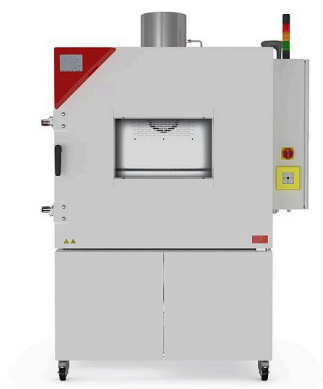


Model LIT MK 240 | with safety equipment for rapid temperature changes

Battery test chambers from BINDER are ideal for aging, performance, and stress testing in quality assurance and battery production. To ensure maximum safety, all the chambers in the LIT MK series are fitted with detection and fire suppression equipment as standard. TÜV SÜD AG has recently confirmed that the LIT MK 240 and LIT MK 720 battery test chambers are suitable for EUCAR LEVEL 6.

BENEFITS

- Safety thanks to extensive protective measures
- Homogeneous climate conditions thanks to APT.line™ preheating chamber
- Extensive programming and data collection
- Excellent overview of the test object thanks to large heated viewing window



Model 240



Model 240

MAIN FEATURES

- Temperature range: -40 °C to +110 °C
- Class 2 independent temperature safety device when temperature is set to +120 °C
- Reversible stainless steel pressure relief flap installed in the middle on top of the unit
- Enhanced door-locking mechanism with reinforced brackets
- Monitoring of CO, H₂, O₂, and temperature in testing area atmosphere
- Inertization equipment
- CO₂ fire suppression
- APT.line™ preheating chamber technology
- Programmable condensation protection for samples
- Heated viewing window with LED interior lighting
- BINDER Multi Management Software APT-COM™ basic edition
- 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, 50 mm, left
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: Ethernet
- 1 stainless steel rack, can be freely positioned
- CFC-free refrigerant R-452A
- Cooling with compressor cooling unit
- TÜV SÜD confirms that the LIT MK 240 and LIT MK 720 chambers are suitable for EUCAR level 6

OPTIONAL EQUIPMENT

- Electromechanical door-locking mechanism
- Additional access ports available in various sizes and locations
- Multi Management Software APT-COM for managing, recording, and documenting unit parameters
- Services – wide range of services to ensure that the unit functions correctly

ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
228	400 V 3~ ph 50 Hz	Standard	LITMK240-400V	9020-0402
	480 V 3~ ph 60 Hz	with voltage and frequency converter	LITMK240-480V-C	9020-0404

TECHNICAL DATA

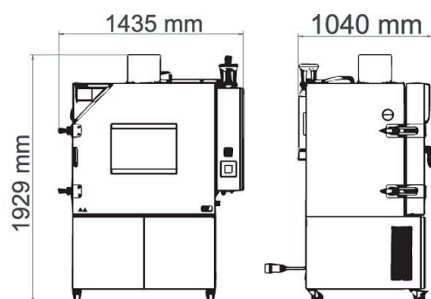
Description	LITMK240-400V ¹	LITMK240-480V-C ¹
Article Number	9020-0402	9020-0404
Performance Data Temperature		
Temperature range	-40...110	-40...110
Temperature variation depending on setpoint [± K]	0.1...1.2	0.1...1.2
Temperature fluctuation depending on setpoint [± K]	0.1...0.5	0.1...0.5
Average heating-up rate according to IEC 60068-3-5 [K/min]	5	5
Cooling down time from 110 °C to -40 °C [min]	160	160
Average cooling down time according to IEC 60068-3-5 [K/min]	3.5	3.5
Max. heat compensation at 25 °C [W]	3000	3000

¹ 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.

Description	LITMK240-400V ¹	LITMK240-480V-C ¹
Article Number	9020-0402	9020-0404
Electrical data		
Rated Voltage [V]	400	480
Power frequency [Hz]	50	60
Nominal power [kW]	5,6	5,6
Unit fuse [A]	16	16
Phase (Nominal voltage)	3~	3~
Measures		
Interior volume [L]	228	228
Net weight of the unit (empty) [kg]	375	375
Permitted load [kg]	70	70
Load per rack [kg]	30	30
Viewing window width [mm]	508	508
Viewing window height [mm]	300	300
Wall clearance back [mm]	300	300
Wall clearance sidewise [mm]	200	200
Internal Dimensions		
Width [mm]	735	735
Height [mm]	700	700
Depth [mm]	443	443
Doors		
Unit doors	1	1
Housing dimensions not incl. fittings and connections		
Width net [mm]	1335	1335
Height net [mm]	1929	1929
Depth net [mm]	925	925
Environment-specific data		
Sound-pressure level [dB(A)]	62	67
Fixtures		
Number of shelves (std./max.)	1/6	1/6

1 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.

DIMENSIONS incl. fittings and connections [mm]



OPTIONS

Designation	Description	*	Art.-No.
	left		
	30 mm	01	8012-1322
	50 mm	01	8012-1328
Access port with silicone plug	80 mm	01	8012-1334
	100 mm	01	8012-1542
	125 mm	01	8012-1351
	top		
	80 mm	01	8012-1536
Analog output 4-20 mA	for temperature values (output not adjustable)	-	8012-1084
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1124
	for temperature, measurement in center of chamber at specified temperature	-	8012-1143
Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1602
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1581
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1560
Compressed air connection	for the connection to an existing pressurized air network	-	8012-1089
Door lock	lockable door handle	-	8012-1861
Electromechanical door-locking mechanism	Controlled via control contact in time program or manually	-	8012-2011
Heated access port	On left side, including locking latch and silicone plug		
	150 mm diameter	-	8012-1999
	For securing the silicone plug of an access port		
	30 mm diameter	-	8012-2012
Locking latch for access port plug	50 mm diameter	-	8012-2013
	80 mm diameter	-	8012-2014
	100 mm diameter	-	8012-2015
	125 mm diameter	-	8012-2016
Notch-type access port	notch-type access port in door, 100 x 35 mm	-	8012-1850
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1093
Reinforced boiler base	for increasing the load capacity of the interior base		
	to 200 kg	-	8012-2009
RS 485 interface, 2-wire	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	-	8012-1768
Zero voltage relay contacts	for controlling 3 relay contacts via program regulators, accessible via 6-pin DIN socket (max. 24 V - 2,5 A)	-	8012-1095

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
APT-COM™ 4 GLP-Edition	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
APT-COM™ 4 PROFESSIONAL-Edition	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.		
	version 4, PROFESSIONAL edition	-	9053-0040
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016

* Notes › See last page

Designation	Description	*	Art.-No.
Qualification documents	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 ₂ , O ₂ , 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 ₂ , O ₂ – or pressure, depending on unit		
	Digital in PDF format	–	7057-0005
	Hard copy inside folder	–	7007-0005
Rack	stainless steel	–	8012-2053
Rack accessories	fasteners (1 set of 4) for additional security of racks	–	8012-0620
Rack, reinforced	stainless steel, with fasteners (1 set of 4)	–	8012-0605
RS 485 / RS 422 interface converter	RS 422 cable set and RS 485 / RS 422 interface converter for connection to 10-way plug distributor		
	115 V option model	–	8012-0599
	230 V option model	–	8012-0589
Shelf, perforated	Stainless steel	–	8009-0447
WLAN kit	The kit contains a client bridge that establishes a wireless connection between BINDER units and APT-COM4, LIMS, or customer-specific software via an Ethernet interface. It provides an alternative solution in situations where units need to be positioned in locations without an on-site Ethernet connection. In secured networks, installation and configuration must be performed by the customer's IT service.	–	8500-0164

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Unit commissioning	Connect the unit to the customer-side connections (electricity, water, wastewater, gas), basic functions check, brief operating instructions. (excl.: unpacking, setup, controller instructions, programming, installation work)	05	DL10-0310
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0710
Maintenance contracts			
Maintenance services			
GOLD 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, replacement of wear parts, calibration of one temperature/humidity value, including certificate	05	DL20-0950
Leakage test	Testing and logging of the leak-tightness of systems containing hydrofluorocarbons in accordance with Regulation EC842/2006, incl. test book	05	DL00-0034
Maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Calibration of a test temperature specified by the user in center of usable space without certificate	05	DL20-0510
SILVER 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, calibration of one test temperature specified by the user in the center of the usable space, without certificate	05	DL20-0840
Calibration services			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	03, 04, 05	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	03, 04, 05	DL30-0102
O ₂ , CO ₂ , and H ₂ calibration	O ₂ , CO ₂ , and H ₂ calibration at specified values, measurements are taken with analyzed test gas, including certificate	03, 04, 05	DL30-0403
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0127

* Notes › See last page

Designation	Description	*	Art.-No.
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0109
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	DL44-0500

* Notes › See last page

NOTES

- 01 Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.
- 02 UL mark is not granted when this option is used.
- 03 Sensor calibration is performed in an accredited calibration laboratory.
- 04 Calibration is performed according to the BINDER factory standard.
- 05 Quoted prices do not include travel costs. Please refer to the chapter on BINDER Service for travel costs for your region. Quoted prices for services performed in Switzerland do not include a country-specific added fee (available on request).

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