

Process Control and -Documentation

Controller

The Nabertherm controllers convince with their intuitive operation and a contemporary design. They are operated via a central control dial (Jog Dial). Temperatures and program information are presented in a clear, high-contrast LC display. Optimum temperature uniformity over the entire temperature range through multi-stage PID parameterization.

In developing the controller, the ease of use was the focus. For convenient operation, the controller may be taken off from the holder at the kiln. The program is entered in plain text, so that all steps are easy to follow. Firing curves can be saved under their name for unique assignment (e.g. glaze firing). The user can choose between 17 languages.

When connected to a kiln for firing ceramics, five sample programs are stored in the controller (two bisque firings and three glaze firings). These programs can easily be used as a basis for an individual adaptation to the actually required firing curve. You can overwrite and save again with the required times and temperatures. Via an integrated real time clock, the kiln can be started delayed e.g. in the evening for a firing overnight.

Each controller of series B400 to P470 is equipped as standard with a USB interface. The firing will be documented on a USB stick, which has to be inserted during the operation. After the firing has been finished it can be easily read-out using the software NTGraph (freeware), which is based on Microsoft Excel as user interface. The visualization is presented in tabular form or as a clearly colored graphic.



B400



C440



P470

Allocation of the Standard Controller to the Furnace Groups

	NW 150 - NW 1000/H	N 100 - N 2200/H	N 40E - N 100E	N 140E - N 500E	Top 16/R - Top 220	HO 70. - HO 100	NB 300 - NB 600	GFM	GF 75 - GF 1425	F 30 - F 110	F 220	MF 5	LE 1/11 - LE 14/11
Catalog page	5	7-8	9	10-11	15-16	18	21	23	25	27	27	28	29
Controller													
B400	●	●	●	●	●	●	●						
C440	○	○	○	○	○	○	○	●	●	●		●	
P470	○	○	○	○		○	○	○	○	○	●	○	
R7													●

Functionality of the Standard Controllers

	R7	B400	C440	P470
Number of programs	1	5	10	50
Segments	2	4	20	40
Extra functions (e.g. fan or autom. flaps) maximum		2	2	2-6
Maximum number of control zones	1	1	1	3
Drive of manual zone regulation		●	●	●
Auto tune		●	●	●
Real time clock		●	●	●
Status messages in clear text		●	●	●
Data input via jog dial and buttons		●	●	●
Entering program names (i.e. "Sintering")		●	●	●
Keypad lock		●	●	●
Skip-button for segment jump		●	●	●
Program entry in steps of 1 °C or 1 min.	●	●	●	●
Start time configurable (e.g. to use night power rates)		●	●	●
Switch-over °C/°F	○	●	●	●
Malfunction memory		●	●	●
kWh meter		●	●	●
Operating hour counter		●	●	●
NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive		●	●	●
Interface for VCD-software		○	○	○
Number of selectable languages		17	17	17

- Standard
- Option

Supply Voltages for Nabertherm Furnaces

1-phase: All furnaces are available for 110 V - 240 V, 50 or 60 Hz.

3-phase: All furnaces are available for 200 V - 240 V and/or 380 V - 480 V, 50 or 60 Hz.

The connecting rates in the catalog refer to the standard furnace with 400 V (3/N/PE) respectively 230 V (1/N/PE).

Controller Operation



1. Display
2. Main operating button (Jog Dial) (turn/push)
3. Button for "Start/Hold/Stop"
4. Button for "Menu" selection e.g. save, copy or delete program
5. Button for "Back" function
6. Button to activate the Info-Menu
e.g. final consumption in kWh, operating hours
7. USB interface

Displays and Functions



Entering a new program



Loading saved programs



Enter the start time (day and time)



Saving a program under the program name



Display of power consumption in kWh



Remaining time display of the current program



Controller removable for ease of use



Documentation of started programs on a USB stick