Dynamic constant climate testing
KMF series

More options: Dynamic constant climate chambers

- More flexibility
  - Extended temperature range from -10 °C to 100 °C
  - Broader climate rage up to 90 % r. H.
  - Defined temperature change rates
  - Automatic water and wastewater management
- More reliability
  - Responsive vapor pressure humidification
  - Powerful cooling system for safe operation up to 32 °C ambient temperature
  - Long-term stress testing, e. g. at 85 °C / 85 % r. H.

The dynamic constant climate chambers from BINDER ensure absolutely constant test conditions throughout the testing area. Their greatest advantage is the low space requirement and flexibility regarding the water supply. The wide temperature and humidity ranges make them ideally suited for stress testing series.

Automotive

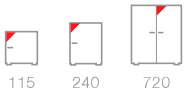
Plastics industry

Packaging industry

Constant climate chambers for stress testing
KMF series

The KMF is the specialist for unconditionally reliable stress testing and precise maintenance of constant test conditions. It has particularly large power reserves and an extremely broad climate range: from -10 °C to 100 °C. It works condensation-free up to 90% r. H. These features make the KMF unique in its class.

▶ KMF 240 model



Available sizes (liters)

▶ **EQUIPMENT**

- Temperature range from -10 °C to 100 °C
- Humidity range 10 % to 90 % r. H.
- MCS controller which can store 25 programs of 100 sections each for a maximum of 500 program segments
- User-friendly LCD color screen
- Easy-to-read menu guide
- Integrated electronic chart recorder
- Variety of options for the graphic display of process parameters
- Real-time clock
- Electronically controlled humidification and dehumidification system with capacitive humidity sensor
- Inner glass door
- Independent temperature safety device class 3.1 (DIN 12880) with visual and audible alarm
- Access port with silicone plug Ø 30 mm, left side
- Complete safety connection kit for water supply and drainage, up to 1m in height
- Ethernet interface for communication software APT-COM™ DataControlSystem
- Shelf, stainless steel
- Four casters, two with brakes (KMF 240/720)

KMF SERIES | BEST TEST CONDITIONS:

Precise climate conditions

- BINDER APT.line™ preheating chamber
  - Constant and gentle circulation of air through large-surface side walls even under a full load
  - Homogeneous climate conditions throughout test specimens

Flexible water management

- Sewage pump for discharges up to 1m in height
- Solutions independent of installation sight
- Water treatment with BINDER PURE AQUA SERVICE
- External water supply

Fast and precise humidification

- Vapor pressure humidification with fast response times
- Drift-free, capacitive humidity sensor
- Short recovery times after door opening
- Finely adjustable humidity control

Comprehensive additional services

- Data Logger Kits
- Years of proven validation and documentation materials
- Customer-specific modifications

Convenient assembly and operation

- Large access area
- Control elements accessible from the front
- Optimal ratio of usable space and footprint

OPTIONS

- Access ports of various diameters with silicone plug
- Shelf, stainless steel
- Perforated shelf, stainless steel
- Reinforced rack, stainless steel
- Lockable controller keyboard
- Interior lighting
- Additional PT 100 temperature sensor
- RS 422 interface
- External water supply set
- BINDER PURE AQUA SERVICE
- Calibration certificate and extension to calibration certificate
- Measurement of temperature accuracy according to DIN 12880
- Data Logger Kit and software
- Independent temperature safety device class 3.3 (DIN 12880)
- Analog outputs 4 – 20 mA for temperature and humidity measurements
- Door lock

BINDER PURE AQUA SERVICE

Data Logger Kits

Numerous access ports

BINDER INDIVIDUAL
More information on page 133

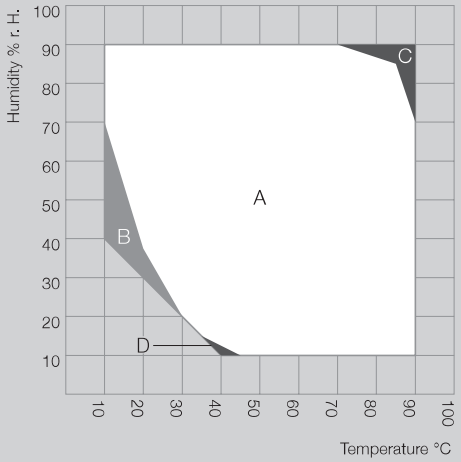
Climate chamber with windows, doors and access ports for connecting several measuring instruments

Technical data for your planning and installation

KMF series

	KMF 115	KMF 240	KMF 720
Exterior dimensions			
Width (including access port) (mm/inch)	885 / 34.84	930 / 36.61	1255 / 49.41
Height (including feet/castors) (mm/inch)	1050 / 41.34	1460 / 57.48	1925 / 75.79
Depth (mm/inch)	650 / 25.59	800 / 31.50	890 / 35.04
Depth including door handle, I-triangle, connection, cable (mm/inch)	730 / 28.74	880 / 34.65	970 / 38.19
Interior dimensions			
Width (mm/inch)	600 / 23.62	650 / 25.59	973 / 38.31
Height (mm/inch)	483 / 19.02	785 / 30.91	1250 / 49.21
Depth (mm/inch)	351 / 13.82	485 / 19.09	576 / 22.68
Interior volume (l/cu.ft.)	102 / 3.6	247 / 8.6	700 / 24.6
Number of racks (standard/max.)	1 / 5	1 / 9	1 / 15
Load per rack (kg/lbs.)	30 / 66	30 / 66	45 / 99
Permitted total load (kg/lbs.)	100 / 221	100 / 221	150 / 331
Weight (empty) (kg/lbs.)	127 / 280	185 / 408	309 / 682
Temperature data			
Temperature range [1] (°C/°F)	-10 – 100 / 14 – 212	-10 – 100 / 14 – 212	-10 – 100 / 14 – 212
Average heating up time acc. to IEC 60068-3-5 (K/min.)	1.3	1.1	1.0
Average cooling down time acc. to IEC 60068-3-5 (K/min.)	0.5	0.6	0.4
Max. heat compensation up to 25 °C / 77 °F (W)	150	350	400
Climatic data			
Temperature range [1] (°C/°F)	+10 – +90 / 50 – 194	+10 – +90 / 50 – 194	+10 – +90 / 50 – 194
Temperature uniformity [3] (±K)	0.3 – 1.0	0.3 – 1.5	0.2 – 1.0
Temperature fluctuation [3] (±K)	0.1 – 0.2	0.1 – 0.5	0.1 – 0.5
Humidity range (% r. H.)	10 – 90	10 – 90	10 – 90
Humidity fluctuation [3] (± % r. H.)	≤ 2.5	≤ 2	≤ 2
Electrical data			
Housing protection acc. to EN 60529	IP 20	IP 20	IP 20
Nominal voltage (±10 %) 50/60 Hz (V)	200 – 240 1N~	200 – 240 1N~	200 – 240 1N~
Nominal power at 240 V (kW)	2.0	2.1	3.1
Energy consumption [4] at 85 °C / 185 °F / 85 % r. H. (Wh/h)	570	500	1050
Model no.	9020-0187	9020-0145	9020-0185

TEMPERATURE-HUMIDITY CHART



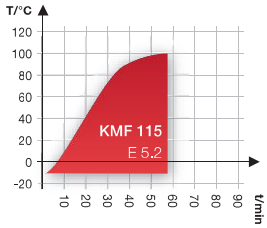
A: Guaranteed condensation-free range
B: Time-limited operation (max. 24 hours)
C: Condensation in the inner chamber may be possible
D: Deviations of technical data may be possible

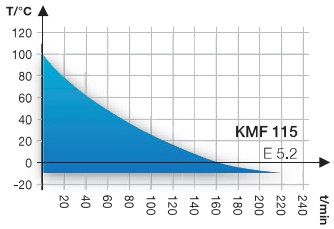
[1] Lower values are valid up to an ambient temperature of max. 25 °C / 77 °F // [2] to 98 % of the set value // [3] depending on the set point // [4] Use this value for dimensioning air conditioning systems. /// All technical data are specified for units with standard equipment at an ambient temperature of 25 °C and a voltage fluctuation of ±10 %. The temperature data are determinated in ccordance with factory standard following DIN 12880 respecting the recommended wall clearances of 10 % of the height, width and depth of the inner chamber. Technical data refers to 100 % fan speed. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

Current information and values are available at:
www.binder-world.com

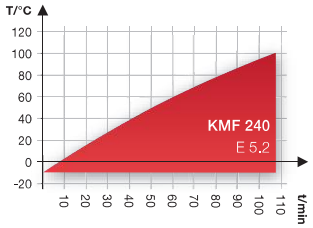
HEATING UP AND COOLING DOWN RATE

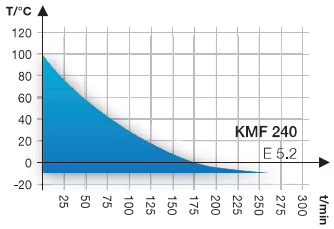
KMF 115



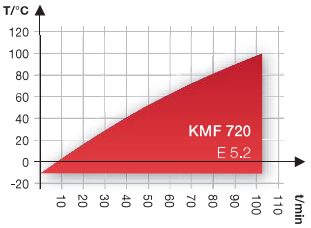


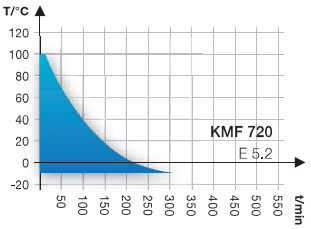
KMF 240



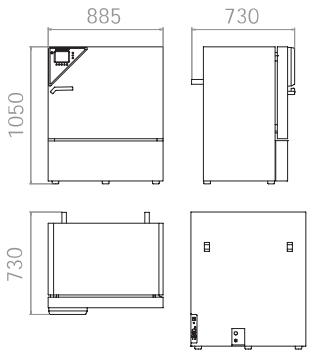


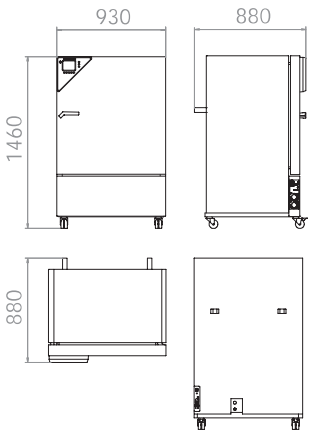
KMF 720

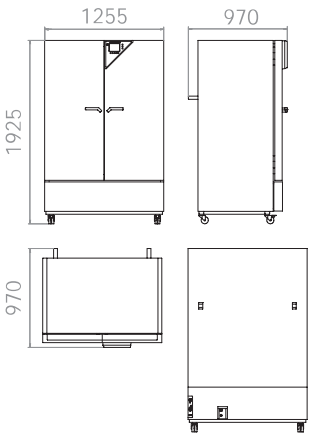




DIMENSIONS







INSTALLATION REQUIREMENTS

	KMF 115	KMF 240	KMF 720
Wall clearance rear (mm/inch)	100 / 3.94	100 / 3.94	100 / 3.94
Wall clearance side (mm/inch)	100 / 3.94	100 / 3.94	100 / 3.94
Nominal voltage (±10 %) 50/60 Hz (V)	200 – 240 1N~	200 – 240 1N~	200 – 240 1N~
Nominal power at 240 V (kW)	2	2.1	3.1