LAC | ART OF HEATING

Company presentation



The LAC Company has been 30 years successful manufacturer and marketer of industrial furnaces and dryers for many technology use for example:

- Low-temperature applications
- Heat treatment and chemical-heat treatment
- Melting and holding of alloys
- Laboratory technologies
- Production of glass and ceramics

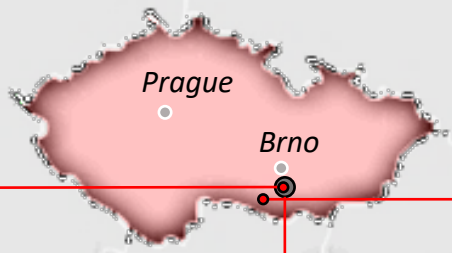
www.lac.cz



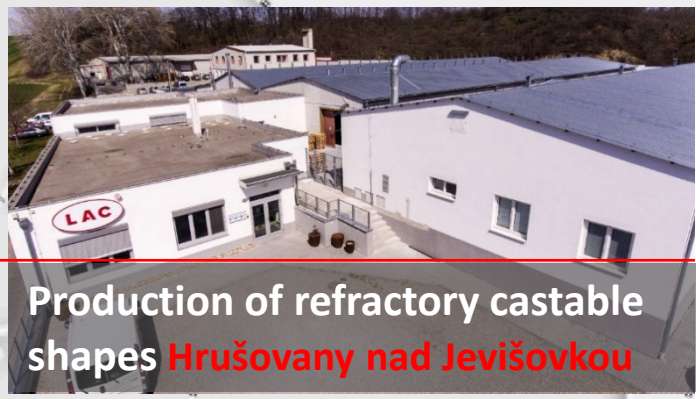
„LAC is a purely Czech company that has grown its way from a 10x10 m garage up to manufacturing area of 25,000 m².“



Production of furnaces and dryers Židlochovice



LAC Headquarters Židlochovice



Production of refractory castable shapes Hrušovany nad Jevišovkou

Developement, design and manufacture in the Czech Republic with two production plants.

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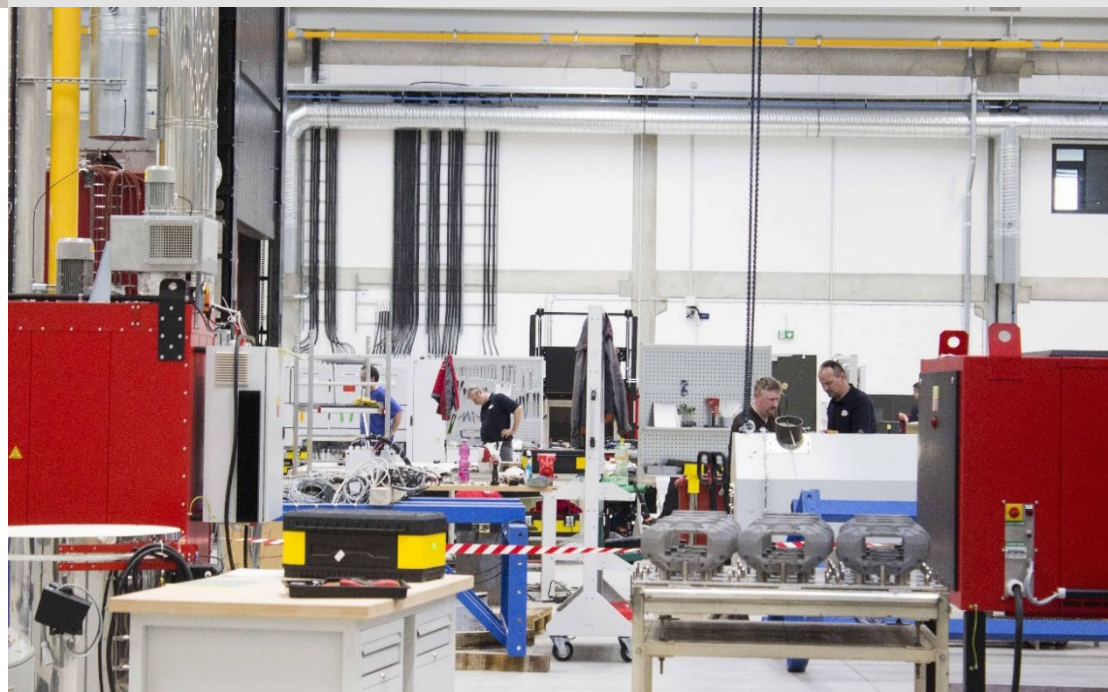
LAC, s.r.o.
Topolová 933
667 01 Židlochovice, Czech Republic



Production of furnaces and dryers Židlochovice

The new production hall enables us to improve production effectivity and produce even better products for our customers.

- Since our founding we have developed and produced over 20,000 furnaces and dryers
- 52 production series of standard furnaces and specialize in custom production
- 25 000 m^2 for production, storage and administration
- 35 countries in which we supply products



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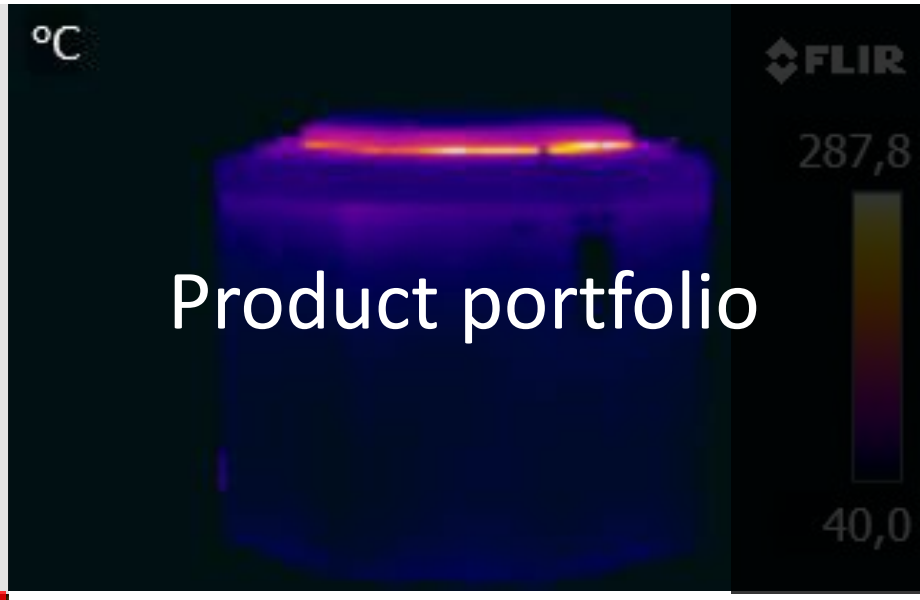
The products are used in many technological processes of heat treatment.

- Low-temperature applications
- Furnaces for foundries – melting and holding
- Heat treatment
- Laboratory furnaces and dryers
- Ceramic and fusing furnaces
- Custom-made furnaces



Product portfolio



Services and technologies

- Own development office and service department, furnace testing center
- Measuring, testing, and thermographic analysis according to AMS, CQI-9, DIN and ISO
- Furnaces and dryers that meet e.g. certification NADCAP

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Laboratory furnaces

Easy installation and control are fundamental for laboratory furnaces. For applications that are true rarities, we regularly adapt our furnaces to ensure they fit your technologies as well as possible.



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Chamber furnace

LE chamber furnace

up to 1 100 °C

A more economical laboratory furnace for shorter-term operation.

LE furnaces will serve you similarly well to the L furnaces for trials and testing with unbeatable price/performance ratio.



Volumes: 5 l - 15 l

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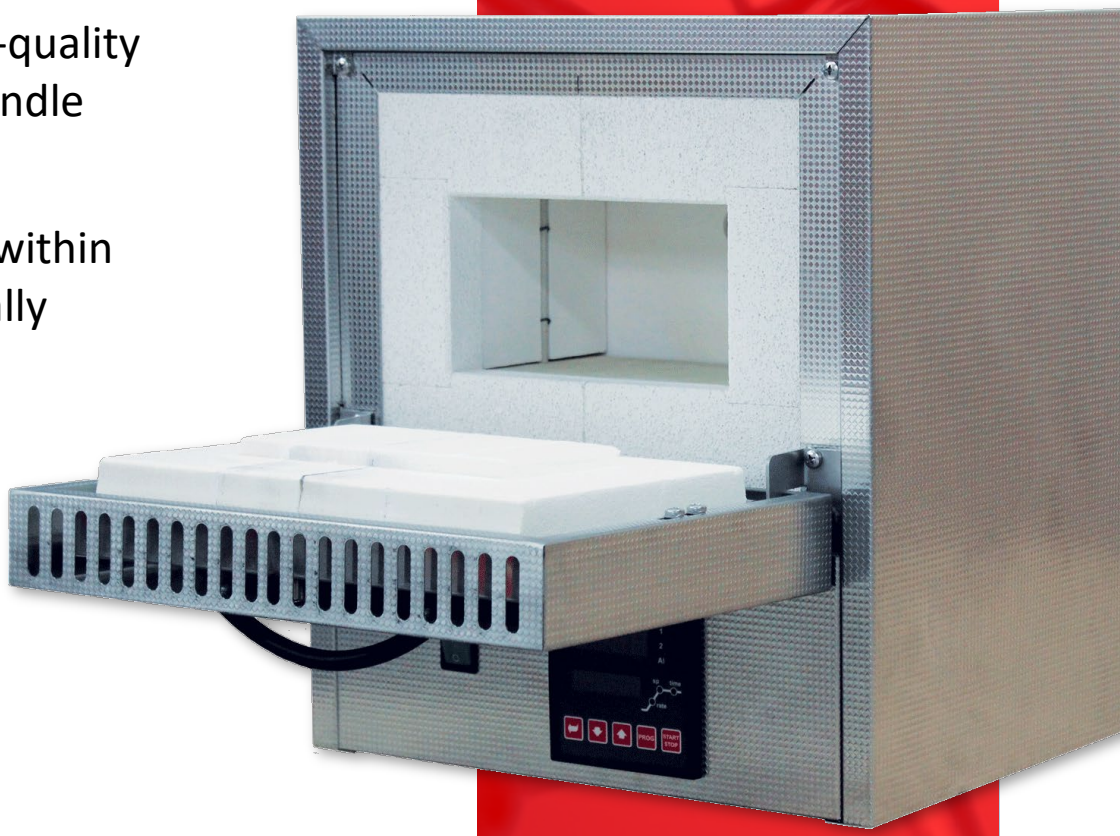
Chamber furnace

L chamber furnace

up to 1 200 °C

A universal laboratory aid with high-quality design and construction that can handle even demanding operations.

Thanks to its heating spirals placed within ceramic plates, this furnace is partially protected against mechanical and chemical damage.



Volumes: 3 l - 15 l

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Chamber furnace

LH chamber furnace

up to 1 340 °C



Acquire this furnace if you need to test materials at relatively high operating temperatures.

The heating elements placed within grooves in the lining ensure very fast conduction of heat towards the charge.

Volumes: 6 l - 30 l

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Tempering chamber furnace

PP tempering furnace

up to 650/850 °C

Industrial furnaces with internal atmosphere circulation.

Smaller volume of PP furnaces are also very compact and ideal for a laboratory. The precision of the temperature distribution give you complete control over the process taking place within the furnace’s chamber.



Volumes: 20 l - 750 l

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Hardening chamber furnace

PKE hardening furnace

up to 1 280 °C



Industrial strength and larger volumes for the laboratory.

This hardening furnace is right for you if you need to work at higher temperatures with higher volume batches. Good heating accumulation into the brick lining allows to open the furnace and check charge more often.

Volumes: 12 l - 90 l

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Sintering chamber furnace

K sintering furnace

up to 1340/1400 °C



Mainly used for firing ceramics in large amounts.

This furnace's shape and design ensure perfect temperature distribution and the option of quick run-up to the required temperature.

Volumes: 50 l - 2100 l

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Chamber furnace

LHS furnace with SiC-based heating rods

up to 1 400/1500 °C



SiC-based heating rods are an inexpensive way to achieve higher working temperatures. Thanks to the high output density of SiC-based rods, the furnace also has very fast run-up to temperature. It can reach 1400 °C within 40 minutes.

Volumes: 3 l - 15 l

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Muffle furnace

LMH muffle furnace

up to 1 200 °C

Specially designed for testing aggressive charges. The heating spirals are located outside of the furnace chamber and protected by a tough ceramic muffle. LMH furnace is equipped with ventilation to protect from condensation during firing.



Volumes: 4 l - 11 l

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LMV vertical muffle furnace

up to 1 200 °C

Top-loaded furnace for testing aggressive charges. The heating spirals are located outside of the furnace chamber and protected by a tough ceramic muffle. LMV furnace is equipped with ventilation to protect from condensation during firing.

Volumes: 2 l - 5 l



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PKRC gastight retort furnace

up to 950/1100 °C

In this furnace a precisely defined atmosphere in the retort protect the charge surface from unwanted changes. Relatively low gas consumption, a variant with argon, nitrogen, or forming gas, and so on. We can also adapt PKRC furnaces to nitriding furnaces at your request.

Volumes: 24 l - 225 l

Retort furnace



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Tube furnace

LT tube furnace

up to 1 300 °C

The ideal furnace for research and testing on small charges thanks to the temperature stability in its ceramic tube.

You can also move the charge during the heat process without significant temperature drops or have properties similar to a gastight furnace.



Inner tube diametter: 50 mm - 100 mm

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Gradient furnace

LSP gradient furnace

up to 1 300 °C

With LSP furnace, you choose an initial temperature in the first zone, and within the set ratios, the furnace automatically runs up to certain temperatures in the other zones as well.

The laboratory gradient furnace is fantastic above all for long-term testing, because its brick lining accumulates heat well.

Volumes: 30 l



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Gravimetric furnace

LG gravimetric furnace

up to 1 200 °C

The LG gravimetric furnace is a combination of a chamber furnace, a precise weighing scale, and software for setting and evaluating the measurement of charge weight loss.



Volumes: 9,4 l

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Incineration chamber furnace

LZ incineration furnace

up to 1 100 °C

The LZ furnaces are especially ideal for oxidation of the charge and determining ash quantity via testing, and also for any other application where a sufficient supply of fresh air and extraction of atmosphere from the furnace are essential.



Volumes: 3 l - 15 l

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Melting furnace

TNT melting furnace for low-melting metals

up to 500 °C

Melting furnace with steel crucible for low-temperature melting metals up to maximal temperature 500°C. Heating is done with heating spirals which are embedded in the furnace lining. A steel crucible with structural steel handles with long service life, mechanical resistance and corrosion resistance is inserted from the top into the furnace chamber.



Volumes: 3 l - 15 l

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Operation centre

SKM operation centre (table)

A practical, all-in-one facility for easy hardening in laboratories.

Hardening centres can be used for preheating, hardening in an oil bath, air or in water, tempering, hardening a charge, cementing in powder, and artificial ageing.

You can choose furnaces that fit this facility.



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Laboratory dryers

Easy installation and control are fundamental for laboratory furnaces. For applications that are true rarities, we regularly adapt our furnaces to ensure they fit your technologies as well as possible.



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Chamber dryer

S chamber dryer

up to 200/300 °C

The S dryers are designed primarily for drying, vulcanising, preheating, and curing a variety of materials.

Thanks to the horizontal internal atmosphere circulation, S dryers also boast an even temperature distribution.

Volumes: 60 l - 400 l



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Custom-made furnaces

The manufacturing program also accommodates the individual requirements of the customer through the design and manufacture of atypical furnaces tailor-made to meet customer specifications.



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Tube furnace

Tube furnace

up to 1 100 °C



A vertical tube furnace for mechanical material testing.

This vertical tube furnace is specially designed as part of the machine for tensile strength testing. The sample is heated up to the required temperature and then subjected to the mechanical test itself. All this is done automatically, so that you can fully concentrate on your notes and observations.

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Calcining furnace

Calcining furnace

up to 1 200 °C

Our designers drafted this custom LH 30/12 furnace for the laboratory calcining of titanium dioxide (TiO_2).

The furnace has a rotating retort made of quartz glass, which is driven into the furnace's chamber using a loading frame.



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Bell furnace

Bottom-loaded bell furnace

up to 500 °C



Bottom-loaded bell furnace for measuring thermal conductivity of samples. The furnace's bottom is positioned on a table with a loading height of 900 mm. The furnace's chamber can be manually shifted vertically, in a range of about 300 mm.

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Furnaces for heat treting of 3D printed parts

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Furnaces with protective box

Furnaces for heat treting of 3D printed parts

Furnaces designed primarily for heat treatment of 3D printed parts produced by additive manufacturing technology.

Furnaces are equipped with a gastight box with an automatic supply of protective atmosphere and an automatic ventilation flap for cooling the working space.



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Countries with LAC furnace instalations



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Reference LAC furnace instalations

AGC



Varroc EXCELLENCE

FEDERAL MOGUL

RONAL

KOLLMORGEN
Because Motion Matters™

ABB

Continental

SIEMENS