Designation: eg. LE 05/11– Laboratory volume in litres/shortened max. temperature

Application

For all types of laboratory tests in medical, stomatological, hygienic, ceramic, glass-making and other laboratories. Furnaces are suitable for testing technologies where the emphasis is put on the accuracy of temperature distribution, its controlled rise time and drop, and/or controlled cooling and in cases where it is not desirable that heating elements are in the very inner space with samples at the same time. In particular the furnaces are convenient for heating materials for heat processing of metals, various sintering tests, calcinations, determining the softening point or sintering of materials, burning samples, enamel firing, etc.

Advantages

Stainless shell safeguards provide long lifetime of the furnace. Heating wire elements are positioned in tubes made of quartz glass. Coils are thus partly protected against attacks of aggressive substances which can get released together with furnace charges. Programmable controller and the main switch are located on the furnace front side. Easy exchange of heating elements and insulation.

PROFI PHOTO



Product URL on the web
https://www.lac.cz/en/furnaces-and-dryers/le-laboratory-chamber-furnace

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Furnace structure

All types are made of frameless structure. The shell consists of stainless bent sheet metal with decoration. Inside the shell bottom and on the shell there are ventilating holes provide shell cooling by natural air flow. The muffle consists of insulating cellular plates made of mineral fibre. All models are designed as desktop types.

Door

The door is made of bent sheet metal in the form of a tray and it opens on the axis downwards. There is a slide valve on the door which opens ingress of air for ventilation purposes.

Furnace insulation

The chamber is composed of insulating cellular plates made of mineral fibre. Between the outer wall of insulation plates and the furnace shell there is an air gap maintaining low temperature of the furnace shell. **A ventilation chimney of inner diameter ∅ 20** is located in the middle section of the furnace backside wall.

Door insulation

The door is filled with a mineral fibre plate which is fixed by means of a sheet metal tray.

Heating

Furnaces of all volumes are designed for temperatures of 1100°C. Heating from two sides is provided by heating elements placed in tubes of quartz glass.

Electrical construction

All electrical components are located in the area next to the muffle, accessible by simply removing the side section. The fuse is located on the furnace backside. The main rocker switch and regulator are positioned on the front panel next to the door.
The door is furnished with a safety terminal switch. Any opening the furnace will switch off the heating. All types are equipped with a connecting flexible cable.

Measurement and regulation

Temperature in furnace is scanned by a K-type thermocouple. HT60B and HT40P regulators serve for furnace regulation and control. Furnaces with the HT40P regulator have an auxiliary regulator output led to a single-phase plug serving for connection of the extraction fan by the customer. The fan is controlled in every step of the program. Furnaces are fitted with the SSR contactless semiconductor closing relay. The furnace has no limiting unit.

Warranty

24 months

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Production plant Furnaces and Dryers
Topolová 933, 667 01 Židlochovice
Production plant Refractory Castable Shapes
Drnholecká 522, 671 67 Hrušovany nad Jevišovkou

Furnace standard accessories include:

- Ht60B controller
- Manually operated door opening downwards with an end switch
- Heating elements in quartz glass tubes
- Airing chimney on the back part of the furnace
- Sliders for air inlet control
- Supply cable fitted with single-phase plug
- Thermocouple Type “K”
- Solid state relay

Accessories for extra charge:

- Ht40P controller
- Ejector with an exhaust fan and draft diverter
- Protection atmosphere inlet
- Calibration of the controller measuring entry
- Interface RS232 or RS485
- Set HtMonit (includes interface + software)

Order No.	Furnace type Ht60B controller	Tmax**	Volume	External dimensions (wxhxd)*	Internal dimension (wxhxd)	Input	Weight	Protection	Voltage
		°C	l	mm	mm	kW	kg	A	V
01067192	LE 05/11	1100	5	470x330x455	170x130x230	1,8	20	16/1	230
01067193	LE 09/11	1100	9,4	490x370x515	190x170x290	2,3	24	16/1	230
01067194	LE 15/11	1100	14,4	550x370x565	250x170x340	3	28	16/1	230

Order No.	Furnace type Ht40P controller	Tmax**	Volume	External dimensions (wxhxd)*	Internal dimension (wxhxd)	Input	Weight	Protection	Voltage
		°C	l	mm	mm	kW	kg	A	V
01067195	LE 05/11	1100	5	470x330x455	170x130x230	1,8	20	16/1	230
01067196	LE 09/11	1100	9,4	490x370x515	190x170x290	2,3	24	16/1	230
01067197	LE 15/11	1100	14,4	550x370x565	250x170x340	3	28	16/1	230

**Outer dimensions are specified with closed door.*

***Tmax is the maximum temperature which can be attained by the furnace, but is not suitable for long-term operation.*

Type LAC	Max. bottom load capacity (kg) (kg)
LE 05	6
LE 09	6
LE 15	6

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Change index	Change/revision made by	Change/revision description and numbers of the changed sections/pages	Date, signature	Change approved by Date, signature
2	Merta	Change of order number (redrawing in Inventor software).	01.01.2024	čuma

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