

Series FD Avantgarde.Line | with forced convection

A BINDER FD series Avantgarde.Line heating oven is always used when fast drying and sterilization is required. Thanks to its fully homogeneous temperature distribution, quick dynamics and powerful fan, this heating oven saves valuable time.



FD 56 model



BENEFITS

- Best energy efficiency on the market
- Excellent temporal and spatial temperature accuracy
- USB connection for recording data
- Temperature range up to +300 °C

MAIN FEATURES

- Temperature range: +10 °C above ambient temperature to +300 °C
- High temperature accuracy thanks to APT.line™ technology
- Forced convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Units up to 115 L are stackable
- Class 2 independent temperature safety device (DIN 12880) with visual temperature alarm
- Ergonomic handle design
- USB port for recording data

AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
FD 56	60	› go2binder.com/en-FD56-AL
FD 115	116	› go2binder.com/en-FD115-AL
FD 260	259	› go2binder.com/en-FD260-AL
FD 720	741	› go2binder.com/en-FD720-AL



Find all details online: go2binder.com/en-FD

OPTIONAL EQUIPMENT

Access port with silicone plug

For introducing external measuring instruments. Large selection of different diameters and positions (left, right, or top)



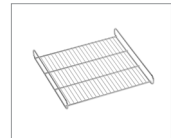
Viewing window and interior lighting

Viewing window in the door with a triple-glazed insulating glass and interior lighting for easy visibility of the samples.



Shelf racks

Perforated shelves or shelf racks, chrome-plated or made from stainless steel.



HEPA air filter

Particle filter on fresh air supply for unit; filter classification H14 (acc. to. EN 1822-1:2009, > 99.995% at 0.3 µm).



Services

You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.



BINDER INDIVIDUAL

Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and services chapter.



► All extras online go2binder.com/en-options

TECHNICAL DATA

Description	FD 56	FD 115	FD 260	FD 720
Measures				
Interior volume [L]	60	116	259	741
Net weight of the unit (empty) [kg]	41	57	85	166
Permitted load [kg]	70	150	270	315
Load per rack [kg]	30	30	40	45
Wall clearance back [mm]	160	160	160	160
Wall clearance sidewise [mm]	100	100	100	100
Internal Dimensions				
Width [mm]	400	550	650	1000
Height [mm]	440	550	780	1300
Depth [mm]	345	385	515	570
Housing dimensions not incl. fittings and connections				
Width net [mm]	560	710	810	1165
Height net [mm]	625	735	940	1590
Depth net [mm]	565	605	825	870
Performance Data Temperature				
Temperature range +10 °C above ambient temperature to [°C]	300	300	300	–
Temperature range +12 °C above ambient temperature to [°C]	–	–	–	300
Temperature variation at 150 °C [± K]	1.7	1.7	1.9	2.5
Temperature fluctuation at 150 °C [± K]	0.3	0.3	0.4	0.6
Heating-up time to 150 °C [min]	15	18	19	25
Recovery time after 30 seconds door open at 150 °C [min]	4	4	5	6
Tabellen				
Air change (approx.) at 100 °C [x/h]	80	32	9	5
Electrical data				
Nominal power (version 120 V) [kW]	1.2	1.4	–	–
Nominal power (version 230 V) [kW]	1.1	1.3	2.3	–
Nominal power (version 240 V) [kW]	–	–	2.5	–
Nominal power (version 400 V) [kW]	–	–	–	4.5
Fixtures				
Number of shelves (std./max.)	2/4	2/5	2/8	2/16

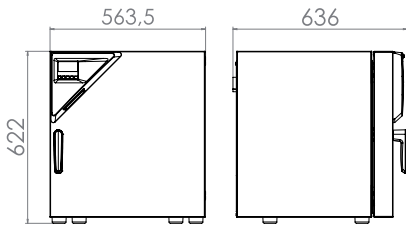
ORDERING INFORMATION [Art. No.]

Further details: Go to www.binder-world.com > Search > Enter Article Number

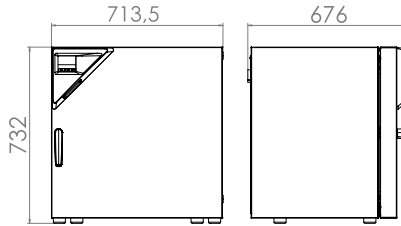
Voltage	Option model	FD 56	FD 115	FD 260	FD 720
400 V 3~ 50/60 Hz	Standard	–	–	–	9010-0311
240 V 1~ 60 Hz	Standard	–	–	9010-0310	–
230 V 1~ 50/60 Hz	Standard	9010-0303	9010-0305	9010-0309	–
120 V 1~ 60 Hz	Standard	9010-0304	9010-0306	–	–

DIMENSIONS incl. fittings and connections [mm]

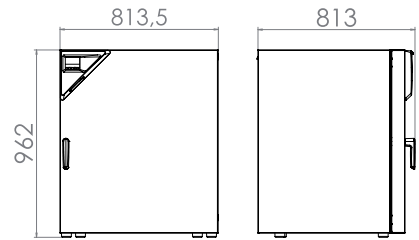
FD 56



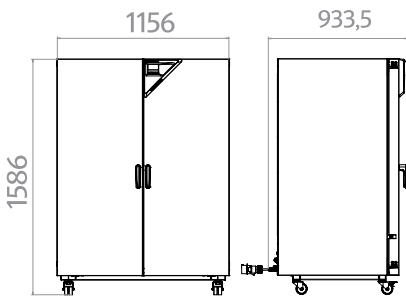
FD 115



FD 260



FD 720



ORDERING INFORMATION OPTIONS

Designation	Description	FD 56	FD 115	FD 260	FD 720	Art. No.
Access port with silicone plug	left					
	10 mm	•	•	•	•	8012-1276
	30 mm	•	•	•	•	8012-1016
	50 mm	•	•	•	•	8012-1020
	100 mm	–	•	•	•	8012-1027
	right					
	10 mm	•	•	•	•	8012-1269
	30 mm	•	•	•	•	8012-1015
	50 mm	•	•	•	•	8012-1019
	100 mm	–	•	•	•	8012-1028
	top					
	10 mm	•	•	•	•	8012-1263
	30 mm	•	•	•	•	8012-1364
	50 mm	•	•	•	•	8012-1380
	100 mm	•	•	•	•	8012-1671
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	•	•	•	•	8012-1636
Analog output 4-20 mA	for temperature values (output not adjustable)	•	•	•	•	8012-1624
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	•	•	•	8012-1116

Designation	Description	FD 56	FD 115	FD 260	FD 720	Art. No.
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	•	•	•	8012-1135
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-1594
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-1573
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-1552
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	•	•	•	•	8012-1643
Clock	battery-backed	•	•	•	•	8012-1641
Door gasket	made of FKM, silicone-free	•	–	–	–	8012-1648
		–	•	–	–	8012-1650
		–	–	•	–	8012-1652
		–	–	–	•	8012-1833
Door lock	lockable door handle	•	•	•	–	8012-1665
		–	–	–	•	8012-1818
Ethernet interface	for Multi Management Software APT-COM™	•	•	•	–	8012-0988
		–	–	–	•	8012-0989
Fan, reinforced	for increased air change rates, incl. uprated heat output for faster heating up time and improved recovery time; max. 300 °C; not in conjunction with load management option					
	400 V option model	–	–	–	•	8012-1062
Gas-tight option model	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	•	–	–	–	8012-1683
		–	•	–	–	8012-1685
		–	–	•	–	8012-1687
Heating output, reinforced	for faster heating up time and improved recovery time; max. 300 °C					
	400 V option model	–	–	–	•	8012-1061
	120/230 V option model	•	–	–	–	8012-1056
		–	•	–	–	8012-1057
HEPA air filter	On fresh air supply for unit; filter classification H14 (acc. to. EN 1822-1:2009, > 99.995% at 0.3 µm); not in conjunction with reinforced heating output, reinforced fan	•	–	–	–	8012-1050
		–	•	–	–	8012-1051
		–	–	•	–	8012-1052
		–	–	–	•	8012-1099
Inert 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	•	–	–	–	8012-1689
		–	•	–	–	8012-1691
		–	–	•	–	8012-1693
Inner chamber, reinforced	max. total load 170 kg	–	•	–	–	8012-1054
	max. total load 300 kg	–	–	•	–	8012-1055
	max. total load 350 kg	–	–	–	•	8012-1821
	max. total load 85 kg	•	–	–	–	8012-1053
Interior lighting	with 15 W light bulb					
	120 V option model	•	•	–	–	8012-1632
	230/240 V option model	•	•	•	–	8012-1628
	with two 15 W light bulbs					
	400 V option model	–	–	–	•	8012-1825
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	•	•	•	•	8012-1195
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	•	8012-1620

Designation	Description	FD 56	FD 115	FD 260	FD 720	Art. No.
Viewing window and interior lighting	viewing window (triple insulating glass) in door, 240 x 240 mm, and 15 W interior					
	120 V option model	•	–	–	–	8012-1702
	230 V option model	•	–	–	–	8012-1700
	viewing window (triple insulating glass) in door, 300 x 480 mm, and 30 W interior					
	400 V option model	–	–	–	•	8012-1831
	viewing window (triple insulating glass) in door, 370 x 370 mm, and 15 W interior					
	120 V option model	–	•	–	–	8012-1706
	230 V option model	–	•	–	–	8012-1704
		–	–	•	–	8012-1708
	240 V option model	–	–	•	–	8012-1710

ORDERING INFORMATION ACCESSORIES

Designation	Description	FD 56	FD 115	FD 260	FD 720	Art. No.
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units.					
	version 4, BASIC edition	•	•	•	•	9053-0039
APT-COM™ 4 GLP-Edition	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	•	•	•	•	9053-0042
APT-COM™ 4 PROFESSIONAL-Edition	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.					
	version 4, PROFESSIONAL edition	•	•	•	•	9053-0040
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	•	•	•	8012-2250
Qualification documents	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
	Hard copy inside folder	•	•	•	•	7007-0001
	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	•	•	•	•	7057-0005
	Hard copy inside folder	•	•	•	•	7007-0005
Rack	chrome plated	•	–	–	–	8012-2038
		–	•	–	–	8012-2040
		–	–	•	–	8012-2042
		–	–	–	•	8012-2044
	stainless steel	•	–	–	–	8012-2085
		–	•	–	–	8012-2168
		–	–	•	–	8012-2169
		–	–	–	•	8012-2170
		–	–	•	–	8012-2184
		–	–	–	•	8012-2185
Rubber pads	set anti-slip feet	•	•	•	–	8012-2030

Designation	Description	FD 56	FD 115	FD 260	FD 720	Art. No.
Shelf, perforated	Stainless steel	•	–	–	–	8012-2175
		–	•	–	–	8012-2176
		–	–	•	–	8012-2177
		–	–	–	•	8012-2178
Table on castors	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	•	•	–	–	9051-0018
	stable cart, casters with locking brakes, dimensions: W 1,300 x D 800 x H 780 mm	–	–	•	–	9051-0019