

## Alternative Controls

### Controller Product Range

#### Basic



**R7**  
- 1 temperature setpoint



**Eurotherm 3208**  
-2 temperature setpoints



**Nabertherm B400/B410**  
- 5 programs / 4 steps  
- Up to 2 settable functions  
- Calibration (10 base points)  
- Jog Dial for value input  
- Real-time clock



- NTLog  
- USB interface  
- Language selection (DE/EN/FR/IT/ES/RU/DA/NL/PL/PT/SV/CS/HU/TR/RO/NO)

#### Comfort



**Eurotherm 3216**  
- 1 program / 8 steps  
- With optional serial interface



**Nabertherm C440/C450**  
- 10 programs / 20 steps  
- Up to 2 settable functions  
- Calibration (10 base points)  
- Jog Dial for value input  
- Real-time clock



- NTLog  
- USB interface  
- Language selection (DE/EN/FR/IT/ES/RU/DA/NL/PL/PT/SV/CS/HU/TR/RO/NO)

#### Professional



**Eurotherm 3504**  
-Multi-zone-/charge control  
-Up to 6 settable functions  
-25 programs / up to 500 steps



**Nabertherm P470/P480**  
- 50 programs / 40 steps  
- Up to 6 settable functions  
- Up to 3 zones, charge control, cooling  
- Logical and continuous control of heating  
- Calibration (10 base points)  
- Jog Dial for value input  
- Real-time clock



- NTLog  
- USB interface  
- Language selection (DE/EN/FR/IT/ES/RU/DA/NL/PL/PT/SV/CS/HU/TR/RO/NO)

#### Options



##### Further controller

- I.e. Stange, Omron, Jumo, Demig ...

##### Temperature limiter

- With adjustable cut-off

##### Industrie 4.0

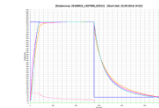
- Interface to overriding systems

#### Softwarezubehör



##### NTGraph

- Presentation of NTLog archives
- Presentation as diagram and table
- Printout of simple report
- Process evaluation
- For MS-Office for Windows 2010/2013/365
- Freeware



##### NTEdit

- Prepare programs on the computer
- For controller Serie 400
- Export of programs on USB flash drive for a direct import in the controller
- For MS-Office for Windows 2010/2013/365
- Freeware



## Alternative Controls

### HiProSystems

### Remote & Alarm Services

#### Comfort



**Process controls H500** for standardized processes without any customer specific adjustments/configurations

1. H500 for electrically heated bale-out and tilting furnaces

2. H500 for furnaces with standard functions: Rotary tube furnaces, controlled cooling (also for air circulation furnaces), multi-zone, charge control

- Touch panel: 4"-display or 7"-display with alpha numeric process visualization
- Siemens PLC hardware



**Process controls H700** for advanced, standardized processes without any customer specific adjustments / configurations

1. H700 for gas fired bale-out and tilting furnaces

- Touch panel: 7"-display with alpha numeric process visualization
- Siemens PLC hardware



**Process controls H1700** for complex standardized processes with customer specific adjustments/configurations

- Touch panel: 7"-display with alpha numeric process visualization
- Siemens PLC hardware

#### Professional



**Process controls H3700** for complex standardized processes with customer specific adjustments/configurations

- Touch panel: 12"-display with graphical process visualization
- Siemens PLC hardware



**Process controls Nabertherm Control Center NCC**, also for multi-step and parallel processes with customer specific adjustments/configurations

- PC Process-Control-System (SCADA) with 19"-monitor and graphical process visualization
- Siemens PLC hardware



#### Safety packages

- Realization with conventional safety technology
- Realization with failsafe PLC technology (F-SPS)

#### Remote Services

##### Remote service for PLC

- Via cell phone (eWon Talk2M: GSM, UMTS, LTE)
- Via internet (eWon Talk2M: VPN)

##### Remote service for PC

- Via Internet (Teamviewer)



#### Alarm Services

##### Alarm messages HiProSystems

- As SMS message
- eWon Talk2M
- Forwarding of 1 (up to 5) group messages

##### Alarm messages Nabertherm Control Center NCC

- As SMS message
- Siemens AlarmControlCenter with GSM module
- Forwarding of any alarm message
- Configurable by the operator

##### Alarm message from process as SMS for standard Controller with floating contact

- GSM module with message input
- Forwarding of an alarm message from the controller (unspecific) as SMS

### Options



#### Industrie 4.0

- Connection to overriding systems
- Monitoring functions
- Maintenance planner

#### Operation

- Alternative operating languages

#### Availability

- Uninterruptible power supplies

## Process Controls and Documentation

### Basic



#### Record and display of process data with graphical recorder

- Eurotherm 6100A/E
- With 3-18 measuring points
- Interface for USB-flash drive and memory card
- Data security level 2



#### Recording of process data with USB-flash drive for Nabertherm-controller with NTLog

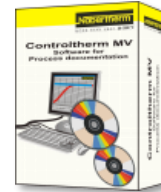
- Presentation with Nabertherm presentation software NTGraph or customer's spreadsheet
- Data security level 1



#### Recording of process data with storage device with NTLog Comfort (HiProSystems)

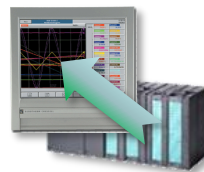
- On memory card, USB-flash drive or network
- From H500
- Presentation with Nabertherm presentation software NTGraph or customer's spreadsheet
- Data security level 1

### Comfort



#### Reading and processing with VCD-Software

- Setpoints and actual values from
  - one or more Nabertherm controllers incl. operating and programming
  - extension packages (additional thermocouples, balances – only actual values)
  - certain Eurotherm controllers (in preparation)
- Available from Windows 7 (32/64 bit).  
Data security level 2



#### Data transmission between graphical recorder and HiProSystems or Eurotherm controller

- Option for Eurotherm 6100A/6180A
- Communication to recorder via network
- Data security level 2

### Professional



#### Process Controls and Documentation with Nabertherm Control Center NCC

- PC process control system (SCADA)
- Documentation of complete process chains according to ISO9000ff.
- At least 16 Process-specific records per furnace
- Data security level 2



#### Relevant documentation for standards, i.e. according to AMS 2750/NADCAP, CQI-9, FDA, EN14179...

- Realization with NCC Aviation/Automotive
- Realization with recorder Eurotherm 6100A, 6180A
- TUS-recorder with Eurotherm 6100A/6180A
- Data security level 2

### Security Levels

#### Legend of Nabertherm security levels

Nabertherm security levels describe the protection against manipulation of the process documentation.

1. level: Protection against intentional manipulation of a file with little criminal effort

Documentation with a simple proof obligation (e.g. the quality of a product), where damages due to criminal actions remains manageable. -> Realization i.e. by checksum calculation, etc...

2. level: Protection against intentional modification of a file with a high criminal effort

Use in normative burden of proof, which cause high damages by criminal manipulation (e.g. AMS, FDA, CQI-9..).  
-> Realization e.g. by generating PDF-Files, additional saving of hidden files, etc.

### Options

- Connection to overriding systems
- Uninterruptible power supplies (UPS)
- Alternative operating languages
- Replacement systems
- PC enclosures
- Barcodes