

Product information

Temperature chambers LABORTECH



Description and use of temperature chambers

Temperature chambers by LABORTECH are used as an accessory for testing machines and equipment, where they serve for tempering of specimens in positive or negative temperatures during or prior to testing.

Main advantages and features

- High quality of technical processing with ideal ergonomic design and construction compliant with CE.
- A steel shell made of stainless steel class. 17 240
- Wide temperature range
- Cooling using LN2 Dewar flask through a special safety and reducing valve
- Sophisticated circulatory system providing a homogeneous environment
- Internal workspace illumination
- Heated three-layer front glass enables accurate scanning of extension by optical or laser extensometer

- Multifunctional PID controller EURO THERM with options to connect to a PC via RS 232 interface
- Option to control the temperature from Test & Motion and displaying of the temperature curve in the protocol
- Accuracy of temperature control $\pm 1^{\circ}\text{C}$
- Fast and constant launch to the desired temperature
- Expandability of the chamber with wedge inserts, providing a simple transfer of the chamber outside the working area
- Simple and safe arrestment of the temperature chamber in the working area.
- Accurate rail tripod with adjustable height
- Electrical retraction of the temperature chamber from workspace – option
- Opening for pincers of automatic mechanical extensometers – option
- Accessories – Dewar flask with a valve, connecting hoses, special desks for chamber control etc.

Manufacturer:

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Technical parameters	Units	TK1-20	TK2-20	TK3-20	TK4-20	TK1-80	TK2-80	TK3-80	TK4-80
External dimensions									
Width	mm	360	690	560	640	360	690	560	640
Width with open doors	mm	475	805	685	765	485	805	685	765
Height	mm	720	720	1040	1040	720	720	1040	1040
Depth	mm	475	801	851	851	475	801	851	851
Inner dimensions									
Width	mm	220	550	420	500	220	550	420	500
Height	mm	580	580	800	800	580	580	800	800
Depth	mm	226	550	500	500	226	550	500	500
Width of the opening	mm	26, (50)	100	50, (62)	50, (62)	26, (50)	100	50, (62)	50, (62)
Glass dimensions w x h	mm	130x320	200x350	200x350	350x500	130x320	200x350	200x350	350x500
Temperature range	°C	20 ... + 280 ¹	20 ... + 280 ¹	20 ... + 280 ¹	20 ... + 280 ¹	² -80 ... + 280 ¹	² -80 ... + 280 ¹	² -80 ... + 280 ¹	² -80 ... + 280 ¹
Cooling system		-				LN ₂	LN ₂	LN ₂	LN ₂
		-				Dewar flask, direct source			
Operating pressure of the coolant	bar	-				0,3 - 0,5	0,3 - 0,5	0,3 - 0,5	0,3 - 0,5
Hose connector of the temperature chamber	''	-				3/8	3/8	3/8	3/8
		-				External thread	External thread	External thread	External thread
Average heat output (empty chamber)	°C/min.	8	9,5	9	9	8	9,5	8	
Average degree of cooling (empty chamber)	°C/min.	-				8.5	7.5	7.5	7.5
Weight of the chamber	kg	65	85	110	110	112	87	112	112
Power input	V	230	230	230	230	230	230	230	230
Power supply frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Power output	kVA	2.3	4,6	4,6	4,6	4,6	4,6	4,6	4,6
Door hinge		on the right	on the right	on the right	on the right	on the right	on the right	on the right	on the right
Regulator		Omron							
Noise level	dB	55							
Interface		RS 232 or RS485							
Network cable	m	3							
Parameters for all chamber comply with EN60204-1, EN 61010-1, IEC 1010-2-010, BS 2771-1, DIN 50011									
Optional accessories:									
¹ Extension of the range of max. temperature by +350°C or +450°C									
² Extension of the range of min. temperature by -150°C or -180°C									
Removable wedges for easier manipulation									
Inner chamber illumination									
Chamber dimensions change – on demand									
Changing of the regulator to a Eurotherm									
Thermocouple on the sample - on request									
Special glass for scanning deformation using contactless extensometers									
Opening for pincers of automatic mechanical extensometers									
A divided tripod not limiting the test area									