

HEATING- AND COOLING CHAMBERS

Series MK: Heating- /Cooling chambers for rapid temperature changes

The MK series chamber is suitable for all heat and cold tests between -40 °C and 180 °C. The MK is a clever alternative to complex individual solutions for cyclical temperature tests.

Features:

- Temperature range: -40 °C to 180 °C
- APT.line™ preheating chamber technology
- Programmable condensation protection for test material
- Heated viewing window with LED interior lighting
- APT-COM™ Basic Edition communication software
- Troubleshooting system with visual and audible alarms
- Intuitive touchscreen controller with time-segment and real-time programming
- Access port with silicone plug (Models 56, 115, 240, 400), 50 mm, left
- 2 access ports with silicone plugs (Model 720, 1020), 80 mm, left and right
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- 4 castors, two with brakes, from 115 liters
- Computer interface: Ethernet
- Adjustable ramp function
- Integrated chart recorder
- Real-time clock
- Door heating
- Inner chamber made of stainless steel incl. 1 ss rack
- CFC-free refrigerant R-452A
- Cooling with compressor cooling unit

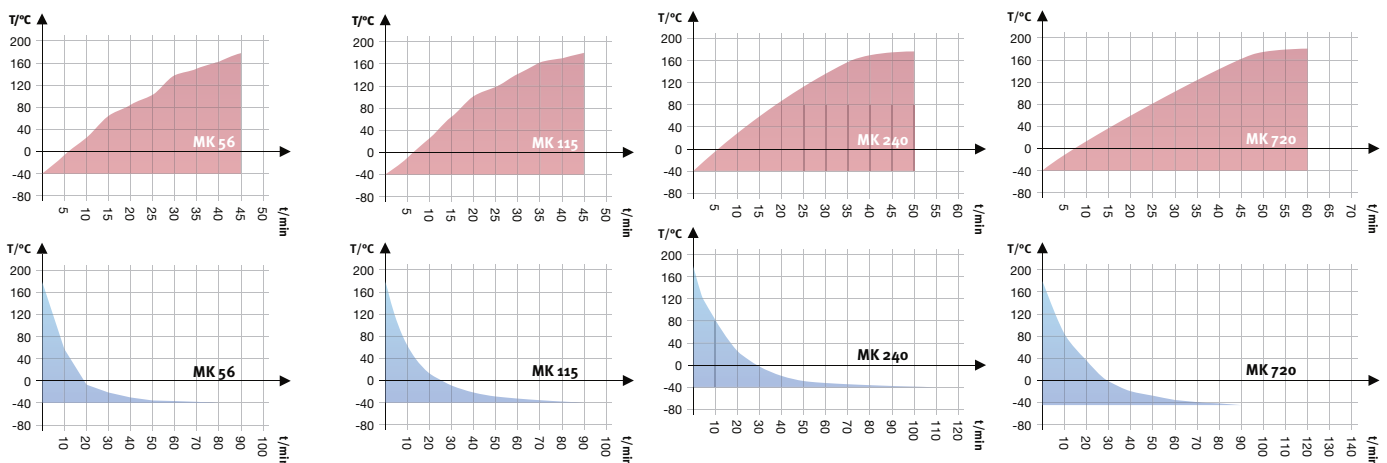


MK 056

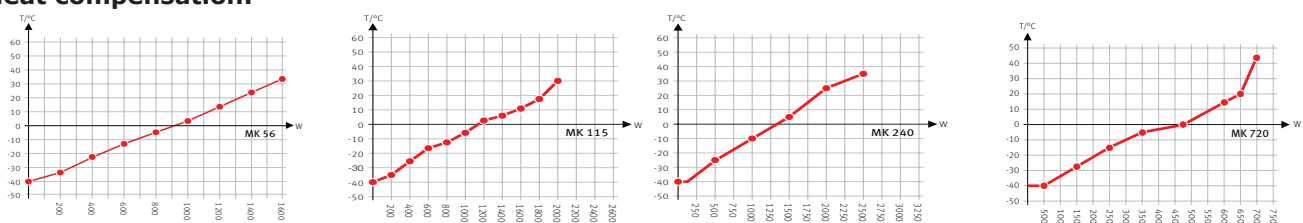


MK 720

Heating up / Cooling down times:



Heat compensation:



Technical data:

	MK056	MK115	MK240	MK400	MK720	MK1020
	230V *	400V *	400V *	400V *	400V *	400V *
Article Number	9020-0374	9020-0375	9020-0376	9020-0406	9020-0377	9020-0407
Performance Data Temperature						
Temperature range [°C]	-40...180	-40...180	-40...180	-40...180	-40...180	-40...180
Temperature variation depending on setpoint [± K]	0,5...1,5	0,1...2	0,1...1,2	0,1...1,2	0,3...2	0,1...1,8
Temperature fluctuation depending on setpoint [± K]	0,1...0,5	0,1...0,5	0,1...0,5	0,1...0,5	0,1...0,5	0,1...0,5
Average heating-up rate according to IEC 60068-3-5 [K/min]	5	5,3	5	5	4	5,5
Heating up time from -40 °C to 180 °C [min]	75	55	50	55	96	60
Cooling down time from 180 °C to -40 °C [min]	90	90	110	115	100	120
Average cooling down time according to IEC 60068-3-5 [K/min]	5	5	4,5	5	4,5	5
Max. heat compensation at 20 °C [W]	-	-	-	4500	-	6000
Max. heat compensation at 25 °C [W]	800	1500	2000	-	3500	-
Electrical data						
Rated Voltage [V]	230	400	400	400	400	400
Power frequency [Hz]	50	50	50	50	50	50
Nominal power [kW]	2,8	3,5	5,6	7	8,7	11,5
Unit fuse [A]	16	16	16	16	16	32
Phase (Nominal voltage) [ph]	1~	3~	3~	3~	3~	3~
Outer dimensions						
Width net [mm]	720	980	1115	1115	1580	1580
Height net [mm]	1445	1725	1710	1710	2005	2005
Depth net [mm]	778	865	925	1400	1140	1480
Wall clearance back [mm]	300	300	300	500	300	300
Wall clearance sidewise [mm]	200	200	200	300	200	200
Viewing window width [mm]	288	288	508	508	508	508
Viewing window height [mm]	255	222	300	300	300	300
Doors						
Unit doors	1	1	1	1	1	1
Internal Dimensions						
Width [mm]	400	600	735	735	1200	1200
Height [mm]	420	480	700	700	1020	1020
Depth [mm]	350	400	443	810	600	810
Further Dimension						
Interior volume [L]	60	115	228	417	734	991
Net weight of the unit (empty) [kg]	165	260	340	413	570	621
permitted load [kg]	60	60	70	150	160	200
Load per rack [kg]	15	30	30	30	40	40
Environment-specific data						
Sound-pressure level [dB(A)]	59	62	62	65	65	65
Fixtures						
Number of shelves (std./max.)	1 / 4	1 / 4	1 / 6	1 / 6	1 / 11	1 / 11

* All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10 %. The temperature data is determined in accordance to BINDER factory standard following DIN 12880, observing 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.

Series MKT: Heating- /Cooling chambers for rapid temperature changes with extended low temperature range

Temperature ranges between -70 °C and 180 °C, with the added benefit of natural simulation, are what make the MKT series so unique. At the same time, this environmental simulation chamber fulfills the very highest precision and performance requirements for cyclical temperature tests.

Features:

- Temperature range: -70 °C to 180 °C
- 4 zero-voltage relay contacts
- APT.line™ preheating chamber technology
- Programmable condensation protection for test material
- Heated viewing window with LED interior lighting
- APT-COM™ Basic Edition communication software
- Troubleshooting system with visual and audible alarms
- Intuitive touchscreen controller with time-segment and real time programming
- Internal data logger, measured values can be read out in open format via USB
- Access port with silicone plug (Models 115, 240: 50 mm, left)
- 2 access ports with silicone plugs (Model 720: 80 mm, left and right)
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- 4 castors, two with brakes
- Computer interface: Ethernet
- Adjustable ramp function
- Integrated chart recorder
- Real-time clock
- Door heating
- Inner chamber made of stainless steel with 1 ss rack
- CFC-free refrigerants R-452A and R-23
- Cooling with cascade compressor cooling unit

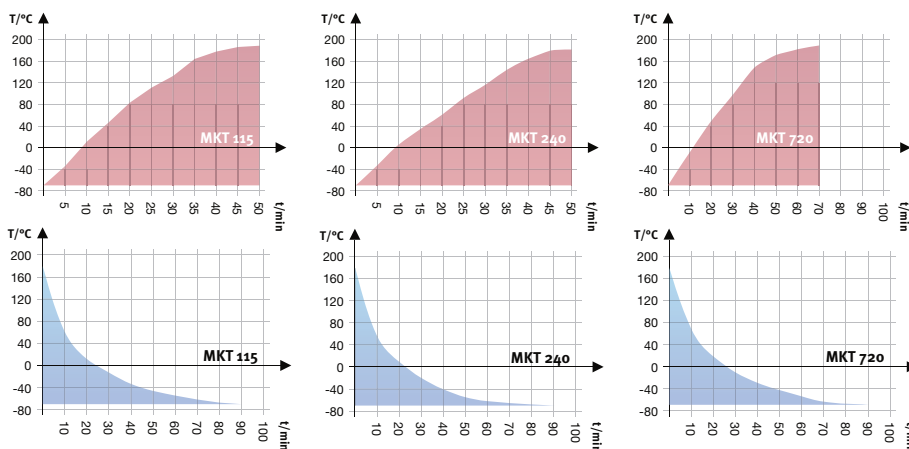


MKT 115

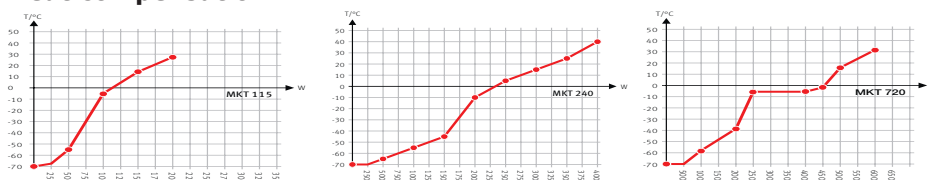


MKT 115

Heating up / Cooling down times:



Heat compensation:



Technical data:

	MKT115	MKT240	MKT720
	400V *	400V *	400V *
Article Number	9020-0385	9020-0386	9020-0387
Performance Data Temperature			
Temperature range [°C]	-70...180	-70...180	-70...180
Temperature variation depending on setpoint [± K]	0,2...1,8	0,1...1,0	0,3...2
Temperature fluctuation depending on setpoint [± K]	0,1...0,6	0,1...0,4	0,1...0,5
Average heating-up rate according to IEC 60068-3-5 [K/min]	5,3	5	4,5
Cooling down time from 180 °C to -70 °C [min]	110	95	
Cooling down time from 180 °C to -40 °C [min]			120
Average cooling down time according to IEC 60068-3-5 [K/min]	4,2	4,2	4,0
Max. heat compensation at 25 °C [W]	1500	3200	5000
Electrical data			
Rated Voltage [V]	400	400	400
Power frequency [Hz]	50	50	50
Nominal power [kW]	5,5	6,5	13
Unit fuse [A]	16	16	32
Phase (Nominal voltage) [ph]	3~	3~	3~
Outer dimensions			
Width net [mm]	980	1115	1580
Height net [mm]	1725	1935	2005
Depth net [mm]	865	925	1140
Wall clearance back [mm]	300	300	300
Wall clearance sidewise [mm]	200	200	200
Viewing window width [mm]	228	508	508
Viewing window height [mm]	222	300	300
Doors			
Unit doors	1	1	1
Internal Dimensions			
Width [mm]	600	735	1200
Height [mm]	480	700	1020
Depth [mm]	400	443	600
Further Dimension			
Interior volume [L]	115	228	734
Net weight of the unit (empty) [kg]	305	380	610
permitted load [kg]	60	70	160
Load per rack [kg]	30	30	40
Environment-specific data			
Sound-pressure level [dB(A)]	64	64	65
Fixtures			
Number of shelves (std./max.)	1/4	1/6	1/11

* All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10 %. The temperature data is determined in accordance to BINDER factory standard following DIN 12880, observing 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.