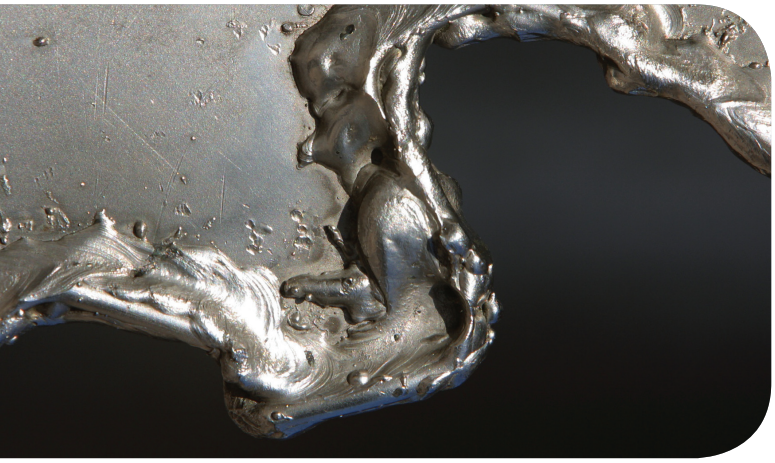


ElectroHeat
Industrial Ovens

INDUSTRIAL FURNACES

Dear Customer,

ElectroHeat Sweden AB is an innovative company based in Gothenburg, Sweden, and has been operating since 1975. We manufacture industrial furnaces and heat treatment equipment to industrial companies all over the world.

We deliver to some of the largest companies in Sweden such as ABB, Siemens and SKF but also equipment to research carried out at technical universities. A significant segment of our production is exported to Europe and the Middle East.

We have a standard product range but we are also fully adaptable to our customers' needs and requirements, each heating system can be made unique.

We make products with outstanding quality and we deliver fast!

Kimmo Ainassaari, CEO

About ElectroHeat

ElectroHeat Sweden AB is a specialist in electrical heat treatment up to 850°C. Higher temperatures, up to 1200°C, are available on demand and also burner and gas technology.

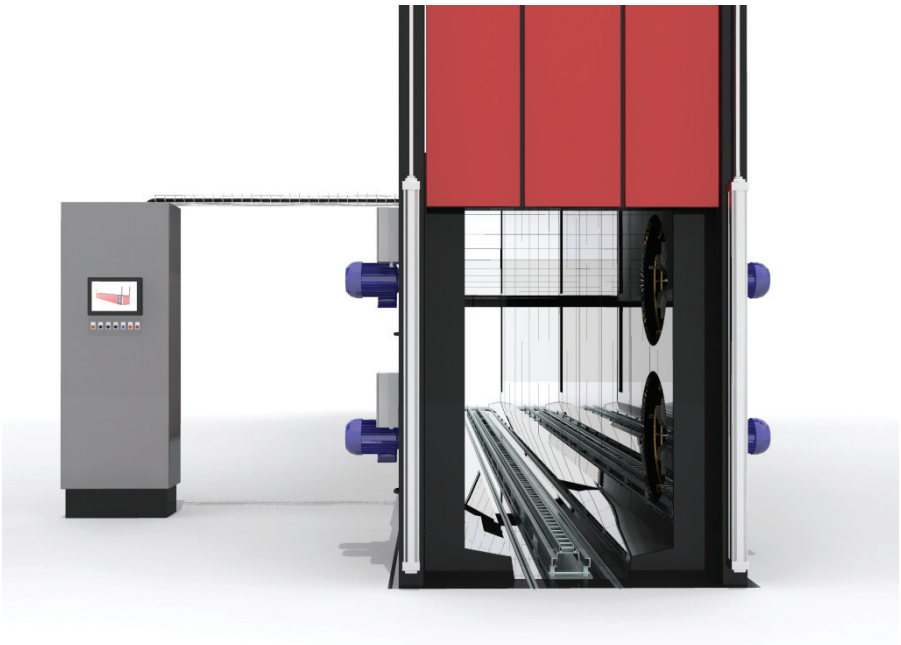
We offer a wide segment of furnaces like chamber furnaces, conveyor furnaces, car bottom furnaces, pit furnaces with gas atmosphere and other special constructions for your specific need.
ElectroHeat Sweden AB provides unique, reliable, heat treatment solutions for

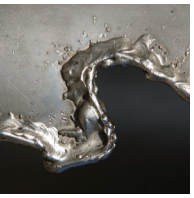
- annealing, soft annealing
- carbonitriding, carburizing
- normalizing
- recrystallisation
- stress relieving
- pre-heating and post heat treatment
- drying and cooling
- vulcanisation of plastics
- hardening of glued products
- welding

The furnaces are controlled by either temperature controllers or by PLC systems like Siemens or Mitsubishi dependent on the functionality of the furnace. We also offer our own developed and very user friendly control system Furnblog. The furnaces can easily be integrated with other production equipment like robots or gantries.

In our facility in Gothenburg we have heat treatment expertise and a functional workshop where we construct and develop the complete furnace, from electrical design and programming to mechanical construction and testing.
We keep our customers in center and we guarantee flexibility, quality and communication at all levels.

It is our proficiency to find a solution to your heat treatment needs regardless of size, process, temperature and other conditions.





Chamber Furnaces

The chamber furnace consists of an iron framework insulated with mineral wool and Superwool. The insulation is enclosed between steel sheets inside the furnace and coated sheets outside the furnace. The furnace is heated up by a heat fan unit that is placed on the furnace roof. The heat fan unit consists of an electrical motor, fan wheel, elements and air-intake. The heat fan unit heats up and recirculates the air in the furnace. The air circulates from the fan unit via air channels, towards goods inside furnace and returns to fan on the roof. The air-intake on the heat fan unit and the air-outtake on the furnace roof are used for controlling the temperature.

The control cabinet contains main switch, fuses, contactors for heat regulation, temperature controller and motor circuit breaker. The furnace has a limit switch for the door, turning heat and fan off when doors are opened. There is also an over heat protection on the heat fan unit.

The furnace can be customized in many different ways. Different kind of doors can be used like a manual door, pneumatic lifting door etc. Different kind of accessories can be added like shelves, roller tracks etc.

Technical specifications

Heating power	As per request
Max. Temperature	950 °C
Dimensions	As per request

Conveyor Belt Furnaces

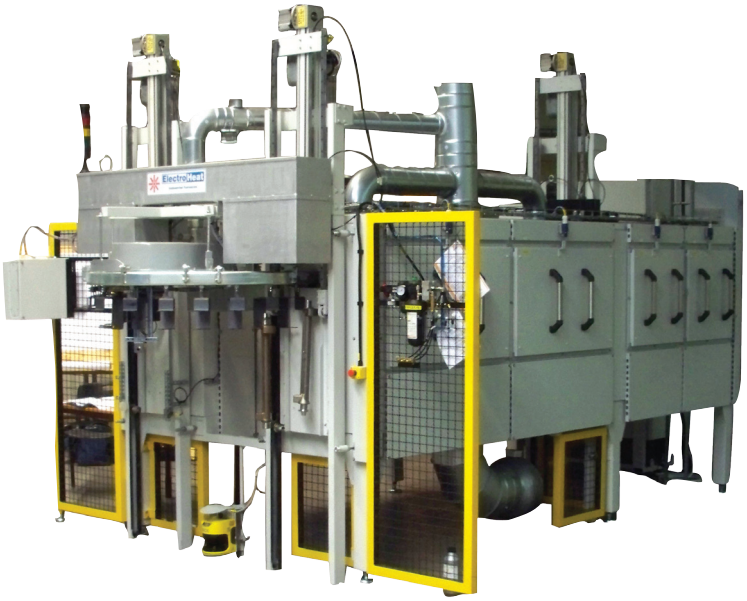
The conveyor belt furnace is built up by an iron framework and is insulated with mineral wool. The furnace is heated up by a heat fan unit that is placed on the furnace roof. The heat fan unit consists of an electrical motor, fan wheel, elements and air-intake.

The conveyor belt is available in various designs like a net band made by fiber glass and Teflon or spiral belt in steel. It is also possible to transport the parts hanging by an overhead conveyor. The conveyor belt has a variable speed, can be either step or continuously feeded. The number or belts, hatches etc. can be designed by request

The furnace can be divided in different heating zones and can also include a cooling zone.

Technical specifications

Heating power	As per request
Max. Temperature	500°C with standard design
Dimensions	As per request



Conveyor Oven

The conveyor oven is built up by an iron framework and is insulated with mineral wool. The oven has two heating zones and one cooling zone. The oven uses an overhead conveyor. The conveyor is step feeded and the hatches are motor driven. The oven also has inspection hatches along the long sides.

Technical specifications

Heating power	As per request
Max. Temperature	200°C
Dimensions	As per request

Car Bottom Furnaces

The car bottom furnace consists of a fixed chamber and a car. The chamber is insulated with mineral wool and Superwool and on the sidewalls elements are assembled to achieve a constant temperature and for easy maintenance. Circulation fan with two motor driven dampers are assembled on the roof. There is also one motor driven damper on the roof connected to a cooling fan. The motor driven car is built up by insulating and fire resistant bricks. Between car and chamber are electrical sealings on both sides of the car which closes during heating and opens when the furnace temperature is below 300°C. The furnace has an electrically controlled lifting door.

The control cabinet contains main switch, fuses, thyristors for heat regulation, temperature/process controller, motor circuit breakers and regulator for over heat temperature. The furnace has a limit switch for the door, turning heat and fan off when doors are opened.

Technical specifications

Heating power	As per request
Max. Temperature	850 °C
Dimensions	As per request

Car Bottom Furnace with motor driven lifting door

The furnace consists of a chamber which is built up by an iron framework and is insulated by superwool and mineralwool. Heating elements are attached to the side walls. On top of furnace two circulation fans and one cooling fan are assembled.
The car bottom which consists of insulation and heat resistant bricks can be loaded with approximately 5 ton goods. Both car bottom and lifting door are motor and chain driven. They are both operated by a two-hand control.

Technical specifications

Heating power	As per request
Max. Temperature	850 °C
Dimensions	As per request

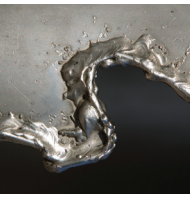
Laboratory Furnaces

The furnace is made in stainless steel and is controlled by a digital controller. The controller enables to reach a predetermined set point temperature in the shortest time or with a specific ramp rate.

Can be ordered with legs and racks. Door can be opened to the right or left and type of locking device is optional. Can be equipped with manual or automatic dampers.

Technical specifications

Heating power	As per request
Max. Temperature	535°C
Dimensions	As per request



Top Hat Furnaces

The industrial furnace is used for heat treatment of steel products such as tempering, annealing, soft annealing, normalising, stress relieving, homogenising and recrystallization. The bottom, which is mounted on the floor, is built up by insulating and fire resistant bricks. The top hat is insulated with Superwool and mineral wool and needs to be lifted off the bottom with lifting equipment when loading and unloading. On the bottom, guiding profiles is mounted, to force the top hat to be placed correctly on the bottom. The elements are either assembled on the sidewalls or in the bottom. The industrial furnace comes with or without fan unit and dampers for cooling.

Technical specifications

Heating power	As per request
Max. Temperature	850°C
Dimensions	As per request

Container Ovens

A standard container rebuilt to an industrial oven. The oven is used for long-duration testing within the automotive industry. Can be used indoors and outdoors.

Technical specifications

Max Temperature	100 °C
Heating Power	17 kW
Dimensions	2400 x 2400 x 5000 mm

Gas Furnaces

The furnace is build up by an iron framework and is insulated with mineral wool. The furnace is covered with steel sheets on the inside and with coated steel sheets on the outside. Natural gas burners heat up the furnace. The hot air is guided from the burners to the fan units for circulation of the air in the furnace. The furnace has fan units containing circulation fans and motor driven dampers. It is also provided with a fan unit for cooling and for removing exhaust gases. The gas heated furnace can be used for drying of welding electrodes.

Technical specifications

Heating power	Natural gas burners
Max. Temperature	1200°C
Dimensions	As per request

Outdoor Degassing Ovens

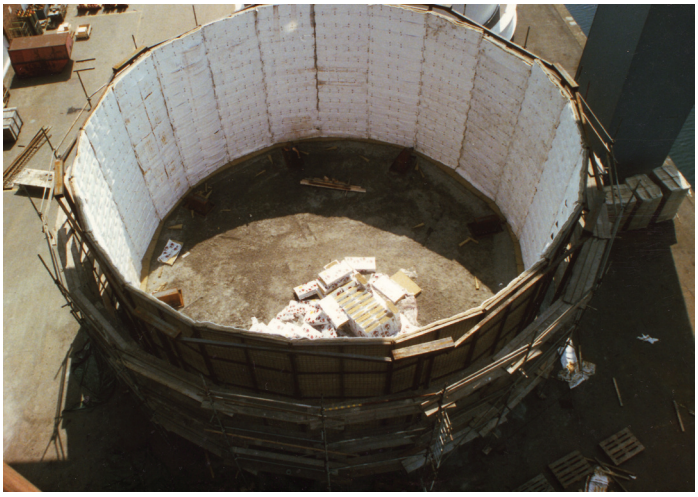
The chamber oven is built up by an iron framework and is insulated with mineral wool. The oven is covered with stainless steel sheets on the inside and with aluzink sheets on the outside. The chamber oven should be placed on a concrete plate underneath a roof outdoors. Each oven can be divided into several heating zones. One heating zone contains circulation fan, heating elements and motor. The air circulates through side air channels with guiding sheets towards the charge and thereafter returns to the fans. Rolling doors are assembled on each oven.

Technical specifications

Heating power	As per request
Max. Temperature	80°C
Dimensions	As per request

Temporary Furnaces

Steel sheets insulated with mineral wool for temporary heat treatment installations. Can be heated with gas or electric heating power. Unique solutions can be manufactured depending on the product, process and environment. The picture shows an example of a temporary oven with ø16m and 8m high.



Pit Furnaces

The pit furnace is used for heat treatment of steel products in inert gas atmosphere and for nitriding. Loading and unloading is made with lifting equipment. The goods are heated by electrical elements placed along the sides. The circulation fan in the furnace makes the hot air circulate and create a constant temperature and gas distribution. The gas is supplied to the furnace via fixed pipes from the gas panel. The gas inlet is placed in the bottom and the outlet in the upper part of the furnace.

The alarm arrangement consists of terminal, siren and a message service. All the functions of the furnace are controlled by a PLC-system.

Technical specifications

Heating Power	As per request
Max. Temperature	800 °C
Dimensions	Example Ø1500 H: 5000
Charge Weight	10 tons

All industrial ovens can be customized. Please contact us for more information.

Control Systems

ElectroHeat can offer different temperature control systems specific for the functionality of the furnace/oven.

BTC 9100/9300

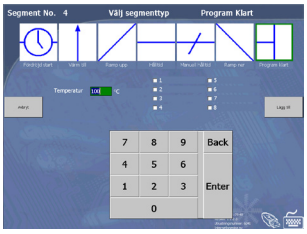
BTC9100 is the most simple temperature controller used for ElectroHeat ovens. The controller enables to reach a predetermined set point temperature in the shortest time or with a specific ramp rate.

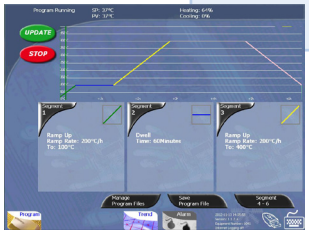
BTC P91

BTC P91 is a temperature program controller used for ElectroHeat furnaces. The controller can hold 9 programs and each program can contain 64 segments. The segments can be programmed for ramp up, ramp down and dwell time.

Furnblog

Furnblog X51 is an own-developed control system specially designed for industrial ovens and furnaces. Furnblog is a program controller and a temperature logger which is operated from a 12” touch screen. The controller can hold over 1000 programs and each program can contain up to 250 segments. Temperature log files and data files are transferred via USB/Network. Logging and monitoring of heat treatment can be done via internet.





PLC (Programmable Logical Controller)

Temperature and process controlling with Mitsubishi or Siemens PLC.
Both hardware and software can be custom made as needed.

Function	BTC 9100/9300	BTC P91	Furnblog	PLC
Ramp up/ramp down/dwell time	X*	X	X	X
Internet monitoring/logging	-	-	X	X**
Logging	-	-	X	X
Digital outputs	1	3	8	***
Touch screen	-	-	12”	***
Save program	-	X	X	X
Segments	-	64	250	***
Alarm	1	1	8	***
Price range	Low	Low	Medium	High

*Limited
**Available with third part Scada server application.
***Custom made.

ElectroHeat – Innovation, Design and Production

Furnaces and industrial ovens
- Heat treatment services for pipes and steel constructions
- Mobile heat treatment equipment
- Ovens for heating or drying of welding rods
- Standard ovens
- High temperature fan units with recirculation
- Design and construction of control cabinets
- Climate chambers with cooling/heating/humidity

Please contact us for more information or visit our web site.
From construction to a finished product – we solve your heat treatment problems!

ElectroHeat
Industrial Ovens

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