

## 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

### BENEFITS

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

### MAIN FEATURES

- Temperature range: +5 °C above ambient temperature 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-CL">go2binder.com/en-M53-CL</a>
M 115	115	› <a href="https://go2binder.com/en-M115-CL">go2binder.com/en-M115-CL</a>
M 240	240	› <a href="https://go2binder.com/en-M240-CL">go2binder.com/en-M240-CL</a>
M 400	400	› <a href="https://go2binder.com/en-M400-CL">go2binder.com/en-M400-CL</a>
M 720	720	› <a href="https://go2binder.com/en-M720-CL">go2binder.com/en-M720-CL</a>



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

## OPTIONAL EQUIPMENT

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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)



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**Viewing window and interior lighting**

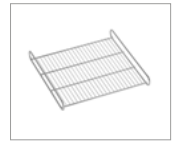
Viewing window in the door with interior lighting for easy samples viewing.



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**Shelf racks**

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



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**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.



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**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.



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► All extras online [go2binder.com/en-options](http://go2binder.com/en-options)

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## TECHNICAL DATA

Description	M 53	M 115	M 240	M 400	M 720
<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
Wall clearance back [mm]	160	160	160	160	160
Wall clearance sidewise [mm]	100	100	100	100	100
<b>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>Housing dimensions not incl. fittings and connections</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>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	2.5	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>Tabellen</b>					
Air change (approx.) at 150 °C [x/h]	192	96	60	54	36
<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

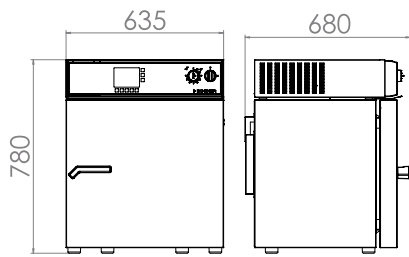
## ORDERING INFORMATION [Art. No.]

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

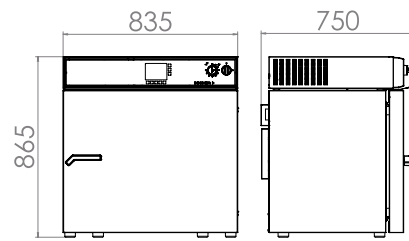
Voltage	Option model	M 53	M 115	M 240	M 400	M 720
400 V 3~ 50/60 Hz	Standard	–	–	–	9010-0204	9010-0205
230 V 1~ 50/60 Hz	Standard	9010-0201	9010-0202	9010-0203	–	–

**DIMENSIONS incl. fittings and connections [mm]**

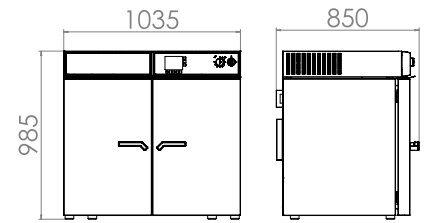
M 53



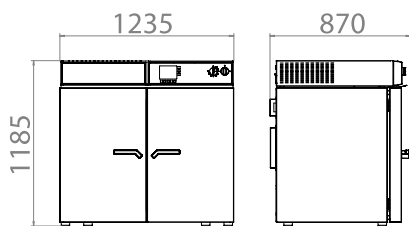
M 115



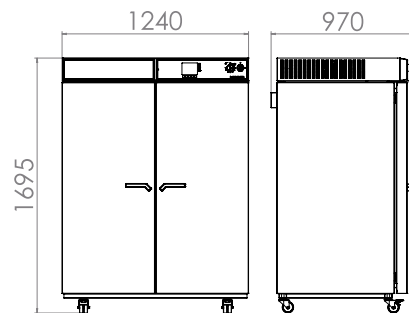
M 240



M 400



M 720



**ORDERING INFORMATION OPTIONS**

Designation	Description	M	M	M	M	M	Art. No.
		53	115	240	400	720	
	back						
	10 mm	•	•	•	•	•	8012-1287
	30 mm	•	•	•	•	•	8012-1371
	50 mm	•	•	•	•	•	8012-1387
	left						
	10 mm	•	•	•	•	•	8012-1280
	30 mm	•	•	•	•	•	8012-1363
	50 mm	•	•	•	•	•	8012-1379
<b>Access port with silicone plug</b>	100 mm	•	•	•	•	•	8012-1511
	right						
	10 mm	•	•	•	•	•	8012-1273
	30 mm	•	•	•	•	•	8012-1358
	50 mm	•	•	•	•	•	8012-1375
	100 mm	•	•	•	•	•	8012-1508
	top						
	10 mm	•	•	•	•	•	8012-1266
	30 mm	•	•	•	•	•	8012-1367
	50 mm	•	•	•	•	•	8012-1383
<b>Analog output 4-20 mA</b>	for temperature values (output not adjustable)	•	•	•	•	•	8012-0480
<b>Calibration certificate, expanded</b>	for temperature; for extending the measurement in center of chamber to include another test temperature	•	•	•	•	•	8012-1123

Designation	Description	M 53	M 115	M 240	M 400	M 720	Art. No.
<b>Calibration certificate, temperature</b>	for temperature, measurement in center of chamber at specified temperature	•	•	•	•	•	8012-1142
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	•	8012-1601
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	•	8012-1580
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	•	8012-1559
<b>Door gasket</b>	made of FKM, silicone-free	•	–	–	–	–	8012-1307
		–	•	–	–	–	8012-1308
		–	–	•	–	–	8012-1309
		–	–	–	•	–	8012-1312
		–	–	–	–	•	8012-1315
<b>Door lock</b>	lockable door handle	•	•	–	–	–	8012-1251
		–	–	•	•	•	8012-1256
<b>Gas-tight option model</b>	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	•	•	–	–	–	8012-0181
<b>HEPA air filter</b>	On fresh air supply for unit; filter classification H14 (acc. to EN 1822-1:2009, > 99.995% at 0.3 µm); not in conjunction with reinforced heating output, reinforced fan	•	•	•	•	•	8012-0222
<b>Inert gas connection</b>	with gas inlet and outlet, Ø 10 mm, incl. additional measures to provide the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	•	•	–	–	–	8012-1545
<b>Inner chamber, reinforced</b>	including 2 reinforced racks	–	–	•	–	–	8012-0341
	max. total load 250 kg	–	–	–	•	–	8012-0342
		–	–	–	–	•	8012-0343
<b>Lockable controller keyboard</b>	Lockable controller keyboard with key-operated switch	•	•	•	•	•	8012-0529
<b>Measurement of air exchange rate</b>	in accordance with ASTM D5374, definition and protocol according to ambient temperature	•	•	•	•	•	8012-1199
<b>Pt 100 temperature sensor</b>	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	•	•	8012-0334
<b>Viewing window and interior lighting</b>	viewing window in door, 230 x 230 mm, and 15 W interior lighting	•	–	–	–	–	8012-0055
	230 V option model						
	viewing window in door, 320 x 260 mm, and 15 W interior lighting	–	•	–	–	–	8012-0057
	230 V option model						
	viewing window in each door, 290 x 470 mm, and 30 W interior lighting	–	–	–	•	–	8012-0061
	400 V option model						
viewing window in each door, 350 x 240 mm, and 30 W interior lighting	–	–	•	–	–	8012-0059	
230 V option model							

## ORDERING INFORMATION ACCESSORIES

Designation	Description	M 53	M 115	M 240	M 400	M 720	Art. No.	
<b>APT-COM™ 4 BA-SIC-Edition</b>	for simple logging and documentation requirements with up to 5 networked units.							
	version 4, BASIC edition	•	•	•	•	•	9053-0039	
<b>APT-COM™ 4 GLP-Edition</b>	for working under GLP-compliant conditions. Measured values are documented in a tamper-proof way in line with the requirements of FDA Regulation 21 CFR 11.							
	version 4, GLP edition	•	•	•	•	•	9053-0042	
<b>APT-COM™ 4 PROFESSIONAL-Edition</b>	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.							
	version 4, PROFESSIONAL edition	•	•	•	•	•	9053-0040	
<b>Base</b>	the base equipped with casters is used for the secure positioning and leveling of a BINDER drying and heating chamber	–	•	–	–	–	9051-0033	
		–	–	•	–	–	9051-0034	
<b>pH-neutral detergent</b>	concentrated, for gentle remove of residual contaminants; 1 kg	•	•	•	•	•	8012-2250	
<b>Qualification documents</b>	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO <sub>2</sub> , O <sub>2</sub> , pressure, depending on unit	Digital in PDF format	•	•	•	•	•	7057-0001
		Hard copy inside folder	•	•	•	•	•	7007-0001
	IQ/OQ/PQ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/OQ; parameters: temperature, CO <sub>2</sub> , O <sub>2</sub> – or pressure, depending on unit	Digital in PDF format	•	•	•	•	•	7057-0005
		Hard copy inside folder	•	•	•	•	•	7007-0005
		–	•	–	–	–	–	8012-2033
		–	•	–	–	–	–	8012-2034
<b>Rack</b>	chrome plated	–	–	•	–	–	8012-2035	
		–	–	–	•	–	8012-2036	
		–	–	–	–	•	8012-2037	
		•	–	–	–	–	8012-2047	
	stainless steel	–	•	–	–	–	8012-2048	
		–	–	•	–	–	8012-2080	
		–	–	–	•	–	8012-2159	
		–	–	–	–	•	8012-2082	
<b>Rack accessories</b>	fasteners (1 set of 4) for additional security of racks	•	•	•	•	•	8012-0531	
		–	–	•	–	–	8012-0345	
<b>Rack, reinforced</b>	stainless steel, with fasteners (1 set of 4)	–	–	–	•	–	8012-0346	
		–	–	–	–	•	8012-0374	
<b>Rubber pads</b>	set anti-slip feet	•	•	•	•	–	8012-2030	
		•	–	–	–	–	8012-2083	
		–	•	–	–	–	8012-2161	
<b>Shelf, perforated</b>	Stainless steel	–	–	•	–	–	8012-2084	
		–	–	–	•	–	8012-2162	
		–	–	–	–	•	8012-2081	
		•	•	–	–	–	9051-0018	
<b>Table on castors</b>	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	–	–	•	•	–	9051-0019	
	stable cart, casters with locking brakes, dimensions: W 1,300 x D 800 x H 780 mm	–	–	•	•	–	9051-0019	