

## Burnout Furnaces for Burn-Out of Muffles and Speed Investment Material



Burnout furnace L 3/12



Burnout furnace L 3/11 with casting muffle

These burnout furnaces are the perfect choice for daily work in the dental laboratory. These furnaces stand for excellent workmanship, advanced, attractive design and highest level of reliability. They are perfectly suitable for burnout of muffles and also for speed investments. These furnaces come equipped with either a flap door or lift door at no extra charge. The burnout furnaces come with a fiber insulation for 1100 °C or 1200 °C.



Adjustable air inlet integrated in the door

- Tmax 1100 °C or 1200 °C
- Heating from two sides by ceramic heating plates provides for an optimal temperature uniformity
- Ceramic heating plates with integral heating element which is safeguarded against fumes and splashing, and easy to replace
- Only fiber materials are used which are not classified as carcinogenic according to TRGS 905, class 1 or 2
- Housing made of sheets of textured stainless steel
- Dual shell housing for low external temperatures and high stability
- Optional flap door (L) which can be used as work platform or lift door (LT) with hot surface facing away from the operator
- Adjustable air inlet integrated in door (see illustration)
- Exhaust air outlet in rear wall of furnace
- Solid state relays provide for low-noise operation
- Controller B410
- For maximum number of chargeable muffles in the furnace models see page 17
- Defined application within the constraints of the operating instructions
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Controls description see page 22

### Additional equipment

- Chimney, chimney with fan or catalytic converter (not for L 1 and L 15). For burn-out of muffles and speed investment materials we recommend the use of a catalyst.
- Over-temperature limiter with adjustable cutout temperature for thermal protection class 2 in accordance with EN 60519-2 as temperature limiter to protect the furnace and load
- Protective gas connection to purge with non-flammable protective or reaction gases (not available in combination with chimney, chimney with fan or catalytic converter)

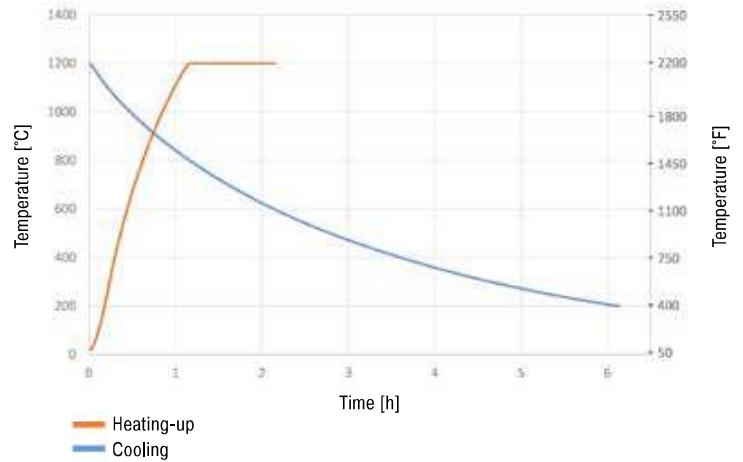


Over-temperature limiter



Burnout furnace LT 5/12

**L 9/12 Heat Up and Cooling Times**



- Manual or automatic gas supply system
- Please see page 20 for more accessories
- Process control and documentation via VCD software package for monitoring, documentation and control see page 23

**Maximum Chargeable Number of Burnout Muffles**

The table below indicates the maximum number of burnout out muffles that can be charged in our different muffle furnaces.

Model	Muffle type			
	Size 1 x (Ø 37 mm)	Size 3 x (Ø 55 mm)	Size 6 x (Ø 72 mm)	Size 9 x (Ø 88 mm)
LE 1	6	4	1	1
LE 2	8	6	2	2
LE 6	20	9	4	2
LE 14	35	20	12	6
L 1	6	4	1	1
L 3	12	6	2	2
L 5	20	9	4	2 - 3
L 9	36	16	9	4
L 15	54	24	12	6
N 7/H	42	20	9	6
N 11/H, N 11/HR	63	28	14	11
N 17/HR	91	43	20	15



LT 3/..



LT 5/..



LT 9/..

Model	Tmax °C	Inner dimensions in mm			Volume in l	Outer dimensions in mm <sup>3</sup>			Connected load kW	Electrical connection*	Weight in kg	Minutes to Tmax <sup>2</sup>
		w	d	h		W	D	H <sup>1</sup>				
L, LT 3/11	1100	160	140	100	3	385	330	405+155	1.2	1-phase	20	60
L, LT 5/11	1100	200	170	130	5	385	390	460+205	2.4	1-phase	30	60
L, LT 9/11	1100	230	240	170	9	415	455	515+240	3.0	1-phase	35	75
L, LT 15/11	1100	230	340	170	15	415	555	515+240	3.5	1-phase	40	95
L 1/12	1200	90	115	110	1	250	265	340	1.5	1-phase	10	25
L, LT 3/12	1200	160	140	100	3	385	330	405+155	1.2	1-phase	20	75
L, LT 5/12	1200	200	170	130	5	385	390	460+205	2.4	1-phase	30	75
L, LT 9/12	1200	230	240	170	9	415	455	515+240	3.0	1-phase	35	90
L, LT 15/12	1200	230	340	170	15	415	555	515+240	3.5	1-phase	40	110

\*These furnaces are available for main voltage of 110 V - 120 V (up to 1,5 kW) resp. 200 V - 240 V, 1/N/PE or 2/PE

<sup>1</sup>Including opened lift door

<sup>2</sup>In the empty and closed furnace, connected to 230 V 1/N/PE resp. 400 V 3/N/PE

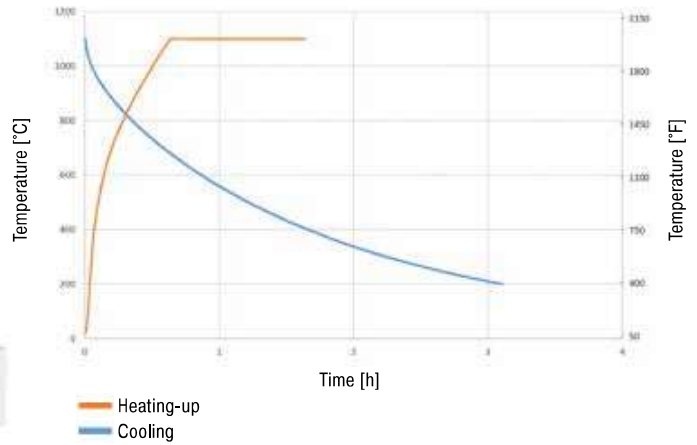
<sup>3</sup>External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.

# Compact Burnout Furnaces



Burnout furnace LE 6/11

## LE 6/11 Heat Up and Cooling Times



With their unbeatable price/performance ratio, these compact burnout furnaces are optimally suited for burnout in the dental laboratory. They convince by very fast possible heating ramps and attractive design. Quality features like the dual shell housing of stainless steel, their compact, lightweight design, or the heating elements installed in quartz glass tubes make this burnout furnace a reliable partner for your dental application.



Burnout furnace LE 1/11

- Tmax 1100 °C, working temperature 1050 °C
- Heating from two sides from heating elements in quartz glass tubes
- Maintenance-friendly replacement of heating elements and insulation
- Only fiber materials are used which are not classified as carcinogenic according to TRGS 905, class 1 or 2
- Housing made of sheets of textured stainless steel
- Dual shell housing for low external temperatures and high stability
- Flap door which can also be used as a work platform
- Exhaust air outlet in rear wall
- Solid state relays provide for low-noise operation
- Compact dimensions and light weight
- Controller R7
- Controller mounted under the door to save space
- For maximum number of chargeable muffles in the furnace models see page 17
- Defined application within the constraints of the operating instructions
- Controls description see page 22

### Additional equipment

- Chimney, chimney with fan or catalytic converter (not for LE 1 and LE 2). For burn-out of muffles and speed investment materials we recommend the use of a catalyst.
- Please see page 20 for more accessories



Maximum chargeable number of burnout muffles see page 17

Model	Tmax °C	Inner dimensions in mm			Volume in l	Outer dimensions in mm <sup>2</sup>			Connected load kW	Electrical connection*	Weight in kg	Minutes to Tmax <sup>1</sup>
		w	d	h		W	D	H				
LE 1/11	1100	90	115	110	1	290	280	410	1,5	1-phase	10	10
LE 2/11	1100	110	180	110	2	330	385	410	1,8	1-phase	10	25
LE 6/11	1100	170	200	170	6	390	435	470	1,8	1-phase	18	35
LE 14/11	1100	220	300	220	14	440	535	520	2,9	1-phase	25	40

\*These furnaces are available for main voltage of 110 V - 120 V resp. 200 V - 240 V, 1/N/PE or 2/PE

<sup>1</sup>In the empty and closed furnace, connected to 230 V 1/N/PE resp. 400 V 3/N/PE

<sup>2</sup>External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.

## Burnout Furnaces with Brick Insulation



With their brick insulation and the robust table-top design, the burnout furnaces are the workhorses for the daily use in the dental laboratory. Heating elements in both sides and the bottom provide for excellent temperature uniformity even if the furnace is fully charged. The burnout furnace can be used for the burnout of muffles or for speed investments.

Burnout furnace N 7/H as table-top model

- Tmax 1280 °C
- Three-sided heating from both sides and the bottom
- Heating elements on support tubes ensure free heat radiation and a long service life
- Bottom heating protected by heat-resistant SiC plate
- Multi-layer insulation with high-quality lightweight refractory bricks in the furnace chamber
- Exhaust opening in the side of the furnace
- Controller B400
- For maximum number of chargeable muffles in the furnace models see page 17
- Defined application within the constraints of the operating instructions
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Controls description see page 22

### Additional equipment

- Chimney, chimney with fan or catalytic converter
- Over-temperature limiter with adjustable cutout temperature for thermal protection class 2 in accordance with EN 60519-2 as temperature limiter to protect the furnace and load
- Protective gas connection for non-flammable protective or reaction gases
- Manual or automatic gas supply system
- Please see page 20 for more accessories
- Process control and documentation via VCD software package for monitoring, documentation and control see page 23



Maximum chargeable number of burnout muffles see page 17

Model	Tmax °C	Inner dimensions in mm			Volume in l	Outer dimensions in mm <sup>3</sup>			Connected load kW	Electrical connection*	Weight in kg	Minutes to Tmax <sup>2</sup>
		w	d	h		W	D	H				
N 7/H	1280	250	250	140	9	800	650	600	3,0	1-phase	60	180
N 11/H	1280	250	350	140	11	800	750	600	3,5	1-phase	70	180
N 11/HR	1280	250	350	140	11	800	750	600	5,5	3-phase <sup>1</sup>	70	120
N 17/HR	1280	250	500	140	17	800	900	600	6,4	3-phase <sup>1</sup>	90	120

\*These furnaces are available for main voltage of 110 V - 120 V resp. 200 V - 240 V, 1/N/PE or 2/PE

<sup>1</sup>Heating only between two phases

<sup>2</sup>In the empty and closed furnace, connected to 230 V 1/N/PE resp. 400 V 3/N/PE

<sup>3</sup>External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.

## Accessories for Preheating Furnaces



Article No.: 631000140

**Chimney** for connection to an exhaust pipe.



Article No.:  
631000812

**Chimney with fan**, to remove exhaust gas from the furnace better. The B400 - P480 controllers can be used to activate the fan automatically (not for models L(T) 15..., L 1/12, LE 1/11, LE 2/11).\*



Article No.:  
631000166

**Catalytic converter with fan** for removal of organic components from the exhaust air. Organic components are catalytically oxidized at about 600 °C, broken into carbon dioxide and water vapour. Irritating odors are thus largely eliminated. The B400 - P480 controllers can be used to switch the catalytic converter automatically (not for models L(T) 15..., L 1/12, LE 1/11, LE 2/11).\*

\* Note: If other controller types are used an adapter cable for connection to mains supply has to be ordered separately. The device will be activated by plugging in the socket.

Select between different **bottom plates** and **collecting pans** for protection of the furnace and easy loading (for models L, LT and LE on pages 16 - 18).



**Ceramic ribbed plate, Tmax 1200 °C**



**Ceramic collecting pan, Tmax 1300 °C**



**Steel collecting pan, Tmax 1100 °C**

For models	Ceramic ribbed plate		Ceramic collecting pan		Steel collecting pan (Material 1.4828)	
	Articel No.	Dimensions in mm	Articel No.	Dimensions in mm	Articel No.	Dimensions in mm
L 1, LE 1	691601835	110 x 90 x 12.7	-	-	691404623	85 x 100 x 20
LE 2	691601097	170 x 110 x 12.7	691601099	100 x 160 x 10	691402096	110 x 170 x 20
L 3, LT 3	691600507	150 x 140 x 12.7	691600510	150 x 140 x 20	691400145	150 x 140 x 20
LE 6, L 5, LT 5	691600508	190 x 170 x 12.7	691600511	190 x 170 x 20	691400146	190 x 170 x 20
L 9, LT 9, N 7	691600509	240 x 220 x 12.7	691600512	240 x 220 x 20	691400147	240 x 220 x 20
LE 14	691601098	210 x 290 x 12.7	-	-	691402097	210 x 290 x 20
L 15, LT 15, N 11	691600506	340 x 220 x 12.7	-	-	691400149	230 x 330 x 20

## General Accessories

Heat-resistant **gloves** for protection of the operator when loading or removing hot materials, resistant to 650 °C or 700 °C.



Article No.: 493000004

**Gloves, Tmax 650 °C**



Article No.:  
491041101

**Gloves, Tmax 700 °C**



Article No.:  
493000002 (300 mm)  
493000003 (500 mm)

Various **tongs** for easy loading and unloading of the furnace.