Process Control and Documentation

Controltherm MV Software for Control, Visualisation and Documentation

Documentation and reproducibility gain increased attention with steadily rising quality standards. The powerful Nabertherm software Controltherm MV provides for an optimum solution for the control and documentation of one or more furnaces as well as charge data on basis of Nabertherm controllers.

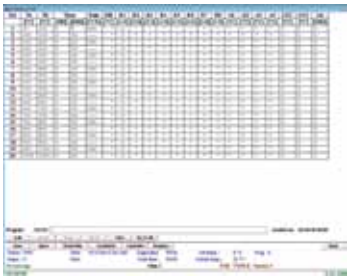
In the basic version one furnace can be connected to the MV-software. The system can be extended to four, eight or even 16 multi-zone controlled furnaces. Up to 400 different heat treatment programs can be stored. The process will be documented and filed. Process data can be read-out graphically or in table format. A data transfer to MS-Excel is also possible.

For furnaces which are not controlled via a Nabertherm controller, the furnace temperature can be documented with the MV-software. We deliver an extension package as optional equipment. With respect to the individual version, three, six or even nine independent thermocouples can be connected. Independent of the control system, the values of each thermocouple will be read-out and evaluated by the MV-software.

Controltherm MV Software for Control, Visualisation and Documentation

Features

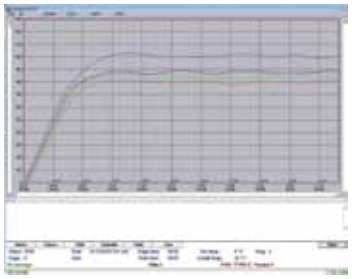
- Simple installation without specific knowledge
- All Nabertherm controllers with interface connectable
- Manipulation protected storage of temperature curves of up to one, four, eight or 16 furnaces (also multizone-controlled), depending on the version of MV-software
- Redundant storage on a network server possible
- Programming, archiving and printing of programs and graphics
- Free input of descriptive charge data text with comfortable search function
- Data exportable into Excel format for further evaluation
- Start/stop of the controller from the local PC (only with Nabertherm controllers mit interface)
- Selectable languages: German, English, French, Italian or Spanish
- 400 additional programs storable (only with Nabertherm controllers with interface)



Data input in table format if used together with Nabertherm controllers

Extension Package II for Connection of one Additional Temperature Measuring Point, Independent of the Controller

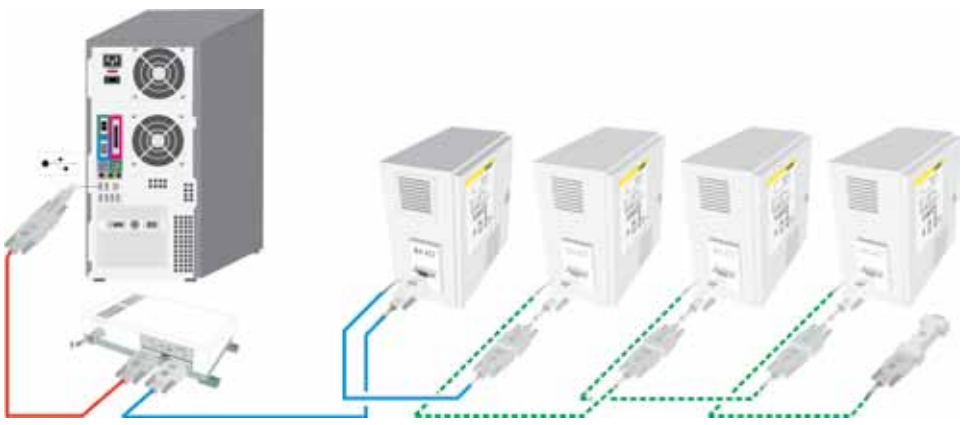
- Connection of an independent thermocouple, type K or S with display of the measured temperature on the included controller C 6 D, e.g. for documentation of charge temperature
- Conversion and transmission of measured data to the MV-software
- For data evaluation see MV-software features



Graphical display of set and actual temperature curve

Extension Package II for Connection Three, Six or Nine Temperature Measuring Points, Independent of the Controller

- Connection of three thermocouples, type K, S, N or B to the supplied connection box
- Extendable to two or three connection boxes for up to nine temperature measuring points
- Conversion and transmission of measured data to the MV-software
- For data evaluation, please see MV-software features

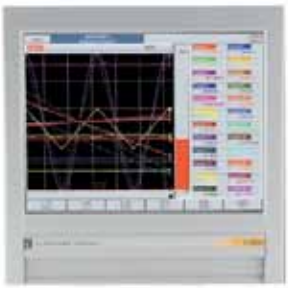


Extendable for connection of up to 16 furnaces

PC for HiProSystems control in a separate cabinet

H 1700 with colored, tabular depiction of the data

H 3700 with colored graphic presentation of data



Temperature recorder

HiProSystems Control and Documentation

This professional control system for single and multi-zone furnaces is based on Siemens hardware and can be adapted and upgraded extensively. HiProSystems control is used when more than two process-dependent functions, such as exhaust dampers, cooling fans, automatic movements, etc., have to be handled during a cycle, when furnaces with more than one zone have to be controlled, when special documentation of each batch is required and when remote telediagnostic service is required. It is flexible and is easily tailored to your process or documentation needs.

Alternative User Interfaces

Touch panel H 700

This basic panel accommodates most basic needs and is very easy to use.

Touch panel H 1700

Firing cycle data and the extra functions activated are clearly displayed in a table. Messages appear as text.

Touch panel H 3700

All functions and process data are stored and displayed in easy to read charts. The data can be exported through various interfaces (Ethernet TCP/IP, MPI, Profibus) to a local PC or your company network for further processing. A CF card also gives the opportunity for data storage and transfer to a PC with a card reader.

For Control, Visualisation and Documentation

Nabertherm Control Center NCC

Upgrading the HiProSystems-Control individually into an NCC provides for additional interfaces, operating documentation, and service benefits in particular for controlling furnace groups including charge beyond the furnace itself (quenching tank, cooling station etc.):

- Recommended for heat treatment processes with extensive requirements in respect to documentation e.g. for metals, technical ceramics or in the medicine field
- Software can be used also in accordance with the AMS 2750 D (NADCAP)
- Documentation according to the requirements of Food and Drug Administration (FDA), Part 11, EGV 1642/03 possible
- Charge data can be read in via barcodes
- Interface for connection to existing Enterprise Database systems (e.g. SAP, Oracle)
- Connection to mobile phone network for alarm message transmission via SMS
- Control from various locations over the network
- Calibration of each measuring point for a specific temperature possible
- Extendable for calibration of a polygonal line with up to 18 temperatures per measuring point for use at different temperatures e.g for AMS 2750 D applications

For Documentation

Nabertherm Documentation Center NDC and data recording via NT Log

If the process data of the HiProSystems control unit only need to be recorded, this can be done using a personal computer (PC) with the high-performance NDC software. The data are documented, forgery-proof, and can be evaluated both in the form of a table or a chart. Individual charge data can be entered by the customer and are archived together with the process data. A low-cost alternative which can be used is the NT Log package. The data is recorded on a USB stick during the firing. After the heat treatment has been completed, the recorded value can be read out on the PC with the free analysis software.

Temperature Recorder

Besides the documentation via the software which is connected to the controls, Nabertherm offers different temperature recorders which can be used with respect to the application.

	Model 6100e	Model 6100a	Model 6180a
Data input using touch panel	x	x	x
Size of colour display in inch	5.5	5.5	12.1
Number of thermocouple inputs	3	18	48
Data read-out via USB-stick	x	x	x
Input of charge data		x	x
Evaluation software included	x	x	x
Applicable for TUS-measurements acc. to AMS 2750 D			x