

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



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

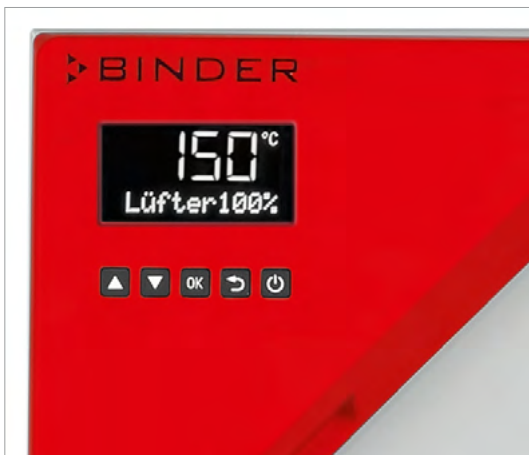
The USB connector, standard on the ED, FD and FED, provides easy data logging. Ethernet connectivity is standard on FED and an option for ED and FD.



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 |



TIPS & TRICKS

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- Tips & Tricks: › go2binder.com/us-tips-tricks
 Case Studies: › go2binder.com/us-case-studies

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.]

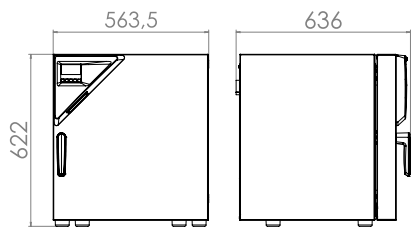
Further details: Go to www.binder-world.com > Search > Enter Article Number

| 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 | – | – |

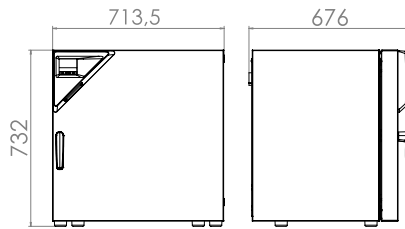
► You will find a selection of options, accessories and services suitable for each product on page 15

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

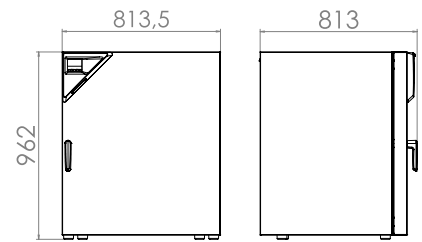
ED 56



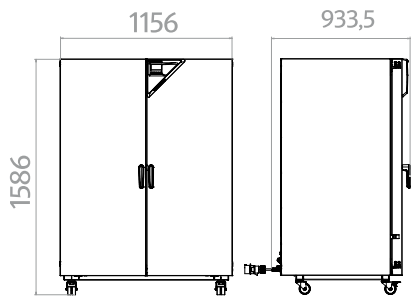
ED 115



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



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

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.]

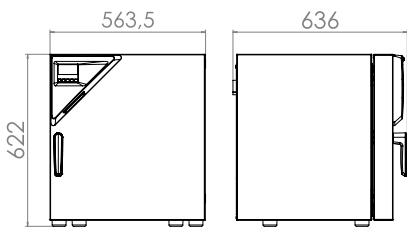
Further details: Go to www.binder-world.com > Search > Enter Article Number

| 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 | – | – |

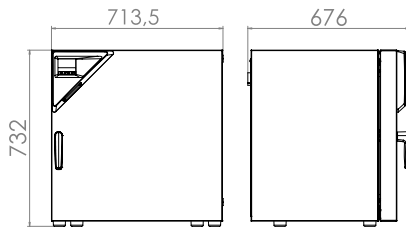
► You will find a selection of options, accessories and services suitable for each product on page 15

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

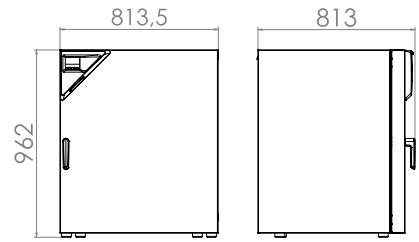
FD 56



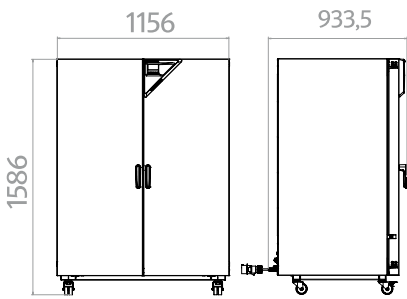
FD 115



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.]

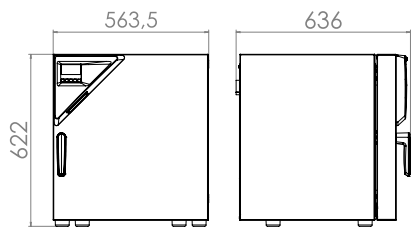
Further details: Go to www.binder-world.com > Search > Enter Article Number

| 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 | – | – |

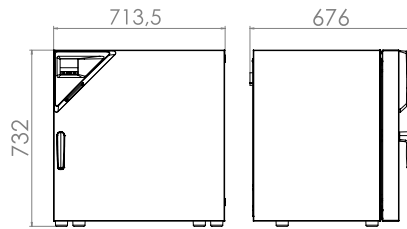
► You will find a selection of options, accessories and services suitable for each product on page 15

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

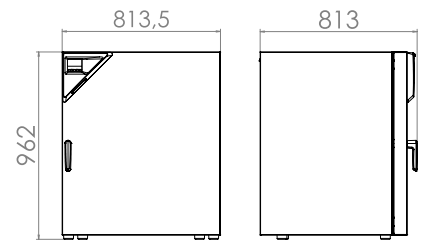
FED 56



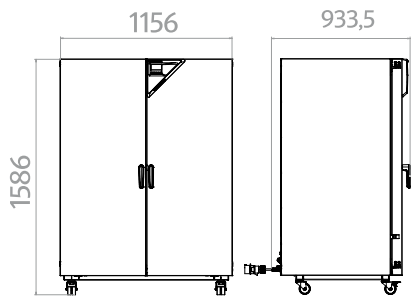
FED 115



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

| | |
|-------------------------|---------|
| 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 |
| Options and Accessories | Page 35 |

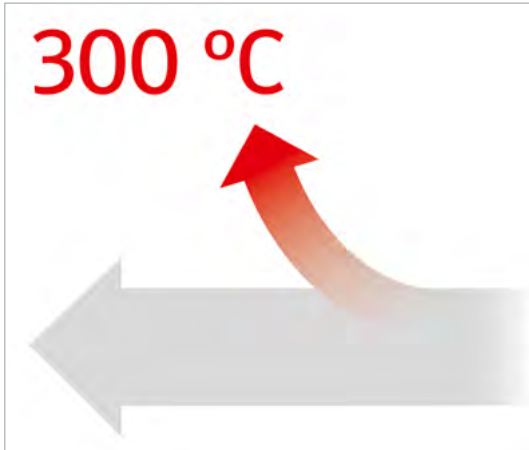
With gravity or forced convection, all BINDER drying and heating chambers offer first-rate quality and process reliability. With its wide temperature range from 5 °C above ambient temperature to 300 °C, the heating chamber can be used in all applications. Short heating-up times and large power reserves 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

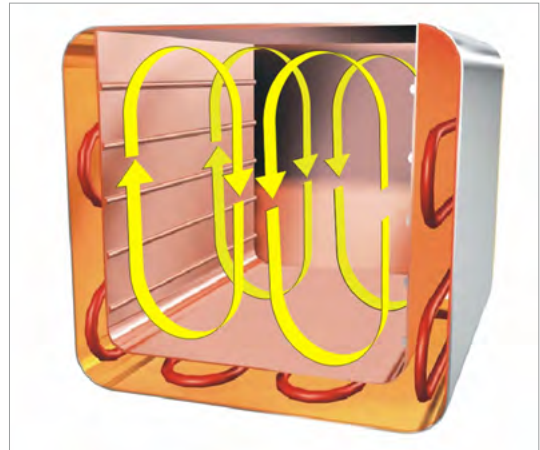
ADVANTAGES AT A GLANCE



BROAD RANGE OF APPLICATIONS

Series ED, FD, FED, FP, M

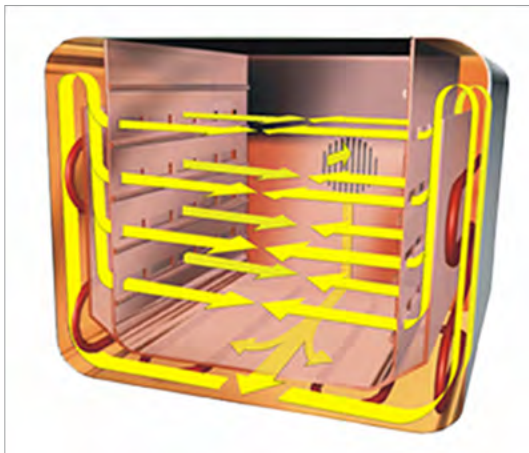
Many different applications can take advantage of the wide temperature range from 5 °C above ambient temperature to 300 °C. The FP and M series also impress with their adjustable air change rates and large power reserves.



HOMOGENEOUS TEMPERATURE CONDITIONS WITH GRAVITY CONVECTION

Series ED

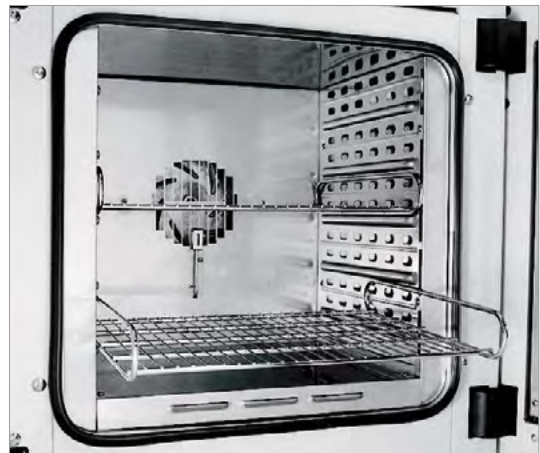
Gentle temperature distribution provided by the APT.line™ preheating chamber technology.



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 |

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.]

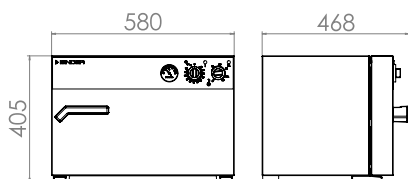
Further details: Go to www.binder-world.com > Search > Enter Article Number

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

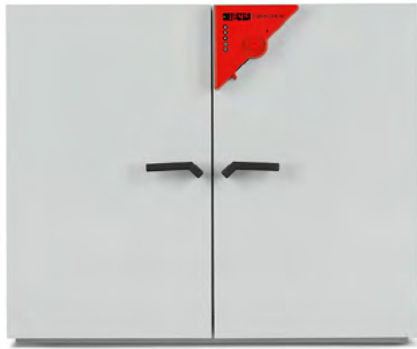
DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

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 |

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.]

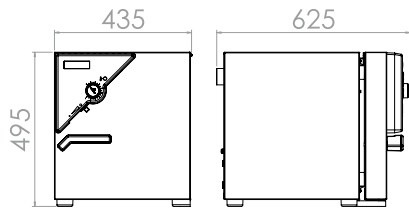
Further details: Go to www.binder-world.com > Search > Enter Article Number

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

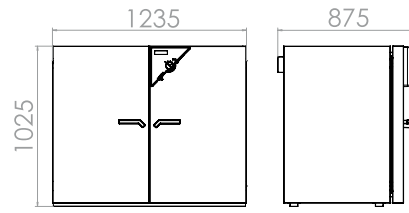
► You will find a selection of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

ED 23



ED 400



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.]

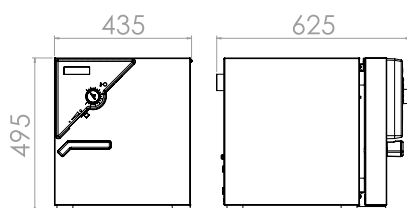
Further details: Go to www.binder-world.com > Search > Enter Article Number

| 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 selection 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 an 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.]

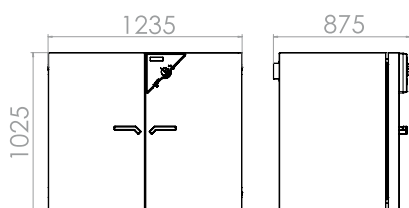
Further details: Go to www.binder-world.com > Search > Enter Article Number

| 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 selection 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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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.]

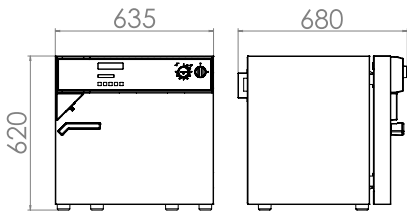
Further details: Go to www.binder-world.com > Search > Enter Article Number

| 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 | – | – | – |

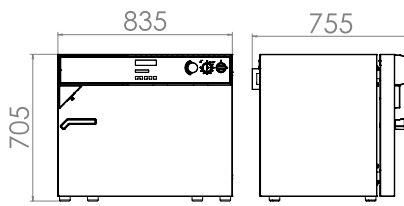
► You will find a selection of options, accessories and services suitable for each product on page 35

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]

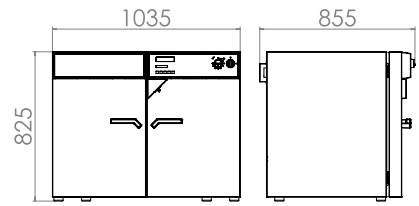
FP 53



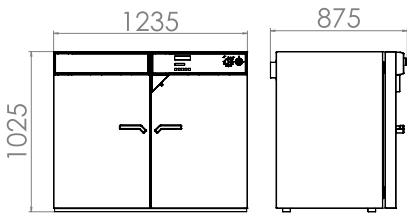
FP 115



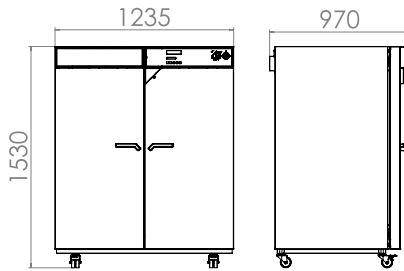
FP 240



FP 400



FP 720



Series M 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 |

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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 |

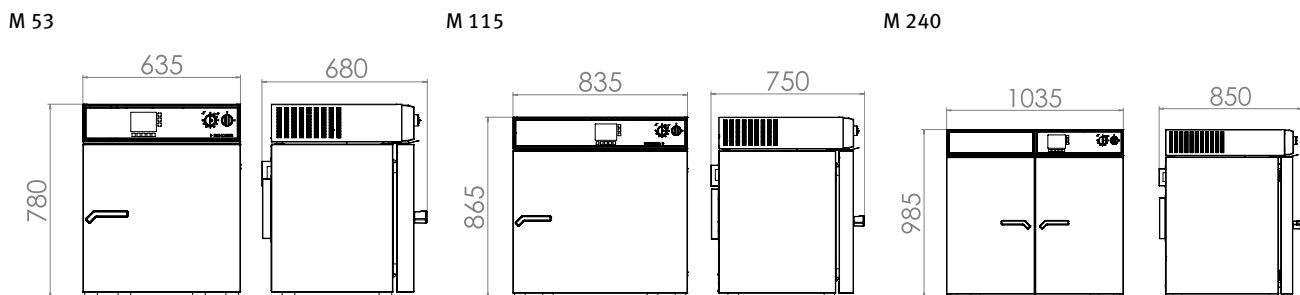
ORDERING INFORMATION [Art. No.]

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

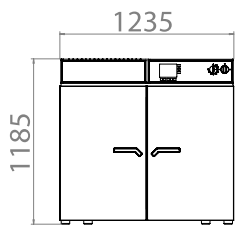
| Voltage | Option model | M 53 | M 115 | M 240 | M 400 | M 720 |
|-------------------|--------------|-----------|-----------|-----------|-----------|-----------|
| 400 V 3~ 50/60 Hz | Standard | – | – | – | 9010-0204 | 9010-0205 |
| 230 V 1~ 50/60 Hz | Standard | 9010-0201 | 9010-0202 | 9010-0203 |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

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

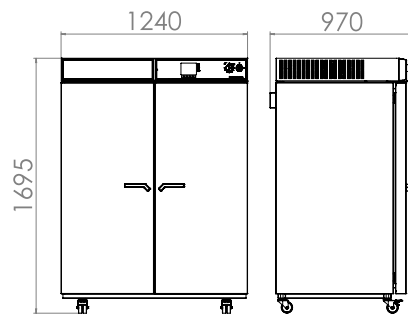
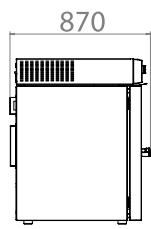
DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]



M 400



M 720



EXCERPT FROM OPTIONS AND ACCESSORIES

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



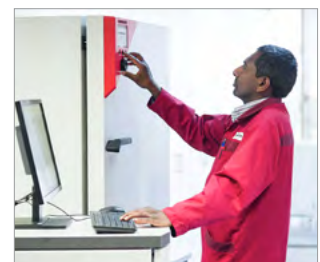
Access port with silicone plug



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 <small>› Page 40</small> | Series FD-S Solid.Line <small>› Page 42</small> |
|---|--|--|
| 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 | 2.2 | › go2binder.com/us-ED-S56 |
| Solid.Line | 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

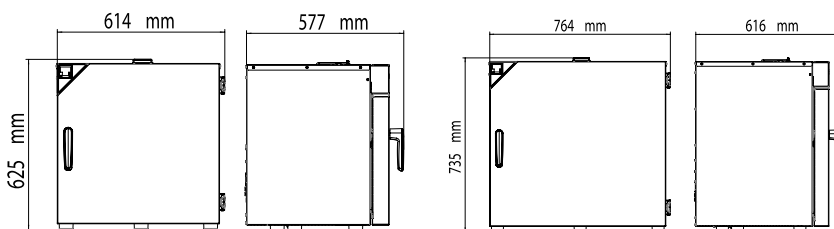
| Voltage | Option model | ED-S 56 | ED-S 115 |
|-------------------|--------------|-----------|-----------|
| 230 V 1~ 50/60 Hz | Standard | 9090-0014 | 9090-0020 |
| 120 V 1~ 60 Hz | Standard | 9090-0015 | 9090-0021 |

> You will find a selection 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 | 1.9 | › go2binder.com/us-FD-S56 |
| Solid.Line | 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

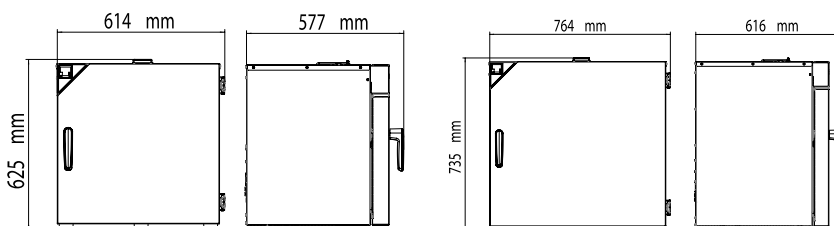
| Voltage | Option model | FD-S 56 | FD-S 115 |
|-------------------|--------------|-----------|-----------|
| 230 V 1~ 50/60 Hz | Standard | 9090-0018 | 9090-0024 |
| 120 V 1~ 60 Hz | Standard | 9090-0019 | 9090-0025 |

► You will find a selection 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

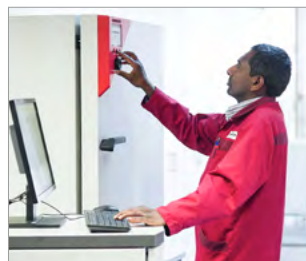
BINDER INDIVIDUAL

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

CO₂ incubators

Incubators

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Growth chambers

Ultralow temperature freezers

Drying and heating chambers

Safety drying chambers

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Humidity test chambers

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