

## Alternative Controls

### Controller Product Range

#### Basic



**Eurotherm 3208**  
-2 temperature setpoints



**R7**  
- 1 temperature setpoint



**Nabertherm B150, B180**  
-1 program / 2 steps



**Nabertherm B130**  
-2 programs / 4 steps  
-With preset programs for ceramic applications

**Nabertherm B400/B410**  
- 5 programs / 4 steps  
- Up to 2 settable functions  
- Calibration (10 base points)  
- Jog Dial  
- Real-time clock  
- NTLog  
- USB interface  
- Language selection (DE/EN/FR/IT/SP/RU)

#### Comfort



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



**Nabertherm C280**  
-9 programs / 4 steps  
-2 settable functions  
-With preset programs for ceramic applications



**Nabertherm P300-P330**  
-9 programs / 40 steps  
-2 settable functions  
-P330 with real-time clock



**Nabertherm C440/C450**  
- 10 programs / 20 steps  
- Up to 2 settable functions  
- Calibration (10 base points)  
- Jog Dial  
- Real-time clock  
- NTLog  
- USB interface  
- Language selection (DE/EN/FR/IT/SP/RU)

#### 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  
- Real-time clock  
- NTLog  
- USB interface  
- Language selection (DE/EN/FR/IT/SP/RU)

#### Options

- Further Controller: I.e. Stange, Omron, Jumo
- Temperature limiter
- Interfaces

## Alternative Controls

## HiProSystems

## Remote &amp; 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 bale-out and tilting furnaces

2. H700 for VHT furnaces

3. H700 for R(SR) 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)

## Options

- Connection to customer-specific systems

- Uninterruptible power supplies (UPS)

- Alternative operating languages

## Remote Services



**Remote service for PLC**

- Via conventional telephone (analog modem)

- Via cell phone (GSM, GPRS, Edge,

UMTS, eWon 2000/4000)

- Via internet (eWon 2000/4000, VPN)



**Remote service for PC**

- Via Internet (Teamviewer)

## Alarm Services



**Alarm messages HiProSystems**

- As SMS message

- eWon 2000/4000

- 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

## Process Controls and Documentation

### Basic



#### Record and display of process data with paper chart recorder

- Eurotherm 4102/3
- 6 measuring points



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

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



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

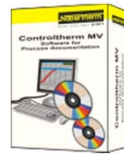
- Presentation with Nabertherm presentation software NTGraph or customer's spreadsheet
- Recording of differential time
- Data security level 1



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

- On storage card, USB-flash drive or network
- From H1700/H3700
- Presentation with Nabertherm presentation software NTGraph or customer's spreadsheet
- Data security level 1

### Comfort



#### Reading and processing with MV-Software

- Setpoints, actual values from one or more Nabertherm- and/or Eurotherm-controller according to ISO9000ff., incl. operating and programming
- Only actual values for other controllers and systems
- Available for 32 bit operating systems
- 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



#### Reading and processing with Nabertherm Documentation Center NDC

- 16 records defined by one or more Nabertherm furnaces according to ISO9000ff.
- From H1700
- 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 2750E/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

### Options

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

### 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.