





































# Drying and heating chambers Classic.Line

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Options and Accessories	Page 35

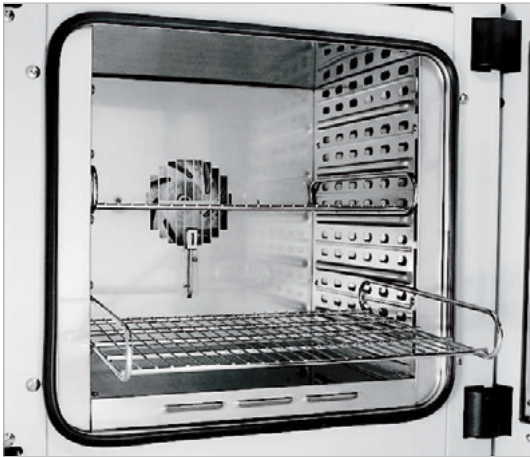
With natural or forced convection, all BINDER drying and heating chambers offer first-rate quality and process reliability. With its wide temperature range from 5 °C above ambient temperature to 300 °C, the heating chamber can be used in all applications. Short heating-up times and large power reserves 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	<b>E</b> › Page 20	<b>ED</b> › Page 22	<b>FD</b> › Page 25	<b>FED</b> › Page 27	<b>FP</b> › Page 29	<b>M</b> › Page 32
<b>Model</b>						
Model 23	–	•	•	–	–	–
Model 28	•	–	–	–	–	–
Model 53	–	–	–	–	•	•
Model 115	–	–	–	–	•	•
Model 240	–	–	–	–	•	•
Model 400	–	•	–	•	•	•
Model 720	–	•	–	•	•	•
<b>General data</b>						
Temperature range [°C]	60...230	–	–	–	–	–
Temperature range 5 °C above ambient temperature to [°C]	–	300	300	300	300	300
RS 422 interface	–	–	•	•	•	•
Natural convection	•	•	–	–	–	–
Forced convection	–	–	•	•	•	•
<b>Controller and timer functions</b>						
Controller display	LED	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, acoustic	–	–	–	–	–	•
Temperature alarm, visual	–	•	•	•	•	•

•Standard equipment

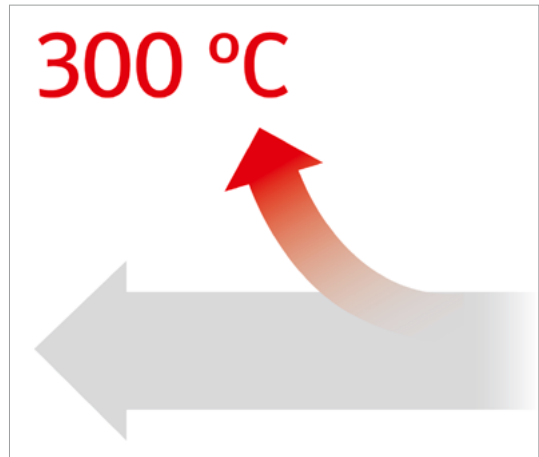
## ADVANTAGES AT A GLANCE



### CONVENIENT WORK ENVIRONMENT

Series E, FD, FED, FP, M

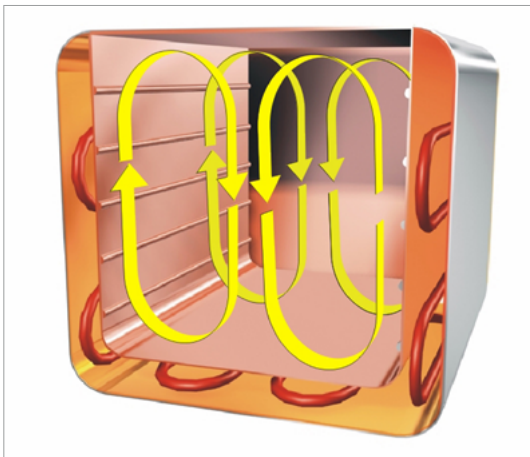
BINDER APT.line™ preheating chamber technology ensures long-term operational stability even under full load.



### BROAD RANGE OF APPLICATIONS

Series ED, FD, FED, FP, M

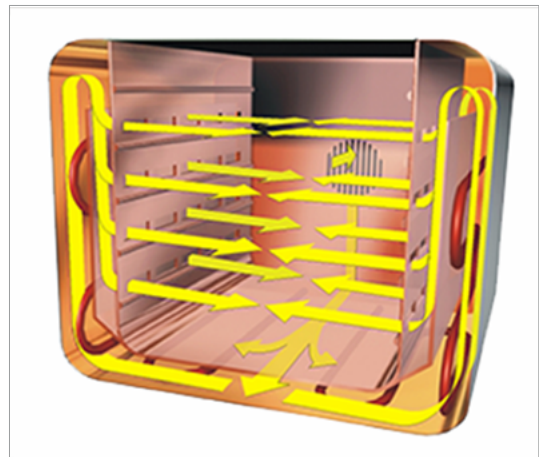
Many different applications can take advantage of the wide temperature range from 5 °C above ambient temperature to 300 °C. The FP and M series also impress with their adjustable air change rates and large power reserves.



### HOMOGENEOUS TEMPERATURE CONDITIONS WITH NATURAL CONVECTION

Series E, ED

Gentle temperature distribution with APT.line™ preheating chamber technology.



### HOMOGENEOUS TEMPERATURE CONDITIONS WITH FORCED CONVECTION

Series FD, FED, FP, M

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

## Series E | 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 [L]	Online data sheets
E 28	28	› <a href="https://go2binder.com/en-E28">go2binder.com/en-E28</a>



Find all details online  
[go2binder.com/en-E-c](https://go2binder.com/en-E-c)

## TECHNICAL DATA

Description	E 28
<b>Measures - Outer dimensions</b>	
Width net [mm]	580
Height net [mm]	405
Depth net [mm]	425
<b>Measures - Internal Dimensions</b>	
Width [mm]	400
Height [mm]	280
Depth [mm]	250
<b>Measures</b>	
Interior volume [L]	28
Net weight of the unit (empty) [kg]	22
permitted load [kg]	25
Load per rack [kg]	10
<b>Performance Data Temperature</b>	
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
<b>Electrical data</b>	
Nominal power (Version 120 V) [kW]	0.8
Nominal power (Version 230 V) [kW]	0.8
<b>Fixtures</b>	
Number of shelves (std./max.)	2/4

## ORDERING INFORMATION [Art. No.]

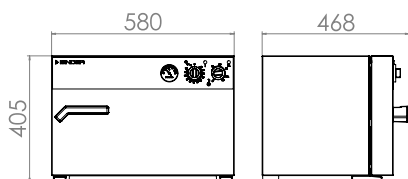
**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

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 selection of options, accessories and services suitable for each product on page 35

## DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

E 28



## Series ED | 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 720 model


### MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Free 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 [L]	Online data sheets
ED 23	20	› <a href="https://go2binder.com/en-ED23">go2binder.com/en-ED23</a>
ED 400	400	› <a href="https://go2binder.com/en-ED400">go2binder.com/en-ED400</a>
ED 720	720	› <a href="https://go2binder.com/en-ED720">go2binder.com/en-ED720</a>

› Other Avantgarde.Line models › page 3

 Find all details online  
[go2binder.com/en-ED-c](https://go2binder.com/en-ED-c)

## TECHNICAL DATA

Description	ED 23	ED 400	ED 720
<b>Measures - Outer dimensions</b>			
Width net [mm]	435	1235	1235
Height net [mm]	495	1025	1530
Depth net [mm]	520	765	865
<b>Measures - Internal Dimensions</b>			
Width [mm]	222	1000	1000
Height [mm]	330	800	1200
Depth [mm]	300	520	620
<b>Measures</b>			
Interior volume [L]	20	400	720
Net weight of the unit (empty) [kg]	27	125	174
permitted load [kg]	25	90	120
Load per rack [kg]	12	35	45
<b>Performance Data Temperature</b>			
Temperature range 5 °C above ambient temperature to [°C]	300	300	300
Temperature variation at 150 °C [± K]	2.8	3	3.6
Temperature fluctuation at 150 °C [± K]	0.5	0.5	0.5
Heating-up time to 150 °C [min]	28	71	84
Recovery time after 30 seconds door open at 150 °C [min]	28	31	34
<b>Electrical data</b>			
Nominal power (Version 120 V) [kW]	0.8	–	–
Nominal power (Version 208 V) [kW]	–	3.4	5
Nominal power (Version 230 V) [kW]	0.8	–	–
Nominal power (Version 400 V) [kW]	–	3.4	5
<b>Fixtures</b>			
Number of shelves (std./max.)	2/4	2/10	2/16

## ORDERING INFORMATION [Art. No.]

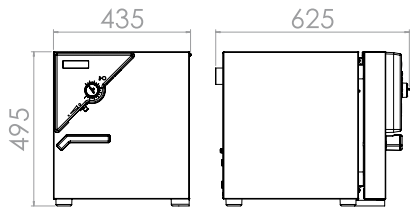
**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

Voltage	Option model	ED 23	ED 400	ED 720
400 V 3~ 50/60 Hz	with RS 422	–	9010-0075	9010-0076
	Standard	9010-0190	–	–
230 V 1~ 50/60 Hz	with RS 422	9010-0191	–	–
	Standard	9010-0192	–	–
208 V 3~ 60 Hz	with RS 422	–	9010-0168	9010-0169
	Standard	9010-0192	–	–
120 V 1~ 60 Hz	with RS 422	9010-0193	–	–
	Standard	9010-0192	–	–

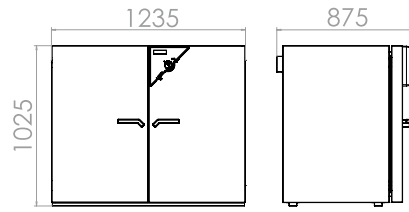
► You will find a selection of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

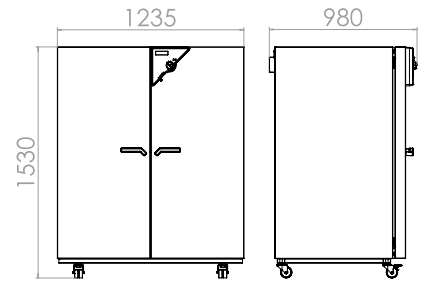
ED 23



ED 400



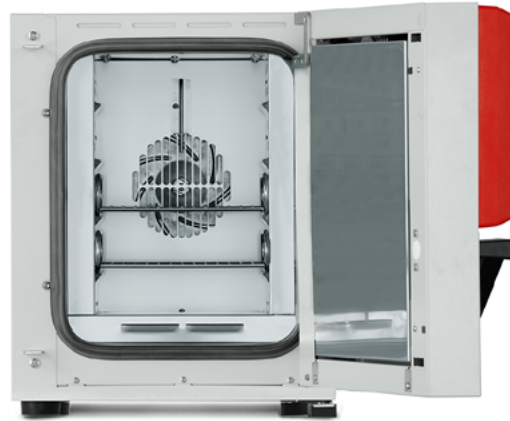
ED 720





## Series FD | 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 [L]	Online data sheets
FD 23	20	› <a href="https://go2binder.com/en-FD23">go2binder.com/en-FD23</a>

› Other Avantgarde.Line models › page 3



Find all details online  
[go2binder.com/en-FD-c](https://go2binder.com/en-FD-c)

## TECHNICAL DATA

Description	FD 23
<b>Measures - Outer dimensions</b>	
Width net [mm]	435
Height net [mm]	495
Depth net [mm]	520
<b>Measures - Internal Dimensions</b>	
Width [mm]	222
Height [mm]	330
Depth [mm]	300
<b>Measures</b>	
Interior volume [L]	20
Net weight of the unit (empty) [kg]	27
permitted load [kg]	25
Load per rack [kg]	12
<b>Performance Data Temperature</b>	
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
<b>Electrical data</b>	
Nominal power (Version 120 V) [kW]	0.8
Nominal power (Version 230 V) [kW]	0.8
<b>Fixtures</b>	
Number of shelves (std./max.)	2/4

## ORDERING INFORMATION [Art. No.]

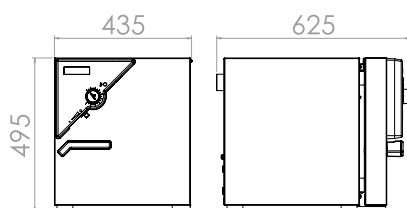
**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

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 selection of options, accessories and services suitable for each product on page 35

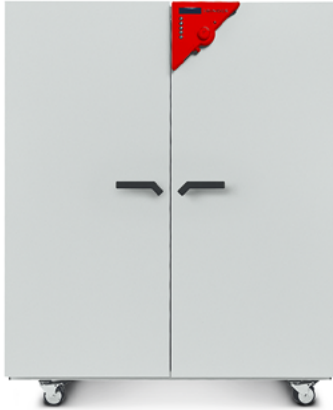
## DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

FD 23



## Series FED | 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 an adjustable fan, temperature and convection conditions are easily controlled.



FED 720 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 [L]	Online data sheets
FED 400	400	› <a href="https://go2binder.com/en-FED400">go2binder.com/en-FED400</a>
FED 720	720	› <a href="https://go2binder.com/en-FED720">go2binder.com/en-FED720</a>

› Other Avantgarde.Line models › page 3



Find all details online  
[go2binder.com/en-FED-c](https://go2binder.com/en-FED-c)

## TECHNICAL DATA

Description	FED 400	FED 720
<b>Measures - Outer dimensions</b>		
Width net [mm]	1235	1235
Height net [mm]	1025	1530
Depth net [mm]	765	865
<b>Measures - Internal Dimensions</b>		
Width [mm]	1000	1000
Height [mm]	800	1200
Depth [mm]	510	610
<b>Measures</b>		
Interior volume [L]	400	720
Net weight of the unit (empty) [kg]	145	195
permitted load [kg]	90	120
Load per rack [kg]	35	45
<b>Performance Data Temperature</b>		
Temperature range 5 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	3.8	3
Temperature fluctuation at 150 °C [± K]	0.7	0.3
Heating-up time to 150 °C [min]	29	29
Recovery time after 30 seconds door open at 150 °C [min]	6	8
<b>Electrical data</b>		
Nominal power (Version 208 V) [kW]	3.4	5
Nominal power (Version 400 V) [kW]	3.4	5
<b>Fixtures</b>		
Number of shelves (std./max.)	2/10	2/16

## ORDERING INFORMATION [Art. No.]

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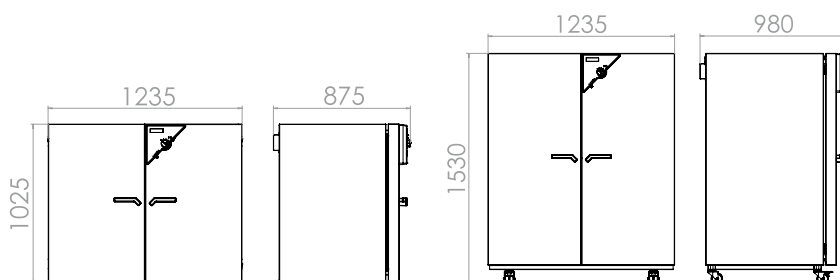
Voltage	Option model	FED 400	FED 720
400 V 3~ 50/60 Hz	Standard	9010-0216	9010-0218
208 V 3~ 60 Hz	Standard	9010-0217	9010-0219

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

## DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

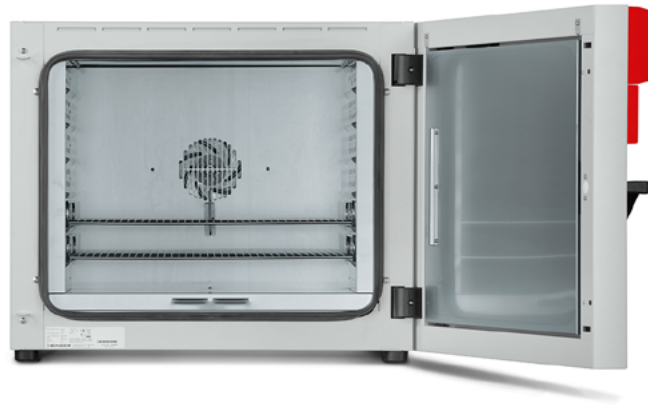
FED 400

FED 720



## Series FP | 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 [L]	Online data sheets
FP 53	53	› <a href="https://go2binder.com/en-FP53">go2binder.com/en-FP53</a>
FP 115	115	› <a href="https://go2binder.com/en-FP115">go2binder.com/en-FP115</a>
FP 240	240	› <a href="https://go2binder.com/en-FP240">go2binder.com/en-FP240</a>
FP 400	400	› <a href="https://go2binder.com/en-FP400">go2binder.com/en-FP400</a>
FP 720	720	› <a href="https://go2binder.com/en-FP720">go2binder.com/en-FP720</a>

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## TECHNICAL DATA

Description	FP 53	FP 115	FP 240	FP 400	FP 720
<b>Measures - Outer dimensions</b>					
Width net [mm]	635	835	1035	1235	1235
Height net [mm]	620	705	825	1025	1530
Depth net [mm]	575	645	745	765	865
<b>Measures - Internal Dimensions</b>					
Width [mm]	400	600	800	1000	1000
Height [mm]	400	480	600	800	1200
Depth [mm]	340	410	510	510	610
<b>Measures</b>					
Interior volume [L]	53	115	240	400	720
Net weight of the unit (empty) [kg]	44	62	96	145	194
permitted load [kg]	40	50	70	90	120
Load per rack [kg]	15	20	30	35	45
<b>Performance Data Temperature</b>					
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
<b>Electrical data</b>					
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
<b>Fixtures</b>					
Number of shelves (std./max.)	2/5	2/6	2/7	2/10	2/16

## ORDERING INFORMATION [Art. No.]

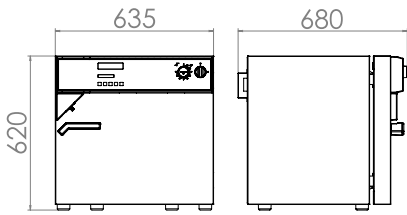
**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

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	–	–	–

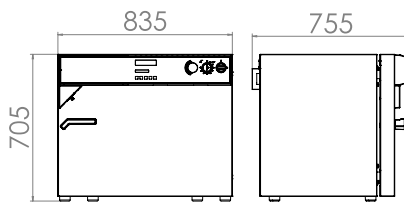
► You will find a selection of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

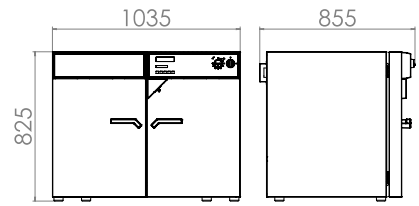
FP 53



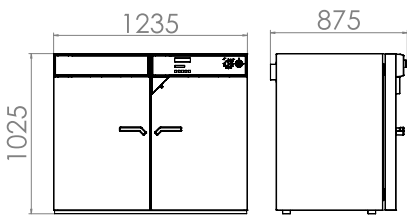
FP 115



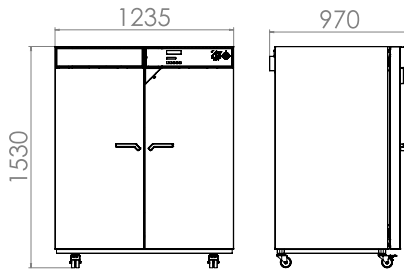
FP 240



FP 400



FP 720



## Series M | 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 [L]	Online data sheets
M 53	53	<a href="https://go2binder.com/en-M53">go2binder.com/en-M53</a>
M 115	115	<a href="https://go2binder.com/en-M115">go2binder.com/en-M115</a>
M 240	240	<a href="https://go2binder.com/en-M240">go2binder.com/en-M240</a>
M 400	400	<a href="https://go2binder.com/en-M400">go2binder.com/en-M400</a>
M 720	720	<a href="https://go2binder.com/en-M720">go2binder.com/en-M720</a>

► Other Avantgarde.Line models ► page 3

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## TECHNICAL DATA

Description	M 53	M 115	M 240	M 400	M 720
<b>Measures - Outer dimensions</b>					
Width net [mm]	635	835	1035	1235	1235
Height net [mm]	780	865	985	1190	1690
Depth net [mm]	575	645	745	795	865
<b>Measures - Internal Dimensions</b>					
Width [mm]	400	600	800	1000	1000
Height [mm]	400	480	600	800	1200
Depth [mm]	340	410	510	510	610
<b>Measures</b>					
Interior volume [L]	53	115	240	400	720
Net weight of the unit (empty) [kg]	61	89	131	173	203
permitted load [kg]	40	50	70	90	120
Load per rack [kg]	15	20	30	35	45
<b>Performance Data Temperature</b>					
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
<b>Electrical data</b>					
Nominal power (Version 230 V) [kW]	1.2	1.6	2.7	–	–
Nominal power (Version 400 V) [kW]	–	–	–	3.4	5
<b>Fixtures</b>					
Number of shelves (std./max.)	2/5	2/6	2/7	2/10	2/16

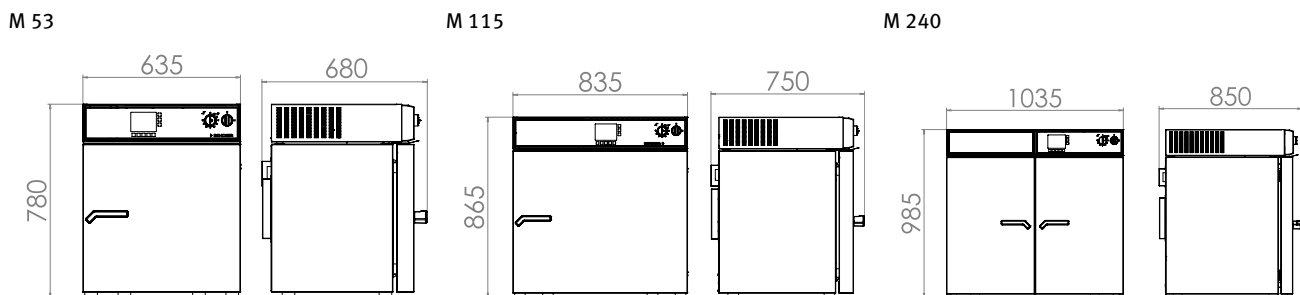
## ORDERING INFORMATION [Art. No.]

**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

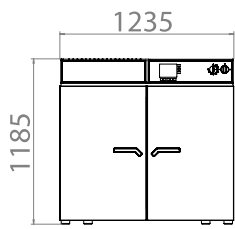
Voltage	Option model	M 53	M 115	M 240	M 400	M 720
400 V 3~ 50/60 Hz	Standard	–	–	–	9010-0204	9010-0205
230 V 1~ 50/60 Hz	Standard	9010-0201	9010-0202	9010-0203	–	–

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

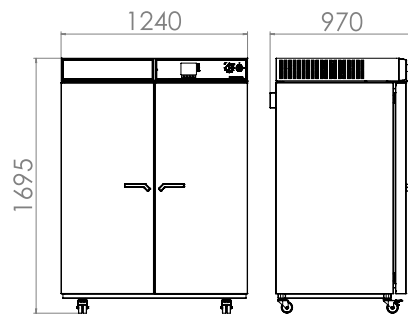
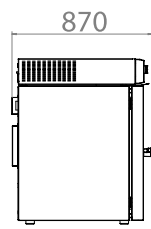
## DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]



M 400



M 720



## EXCERPT FROM OPTIONS AND ACCESSORIES

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### 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, FP, M

---

### Viewing window and interior lighting

Viewing window in the door with interior lighting for easy samples viewing.

Series 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/en-options](http://go2binder.com/en-options)

---



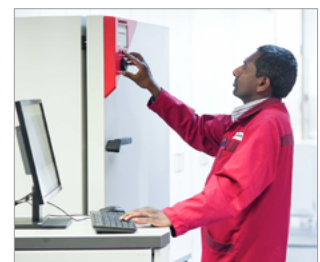
Access port with silicone plug



Viewing window in the door



Shelf



Services

# BINDER products

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Incubators

Cooling incubators

Growth chambers

Ultralow temperature freezers

Drying and heating chambers

Safety drying chambers

Vacuum drying chambers

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