

 **SYSTHERMS**



Furnaces for
low pressure
carburising



Furnaces for low pressure carburising



Almost unlimited flexibility

SYSTHERMS offers low pressure carburising furnaces for a wide range of applications. In addition to traditional single chamber furnaces with a quenching pressure of 10 or 15 bar, dual chamber furnaces are available, where the gas quenching is carried out with up to 20 bar in a separate cold chamber. In this furnace type there is also the possibility to use oil instead of gas as quenching medium. Therefore the product range can be extended to steel grades which could not be hardened in gas up to now. In addition to horizontal furnaces with front loading, vertical bottom loader furnaces are available as carburising furnaces. Your application determines the design.

Features:

- Full process automation
- Excellent reproducibility of results
- Extremely simple programming of the carburising process thanks to an advanced user interface
- Innovative low pressure carburising technology
- High degree of environmental friendliness of carburising and quenching



Every vacuum furnace can be used for low pressure carburising.

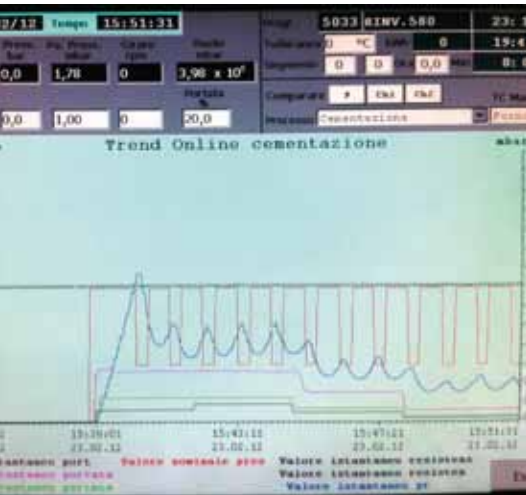
The conditions for this are:

- Appropriate gassing equipment
- Sufficient quenching pressure for the steel grades used



◀ Dual chamber vacuum furnace VWKK
Bottom loader vacuum furnace VWS ▶





Process technology – beyond the standards

When carburizing with SYSTHERMS furnaces the process is controlled by a specific method. In a preliminary step, the process with its carburising and diffusion steps is simulated on a PC. The input parameters are the surface of the products, steel grade, process temperature and the required carburising profile.

The values calculated by the simulation software now can be transferred to the furnace controller: This can occur either automatically via the SYSTHERMS control systems **host** or **hestia** or manually via the user interface of the furnace.

Then the furnace process is started and runs completely automatically. The programs thus generated can be saved and recalled at any time. Thus any time full reproducible results can be achieved with the same batch.

The simulation software also provides further benefits:

The full simulation mode helps inexperienced users to develop the processes and can suggest a process with all carburising and diffusion times as well as gas flows according to the specifications of the required results.

Experienced users can specify the process with the required parameters and will get the carburising result simulated by the program.

We continually develop!
LPC online control
already in the test!

Standard sizes

(Dimensions of usable space)

400 x 400 x 600 mm

600 x 600 x 900 mm

900 x 800 x 1200 mm

1000 x 1000 x 1500 mm

Special sizes on request



Single chamber vacuum furnace VWC ▶



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