BINDER
Best conditions for your success

Drying and heating chambers

Avantgarde.Line
ED | FD | FED series

Classic.Line
E | ED | FD | FED | FP | M series

Solid.Line
ED-S | FD-S series

US

PRODUCT SELECTION DRYING AND HEATING CHAMBERS

	Classic.Line	Avantgarde.Line	Classic.Line	Solid.Line	Avantgarde.Line	Classic.Line	Solid.Line	Avantgarde.Line	Classic.Line	Classic.Line	Classic.Line
Serie	**E** › Seite 20	**ED** › Seite 6	**ED** › Seite 22	**ED-S** › Seite 40	**FD** › Seite 9	**FD** › Seite 25	**FD-S** › Seite 42	**FED** › Seite 12	**FED** › Seite 27	**FP** › Seite 29	**M** › Seite 32
Model											
Model 23	–	–	●	–	–	●	–	–	–	–	–
Model 28	●	–	–	–	–	–	–	–	–	–	–
Model 53	–	–	–	–	–	–	–	–	–	●	●
Model 56	–	●	–	●	●	–	●	●	–	–	–
Model 115	–	●	–	●	●	–	●	●	–	●	●
Model 260	–	●	–	–	●	–	–	–	–	●	●
Model 400	–	–	●	–	–	–	–	–	●	●	●
Model 720	–	●	–	–	●	–	–	●	–	●	●
General data											
Temperature range 5 °C above ambient temperature to [°C]	60-230	300	300	–	–	300	–	–	300	300	300
Temperature range 7°C above ambient temperature to [°C]	–	–	–	250	–	–	–	–	–	–	–
Temperature range 10 °C above ambient temperature to [°C]	230	–	–	–	300	–	250	300	–	–	–
Temperature range 12 °C above ambient temperature to [°C]	–	–	–	–	–	–	–	300	–	–	–
Interface	–	USB	–	–	USB	–	–	Ethernet	RS 422	RS 422	RS 422
Natural convection	●	●	●	●	–	–		–	–	–	–
Forced convection	–	–	–	–	●	●	●	●	●	●	●
Controller and timer functions											
Controller display	Analog	LCD	LED	LED	LCD	LED	LED	LCD	LED	LED	LCD
Ramp function	–	●	●	●	●	●	●	●	●	–	–
Time delayed OFF	●	●	●	●	●	●	●	●	●	–	–
Time delayed ON	–	●	–	–	●	–	–	●	●	–	–
Temperature dependent delayed OFF	–	●	–	–	●	–	–	●	●	–	–
Programming option	–	–	–	–	–	–	–	–	–	●	●
Weekly program function	–	–	–	–	–	–	–	–	–	●	–
Adjustable fan speed	–	–	–	–	–	–	–	●	●	●	●
Real-time clock	–	○	–	–	○	–	–	○	–	●	●
Class 2 independent adjustable temperature safety device	–	●	●	●	●	●	●	●	●	●	●
Temperature alarm, acoustic	–	○	○	–	○	○	–	○	○	–	–
Temperature alarm, visual	–	●	●	●	●	●	●	●	●	●	●

●Standard equipment | ○ Option

Drying and heating chambers Avantgarde.Line

Series ED Avantgarde.Line	Page 6
Series FD Avantgarde.Line	Page 9
Series FED Avantgarde.Line	Page 12
Options and Accessories	Page 15

BINDER drying chambers with gravity 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 new design, convenient operation, and efficiency of these units, the latest APT.line™ technology offers outstanding temperature accuracy to give this new generation of incubators real appeal.

PRODUCT SELECTION DRYING AND HEATING CHAMBERS AVANTGARDE.LINE

Features	**Series ED Avantgarde.Line** › Page 6	**Series FD Avantgarde.Line** › Page 9	**Series FED Avantgarde.Line** › Page 12
Model			
Model 56	•	•	•
Model 115	•	•	•
Model 260	•	•	•
Model 720	•	•	•
General data			
Temperature range 5 °C above ambient temperature to [°C]	300	–	–
Temperature range 10 °C above ambient temperature to [°C]	–	300	300
Temperature range 12 °C above ambient temperature to [°C]	–	300	300
Controller and timer functions			
Controller display		LCD	
Ramp function	•	•	•
Time delayed OFF	•	•	•
Time delayed ON	•	•	•
Temperature dependent delayed OFF	•	•	•
Adjustable fan speed	–	–	•
Class 2 independent adjustable temperature safety device	•	•	•
Temperature alarm, visual	•	•	•

•Standard equipment

ADVANTAGES AT A GLANCE

EASY DATA LOGGING

Series ED, FD, FED

The USB connector, standard on the ED, FD and FED, provides easy data logging. Ethernet connectivity is standard on FED and an option for ED and FD.

BEST ENERGY EFFICIENCY ON THE MARKET AND LOW INSTALLATION REQUIREMENTS

Series ED, FD, FED

thanks to low heat dissipation and an optimized heating system.

EASY, INTUITIVE HANDLING

Series ED, FD, FED

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

Series FD, FED

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

Series ED Avantgarde.Line | with gravity 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

MAIN FEATURES

- Temperature range: ambient temperature plus 5 °C to 300 °C
- High temperature accuracy thanks to APT.line™ technology
- Gravity 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 [cu. ft.]	Online data sheets
ED 56	2	› go2binder.com/us-ED56
ED 115	4	› go2binder.com/us-ED115
ED 260	9	› go2binder.com/us-ED260
ED 720	26.2	› go2binder.com/us-ED720

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Case Studies: › go2binder.com/us-case-studies

Find all details online
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TECHNICAL DATA

Description	ED 56	ED 115	ED 260	ED 720
Outer dimensions				
Width net [in]	22.06	27.97	31.91	45.9
Height net [in]	24.63	28.96	38.02	62.6
Depth net [in]	22.26	23.84	29.94	34.28
Internal Dimensions				
Width [in]	14.18	20.09	24.03	37.82
Height [in]	16.55	20.88	29.94	50.4
Depth [in]	14.97	16.74	21.67	23.84
Measures				
Interior volume [cu.ft.]	2	4	9	26.2
Net weight of the unit (empty) [lbs]	86	119	187	373
permitted load [lbs]	154	331	595	694
Load per rack [lbs]	66	66	88	99
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
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.]

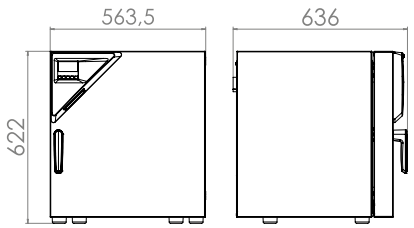
Further details: Go to www.binder-world.com › Search › Enter Article Number

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	–	–

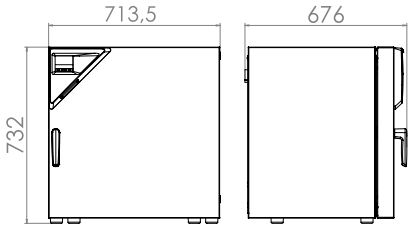
▸ You will find a selction of options, accessories and services suitable for each product on page 15

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

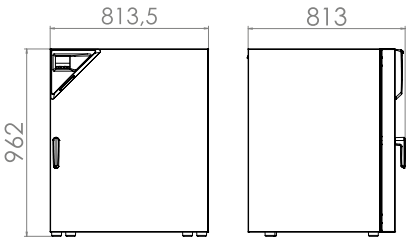
ED 56



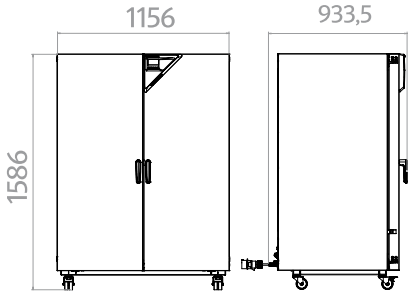
ED 115



ED 260



ED 720



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

MAIN FEATURES

- Temperature range: ambient temperature plus 10 °C 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 [cu. ft.]	Online data sheets
FD 56	2.1	› go2binder.com/us-FD56
FD 115	4.1	› go2binder.com/us-FD115
FD 260	9.1	› go2binder.com/us-FD260
FD 720	26.2	› go2binder.com/us-FD720

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TECHNICAL DATA

Description	FD 56	FD 115	FD 260	FD 720
Outer dimensions				
Width net [in]	22.06	27.97	31.91	45.9
Height net [in]	24.63	28.96	38.02	62.6
Depth net [in]	22.26	23.84	29.94	34.28
Internal Dimensions				
Width [in]	15.76	21.67	25.61	39.4
Height [in]	17.34	21.67	30.73	51.2
Depth [in]	13.59	15.17	20.29	22.46
Measures				
Interior volume [cu.ft.]	2.1	4.1	9.1	26.2
Net weight of the unit (empty) [lbs]	86	119	187	366
permitted load [lbs]	154	331	595	694
Load per rack [lbs]	66	66	88	99
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
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.]

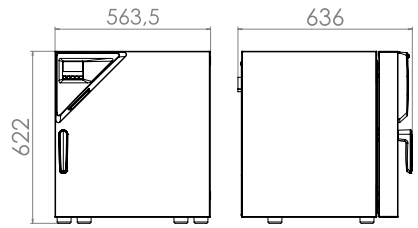
Further details: Go to www.binder-world.com › Search › Enter Article Number

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	–	–

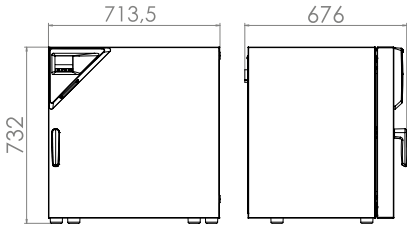
▸ You will find a selction of options, accessories and services suitable for each product on page 15

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

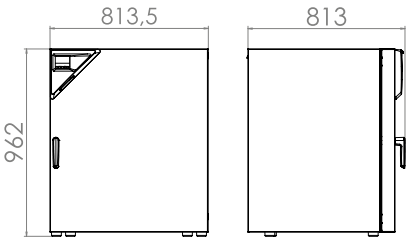
FD 56



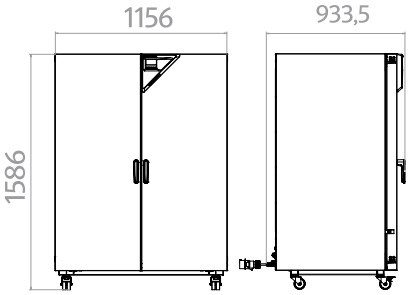
FD 115



FD 260



FD 720



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

MAIN FEATURES

- Temperature range: ambient temperature plus 10 °C 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 [cu. ft.]	Online data sheets
FED 56	2.1	› go2binder.com/us-FED56
FED 115	4.1	› go2binder.com/us-FED115
FED 260	9.1	› go2binder.com/us-FED260
FED 720	26.2	› go2binder.com/us-FED720

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TECHNICAL DATA

Description	FED 56	FED 115	FED 260	FED 720
Outer dimensions				
Width net [in]	22.06	27.97	31.91	45.9
Height net [in]	24.63	28.96	38.02	62.6
Depth net [in]	22.26	23.84	29.94	34.28
Internal Dimensions				
Width [in]	15.76	21.67	25.61	39.4
Height [in]	17.34	21.67	30.73	51.2
Depth [in]	13.59	15.17	20.29	22.46
Measures				
Interior volume [cu.ft.]	2.1	4.1	9.1	26.2
Net weight of the unit (empty) [lbs]	86	119	187	366
permitted load [lbs]	154	331	595	694
Load per rack [lbs]	66	66	88	99
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
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.]

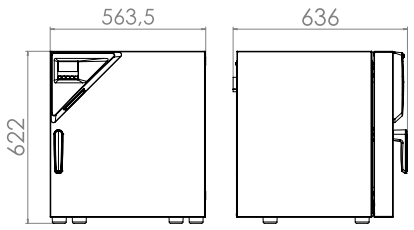
Further details: Go to www.binder-world.com › Search › Enter Article Number

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	–	–

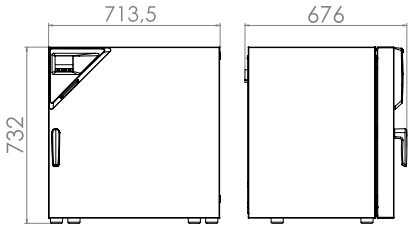
▸ You will find a selction of options, accessories and services suitable for each product on page 15

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

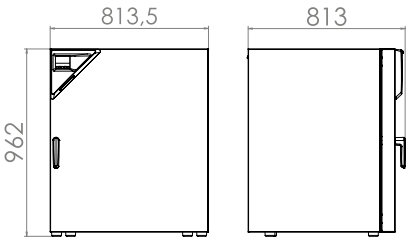
FED 56



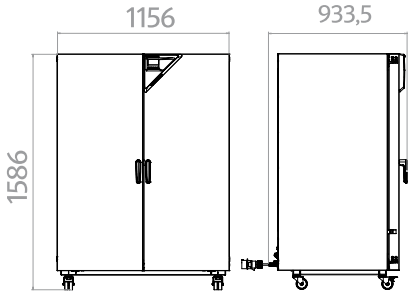
FED 115



FED 260



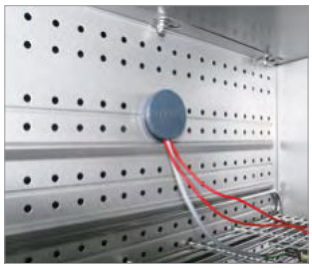
FED 720



EXCERPT FROM OPTIONS AND ACCESSORIES

Access port with silicone plug	For introducing external measuring instruments. Large selection of different diameters and positions (left, right, or top) Series ED, FD, FED
Data Logger Kit T	Independent temperature data logging. The tailored product solution contains helpful accessories: From the magnetic mounting of the data logger to the BINDER unit and securing sensor cable for accurate readings. Series ED, FD, FED
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. Series ED, FD, FED
Shelf racks	Perforated shelves or shelf racks, chrome-plated or made from stainless steel. Series ED, FD, FED
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). Series ED, FD, FED
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. Series ED, FD, FED
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. Series ED, FD, FED

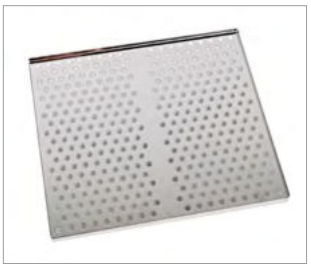
▸ All extras online go2binder.com/us-options



Access port with silicone plug

Data Logger for temperature

Viewing window in the door



Shelf

Drying and heating chambers Classic.Line

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Series FED Classic.Line	Page 27
Series FP Classic.Line	Page 29
Series M Classic.Line	Page 32
Options and Accessories	Page 35

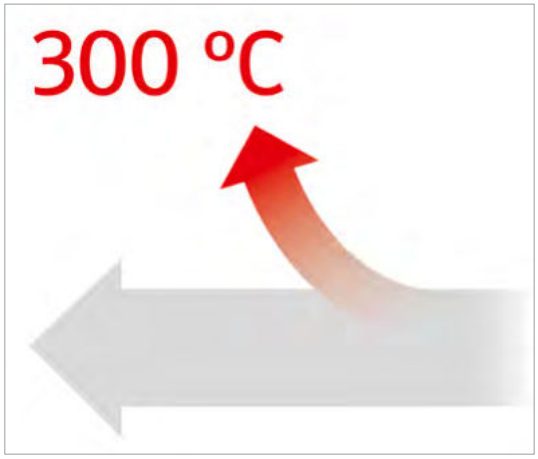
With gravity or forced convection, all BINDER drying and heating chambers offer first-rate quality and process reliability. With its wide temperature range from 5 °C above ambient temperature to 300 °C, the heating chamber can be used in all applications. Short heating-up times and large power reserves are ideal for applications in science, research, and industry. The excellent thermal insulation also reduces operating costs.
In its FP and M series, BINDER offers material test chambers with forced convection and customized programming.

PRODUCT SELECTION DRYING AND HEATING CHAMBERS CLASSIC.LINE

Features	Series E Classic.Line › Page 20	Series ED Classic.Line › Page 22	Series FD Classic.Line › Page 25	Series FED Classic.Line › Page 27	Series FP Classic.Line › Page 29	Series M Classic.Line › Page 32
Model						
Model 23	–	•	•	–	–	–
Model 28	•	–	–	–	–	–
Model 53	–	–	–	–	•	•
Model 115	–	–	–	–	•	•
Model 240	–	–	–	–	•	•
Model 400	–	•	–	•	•	•
Model 720	–	–	–	–	•	•
General data						
Temperature range [°C]	60…230	–	–	–	–	–
Temperature range 5 °C above ambient temperature to [°C]	–	300	300	300	300	300
Controller and timer functions						
Controller display	Analog	LED	LED	LED	LED	LCD color display
Ramp function	–	•	•	•	–	–
Time delayed OFF	•	•	•	•	–	–
Time delayed ON	–	–	–	•	–	–
Temperature dependent delayed OFF	–	–	–	•	–	–
Programming option	–	–	–	–	•	•
Weekly program function	–	–	–	–	•	–
Adjustable fan speed	–	–	–	•	•	•
Real-time clock	–	–	–	–	•	•
Class 2 independent adjustable temperature safety device	–	•	•	•	•	•
Temperature alarm, visual	–	•	•	•	•	•

•Standard equipment

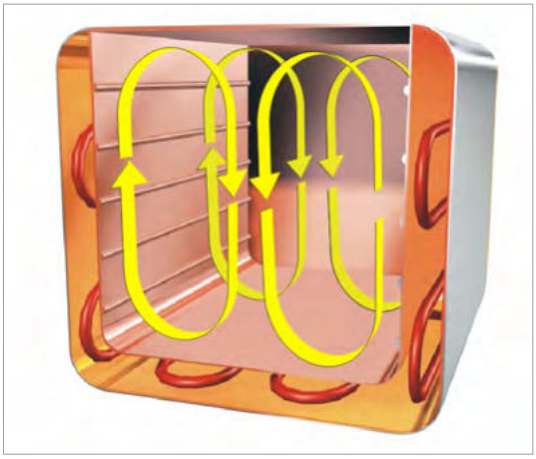
ADVANTAGES AT A GLANCE



BROAD RANGE OF APPLICATIONS

Series ED, FD, FED, FP, M

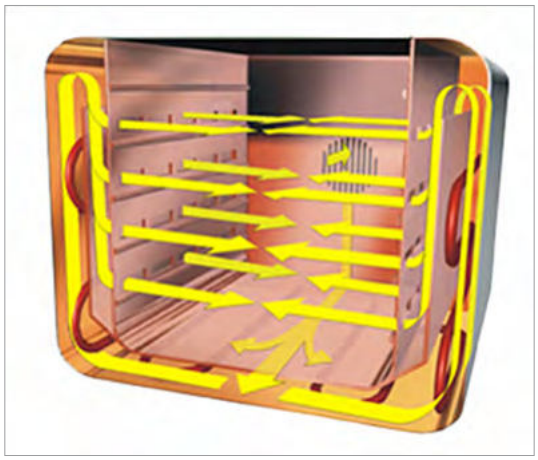
Many different applications can take advantage of the wide temperature range from 5 °C above ambient temperature to 300 °C. The FP and M series also impress with their adjustable air change rates and large power reserves.



HOMOGENEOUS TEMPERATURE CONDITIONS WITH GRAVITY CONVECTION

Series ED

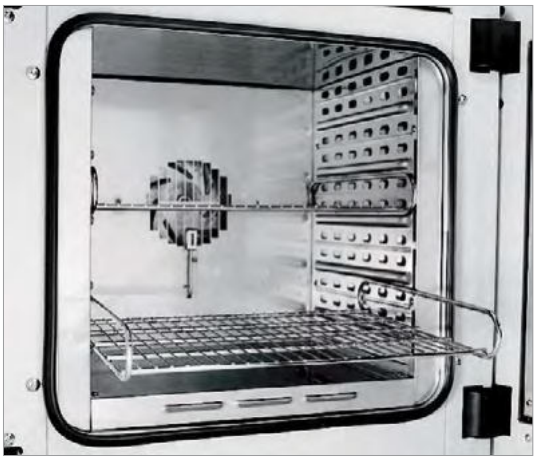
Gentle temperature distribution provided by the APT.line™ preheating chamber technology.



HOMOGENEOUS TEMPERATURE CONDITIONS WITH FORCED CONVECTION

Series FD, FED, FP, M

Long-term operational stability even under full load from the APT.line™ preheating chamber technology.



CONVENIENT WORK ENVIRONMENT

Series E, FD, FED, FP, M

BINDER interior concept: highlights rack with tilt protection, no permanent fixtures and stainless-steel inner chamber.

Series E Classic.Line | with mechanical adjustment

With a BINDER E series heating oven, you obtain a reliable and powerful unit in a solid configuration at a very attractive price. This heating oven is preferred for tasks in basic research, as well as in human and veterinary medicine.

E 28 model

MAIN FEATURES

- Temperature range: 60 °C to 230 °C
- Adjustable exhaust air flap
- Hydro-mechanical thermostat
- Class 1 temperature limitation device (Model E028-230V-T)
- Timer 0 – 120 min
- 2 chrome-plated racks

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
E 28	1	› go2binder.com/us-E28

Find all details online
go2binder.com/us-E-c

TECHNICAL DATA

Description	E 28
Outer dimensions	
Width net [in]	22.85
Height net [in]	15.96
Depth net [in]	16.74
Internal Dimensions	
Width [in]	15.76
Height [in]	11.03
Depth [in]	9.85
Measures	
Interior volume [cu.ft.]	1
Net weight of the unit (empty) [lbs]	49
permitted load [lbs]	55
Load per rack [lbs]	22
Performance Data Temperature	
Temperature range [°C]	60...230
Heating-up time to 150 °C [min]	36
Recovery time after 30 seconds door open at 150 °C [min]	19
Electrical data	
Nominal power (version 120 V) [kW]	0.8
Nominal power (version 230 V) [kW]	0.8
Fixtures	
Number of shelves (std./max.)	2/4

ORDERING INFORMATION [Art. No.]

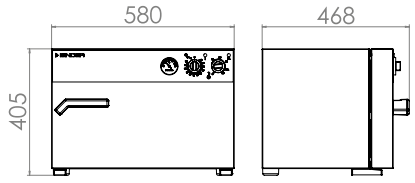
Further details: Go to www.binder-world.com › Search › Enter Article Number

Voltage	Option model	E 28
230 V 1~ 50/60 Hz	Standard	9010-0001
	with TB class 1	9010-0003
120 V 1~ 60 Hz	Standard	9010-0106

▸ You will find a selction of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

E 28



Series ED Classic.Line | with gravity convection

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

BD 400 model

MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Gravity convection
- Adjustable exhaust air flap
- Controller with timer functions
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
ED 23	0.7	› go2binder.com/us-ED23
ED 400	14.1	› go2binder.com/us-ED400

Find all details online
go2binder.com/us-ED-c

TECHNICAL DATA

Description	ED 23	ED 400
Outer dimensions		
Width net [in]	17.14	48.7
Height net [in]	19.5	40.4
Depth net [in]	20.49	30.14
Internal Dimensions		
Width [in]	8.75	39.4
Height [in]	13	31.52
Depth [in]	11.82	20.49
Measures		
Interior volume [cu.ft.]	0.7	14.1
Net weight of the unit (empty) [lbs]	60	276
permitted load [lbs]	55	198
Load per rack [lbs]	26	77
Performance Data Temperature		
Temperature range 5 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	2.8	3
Temperature fluctuation at 150 °C [± K]	0.5	0.5
Heating-up time to 150 °C [min]	28	71
Recovery time after 30 seconds door open at 150 °C [min]	28	31
Electrical data		
Nominal power (version 120 V) [kW]	0.8	–
Nominal power (version 208 V) [kW]	–	3.4
Nominal power (version 230 V) [kW]	0.8	–
Nominal power (version 400 V) [kW]	–	3.4
Fixtures		
Number of shelves (std./max.)	2/4	2/10

ORDERING INFORMATION [Art. No.]

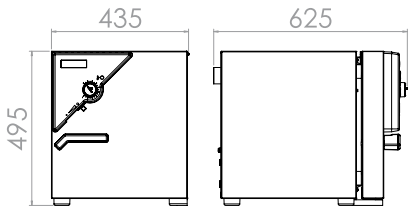
Further details: Go to www.binder-world.com › Search › Enter Article Number

Voltage	Option model	ED 23	ED 400
400 V 3~ 50/60 Hz	with RS 422	–	9010-0075
230 V 1~ 50/60 Hz	Standard	9010-0190	–
	with RS 422	9010-0191	–
208 V 3~ 60 Hz	with RS 422	–	9010-0168
120 V 1~ 60 Hz	Standard	9010-0192	–
	with RS 422	9010-0193	–

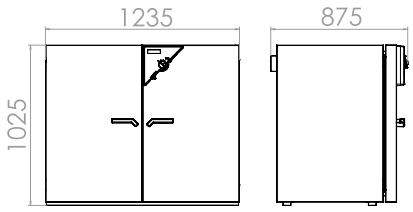
▸ You will find a selction of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

ED 23



ED 400



Series FD Classic.Line | with forced convection

A BINDER FD series 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 23 model

MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Forced convection
- Adjustable exhaust air flap
- Controller with timer functions
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
FD 23	0.7	› go2binder.com/us-FD23

Find all details online
go2binder.com/us-FD-c

TECHNICAL DATA

Description	FD 23
Outer dimensions	
Width net [in]	17.14
Height net [in]	19.5
Depth net [in]	20.49
Internal Dimensions	
Width [in]	8.75
Height [in]	13
Depth [in]	11.82
Measures	
Interior volume [cu.ft.]	0.7
Net weight of the unit (empty) [lbs]	60
permitted load [lbs]	55
Load per rack [lbs]	26
Performance Data Temperature	
Temperature range 5 °C above ambient temperature to [°C]	300
Temperature variation at 150 °C [± K]	2.5
Temperature fluctuation at 150 °C [± K]	0.3
Heating-up time to 150 °C [min]	25
Recovery time after 30 seconds door open at 150 °C [min]	6
Electrical data	
Nominal power (version 120 V) [kW]	0.8
Nominal power (version 230 V) [kW]	0.8
Fixtures	
Number of shelves (std./max.)	2/4

ORDERING INFORMATION [Art. No.]

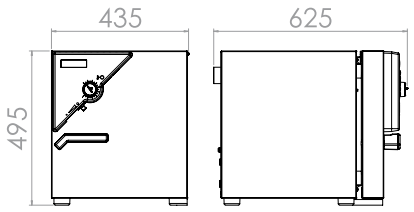
Further details: Go to www.binder-world.com › Search › Enter Article Number

Voltage	Option model	FD 23
230 V 1~ 50/60 Hz	Standard	9010-0194
120 V 1~ 60 Hz	Standard	9010-0196

▸ You will find a selction of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

FD 23



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

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

BF 400 model

MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Adjustable fan speed
- Adjustable exhaust air flap
- Controller with expanded timer functions
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: RS 422

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
FED 400	14.1	› go2binder.com/us-FED400

Find all details online
go2binder.com/us-FED-c

TECHNICAL DATA

Description	FED 400
Outer dimensions	
Width net [in]	48.7
Height net [in]	40.4
Depth net [in]	30.14
Internal Dimensions	
Width [in]	39.4
Height [in]	31.52
Depth [in]	20.09
Measures	
Interior volume [cu.ft.]	14.1
Net weight of the unit (empty) [lbs]	320
permitted load [lbs]	198
Load per rack [lbs]	77
Performance Data Temperature	
Temperature range 5 °C above ambient temperature to [°C]	300
Temperature variation at 150 °C [± K]	3.8
Temperature fluctuation at 150 °C [± K]	0.7
Heating-up time to 150 °C [min]	29
Recovery time after 30 seconds door open at 150 °C [min]	6
Electrical data	
Nominal power (version 208 V) [kW]	3.4
Nominal power (version 400 V) [kW]	3.4
Fixtures	
Number of shelves (std./max.)	2/10

ORDERING INFORMATION [Art. No.]

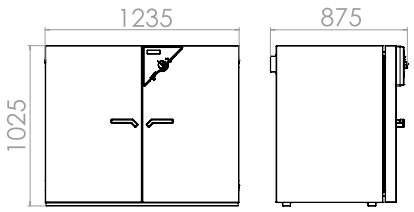
Further details: Go to www.binder-world.com › Search › Enter Article Number

Voltage	Option model	FED 400
400 V 3~ 50/60 Hz	Standard	9010-0216
208 V 3~ 60 Hz	Standard	9010-0217

▸ You will find a selction of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

FED 400



Series FP Classic.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

MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Adjustable fan speed
- Adjustable exhaust air flap
- Controller with time-segment and real-time programming
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: RS 422

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
FP 53	1.9	› go2binder.com/us-FP53
FP 115	4.1	› go2binder.com/us-FP115
FP 240	8.5	› go2binder.com/us-FP240
FP 400	14.1	› go2binder.com/us-FP400
FP 720	25.4	› go2binder.com/us-FP720

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Find all details online
go2binder.com/us-FP-c

TECHNICAL DATA

Description	FP 53	FP 115	FP 240	FP 400	FP 720
Outer dimensions					
Width net [in]	25.02	32.9	40.8	48.7	48.7
Height net [in]	24.43	27.78	32.5	40.4	60.3
Depth net [in]	22.65	25.41	29.35	30.14	34.08
Internal Dimensions					
Width [in]	15.76	23.64	31.52	39.4	39.4
Height [in]	15.76	18.91	23.64	31.52	47.3
Depth [in]	13.4	16.15	20.09	20.09	24.03
Measures					
Interior volume [cu.ft.]	1.9	4.1	8.5	14.1	25.4
Net weight of the unit (empty) [lbs]	97	137	212	320	428
permitted load [lbs]	88	110	154	198	265
Load per rack [lbs]	33	44	66	77	99
Performance Data Temperature					
Temperature range 5 °C above ambient temperature to [°C]	300	300	300	300	300
Temperature variation at 150 °C [± K]	2	1.8	2	2.5	2
Temperature fluctuation at 150 °C [± K]	0.3	0.3	0.3	0.3	0.3
Heating-up time to 150 °C [min]	24	30	27	35	39
Recovery time after 30 seconds door open at 150 °C [min]	5	8	10	17	20
Electrical data					
Nominal power (version 120 V) [kW]	1.2	1.6	–	–	–
Nominal power (version 208 V) [kW]	–	–	2.7	3.4	5
Nominal power (version 230 V) [kW]	1.2	1.6	2.7	–	–
Nominal power (version 400 V) [kW]	–	–	–	3.4	5
Fixtures					
Number of shelves (std./max.)	2/5	2/6	2/7	2/10	2/16

ORDERING INFORMATION [Art. No.]

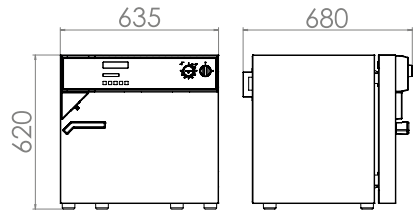
Further details: Go to www.binder-world.com › Search › Enter Article Number

Voltage	Option model	FP 53	FP 115	FP 240	FP 400	FP 720
400 V 3~ 50/60 Hz	Standard	–	–	–	9010-0265	9010-0267
230 V 1~ 50/60 Hz	Standard	9010-0153	9010-0255	9010-0263	–	–
208 V 1~ 60 Hz	Standard	–	–	9010-0264	9010-0266	9010-0268
120 V 1~ 60 Hz	Standard	9010-0175	9010-0262	–	–	–

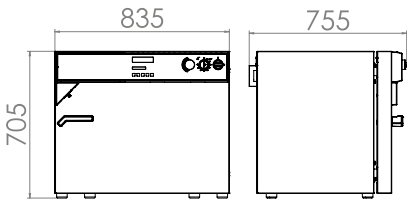
▸ You will find a selction of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

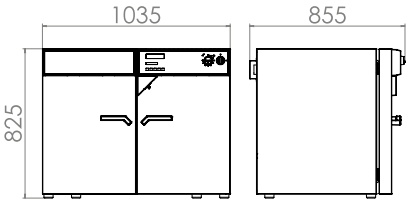
FP 53



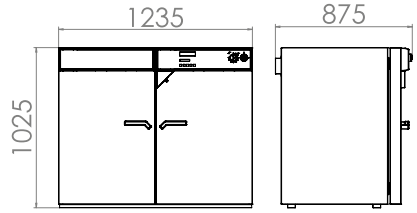
FP 115



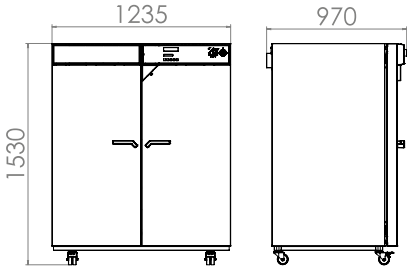
FP 240



FP 400



FP 720



Series M Classic.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 53 model

MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Adjustable fan speed
- Program-controlled ventilation flap
- Color LCD controller with time-segment programming
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: RS 422

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
M 53	1.9	› go2binder.com/us-M53
M 115	4.1	› go2binder.com/us-M115
M 240	8.5	› go2binder.com/us-M240
M 400	14.1	› go2binder.com/us-M400
M 720	25.4	› go2binder.com/us-M720

i

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Find all details online
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TECHNICAL DATA

Description	M 53	M 115	M 240	M 400	M 720
Outer dimensions					
Width net [in]	25.02	32.9	40.8	48.7	48.7
Height net [in]	30.73	34.08	38.81	46.9	66.6
Depth net [in]	22.65	25.41	29.35	31.32	34.08
Internal Dimensions					
Width [in]	15.76	23.64	31.52	39.4	39.4
Height [in]	15.76	18.91	23.64	31.52	47.3
Depth [in]	13.4	16.15	20.09	20.09	24.03
Measures					
Interior volume [cu.ft.]	1.9	4.1	8.5	14.1	25.4
Net weight of the unit (empty) [lbs]	134	196	289	381	448
permitted load [lbs]	88	110	154	198	265
Load per rack [lbs]	33	44	66	77	99
Performance Data Temperature					
Temperature range 5 °C above ambient temperature to [°C]	300	300	300	300	300
Temperature variation at 150 °C [± K]	1.3	1.5	1.5	1.5	1.9
Temperature fluctuation at 150 °C [± K]	0.3	0.3	0.3	0.3	0.3
Heating-up time to 150 °C [min]	15	16	19	18	21
Recovery time after 30 seconds door open at 150 °C [min]	3	3	3	3	3
Electrical data					
Nominal power (version 230 V) [kW]	1.2	1.6	2.7	–	–
Nominal power (version 400 V) [kW]	–	–	–	3.4	5
Fixtures					
Number of shelves (std./max.)	2/5	2/6	2/7	2/10	2/16

ORDERING INFORMATION [Art. No.]

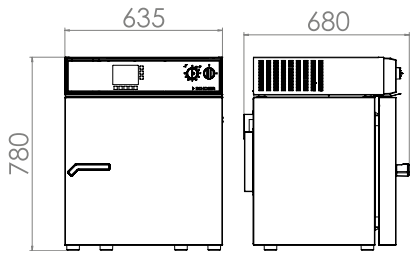
Further details: Go to www.binder-world.com › Search › Enter Article Number

Voltage	Option model	M 53	M 115	M 240	M 400	M 720
400 V 3~ 50/60 Hz	Standard	–	–	–	9010-0204	9010-0205
230 V 1~ 50/60 Hz	Standard	9010-0201	9010-0202	9010-0203	–	–

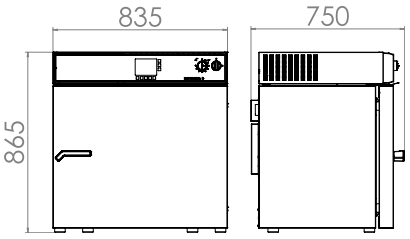
▸ You will find a selction of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

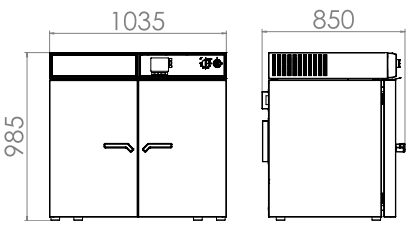
M 53



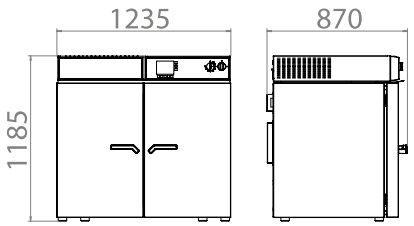
M 115



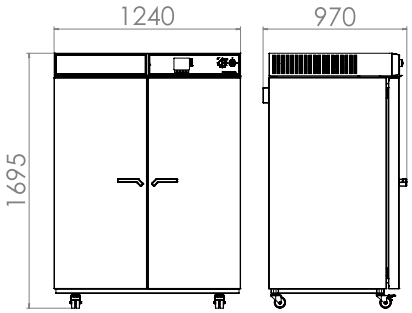
M 240



M 400



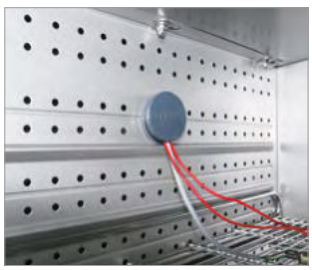
M 720



EXCERPT FROM OPTIONS AND ACCESSORIES

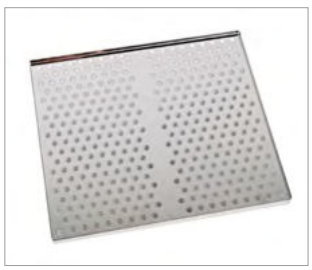
Access port with silicone plug	For introducing external measuring instruments. Large selection of different diameters and positions (left, right, or top) Series E, ED, FD, FED, FP, M
Viewing window and interior lighting	Viewing window in the door with interior lighting for easy samples viewing. Series E, ED, FD, FED, FP, M
Shelf racks	Perforated shelves or shelf racks, chrome-plated or made from stainless steel. Series E, ED, FD, FED, FP, M
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. Series E, ED, FD, FED, FP, M
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. Series E, ED, FD, FED, FP, M

▸ All extras online go2binder.com/us-options

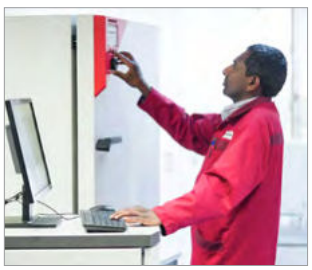


Access port with silicone plug

Viewing window in the door



Shelf



Services

Drying and heating chambers Solid.Line

Series ED-S Solid.Line	Page 40
Series FD-S Solid.Line	Page 42
Options and Accessories	Page 44

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.

PRODUCT SELECTION DRYING AND HEATING CHAMBERS SOLID.LINE

Features	**Series ED-S Solid.Line** › Page 40	**Series FD-S Solid.Line** › Page 42
Model		
Model 56	•	•
Model 115	•	•
General data		
Temperature range 7 °C above ambient temperature to [°C]	250	–
Temperature range 10 °C above ambient temperature to [°C]	–	250
Controller and timer functions		
Controller display	LED	
Ramp function	•	•
Time delayed OFF	•	•
Class 2 independent adjustable temperature safety device	•	•
Temperature alarm, visual	•	•

•Standard equipment

ADVANTAGES AT A GLANCE

EASY OPERATION OF THE UNIT

Series ED-S, FD-S

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

ADJUSTABLE EXHAUST AIR FLAP ABOVE THE UNIT

Series ED-S, FD-S

For setting the air change rates.

COMPLETELY HOMOGENEOUS TEMPERATURE DISTRIBUTION

Series FD-S

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

Series ED-S Solid.Line | with gravity 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

MAIN FEATURES

- Temperature range: ambient temperature +7 °C to 250 °C
- APT.line™ preheating chamber technology
- Natural convection
- Adjustable exhaust air flap
- Controller with timer function
- 1 chrome-plated rack
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
Series ED-S Solid.Line	2.2	› go2binder.com/us-ED-S56
	4.2	› go2binder.com/us-ED-S115

Find all details online
go2binder.com/us-ED-S

TECHNICAL DATA

Description	ED-S 56	ED-S 115
Outer dimensions		
Width net [in]	23.44	29.35
Height net [in]	24.63	28.96
Depth net [in]	20.69	22.26
Internal Dimensions		
Width [in]	15.76	21.67
Height [in]	17.34	21.67
Depth [in]	13.79	15.37
Measures		
Interior volume [cu.ft.]	2.2	4.2
Net weight of the unit (empty) [lbs]	84	119
permitted load [lbs]	66	165
Load per rack [lbs]	33	44
Performance Data Temperature		
Temperature range 7 °C above ambient temperature to [°C]	250	250
Temperature variation at 150 °C [± K]	2.8	2.8
Temperature fluctuation at 150 °C [± K]	0.8	0.8
Heating-up time to 150 °C [min]	60	55
Electrical data		
Nominal power (version 120V) [kW]	1.05	1.25
Nominal power (version 230V) [kW]	1.05	1.25
Environment-specific data		
Energy consumption at 150 °C [Wh/h]	180	310
Fixtures		
Number of shelves (std./max.)	1/3	1/5

ORDERING INFORMATION [Art. No.]

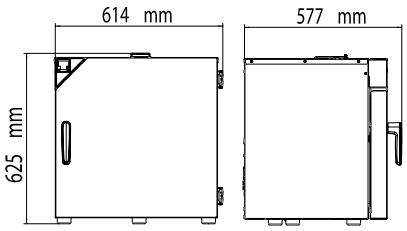
Further details: Go to www.binder-world.com › Search › Enter Article Number

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

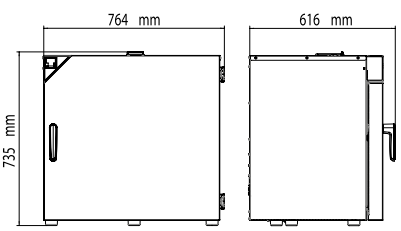
▸ You will find a selction of options, accessories and services suitable for each product on page 44

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

Series ED-S Solid.Line



Series ED-S Solid.Line



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

MAIN FEATURES

- Temperature range: ambient temperature +10 °C to 250 °C
- APT.line™ preheating chamber technology
- Forced convection
- Adjustable exhaust air flap
- Controller with timer function
- 1 chrome-plated rack
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm

AVAILABLE SIZES

Model	Interior volume [cu. ft.]	Online data sheets
Series FD-S Solid.Line	1.9	› go2binder.com/us-FD-S56
	3.7	› go2binder.com/us-FD-S115

Find all details online
go2binder.com/us-FD-S

TECHNICAL DATA

Description	FD-S 56	FD-S 115
Outer dimensions		
Width net [in]	23.44	29.35
Height net [in]	24.63	28.96
Depth net [in]	20.69	22.26
Internal Dimensions		
Width [in]	15.76	21.67
Height [in]	17.34	21.67
Depth [in]	12.21	13.79
Measures		
Interior volume [cu.ft.]	1.9	3.7
Net weight of the unit (empty) [lbs]	84	119
permitted load [lbs]	66	165
Load per rack [lbs]	33	44
Performance Data Temperature		
Temperature range 10 °C above ambient temperature to [°C]	250	250
Temperature variation at 150 °C [± K]	2.6	2.4
Temperature fluctuation at 150 °C [± K]	0.5	0.5
Heating-up time to 150 °C [min]	20	22
Air change data		
Air change (approx.) at 100 °C [x/h]	80	32
Electrical data		
Nominal power (version 120V) [kW]	1.1	1.3
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.]

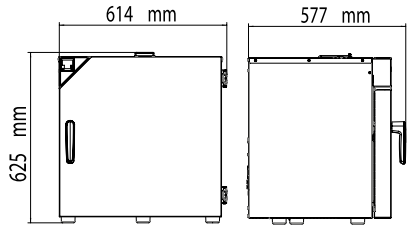
Further details: Go to www.binder-world.com › Search › Enter Article Number

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

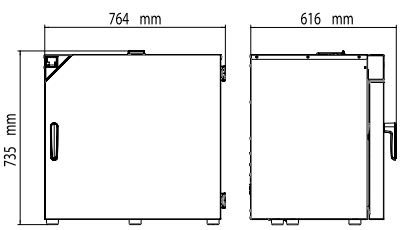
▸ You will find a selction of options, accessories and services suitable for each product on page 44

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

Series FD-S Solid.Line



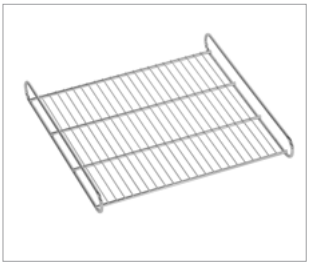
Series FD-S Solid.Line



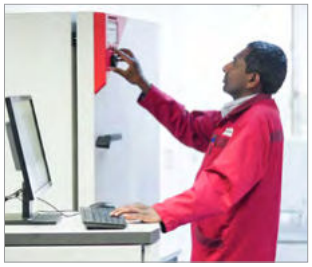
EXCERPT FROM OPTIONS AND ACCESSORIES

Shelf racks	Chromed shelves. Series ED-S, FD-S
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. Series ED-S, FD-S
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. Series ED-S, FD-S

▸ All extras online go2binder.com/us-options



Shelves



Services

BINDER products

- CO_2 incubators
- Incubators
- Refrigerated incubators
- Growth chambers
- Ultralow temperature freezers
- Drying and heating chambers
- Safety drying chambers
- Vacuum drying chambers
- Humidity test chambers
- Dynamic climate chambers

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