certificate | DL30-0109

Validation services | Execution of IQ/QO | DL40-0100

Execution of IQ/QO/PQ | DL44-0500

Warranty service | Warranty extension from 2 to 3 years | DL01-6041

The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded | DL01-6042

Warranty extension from 2 to 5 years | The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded | DL01-6042

* 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.