

Model BF 115 | Standard-Incubators with forced convection

The BINDER incubator of the BF Avantgarde. Line series with forced convection is suitable for all gentle incubation applications, particularly under a full load and large batch throughputs. This incubator is extremely homogeneous and has quick recovery times.

BENEFITS

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



Model 115



Model 115

MAIN FEATURES

- Temperature range (model 56 | 260): +7 °C above ambient temperature to
- Temperature range (model 115): +8 °C above ambient temperature to +100 °C
- High temperature accuracy thanks to APT.line™ technology
- Forced convection
- Controller with LCD display
- · Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass

- 2 chrome-plated racks
- Units up to 115 L are stackable
- 4 stable castors, two with brakes, from 720 liters
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- · USB port for recording data

ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	ArtNo.
	230 V 1~ 50/60 Hz	Standard	BF115-230V	9010-0315
4	120 V 1~ 60 Hz	Standard	BF115UL-120V	9010-0316

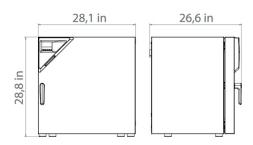


TECHNICAL DATA

Article where940-935940-935Performance Data Emerature3030Temperature range -8" Cabove ambient temperature for [1]3030Temperature ange -8" Cabove ambient temperature for [2]3030Temperature fluctuation at 37" Cik [4]3030Recovery time after 30 seconds dorogen at 37" Ciminal83030Bectury Life after 30 seconds dorogen at 37" Ciminal303030Bredit Statist303030Power frequency Itifal303030Browler flug March303030Browler flug March303030Browler flug March303030Browler flug March303030Browler flug March403030Browler flug March403030Browler flug March323030Browler flug March323030Brown flug March323030Browler flug March323030Browler flug March3232 <td< th=""><th>Description</th><th>BF115-230V1</th><th>BF115UL-120V1</th></td<>	Description	BF115-230V1	BF115UL-120V1
Temperature ariation at 37 "C[k] 30 30 Temperature variation at 37 "C[k] 0.3 0.3 Temperature fluctuation at 37 "C[k] 0.1 0.1 Reating-up time to 37 "C[ki] 8 8 Recovery time after 30 seconds door open at 37 "C[kil] 3 3 Recovery time after 30 seconds door open at 37 "C[kil] 30 20 Reterd Voltage [V] 30 6 0 Power frequency [kt] 0.4 0 0 Nominal power [ktW] 0.4 0 0 Unit Use [A] 0.2 0 0 Name (ktW] 0.4 0 0 What [A] 0.2 0 0 Name (ktW] 4 0 0 0 Name (ktW] 4 0	Article Number	9010-0315	9010-0316
Temperature variation at 37 °C[k] 0.3 0.3 Temperature fluctuation at 37 °C[k] 0.1 0.1 Heating-up time to 37 °C[ki] 8 8 Recovery time affor so seconds door open at 37 °C[kil] 3 3 Electrical data Rote Voltage [V] 300 120 Power frequency [It2] 6 0 Nominal power [kW] 6 0 Unit fuse [A] 6 3 Phase (Wominal voltage) 1-2 Measures Teterior volume [cu.ft.] 4 4 Net weight of the unit (empty) [Ibs] 33 33 Permitted load [Ibs] 331 33 Load per rack [Ibs] 6 6 6 Wall clearace back [in] 9,4 9 Wall clearace back [in] 1,6 1 Wall clearace back [in] 2,6 2 Height [in] 2,6 2 Height [in] 2,7 2 Wall cl	Performance Data Temperature		
Remperature fluctuation at 37 °C [km] 0.1 0.2 0.1	Temperature range +8 °C above ambient temperature to [°C]	100	100
Betating up time to 37° (min) 8 8 Recovery time after 30 seconds door open at 37° (min) 3 3 Electrical tata Very time after 30 seconds door open at 37° (min) 30 20 Rated Voltage (V) 50 6 6 Power frequency (Hz) 0,40 0.4 0.4 Nominal power (kW) 6.2 2.5 0.2 Phase (Nominal voltage) 6.2 2.5 0.2 Phase (Nominal voltage) 4.2 2.2 0.2 Measures Very Controllage 4.2 2.2 0.2	Temperature variation at 37 °C [± K]	0.3	0.3
Recovery time after 30 seconds door open at 37 °C (min) 3 3 Electrical data 320 120 Power frequency [ktz] 50/60 60 Nominal power [kW] 0.4 0.4 Unit fuse [A] 6.3 12.5 Phase (Nominal voltage) 1- 1- Measures 1- 1- Interior volume [cu.ft.] 4 4 4 Net weight of the unit (empty) [bls) 23 123 33 Permitted load [bls] 331 33 33 Vet weight of the unit (empty) [bls) 331 33 34 Wall clearance sloewise [in] 5.3 3.94 3.94 3.94 Wall clearance sloewise [in] 2.167	Temperature fluctuation at 37 °C [± K]	0.1	0.1
Electrical data Electrical data Image: Power frequency [Fr] 230 120 1	Heating-up time to 37 °C [min]	8	8
Rated Voltage [V] 230 120 Power frequency [Hz] 50/60 60 Nominal power [kW] 44 40 Unit use [A] 52 42 Unit use [A] 52 42 Phase (Nominal otage) 12 22 Phase (Nominal otage) 4 4 Measures V 4 Residency or United (Lth) 4 4 New weight of the unit (empty) [Ibis] 31 33 33 Permitted load [Ibis] 33 33 33 34 </td <td>Recovery time after 30 seconds door open at 37 °C [min]</td> <td>3</td> <td>3</td>	Recovery time after 30 seconds door open at 37 °C [min]	3	3
Power frequency [Hz] 50/60 60 Nominal power [kW] 0.4 0.4 Unit fuse [A] 6.3 12.5 Phase (Nominal voltage) 1- 1- Measures 4 4 1-	Electrical data		
Nominal power [kW] 0.4 0.4 Unit fuse [A] 6.3 12.5 Phase (Nominal voltage) 1- Measures Interior volume [cu.ft.] 4 4 Net weight of the unit (empty) [bls] 223 23 Permitted load [bls] 331 331 Load per rack [lbs] 6.6 6 Wall clearance back [n] 5.9 3.94 Wall clearance sidewise [n] 3.94 3.94 Wild lin] 21.67 21.67 Weight [n] 21.67 21.67 Depth [n] 4.97 21.67 Unit doors 1 4.97 Unit doors 1 7.97 Unit doors 27.97 2.97 Height net [n] 28.57 28.57 Depth net [n] 28.6 28.57 Depth net [n] 29.79 2.97 Height net [n] 28.6 2.57 Depth net [n] 28.6 2.57 Depth net	Rated Voltage [V]	230	120
Unit fuse [A] 6.3 12.5 Phase (Nominal voltage) 1~ 1 Measures Interior volume [cu.ft.] 4 4 Net weight of the unit (empty) [lbs] 123 123 Permitted load [lbs] 331 331 Load per rack [lbs] 66 66 66 Wall clearance back [in] 3.94 3.94 United [bight] 2.167 2.167 Height [in] 2.167 2.167 Doors 3.49 3.94 Unit doors 1 1.97 2.97 Unit doors 2.97 2.97 2.97 Height [in] 2.97 2.85 2.97 Unit doors 2.85 2.97 2.97 2.97 Height re[in] 2.85 2.85 2.85 2.85 Permitter [in] 2.84 2.85 2.85 2.85 Permitter [in] 2.85 2.85 2.85 2.85 2.85 2.85 2.85 2.85 2.85 2.85	Power frequency [Hz]	50/60	60
Phase (Nominal voltage) 1- 4-	Nominal power [kW]	0.4	0.4
Measures Interior volume [cu.ft.] 4 4 Net weight of the unit (empty) [lbs] 123 123 Permitted load [lbs] 331 331 Load per rack [lbs] 66 66 Wall clearance back [in] 3.94 3.94 Internal Dimensions 3.167 3.94 Width [in] 21.67 21.67 Beight [in] 21.67 21.67 Dopth [in] 4.97 2.97 Housing dimensions not incl. fittings and connections 27.97 27.97 Height net [in] 28.57 28.57 Depth net [in] 28.57 28.57 Depth net [in] 28.67 28.67 Environment-specific data 28.64 28.67 Environment-specific data 60 6 Sound-pressure level (dB(A)) 43 43	Unit fuse [A]	6.3	12.5
Interior volume [cu.ft.] 4 4 Net weight of the unit (empty) [bls] 123 123 Permitted load [bls] 331 331 Load per rack [lbs] 66 66 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions ************************************	Phase (Nominal voltage)	1~	1~
Net weight of the unit (empty) [lbs] 123 123 Permitted load [lbs] 331 331 Load per rack [lbs] 66 66 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions 3.94 3.94 Width [in] 21.67 21.67 Depth [in] 4.97 4.97 Doors 3.94 3.94 Unit doors 1 1 4.97 Housing dimensions not incl. fittings and connections 3.97 2.99 Height net [in] 27.97 27.97 2.97 Height net [in] 28.57 28.57 28.57 Depth net [in] 23.84 23.84 3.94 Enryronment-specific data Enrgy consumption at 37 °C [Wh/h] 60 60 60 Sound-pressure level [dB(A)] 43 43 43	Measures		
Permitted load (lbs) 331 331 Load per rack (lbs) 66 66 Wall clearance back [in] 3.94 3.94 Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions ************************************	Interior volume [cu.ft.]	4	4
Load per rack [lbs] 66 Wall clearance back [in] 6.3 3.94 Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions Width [in] 21.67 21.67 Height [in] 21.67 21.67 21.67 Depth [in] 14.97 14.97 2.00 Unit doors 1 1 1 Housing dimensions not incl. fittings and connections 27.97 27.97 27.97 Height net [in] 28.57 28.57 28.57 Depth net [in] 23.84 23.84 23.84 Environment-specific data Environment-specific data 60 60 60 Sound-pressure level [dB(A)] 43 43 60 60 Sound-pressure level [dB(A)] 43 43 60	Net weight of the unit (empty) [lbs]	123	123
Wall clearance back [in] 6.3 3.94 3.94 Wall clearance sidewise [in] 3.94 3.9	Permitted load [lbs]	331	331
Wall clearance sidewise [in] 3.94 3.94 Internal Dimensions Unide processing the large state of the l	Load per rack [lbs]	66	66
Internal Dimensions Width [in] 21.67 21.67 Height [in] 21.67 21.67 Depth [in] 14.97 14.97 Doors ************************************	Wall clearance back [in]	6.3	6.3
Width [in] 21.67 21.67 Height [in] 21.67 21.67 Depth [in] 14.97 14.97 Unit doors 1 1 Housing dimensions not incl. fittings and connections 27.97 27.97 Width net [in] 27.97 28.57 Depth net [in] 23.84 23.84 Environment-specific data 5 Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Wall clearance sidewise [in]	3.94	3.94
Height [in] 21.67 21.67 Depth [in] 14.97 14.97 Doors Unit doors 1 1 Housing dimensions not incl. fittings and connections Width net [in] 27.97 27.97 Height net [in] 28.57 28.57 Depth net [in] 23.84 23.84 Environment-specific data Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Internal Dimensions		
Depth [in] 14.97 14.97 Doors ************************************	Width [in]	21.67	21.67
Doors Unit doors 1 1 Housing dimensions not incl. fittings and connections Width net [in] 27.97 27.97 Height net [in] 28.57 28.57 Depth net [in] 23.84 23.84 Environment-specific data 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Height [in]	21.67	21.67
Unit doors 1 1 Housing dimensions not incl. fittings and connections Vidth net [in] 27.97 27.97 Height net [in] 28.57 28.57 Depth net [in] 23.84 23.84 Environment-specific data 5 Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Depth [in]	14.97	14.97
Housing dimensions not incl. fittings and connections Width net [in] 27.97 27.97 Height net [in] 28.57 Depth net [in] 23.84 23.84 Environment-specific data Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Doors		
Width net [in] 27.97 27.97 Height net [in] 28.57 28.57 Depth net [in] 23.84 23.84 Environment-specific data *** Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Unit doors	1	1
Height net [in] 28.57 28.57 Depth net [in] 23.84 23.84 Environment-specific data **** Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures **** *** *** *** *** *** *** *** *** *	Housing dimensions not incl. fittings and connections		
Depth net [in] 23.84 23.84 Environment-specific data Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Width net [in]	27.97	27.97
Environment-specific data Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Height net [in]	28.57	28.57
Energy consumption at 37 °C [Wh/h] 60 60 Sound-pressure level [dB(A)] 43 43 Fixtures	Depth net [in]	23.84	23.84
Sound-pressure level [dB(A)] 43 43 Fixtures	Environment-specific data		
Fixtures	Energy consumption at 37 °C [Wh/h]	60	60
	Sound-pressure level [dB(A)]	43	43
Number of shelves (std./max.) 2/5 2/5	Fixtures		
	Number of shelves (std./max.)	2/5	2/5

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.

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]





OPTIONS

Designation	Description	*	ArtNo.
	left		
	10 mm	01	8012-1274
	30 mm	01	8012-1156
	50 mm	01	8012-1164
	right		
	10 mm	01	8012-1267
Access port with silicone blug	30 mm	01	8012-1153
5	50 mm	01	8012-1162
	top		
	10 mm	01	8012-1261
	30 mm	01	8012-1150
	50 mm	01	8012-1159
	100 mm	01, 10	8012-1166
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	-	8012-1634
nalog output 4-20 mA	for temperature values (output not adjustable)	02	8012-1622
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1111
	for temperature, measurement in center of chamber at specified temperature	-	8012-1130
Calibration certificate,	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1590
emperature	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1569
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1548
llock	battery-backed	_	8012-1639
Door lock	lockable door handle	_	8012-1663
thernet interface	for Multi Management Software APT-COM™	_	8012-0990
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	8012-1045
nert 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	-	8012-1048
	with 15 W light bulb		
nterior lighting	120 V option model	_	8012-0971
-	230 V option model	_	8012-1626
nterior socket	Waterproof, switched flush-mounting box (CA ₃ GD) for nominal voltage in unit interior, with cover and corresponding plug (nominal voltage; max. 500 W; max. 90 °C; protection class IP67)	07	8012-1638
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1618
* Notes > See last page			

^{*} Notes > See last page

ACCESSORIES

Designation	Description	*	ArtNo.
Data Logger Kit	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	19	8012-0715
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
Multi Management Software	Multi Management Software APT-COM™		
	version 4, BASIC edition	19	9053-0039
	version 4, GLP edition	19	9053-0042
	version 4, PROFESSIONAL edition	19	9053-0040
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016

^{*} Notes > See last page



Designation	Description	*	ArtNo.
	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO ₂ , O ₂ , pressure, depending on unit		
	Digital in PDF format	-	7057-0001
Ouglification documents	Hard copy inside folder	-	7007-000
Qualification documents	$IQ/OQ/PQ$ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/OQ ; parameters: temperature, CO_2 , O_2 – or pressure, depending on unit		
	Digital in PDF format	-	7057-000
	Hard copy inside folder	-	7007-000
	chrome plated	-	6004-016
Rack	stainless steel	-	6004-015
Rack, heavy load	Stainless steel, max. load per rack 70 kg	-	6004-019
Rubber pads	set anti-slip feet	-	8012-188
Shelf, perforated	Stainless steel	-	6004-018
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	*	ArtNo.
Installation services			
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
Calibration services			
T	Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature	14, 16, 17, 18	DL30-0102
Temperature calibration	Temperature calibration with 1 measuring point in center of chamber at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0101
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0127
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0109
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	15, 18	DL40-0100
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	15, 18	DL44-0500
Warranty service			
Warranty extension from 2 to 3 years	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	-	DL01-7041
Warranty extension from 2 to 5 years	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	-	DL01-7042

^{*} Notes > See last page



NOTES

- o1 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.
- o7 The additional heat input may affect the temperature behavior.
- o9 Not in conjunction with the optional access port, door with window and interior lighting.
- 10 Not available on 23-liter units.
- Not available on 23- or 53-liter units.
- 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.
- We recommend a BINDER service contract to cover unit inspections, calibrations and validations.
- OQ according to Yellow Paper = completed factory validation documentation of all OQ checklists.
- Sensor calibration is performed in an accredited calibration laboratory.
- 17 Calibration is performed according to the BINDER factory standard.
- .8 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.

BINDER GmbH

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