

Drying and heating chambers



Avantgarde.Line
ED | FD | FED | FP | M series

Solid.Line
ED-S | FD-S series



Drying and heating chambers Avantgarde.Line

Series ED Avantgarde.Line	Page 6
Series FD Avantgarde.Line	Page 12
Series FED Avantgarde.Line	Page 19
Series FP Avantgarde.Line	Page 26
Series M Avantgarde.Line	Page 31

BINDER drying chambers with natural convection or forced convection are renowned for their high quality and reliability. Thanks to their extensive redevelopment, these all-rounders are now even more firmly focused on addressing the requirements involved in drying or heating samples. What's more, in addition to the best energy efficiency on the market and convenient operation, the latest APT.line™ technology offers outstanding temperature accuracy to give the Avantgarde.Line incubators real appeal.

ADVANTAGES AT A GLANCE



EASY DATA LOGGING

Via USB connector or Ethernet



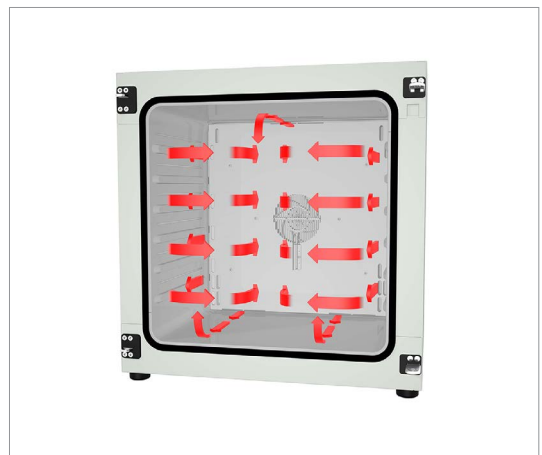
BEST ENERGY EFFICIENCY AND LOW INSTALLATION REQUIREMENTS

thanks to low heat dissipation and an optimized heating system.



EASY, INTUITIVE HANDLING

Our state-of-the-art controller with LCD display, excellent readability, alphanumeric display, and various functions provide a user friendly interface. Choice of languages as standard: English, German, and French.



COMPLETELY HOMOGENEOUS TEMPERATURE DISTRIBUTION

This feature provides excellent spatial and temporal temperature accuracy with the all-new generation of APT.line™ technology.

Series ED Avantgarde.Line | with natural convection

The strengths of a BINDER ED series drying chamber include routine drying and sterilization tasks up to 300 °C. Thanks to the natural convection, all thermal processes which use this drying chamber are highly efficient. The ED series ensures fast, uniform drying.



ED 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: +5 °C above ambient temperature to +300 °C
- Up to 30% lower energy consumption compared to conventional units on the market
- High temperature accuracy thanks to APT.line™ technology
- Natural convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Units up to 115 liters are stackable
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design

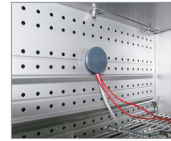
AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
ED 56	57	› go2binder.com/en-ED56-AL
ED 115	114	› go2binder.com/en-ED115-AL
ED 260	255	› go2binder.com/en-ED260-AL
ED 720	743	› go2binder.com/en-ED720-AL

OPTIONAL EQUIPMENT

Access port with silicone plug

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



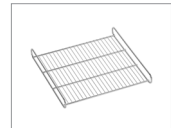
Viewing window and interior lighting

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

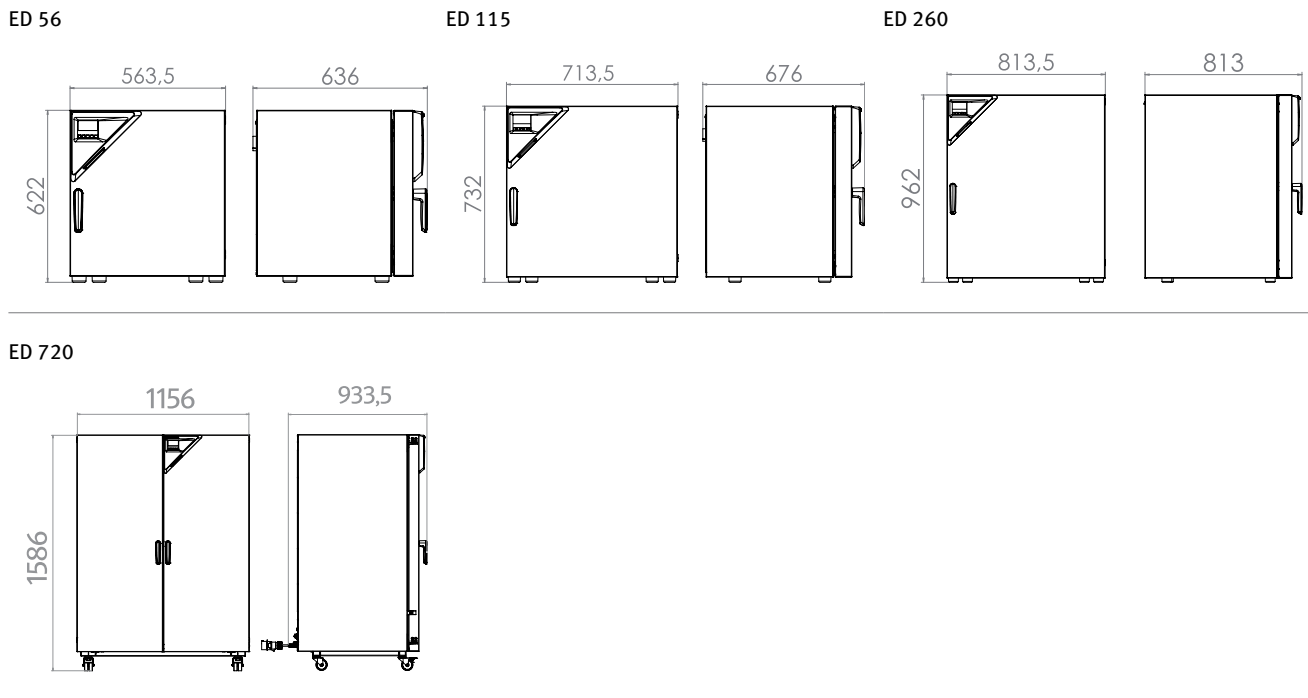
Description	ED 56	ED 115	ED 260	ED 720
Measures				
Interior volume [L]	57	114	255	743
Net weight of the unit (empty) [kg]	42	57	85	169
Permitted load [kg]	70	150	270	315
Load per rack [kg]	30	30	40	45
Wall clearance back [mm]	160	160	160	160
Wall clearance sidewise [mm]	100	100	100	100
Internal Dimensions				
Width [mm]	360	510	610	960
Height [mm]	420	530	760	1280
Depth [mm]	380	425	550	605
Housing dimensions not incl. fittings and connections				
Width net [mm]	560	710	810	1165
Height net [mm]	625	705	940	1590
Depth net [mm]	565	605	760	870
Performance Data Temperature				
Temperature range +5 °C above ambient temperature to [°C]	300	300	300	300
Temperature variation at 150 °C [± K]	2.3	1.5	1.8	3.2
Temperature fluctuation at 150 °C [± K]	0.4	0.4	0.8	0.8
Heating-up time to 150 °C [min]	50	45	50	85
Recovery time after 30 seconds door open at 150 °C [min]	19	16	20	25
Tabellen				
Air change (approx.) at 100 °C [x/h]	8	6	3	2
Electrical data				
Nominal power (version 120 V) [kW]	1.15	1.35	–	–
Nominal power (version 230 V) [kW]	1.05	1.25	2.25	–
Nominal power (version 240 V) [kW]	–	–	2.45	–
Nominal power (version 400 V) [kW]	–	–	–	4.1
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	ED 56	ED 115	ED 260	ED 720
400 V 3~ 50/60 Hz	Standard	–	–	–	9010-0341
240 V 1~ 60 Hz	Standard	–	–	9010-0340	–
230 V 1~ 50/60 Hz	Standard	9010-0333	9010-0335	9010-0339	–
120 V 1~ 60 Hz	Standard	9010-0334	9010-0336	–	–

DIMENSIONS incl. fittings and connections [mm]



ORDERING INFORMATION OPTIONS

Designation	Description	ED 56	ED 115	ED 260	ED 720	Art. No.
Access port with silicone plug	back					
	10 mm	•	•	•	•	8012-1282
	30 mm	•	•	•	•	8012-0540
	50 mm	•	•	•	•	8012-0546
	left					
	10 mm	•	•	•	•	8012-1275
	30 mm	•	•	•	•	8012-1018
	50 mm	•	•	•	•	8012-1022
	100 mm	–	•	•	•	8012-1030
	right					
	10 mm	•	•	•	•	8012-1268
	30 mm	•	•	•	•	8012-1017
	50 mm	•	•	•	•	8012-1021
	100 mm	–	•	•	•	8012-1031
	top					
	10 mm	•	•	•	•	8012-1262
30 mm	•	•	•	•	8012-0539	
50 mm	•	•	•	•	8012-0545	
100 mm	•	•	•	•	8012-1029	
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	•	•	•	•	8012-1635
Analog output 4-20 mA	for temperature values (output not adjustable)	•	•	•	•	8012-1623
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	•	•	•	8012-1115

Designation	Description	ED 56	ED 115	ED 260	ED 720	Art. No.
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	•	•	•	8012-1134
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-1593
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-1572
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-1551
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	•	•	•	•	8012-0985
Clock	battery-backed	•	•	•	•	8012-1640
Door gasket	made of FKM, silicone-free	•	–	–	–	8012-1008
		–	•	–	–	8012-1009
		–	–	•	–	8012-1011
		–	–	–	•	8012-1013
		•	•	•	–	8012-1664
Door lock	lockable door handle	–	–	–	•	8012-1817
		•	•	•	–	8012-1645
Ethernet interface	for Multi Management Software APT-COM™	–	–	–	•	8012-1836
Inner chamber, reinforced	max. total load 350 kg	–	–	–	•	8012-1827
Interior lighting	with 15 W light bulb					
	120 V option model	•	•	–	–	8012-1631
	230/240 V option model	•	•	•	–	8012-1627
	with two 15 W light bulbs					
400 V option model	–	–	–	•	8012-1824	
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	•	•	•	•	8012-0195
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	•	8012-1619
Viewing window and interior lighting	viewing window (triple insulating glass) in door, 240 x 240 mm, and 15 W interior					
	120 V option model	•	–	–	–	8012-1059
	230 V option model	•	–	–	–	8012-1058
	viewing window (triple insulating glass) in door, 300 x 480 mm, and 30 W interior					
	400 V option model	–	–	–	•	8012-1830
	viewing window (triple insulating glass) in door, 370 x 370 mm, and 15 W interior					
	120 V option model	–	•	–	–	8012-1063
	230 V option model	–	•	–	–	8012-1060
	240 V option model	–	–	•	–	8012-1064
		–	–	•	–	8012-1065

ORDERING INFORMATION ACCESSORIES

Designation	Description	ED 56	ED 115	ED 260	ED 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

Designation	Description	ED 56	ED 115	ED 260	ED 720	Art. No.
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
Ethernet interface	for Multi Management Software APT-COM™	•	•	•	–	8012-1645
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		•	–	–	–	8012-2039
		–	•	–	–	8012-2041
	chrome plated	–	–	•	–	8012-2043
		–	–	–	•	8012-2045
		•	–	–	–	8012-2171
		–	•	–	–	8012-2172
	stainless steel	–	–	•	–	8012-2173
		–	–	–	•	8012-2174
		–	–	•	–	8012-2187
Rack, heavy load	Stainless steel, max. load per rack 70 kg	–	–	–	•	8012-2186
Rubber pads	set anti-slip feet	•	•	•	–	8012-2030
Shelf, perforated		•	–	–	–	8012-2179
		–	•	–	–	8012-2180
		–	–	•	–	8012-2181
		–	–	–	•	8012-2182
		–	–	–	–	–
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

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

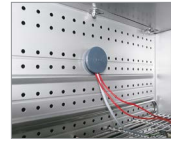
AVAILABLE SIZES

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

OPTIONAL EQUIPMENT

Access port with silicone plug

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



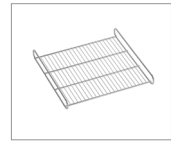
Viewing window and interior lighting

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

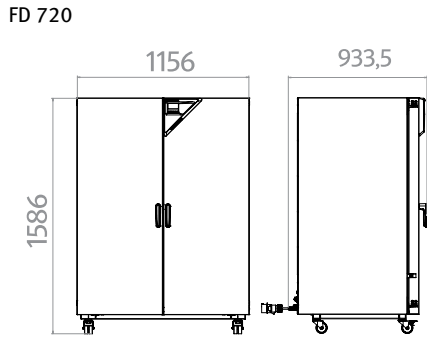
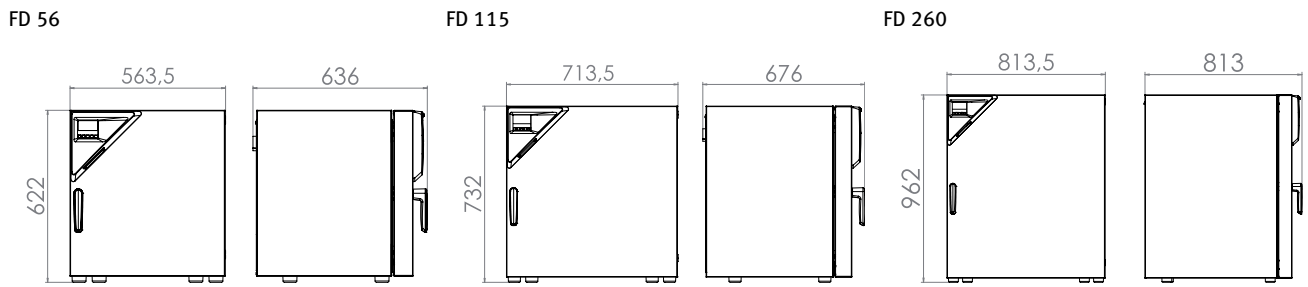
Description	FD 56	FD 115	FD 260	FD 720
Measures				
Interior volume [L]	60	116	259	741
Net weight of the unit (empty) [kg]	41	57	85	166
Permitted load [kg]	70	150	270	315
Load per rack [kg]	30	30	40	45
Wall clearance back [mm]	160	160	160	160
Wall clearance sidewise [mm]	100	100	100	100
Internal Dimensions				
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]



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	•	•	•	•
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
		•	–	–	–	8012-1648
Door gasket	made of FKM, silicone-free	–	•	–	–	8012-1650
		–	–	•	–	8012-1652
		–	–	–	•	8012-1833
		•	•	•	–	8012-1665
Door lock	lockable door handle	–	–	–	•	8012-1818
		•	•	•	–	8012-0988
Ethernet interface	for Multi Management Software APT-COM™	–	–	–	•	8012-0989
		•	•	•	–	8012-1062
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	–	–	–	•	8012-1062
	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	–	–	–	•	8012-1061
	400 V option model	•	–	–	–	8012-1056
	120/230 V option model	–	•	–	–	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	–	–	–	–	8012-1632
	120 V option model	•	•	–	–	8012-1632
	230/240 V option model	•	•	•	–	8012-1628
	with two 15 W light bulbs	–	–	–	•	8012-1825
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
	240 V option model	–	–	•	–	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
Rack	chrome plated	•	–	–	–	8012-2038
		–	•	–	–	8012-2040
		–	–	•	–	8012-2042
		–	–	–	•	8012-2044
		•	–	–	–	8012-2085
	stainless steel	–	•	–	–	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

Series FED Avantgarde.Line | with forced convection and enhanced timer functions

BINDER heating chambers of the FED Avantgarde.Line series provide almost unlimited capacity and are particularly adaptable. With advanced timing functions and a controllable fan, temperature and convection conditions are easily controlled.



FED 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
- Up to 30% lower energy consumption compared to conventional units on the market
- High temperature accuracy thanks to APT.line™ technology
- Adjustable fan speed
- Controller with LCD display and enhanced time functions
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Units up to 115 liters are stackable
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design

AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
FED 56	60	› go2binder.com/en-FED56-AL
FED 115	116	› go2binder.com/en-FED115-AL
FED 260	259	› go2binder.com/en-FED260-AL
FED 720	741	› go2binder.com/en-FED720-AL



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

OPTIONAL EQUIPMENT

Access port with silicone plug

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



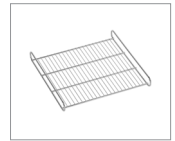
Viewing window and interior lighting

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	FED 56	FED 115	FED 260	FED 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	705	940	1590
Depth net [mm]	565	605	760	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]	1.4	1.2	1.6	2.0
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
Electrical data				
Nominal power (version 120 V) [kW]	1.2	1.4	-	-
Nominal power (version 208 V) [kW]	-	-	-	4.5
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

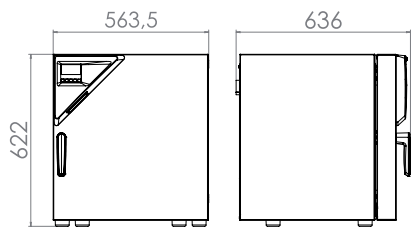
ORDERING INFORMATION [Art. No.]

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

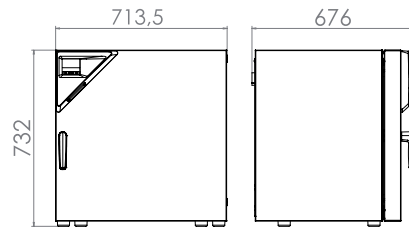
Voltage	Option model	FED 56	FED 115	FED 260	FED 720
400 V 3~ 50/60 Hz	Standard	-	-	-	9010-0301
240 V 1~ 60 Hz	Standard	-	-	9010-0300	-
230 V 1~ 50/60 Hz	Standard	9010-0295	9010-0293	9010-0299	-
208 V 3~ 60 Hz	Standard	-	-	-	9010-0302
120 V 1~ 60 Hz	Standard	9010-0296	9010-0294	-	-

DIMENSIONS incl. fittings and connections [mm]

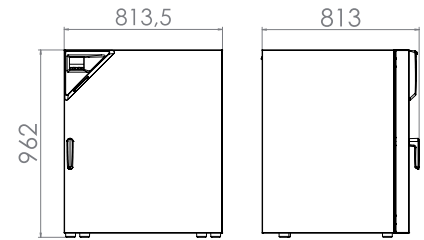
FED 56



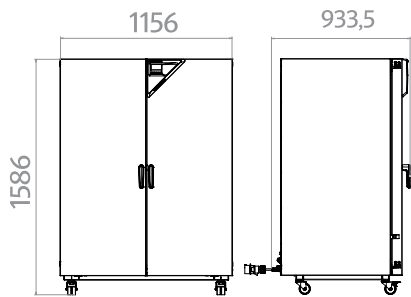
FED 115



FED 260



FED 720



ORDERING INFORMATION OPTIONS

Designation	Description	FED 56	FED 115	FED 260	FED 720	Art. No.
Access port with silicone plug	left					
	10 mm	•	•	•	•	8012-1278
	30 mm	•	•	•	•	8012-1655
	50 mm	•	•	•	•	8012-1657
	100 mm	–	•	•	•	8012-1669
	right					
	10 mm	•	•	•	•	8012-1271
	30 mm	•	•	•	•	8012-1654
	50 mm	•	•	•	•	8012-1656
	100 mm	–	•	•	•	8012-1670
	top					
	10 mm	•	•	•	•	8012-1264
30 mm	•	•	•	•	8012-1365	
50 mm	•	•	•	•	8012-1381	
100 mm	•	•	•	•	8012-1672	
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	•	•	•	•	8012-1637
Analog output 4-20 mA	for temperature values (output not adjustable)	•	•	•	•	8012-1625
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	•	•	•	8012-1118

Designation	Description	FED 56	FED 115	FED 260	FED 720	Art. No.
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	•	•	•	8012-1137
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-1596
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-1575
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-1554
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	•	•	•	•	8012-1644
Clock	battery-backed	•	•	•	•	8012-1642
Door gasket	made of FKM, silicone-free	•	–	–	–	8012-1649
		–	•	–	–	8012-1651
		–	–	•	–	8012-1653
		–	–	–	•	8012-1834
		•	•	•	–	8012-1666
Door lock	lockable door handle	–	–	–	•	8012-1819
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	•	–	–	–	8012-1684
	400 V option model	–	–	–	•	8012-1781
Gas-tight option model	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	–	•	–	–	8012-1686
		–	–	•	–	8012-1688
		•	–	–	–	8012-1698
Heating output, reinforced	for faster heating up time and improved recovery time; max. 300 °C	–	•	–	–	8012-1699
	120/230 V option model	•	–	–	–	8012-1695
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	–	•	–	–	8012-1696
		–	–	•	–	8012-1697
		–	–	–	•	8012-1835
		•	–	–	–	8012-1690
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	–	•	–	–	8012-1692
		–	–	•	–	8012-1694
		–	•	–	–	8012-1714
Inner chamber, reinforced	max. total load 170 kg	–	–	•	–	8012-1715
	max. total load 300 kg	–	–	–	•	8012-1822
	max. total load 350 kg	•	–	–	–	8012-1713
	max. total load 85 kg	–	–	–	–	8012-1713
Interior lighting	with 15 W light bulb	•	•	–	–	8012-1633
	120 V option model	•	•	•	–	8012-1629
	230/240 V option model	–	–	–	•	8012-0972
	with two 15 W light bulbs	–	–	–	•	8012-1826
	208 V option model	–	–	–	•	8012-1826
Measurement of air exchange rate	400 V option model	•	•	•	•	8012-1197
Pt 100 temperature sensor	in accordance with ASTM D5374, definition and protocol according to ambient temperature	•	•	•	•	8012-1197
	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	•	8012-1621

Designation	Description	FED 56	FED 115	FED 260	FED 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	•	–	–	–	8012-1703
	230 V option model	•	–	–	–	8012-1701
	viewing window (triple insulating glass) in door, 300 x 480 mm, and 30 W interior					
	208/400 V option model	–	–	–	•	8012-1832
	viewing window (triple insulating glass) in door, 370 x 370 mm, and 15 W interior					
	120 V option model	–	•	–	–	8012-1707
	230 V option model	–	•	–	–	8012-1705
	230 V option model	–	–	•	–	8012-1709
	240 V option model	–	–	•	–	8012-1711

ORDERING INFORMATION ACCESSORIES

Designation	Description	FED 56	FED 115	FED 260	FED 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		•	–	–	–	8012-2038
		–	•	–	–	8012-2040
		–	–	•	–	8012-2042
		–	–	–	•	8012-2044
		•	–	–	–	8012-2085
		–	•	–	–	8012-2168
		–	–	•	–	8012-2169
		–	–	–	•	8012-2170
Rack, heavy load	Stainless steel, max. load per rack 70 kg	–	–	•	–	8012-2184
		–	–	–	•	8012-2185
Rubber pads	set anti-slip feet	•	•	•	–	8012-2030

Designation	Description	FED 56	FED 115	FED 260	FED 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

Series FP Avantgarde.Line | with forced convection and program functions

A BINDER material test chamber with mechanical convection of the FP series provides reliably short drying times and particularly fast heating – even for chambers under full loads.



FP 115 model

BENEFITS

- Uniform drying conditions thanks to APT.line™ technology
- Identical test conditions throughout the chamber interior independent of sample size and quantity
- Outstanding thermal insulation saves operation costs
- Advanced programming options

MAIN FEATURES

- Temperature range: +10 °C above ambient temperature up to +300 °C
- High temperature accuracy thanks to APT.line™ technology
- Adjustable fan speed
- Controller with interval and real-time programming
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Units up to 115 liters are stackable
- Class 2 independent adjustable temperature safety device (DIN 12880) and class 3.1 independent temperature safety device (DIN 12880) with visual/acoustic alarm available for selection on the controller
- Ergonomic handle design
- Computer interface: Ethernet

AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
FP 56	60	› go2binder.com/en-FP56
FP 115	116	› go2binder.com/en-FP115
FP 260	259	› go2binder.com/en-FP260
FP 720	741	› go2binder.com/en-FP720

OPTIONAL EQUIPMENT

Access port with silicone plug

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



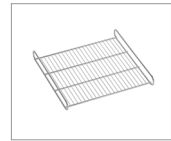
Viewing window and interior lighting

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	FP 56	FP 115	FP 260	FP 720
Measures				
Interior volume [L]	60	116	259	741
Net weight of the unit (empty) [kg]	44	62	96	194
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]	400	550	780	1300
Depth [mm]	342	383	512	574
Housing dimensions not incl. fittings and connections				
Width net [mm]	560	710	810	1160
Height net [mm]	622	732	962	1590
Depth net [mm]	596	636	786	816
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]	1.4	1.4	1.7	2.4
Temperature fluctuation at 150 °C [± K]	0.4	0.3	0.4	0.6
Heating-up time to 150 °C [min]	15	19	19	25
Recovery time after 30 seconds door open at 150 °C [min]	4	5	6	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	2.5	–
Nominal power (version 208 V) [kW]	–	–	–	4.5
Nominal power (version 230 V) [kW]	1.2	1.4	2.5	–
Nominal power (version 400 V) [kW]	–	–	–	4.5
Fixtures				
Number of shelves (std./max.)	2/5	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	FP 56	FP 115	FP 260	FP 720
400 V 3~ 50/60 Hz	Standard	–	–	–	9010-0366
230 V 1~ 50/60 Hz	Standard	9010-0363	9010-0364	9010-0365	–
208 V 3~ 60 Hz	Standard	–	–	–	9010-0370
120 V 1~ 60 Hz	Standard	9010-0367	9010-0368	9010-0369	–

ORDERING INFORMATION OPTIONS

Designation	Description	FP 56	FP 115	FP 260	FP 720	Art. No.
Access port with silicone plug	left					
	10 mm	•	•	•	•	8012-2198
	30 mm	•	•	•	•	8012-2210
	50 mm	•	•	•	•	8012-2213
	100 mm	–	•	•	•	8012-2207
	right					
	10 mm	•	•	•	•	8012-2206
	30 mm	•	•	•	•	8012-2212
	50 mm	•	•	•	•	8012-2215
	100 mm	–	•	•	•	8012-2209
	top					
	10 mm	•	•	•	•	8012-2199
	30 mm	•	•	•	•	8012-2211
	50 mm	•	•	•	•	8012-2214
	100 mm	•	•	•	•	8012-2208
	Analog output 4-20 mA	for temperature values (output not adjustable)	•	•	•	•
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	•	•	•	8012-2231
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	•	•	•	8012-2227
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-2229
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-2228
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-2230
Door gasket	made of FKM, silicone-free	•	–	–	–	8012-2233
		–	•	–	–	8012-2234
		–	–	•	–	8012-2235
		–	–	–	•	8012-2236
Door lock	lockable door handle	•	•	•	–	8012-2237
		–	–	–	•	8012-2238
Gas-tight option model	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	•	–	–	–	8012-2216
		–	•	–	–	8012-2217
		–	–	•	–	8012-2218
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	•	–	–	–	8012-2219
		–	•	–	–	8012-2220
		–	–	•	–	8012-2221
		–	–	–	•	8012-2222
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	•	–	–	–	8012-2195
		–	•	–	–	8012-2196
		–	–	•	–	8012-2197
Inner chamber, reinforced	max. total load 170 kg	–	•	–	–	8012-2224
	max. total load 300 kg	–	–	•	–	8012-2225
	max. total load 350 kg	–	–	–	•	8012-2226
	max. total load 85 kg	•	–	–	–	8012-2223
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	•	•	•	•	8012-2232

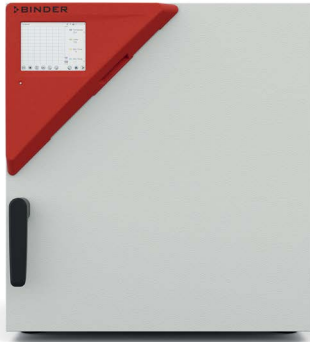
Designation	Description	FP 56	FP 115	FP 260	FP 720	Art. No.
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	•	8012-2193

ORDERING INFORMATION ACCESSORIES

Designation	Description	FP 56	FP 115	FP 260	FP 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
	stainless steel	–	–	–	•	8012-2044
		•	–	–	–	8012-2085
		–	•	–	–	8012-2168
		–	–	•	–	8012-2169
–	–	–	•	8012-2170		
Rack accessories	fasteners (1 set of 4) for additional security of racks	•	•	•	•	8012-0531
Rack, heavy load	Stainless steel, max. load per rack 70 kg	–	–	•	–	8012-2184
		–	–	–	•	8012-2185
Rubber pads	set anti-slip feet	•	•	•	–	8012-2030
		•	–	–	–	8012-2175
Shelf, perforated	Stainless steel	–	•	–	–	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

Series M Avantgarde.Line | with forced convection and advanced program functions

With a maximum of 300 °C and various programming options the M series material test chambers are ideal for material and aging tests. With a high air flow, the powerful fans ensure rapid heating.



M 56 model

BENEFITS

- Uniform drying conditions thanks to APT.line™ technology
- Identical test conditions throughout the chamber interior independent of sample size and quantity
- Outstanding thermal insulation saves operation costs
- Advanced programming options

MAIN FEATURES

- Temperature range: +14...23°C above ambient temperature to +300°C
- Reinforced fan with adjustable speed
- Electromechanical control of the exhaust air flap
- Intuitive touchscreen controller with time-segment and real-time programming
- Class 2 independent adjustable temperature safety device (DIN 12880) and class 3.1 independent temperature
- safety device (DIN 12880) with visual/acoustic alarm available for selection on the controller
- Failsafe function
- Computer interface: Ethernet

AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
M 56	56	› go2binder.com/en-M56-AL
M 115	115	› go2binder.com/en-M115-AL
M 260	260	› go2binder.com/en-M260-AL
M 720	720	› go2binder.com/en-M720-AL



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

OPTIONAL EQUIPMENT

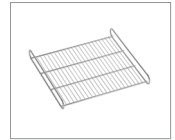
Access port with silicone plug

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



Shelf racks

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



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	M 56	M 115	M 260	M 720
Measures				
Interior volume [L]	59	113	256	735
Net weight of the unit (empty) [kg]	43	56	85	169
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]	335	375	505	565
Housing dimensions not incl. fittings and connections				
Width net [mm]	560	710	810	1160
Height net [mm]	622	732	962	1590
Depth net [mm]	596	636	786	816
Performance Data Temperature				
Temperature range above ambient temperature to 300 °C	+22 °C	+22 °C	+15 °C	+15 °C
Temperature uniformity at 150°C [± K]	1.4	1.4	1.7	2
Temperature fluctuation at 150 °C [± K]	0.2	0.2	0.3	0.5
Heating up time to 150°C [min]	10	13	14	14
Recovery time after door was opened for 30 s at 150°C [min]	4	7	7	7
Tabellen				
Air change rate at 100°C [x/h]	170	105	55	40
Electrical data				
Nominal power [kW]	2	2,4	3,1	6
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

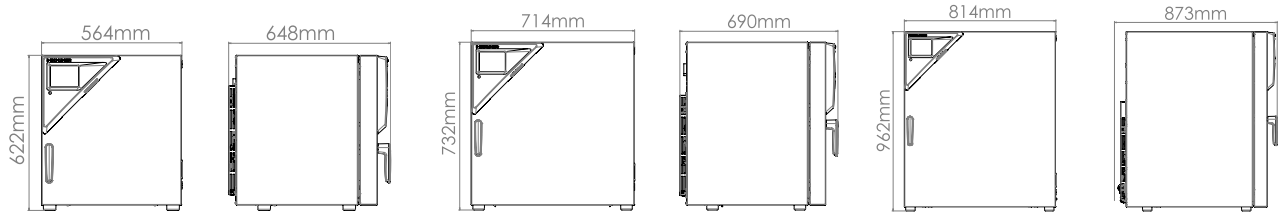
Voltage	Option model	M 56	M 115	M 260	M 720
400 V 3~ 50/60 Hz	Standard	–	–	9010-0373	9010-0374
230 V 1~ 50/60 Hz	Standard	9010-0371	9010-0372	–	–

DIMENSIONS incl. fittings and connections [mm]

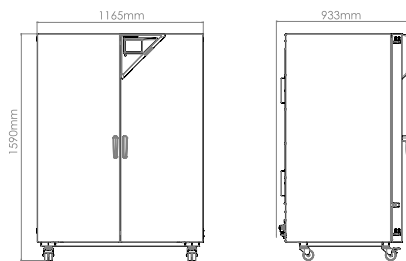
M 56

M 115

M 260



M 720



ORDERING INFORMATION OPTIONS

Designation	Description	M 56	M 115	M 260	M 720	Art. No.
	back					
	10 mm	•	•	•	•	8012-1287
	30 mm	•	•	•	•	8012-1371
	50 mm	•	•	•	•	8012-1387
	left					
	10 mm	•	•	•	•	8012-2296
	30 mm	•	•	•	•	8012-2302
	50 mm	•	•	•	•	8012-2305
Access port with silicone plug	100 mm	•	•	•	•	8012-2299
	right					
	10 mm	•	•	•	•	8012-2298
	30 mm	•	•	•	•	8012-2304
	50 mm	•	•	•	•	8012-2307
	100 mm	–	•	•	•	8012-2301
	top					
	10 mm	•	•	•	•	8012-2297
	30 mm	•	•	•	•	8012-2303
	50 mm	•	•	•	•	8012-2306
	100 mm	•	•	•	•	8012-2300
Analog output 4-20 mA	for temperature values (output not adjustable)	•	•	•	•	8012-2295
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	•	•	•	8012-2328

Designation	Description	M 56	M 115	M 260	M 720	Art. No.
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	•	•	•	8012-2324
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-2326
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-2325
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-2327
Door gasket	made of FKM, silicone-free	•	–	–	–	8012-2331
		–	•	–	–	8012-2332
		–	–	•	–	8012-2333
Door lock	lockable door handle	•	•	–	–	8012-2335
		–	–	•	•	8012-2336
Gas-tight option model	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	•	–	–	–	8012-2308
		–	•	–	–	8012-2309
		–	–	•	–	8012-2310
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	•	–	–	–	8012-2311
		–	•	–	–	8012-2312
		–	–	•	–	8012-2313
		–	–	–	•	8012-2314
Inert gas connection	with gas inlet and outlet, Ø 10 mm, incl. additional measures to provide the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	•	–	–	–	8012-2315
		–	•	–	–	8012-2316
		–	–	•	–	8012-2317
Inner chamber, reinforced	including 2 reinforced racks					
	max. total load 85 kg	•	–	–	–	8012-2320
	max. total load 170 kg	–	•	–	–	8012-2321
	max. total load 300 kg	–	–	•	–	8012-2322
	max. total load 350 kg	–	–	–	•	8012-2323
Lockable controller keyboard	Lockable controller keyboard with key-operated switch	•	•	•	•	8012-0529
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	•	•	•	•	8012-2329
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	•	8012-2330
Viewing window and interior lighting	viewing window in door, 230 x 230 mm, and 15 W interior lighting					
	230 V option model	•	–	–	–	8012-0055
	viewing window in door, 320 x 260 mm, and 15 W interior lighting					
	230 V option model	–	•	–	–	8012-0057
	viewing window in each door, 290 x 470 mm, and 30 W interior lighting					
400 V option model	–	–	–	•	8012-0063	
	viewing window in each door, 350 x 240 mm, and 30 W interior lighting					
230 V option model	–	–	•	–	8012-0059	

ORDERING INFORMATION ACCESSORIES

Designation	Description	M 56	M 115	M 260	M 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	
Designation	Description	M 56	M 115	M 260	M 720	Art. No.	
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		•	–	–	–	8012-2033	
		–	•	–	–	8012-2034	
	chrome plated	–	–	•	–	8012-2035	
		–	–	–	•	8012-2037	
		•	–	–	–	8012-2085	
		–	•	–	–	8012-2168	
	stainless steel	–	–	•	–	8012-2169	
		–	–	–	•	8012-2170	
	Rack accessories	fasteners (1 set of 4) for additional security of racks	•	•	•	•	8012-0531
	Rubber pads	set anti-slip feet	•	•	•	–	8012-2030
Shelf, perforated		•	–	–	–	8012-2075	
	Stainless steel	–	•	–	–	8012-2176	
		–	–	•	–	8012-2177	
		–	–	–	•	8012-2178	
		•	•	–	–	9051-0018	
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	

Drying and heating chambers Solid.Line

Series ED-S Solid.Line

Page 42

Series FD-S Solid.Line

Page 46

With its new Solid.Line range, BINDER is expanding its product portfolio of drying and heating chambers, incubators, and constant climate chambers. This new line embodies solid product design with great value for money. The new Solid.Line is the ideal addition to BINDER's popular premium products, thus complementing the entire product range with BINDER's quality guarantee – Made in Germany.

ADVANTAGES AT A GLANCE



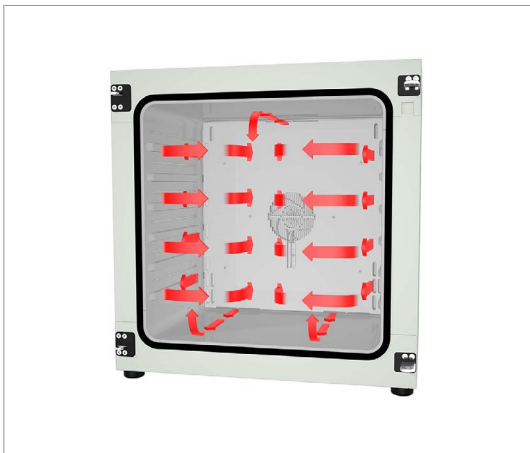
EASY OPERATION OF THE UNIT

Using controller with digital display in °C and °F.



ADJUSTABLE EXHAUST AIR FLAP ABOVE THE UNIT

For setting the air change rates.



COMPLETELY HOMOGENEOUS TEMPERATURE DISTRIBUTION

This feature provides excellent spatial and temporal temperature accuracy with the all-new generation of APT.line™ technology.

Series ED-S Solid.Line | with natural 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.



ED-S 56 model

BENEFITS

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

MAIN FEATURES

- Temperature range: +7 °C above ambient temperature to +250 °C
- APT.line™ preheating chamber technology
- Natural 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

AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
ED-S 56	62	› go2binder.com/en-ED-S56
ED-S 115	118	› go2binder.com/en-ED-S115



Find all details online: go2binder.com/en-ED-S

OPTIONAL EQUIPMENT

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.



► All extras online go2binder.com/en-options

TECHNICAL DATA

Description	ED-S 56	ED-S 115
Measures		
Interior volume [L]	62	118
Net weight of the unit (empty) [kg]	36	50
Permitted load [kg]	45	75
Load per rack [kg]	15	20
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Internal Dimensions		
Width [mm]	400	550
Height [mm]	440	550
Depth [mm]	350	390
Housing dimensions not incl. fittings and connections		
Width net [mm]	614	764
Height net [mm]	625	735
Depth net [mm]	577	616
Performance Data Temperature		
Temperature range +7 °C above ambient temperature to [°C]	250	250
Temperature variation at 150 °C [± K]	3.4	2.8
Temperature fluctuation at 150 °C [± K]	0.8	0.9
Heating-up time to 150 °C [min]	60	55
Electrical data		
Nominal power (version 120V) [kW]	1.15	1.35
Nominal power (version 230V) [kW]	1.05	1.25
Environment-specific data		
Energy consumption at 150 °C [Wh/h]	210	300
Fixtures		
Number of shelves (std./max.)	1/3	1/5

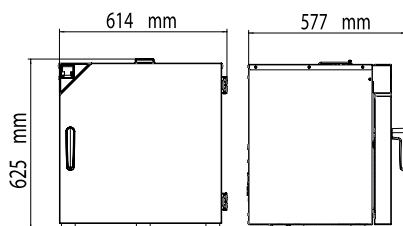
ORDERING INFORMATION [Art. No.]

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

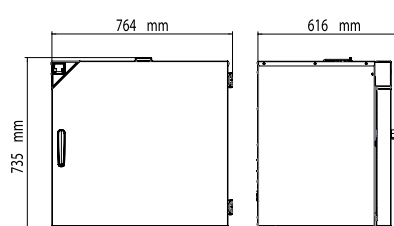
Voltage	Option model	ED-S 56	ED-S 115
230 V 1~ 50/60 Hz	Standard	9090-0014	9090-0020
120 V 1~ 60 Hz	Standard	9090-0015	9090-0021

DIMENSIONS incl. fittings and connections [mm]

ED-S 56



ED-S 115



ORDERING INFORMATION ACCESSORIES

Designation	Description	ED-S 56	ED-S 115	Art. No.
Grid shelf	Incl. shelf supports	•	–	8012-1807
	chrome plated	–	•	8012-1808
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	•	8012-2250
Rubber pads	set anti-slip feet	•	•	8012-2030

Series FD-S Solid.Line | 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.



FD-S 115 model

BENEFITS

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

MAIN FEATURES

- Temperature range: +10 °C above ambient temperature 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

AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
FD-S 56	55	› go2binder.com/en-FD-S56
FD-S 115	106	› go2binder.com/en-FD-S115



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

OPTIONAL EQUIPMENT

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.



► All extras online go2binder.com/en-options

TECHNICAL DATA

Description	FD-S 56	FD-S 115
Measures		
Interior volume [L]	55	106
Net weight of the unit (empty) [kg]	36	48
Permitted load [kg]	45	75
Load per rack [kg]	15	20
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Internal Dimensions		
Width [mm]	400	550
Height [mm]	440	550
Depth [mm]	310	350
Housing dimensions not incl. fittings and connections		
Width net [mm]	614	764
Height net [mm]	625	735
Depth net [mm]	577	616
Performance Data Temperature		
Temperature range +10 °C above ambient temperature to [°C]	250	250
Temperature variation at 150 °C [± K]	2.6	2.0
Temperature fluctuation at 150 °C [± K]	0.4	0.4
Heating-up time to 150 °C [min]	15	20
Tabellen		
Air change (approx.) at 100 °C [x/h]	4	2
Electrical data		
Nominal power (version 120V) [kW]	1.2	1.4
Nominal power (version 230V) [kW]	1.1	1.3
Environment-specific data		
Energy consumption at 150 °C [Wh/h]	290	340
Fixtures		
Number of shelves (std./max.)	1/3	1/5

ORDERING INFORMATION [Art. No.]

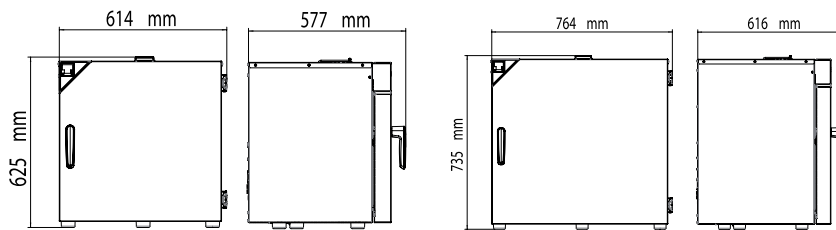
Further details: Go to www.binder-world.com > Search > Enter Article Number

Voltage	Option model	FD-S 56	FD-S 115
230 V 1~ 50/60 Hz	Standard	9090-0018	9090-0024
120 V 1~ 60 Hz	Standard	9090-0019	9090-0025

DIMENSIONS incl. fittings and connections [mm]

FD-S 56

FD-S 115



ORDERING INFORMATION ACCESSORIES

Designation	Description	FD-S 56	FD-S 115	Art. No.
	Incl. shelf supports			
Grid shelf	chrome plated	•	–	8012-1807
		–	•	8012-1808
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	•	8012-2250
Rubber pads	set anti-slip feet	•	•	8012-2030

BINDER products

CO₂ incubators

Incubators

Cooling incubators

Growth chambers

Ultralow temperature freezers

Drying and heating chambers

Safety drying chambers

Vacuum drying chambers

Constant climate chambers

Dynamic climate chambers

Battery test chambers

Walk-in-chambers

Multi Management Software



Never miss a product novelty -
Subscribe and keep up to speed with
the BINDER monthly newsletter.

Subscription

go2binder.com/en-newsletter-subscription



Best conditions for your success

BINDER GmbH
Tuttlingen, Germany

Tel +49 7462 2005 0
info@binder-world.com
www.binder-world.com

BINDER Asia Pacific (Hong Kong) Ltd.
Kowloon, Hong Kong, P.R. China

Tel +852 39070500
asia@binder-world.com

**BINDER Environmental Testing
Equipment (Shanghai) Co., Ltd.**
Shanghai, P.R.China

Tel +86 21 685 808 25
china@binder-world.com

BINDER Inc.
Bohemia, NY, USA

Tel +1 631 224 4340
usa@binder-world.com