

ROHDE

Industry

Enjoy your **results.**

2017/18 PRODUCT CATALOGUE
FURNACES AND SYSTEMS

for heat treatment

QUALITY SAFETY EFFICIENCY PASSION



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Since the company was founded in 1982, ROHDE has been committed to customer and product benefits and offers solutions in all areas of heat treatment. Benefit from smooth processes and efficient workflows when it comes to the consultation as well as the development, construction and manufacture of your furnace.

INNOVATIVE BY TRADITION – TODAY, TOMORROW AND IN THE FUTURE

Our extensive product range comprising standard furnaces provides well-engineered models that suit almost any of your applications and are available at short notice. The wide range of products and varied options allow for specially adapting each standard furnace to your process.

ROHDE has a competent team for the development of special heat treatment solutions if our standard products do not suit your process. Individual heat treatment solutions are designed in collaboration with the customer. On request, our technicians install and commission them on site.

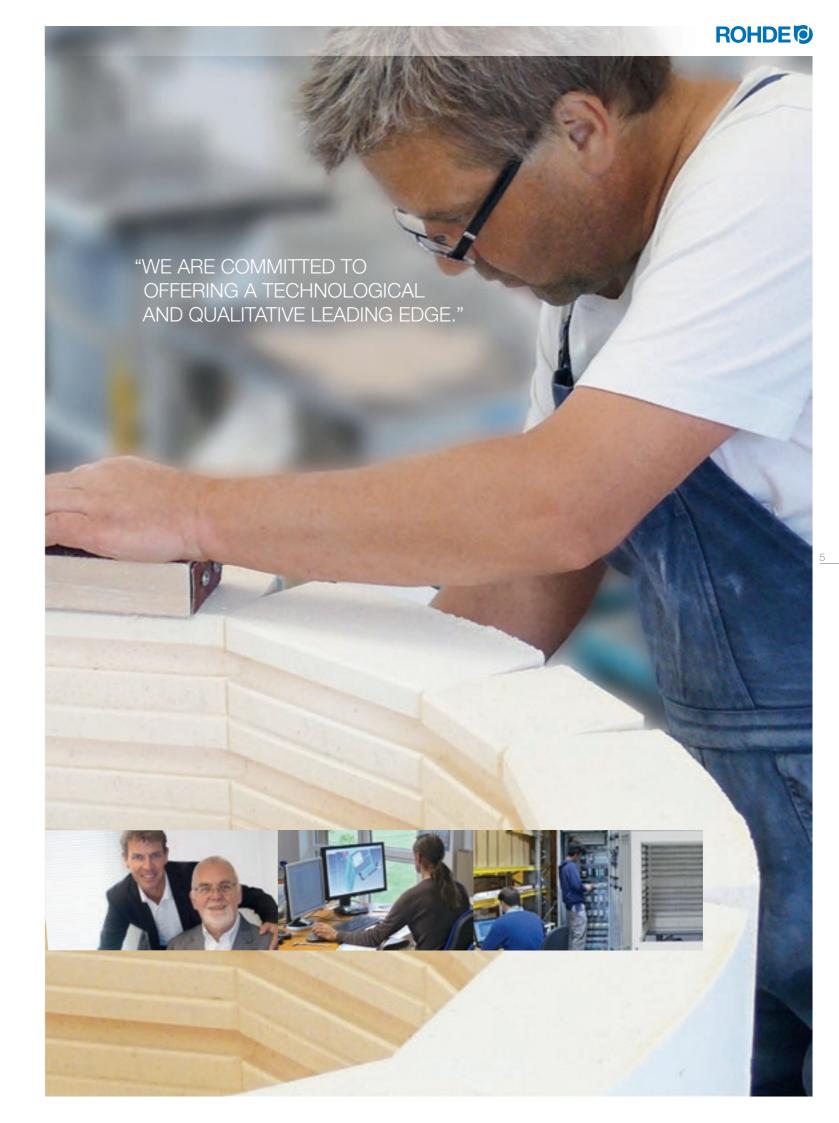
This means that we can always find the perfect solution.











INDUSTRY

ROHDE technology stands for excellent production results in industrial heat treatment.

When it comes to calcining, debinding, annealing and hardening. Nitriding, tempering, quenching and other thermal processes. Testing, preheating, firing and sintering in laboratory applications or melting, incinerating and drying.

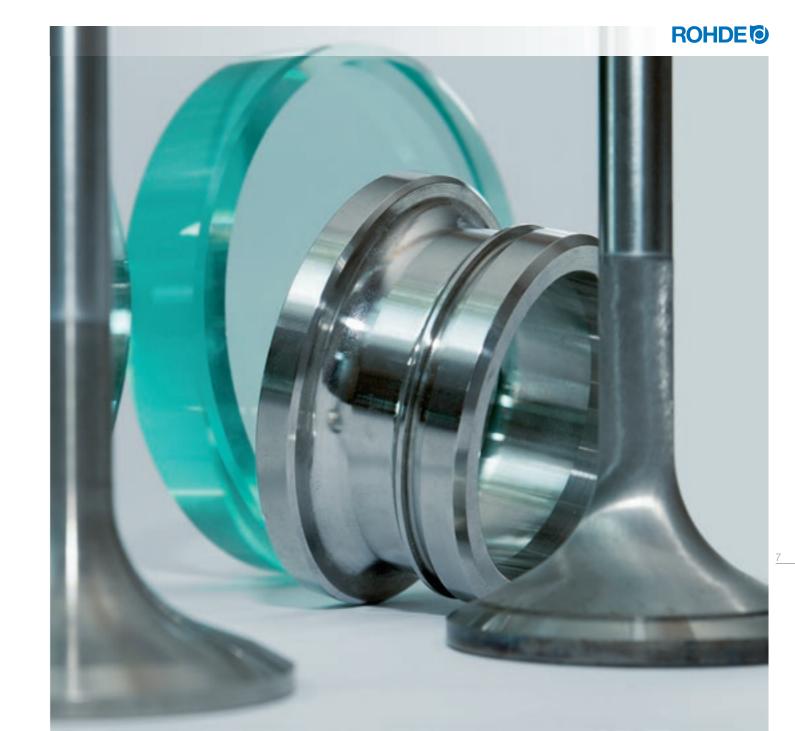
ROHDE provides solutions for a wide spectrum of applications.

ROHDE SOLUTIONS – ALWAYS **RELIABLE** AND **EFFICIENT.**

ARTSAND**CRAFTS**

As a ceramic or glass artisan, you combine creativity, art and technology. Your work is an expression of your inspiration and skills. The final firing process is decisive when it comes to completing your work.

ROHDE kilns and furnaces: because the moment you open the furnace and see the fruit of your labours in perfection is always a very special moment for you





MATERIALS

Metal Ceramics Glass

Composite materials

INDUSTRIES

Coal and steel industry

Foundries |

Mechanical and plant engineering

Ceramics

Glass processing Automotive sector Optical industry
Chemical industry

Pharmaceutical industr

Dental industry

Research & laboratories

APPLICATIONS

Preheating and heating

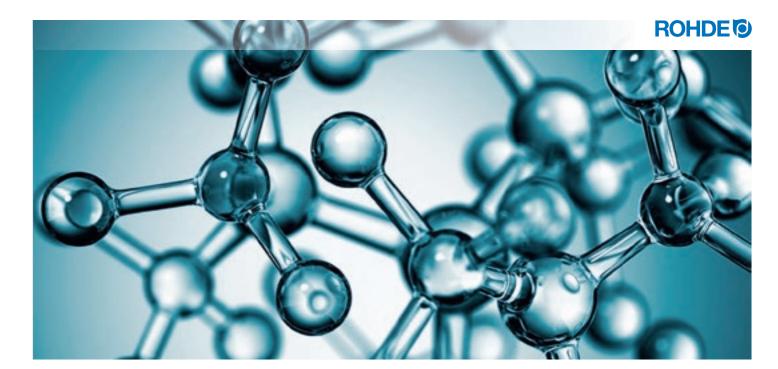
Drying
Bending

Annealing and hardening

Quenching
Carburizing
Calcining
Tempering

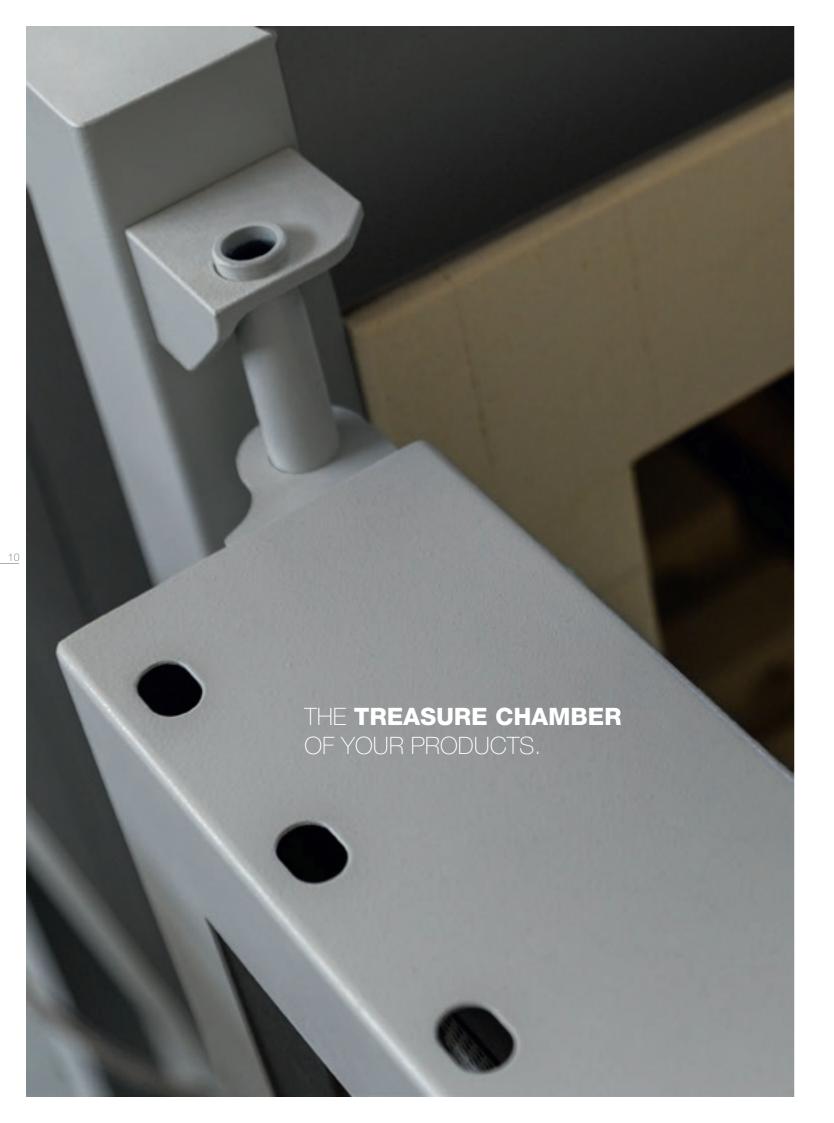
Debinding
Sintering
Aging
Incinerating
Coating rem

Hardenir Firing









ROHDE CHAMBER FURNACES



Chamber Furnaces KE series

ROHDE Chamber Furnaces from the KE series comprise models with furnace volumes between 100 and 1000 litres and are suitable for temperature ranges up to 1200°C, 1300°C and 1400°C.

The reliable all-rounder for heat treatment has been especially designed for many years of continuous use in production and manufacturing.

The torsion-resistant steel construction, high-quality insulation material and 5-side heating provides even distribution of heat throughout every performance range. KANTHAL heating elements have been calculated with minimal surface load to minimise wear and to ensure a long service life.

ROHDE develops customised special solutions to meet the respective application requirements with individual dimensions and varied optional equipment.

© 5-side heating

100/12

200/12

330/12

480/12

100/13

200/13

330/13

480/13

750/13

1000/13

100/14

200/14

330/14

ΚE

ΚE

ΚE

ΚE

KF

ΚE

KF

KF

1200

1200

1200

1200

1300

1300

1300

1300

1300

1300

1400

1400

1400

410

460

590

640

460

640

720

920

410

580

630

580

- (m) Heating elements recessed into bricks (KE /12) Heating elements mounted on support rods (KE/13 and KE /14)
- 3-layer insulation structure
- (2) Robust R-SiC ceiling support



KE 200/12



KE 200/13



KE 100/14

"System ROHDE" R-SiC ceiling support prevents cracks and particles falling onto the products

> Corrosion protection and low external temperature due to in-frame ventilation

Electric Chamber Furnaces **KE** series to 1400°C

480

640

720

470

720

770

1100

1070

480

640

710

770 995

530

680

790

980

540

680

800

1020

1030

1140

530

680

800

750

800

920

980

800

930

980

1570

1660

890

1080

1050

1210

1280

1340

750 1040 1700

1280

1340

1690

810 1120 1700

1280

1130 1410 1860

1210 1770

1610 2040

1350 1840

1700

1780

1800

1830

1800

1830

2010

1790



6,6

11,0

16,5

8.0

13,2

22,0

32.0

50,0

70,0

10.5

18.0

32,0

10

16

25

32 12

20

32

47

73

100

16

26

47

CEE 16 A

CEE 16 A

CEE 32 A

CEE 32 A

CEE 16 A

CEE 32 A

CEE 32 A

CEE 63 A

CEE 16 A

CFF 32 A

CEE 63 A



400 V/50 Hz

531

641

324

529

630

1122

403

558

690

Optional accessories for Chamber Furnaces KE series



Automatic exhaust air flaps



Stainless steel exhaust air hood



Automatic air supply and exhaust air flaps



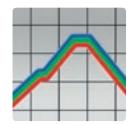
Door opening to the left



Active cooling system



Forklift charging car



Multi-zone control



Individual measuring and control technology

Based on the design of chamber furnaces, ROHDE has developed the unique ELS Ergo Load System furnace concept. The free-running mechanism of this furnace allows the floor to be pulled out completely.

The furnace floor can be pulled out effortlessly using the door that opens to 180° and allows charging on three sides. This makes it faster, safer and more efficient to load the furnace, combining the compact chamber furnace construction with all the advantages of truck furnace loading.

The entire steel construction is equipped with an in-frame ventilation made of stainless steel sheets contributing to low external temperatures and the best possible corrosion protection. The insulation comprises three layers and the furnace floor is fitted with a conical sealing cord providing optimum sealing.

- © 5-side heating
- (m) Heating elements recessed into bricks (ELS /12) Heating elements on support rods (ELS /13)
- 3-layer insulation structure

Easy charging on three sides when the furnace floor is pulled out

Silent, low-wear solid-state relays with external cooling element



ELS 200/12





ELS 200/13





Optional accessories for Chamber Furnaces ELS series



Automatic exhaust air flaps

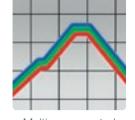
exhaust air hood



Door opening to the left



Active cooling system



Multi-zone control



furnace floor



Individual measuring and control technology

Mod	el	Tmax	Internal	dimens		Externa	l dimens		Output	Supply	Connector	Voltage	Weight
Volur													kg
ELS	150/12	1200	460	460	680	800	1080	1730	9,0	13	CEE 16 A	400 V/50 Hz	450
ELS	200/12	1200	460	620	680	800	1240	1730	11,0	16	CEE 16 A	400 V/50 Hz	510
ELS	150/13	1300	460	460	680	800	1080	1730	10,5	16	CEE 16 A	400 V/50 Hz	460
ELS	200/13	1300	460	620	680	800	1250	1670	13,2	20	CEE 32 A	400 V/50 Hz	550
ELS	330/13	1300	590	720	800	930	1310	1840	22,0	32	CEE 32 A	400 V/50 Hz	690
ELS	480/13	1300	640	770	995	1060	1420	1970	32,0	47	CEE 63 A	400 V/50 Hz	800
ELS	750/13	1300	720	1110	1030	1510	1730	1970	50,0	73	_	400 V/50 Hz	1350
ELS	1000/13	1300	920	1060	1145	1670	1730	2100	70,0	100	_	400 V/50 Hz	1500

The reliable all-rounder for heat treatment of metals, has been designed for many years of use in tough production and workshop operations.

The torsion-resistant steel construction, high-quality insulation material and particularly durable firebricks in the door area meet the highest requirements for quality and reliability. The parallel swing door reduces heat radiation and allows easy and safe operation.

3-side heating with heating elements mounted on support rods provides even distribution of heat. KANTHAL heating elements have been calculated with minimal surface load to minimise wear and to ensure a long service life.

- 3-side heating
- m Heating elements on support rods
- 2-layer insulation structure
- ☼ Solid construction, entirely in-frame ventilated



Corrosion protection and low external temperature due to in-frame ventilation



ME 10/13





Annealing and Hardening Furnaces **ME** series to 1300°C

Mode	el	Tmax	Interna	l dimens	ions mm	Externa	l dimens		Output	Supply	Connector	Voltage	Weight
Volum	ne	°C	b			В			kW	А	Plug	V	kg
ME	10/13	1300	250	250	120	500	600	700	2,5	13	Schuko	230 V/50 Hz	69
ME	15/13	1300	250	250	200	500	700	700	3,6	16	Schuko	230 V/50 Hz	75
ME	20/13	1300	250	350	200	500	700	700	6,0	16	CEE 16 A	400 V/50 Hz	91
ME	30/13	1300	250	500	200	500	850	700	7,0	16	CEE 16 A	400 V/50 Hz	105
ME	45/13	1300	350	500	250	1000	1300	1400	13,0	19	CEE 32 A	400 V/50 Hz	268
ME	65/13	1300	350	750	250	1000	1400	1400	20,0	29	CEE 32 A	400 V/50 Hz	330
ME	87/13	1300	350	1000	250	1000	2000	1400	22,0	32	CEE 32 A	400 V/50 Hz	280
ME	105/13	1300	500	750	300	1350	1850	1900	22,0	32	_	400 V/50 Hz	636
ME	165/13	1300	550	750	400	1400	1850	2000	30,0	44	_	400 V/50 Hz	900
ME	333/13	1300	750	1100	400	1600	2200	2000	44,0	64	_	400 V/50 Hz	1445
ME	665/13	1300	1000	1300	500	1850	2400	2100	70,0	100	_	400 V/50 Hz	2600







ROHDE

ME 45/13

Optional accessories for Annealing and Hardening furnaces ME series



Pneumatic door opening



Semi gas-tight construction with protective gas connection



Robust charging plates



Active cooling system



SiC cover for heating elements



Different hardening units



Hardening boxes



Hardening boxes with protective gas connection

Laboratory Furnaces LS series

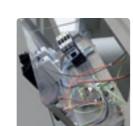
ROHDE Laboratory Furnaces from the LS series comprise models with furnace volumes between 15 and 120 litres and are suitable for temperature ranges up to 1300°C and 1400°C.

The furnace series has been developed especially to meet the various requirements in laboratory and production applications. Its cubic useful volume is ideally suitable for testing, inspecting, preheating, firing, sintering, melting and incinerating.

The torsion-resistant steel construction, high-quality insulation material and 5-side heating with heating elements mounted on support rods provide the best possible distribution of heat. KANTHAL heating elements have been calculated with minimal surface load to minimise wear and to ensure a long service life.

Extensive accessories such as air supply and exhaust air flap control, an active cooling system or a parallel swing door allow the furnace to meet your individual requirements.

- © 5-side heating
- (m) Heating elements on support rods
- 3-layer insulation structure
- ③ Solid construction, entirely in-frame ventilated







5-side heating provides rapid heating rates with even distribution of heat



apid heating rates listribution of heat

Laboratory Furnaces **LS** series to 1400°C

Mode	el	Tmax	Internal	dimens	ions mm	External	l dimens		Output	Supply	Connector	Voltage	Weight
Volur													kg
LS	15/13	1300	250	250	250	650	800	1400	7,0	16	CEE 16 A	400 V/50 Hz	160
LS	30/13	1300	320	320	320	700	850	1450	8,0	12	CEE 16 A	400 V/50 Hz	190
LS	60/13	1300	400	400	400	780	950	1520	11,0	16	CEE 16 A	400 V/50 Hz	250
LS	120/13	1300	500	500	500	880	1050	1620	15,0	22	CEE 32 A	400 V/50 Hz	300
LS	15/14	1400	250	250	250	700	850	1400	8,0	18	CEE 32 A	400 V/50 Hz	250
LS	30/14	1400	320	320	320	780	900	1450	10,0	15	CEE 16 A	400 V/50 Hz	330
LS	60/14	1400	400	400	400	860	970	1520	12,0	18	CEE 32 A	400 V/50 Hz	365
LS	120/14	1400	500	500	500	960	1080	1620	18,0	26	CEE 32 A	400 V/50 Hz	470



Optional accessories for Laboratory Furnaces LS series



Parallel swing door



Semi gas-tight construction with protective gas connection



Automatic exhaust air flaps



Automatic air supply and exhaust air flaps



Active cooling system



Individual measuring and control technology



Stainless steel exhaust air hood



Port to mount additional thermocouples

Air Circulating Chamber Furnaces KU series

ROHDE Air Circulating Furnaces from the KU series comprise models with furnace volumes between 15 and 800 litres and temperature ranges up to 650°C and 750°C.

This model is suitable for a variety of materials and applications and is used for tempering, aging, preheating, drying, shrinking, curing and testing for instance.

The robust housing construction consists of high-quality steel sheets. The internal housing is made of heat-resistant stainless steel guaranteeing a long service life and is extremely durable and corrosion-resistant. The high-quality insulation ensures efficient use of energy and contributes to reduced electricity costs and low external temperatures.

One of the principal characteristics of this series is the even distribution of temperature, achieved through heating from several sides and powerful air circulation. These furnaces can be equipped with inserting shelves and two fitted inserting trays to allow the best utilisation of the interior.

- ② 2-side heating with powerful air circulation
- Tubular heating elements
- 2-layer insulation structure
- ★ High temperature accuracy

15/65

40/65

70/65

140/65

270/65

540/65

800/65

40/75

70/75

140/75

270/75

540/75

800/75

650

650

650

650

650

650

750

750

750

750

750

300

300

350

450

750

800

300

350

450

600

750

KU

KU

KU

Powerful air circulation results in even temperature distribution

Air Circulating Chamber Furnaces KU series to 750°C

350

400

500

600

750

900

1250

400

500

600

750

900

150

300

400

500

600

800

800

300

400

500

600

800

890

1075

1175

1600

715 1165 1450

1265

1365

1725

1240 1875 2005

1290 2225 2005

815 1275

1115 1750

1665 2100

505

715

965

765

865

1090

445

1315

1415

1515

1685

1885

1885

1550

1650

1805

2,4

4,0

8,0

12,0

16,0

24,0

35,0

5,2

10,4

21,0

28.0

The dTron 304 program controller allows easy and intuitive operation







Optional accessories for Air Circulating Furnaces KU series



KU 40/65







Door opening to the left



Pneumatic lifting door



Base frame on castors





Individual measuring and control technology







230 V/50 Hz

400 V/50 Hz 400 V/50 Hz

400 V/50 Hz 1105

75

330

500

650

240

270

390



Dewaxing Chamber Furnaces KE-EW series

ROHDE Dewaxing Chamber Furnaces from the KE-EW series comprise models with furnace volumes between 6 and 600 litres and are suitable for temperature ranges up to 1000°C.

The series has been designed to burn-out wax and plastic moulded parts using controlled exchange of air. It combines all relevant functions in one furnace: melting, clean combustion of the moulding material and the firing of moulds.

Furnaces from KE 150/10 EW upwards use the precise supply of pre-heated air to ensure even drying and heating of casting moulds thus reducing the risk of cracking of the mould. Good heat distribution throughout the dewaxing process shortens the firing process and allows efficient energy supply.

Exact control of the dewaxing process step prevents moulding material from uncontrolled ignition and at the same time allows reliable escape of exhaust gases. A special supporting grid is combined with a practical collecting drawer positioned below the furnace allowing the moulding material to be easily collected and emptied.

- 2-side heating (KE 6/10 EW KE 50/10 EW)4-side heating (from KE 150/10 EW upwards)
- m Heating elements recessed into bricks
- 2-layer insulation structure
- (2) All relevant functions combined in one system

High-quality control system for clear presentation of process data (from KE 150 EW upwards)

Moulding material easy to collect and empty using practical collecting drawer







Dewaxing Chamber Furnaces **KE-EW** series to 1000°C

Model	Tmax	Internal	dimens	ions mm	Externa	dimens		Output	Supply	Connector	Voltage	Weight
Volume												kg
KE 6/10 EW	1000	180	170	220	380	550	780	1,8	8	Schuko	230 V/50 Hz	45
KE 14/10 EW	1000	250	250	250	450	600	800	2,3	10	Schuko	230 V/50 Hz	55
KE 20/10 EW	1000	300	300	200	530	670	750	3	13	Schuko	230 V/50 Hz	60
KE 50/10 EW	1000	300	450	315	520	840	865	5	11	CEE 16 A	400 V/50 Hz	90
KE 150/10 EW	1000	460	470	580	800	1100	1800	13,5	20	CEE 32 A	400 V/50 Hz	460
KE 330/10 EW	1000	590	720	700	1000	1350	2100	22	32	CEE 32 A	400 V/50 Hz	680
KE 600/10 EW	1000	710	870	920	1100	1500	2300	40	59	CEE 63 A	400 V/50 Hz	1000





Features of the Dewaxing Chamber Furnaces KE-EW series



Automatic process flow



Air preheating for controlled burning-off



Integrated collecting drawer for moulding material



Removal of noxious gases through a separate flue system

Debinding Chamber Furnaces KE-DB series

ROHDE Debinding-Sintering Chamber Furnaces from the KE-DB series comprise models with furnace volumes between 200 and 1000 litres and are suitable for temperature ranges up to 1300°C and 1400°C.

Many components and in particular components made of technical ceramics require continuous treatment using a debinding and sintering process in one furnace system. ROHDE has developed the KE-DB series from the proven chamber furnaces to meet these particular requirements.

These combination furnaces are equipped with a flushing air preheating unit i.e. specific flushing of the furnace interior with preheated air during debinding. As a result, good temperature distribution is obtained inside the furnace and reliable removal and discharge of binders from the firing chamber are achieved.

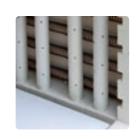
After debinding is completed, the flushing air preheating turns off and starts the sintering process right away, thus saving time and elaborate handling between the two processes.

- 5-side heating
- m Heating elements on support rods
- 3-layer insulation structure
- (2) Ideally suited for combined debinding-sintering processes

Ceramic tubes for consistent supply of flushing air

"System ROHDE" R-SiC ceiling supports prevent cracks and particles falling onto the products







Debinding Chamber Furnaces **KE-DB** series to 1400°C

Мо	del	Tmax	Interna	I dimens	sions mm	Externa	l dimens	ions mm	Output	Supply	Connector	Voltage	Weight
Vol													kg
KE	200/13 DB	1300	460	630	680	800	1210	1770	29	42	CEE 63 A	400 V/50 Hz	416
KE	480/13 DB	1300	640	770	1020	980	1340	1830	56	81	_	400 V/50 Hz	630
KE	750/13 DB	1300	720	1100	1030	1570	1690	2010	80	116	-	400 V/50 Hz	1122
KE	1000/13 DB	1300	920	1070	1140	1660	1610	2040	110	160	-	400 V/50 Hz	1250
KE	200/14 DB	1400	460	640	680	860	1280	1790	29	42	CEE 63 A	400 V/50 Hz	558
KE	480/14 DB	1400	630	770	995	1130	1410	1860	56	82	-	400 V/50 Hz	800
KE	750/14 DB	1400	720	1100	1030	1220	1750	1920	80	116	_	400 V/50 Hz	1250
KE	1000/14 DB	1400	910	1005	1145	1400	1650	2150	110	160	_	400 V/50 Hz	1400



Features of the Debinding Chamber Furnaces KE-DB series



Combined debindingsintering process



Ceramic flushing air tubes allow for even heat distribution



Removal of noxious gases through a separate flue system



Subsequent treatment of exhaust gases optional



ROHDE TRUCK FURNACES



Truck Furnaces HWE series

ROHDE Truck Furnaces from the HWE series comprise models with furnace volumes between 1000 and 7000 litres and are suitable for temperature ranges up to 1000°C or 1300°C.

A truck furnace system is particularly suited to the heat treatment of large components that can be easily loaded outside the furnace. KANTHAL-A1 heating elements provide 5-side heating that ensures even heat distribution throughout the firing chamber and combined with a 3-layer insulation structure achieve a high energy efficiency.

Extensive optional accessories such as an automatic lifting door or additional trucks allow the furnace system to be adapted to any individual process flow.

In addition, ROHDE implements special solutions in accordance with individual internal dimensions and temperatures up to 1400°C.

© 5-side heating

HWE 1000/10 1000

HWE 4000/10 1000

HWE 6000/10 1000

HWE 7000/10 1000

HWE 1000/13 1300

HWE 1500/13 1300

HWE 4000/13 1300

HWE 6000/13 1300

HWE 7000/13 1300

HWE 2000/13

HWE 3000/13

1000

1000

1000

1300

1300

HWE 1500/10

HWE 2000/10

HWE 3000/10

- (m) Heating elements recessed into bricks (HWE/10) Heating elements on support rods (HWE/13)
- 3-layer insulation structure
- (2) Stable R-SiC ceiling support





HWE 1000/13



75

105

140

185

205

235

290

105

140

205

235

290









HWE 1500/13

Electrically operated truck



Active cooling system



Hydraulic lifting door



Second door for alternate operation



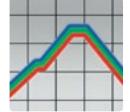
Automatic exhaust air flaps



Loading station



Automatic air supply and exhaust air flaps



Multi-zone control



Truck Furnaces **HWE** series to 1300°C

1000

1000

1250

850 1200

1250 3200

1000 1500

1250 4000

1000

1250

1250

1500

2000

2400

1250 4000 1200

4000

850 1200 1000

2000

2400

3200

1250 4000 1400



1000

1000

1000

1000

1000

1400

1000

1000

1000

1000

1200

1450

1600

1600

1850

1600

1850

1850

1800 2000

2000

2000

2000

2000

2000

2000

2100

2600

3000

1850 3800 2000

1850 4600 2000

1850 4600 2000

1450 1800 2000

2600

3000

1850 4600 2200

1850 4600 2400

3800 2000

1600 2100



70

125

140

160

70

95

125

140

160

200

240



400 V/50 Hz 1200

400 V/50 Hz 2300

400 V/50 Hz 3500

400 V/50 Hz 4500

400 V/50 Hz 6600

400 V/50 Hz 8000

400 V/50 Hz 1200 400 V/50 Hz 1800

400 V/50 Hz 2300

400 V/50 Hz 3500

400 V/50 Hz 4500

400 V/50 Hz 6600

400 V/50 Hz 8000

1800

400 V/50 Hz

Air Circulating Truck Furnaces HWU series

ROHDE Air Circulating Truck Furnaces from the HWU series comprise models with furnace volumes between 1000 and 7000 litres and are suitable for temperature ranges up to 650°C or 850°C.

3-side heating provides the best possible transfer of energy to the firing chamber. ROHDE-designed air circulating fans are decoupled from the drive motor and are quiet, durable and easy to service.

KANTHAL-A1 heating elements and a 2-layer insulation structure ensure an ideal temperature rise even in the upper temperature range resulting in very low energy consumption. Other product characteristics are corrosion protection due to the fully in-frame ventilated steel construction and the mortar-free ceiling of lightweight firebricks with R-SiC ceiling supports.

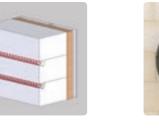
- 3-side heating
- m Heating elements recessed into bricks
- 2-layer insulation structure
- ② Powerful air circulating fan











Optional accessories for Air Circulating Truck Furnaces HWU series



HWU 1000/65

Electrically operated truck

Active cooling system



Hydraulic lifting door

alternate operation



Automatic exhaust air flaps



Automatic air supply and exhaust air flaps



Loading station



Individual measuring and control technology



Powerful air circulation allows

for high temperature accuracy

2-layer wall structure, heating elements mounted in protected position recessed into bricks

Model	Tmax	Interna	l dimens		Externa	l dimens		Output	Supply	Connector	Voltage	Weight
Volume												
HWU 1000/65	650	850	1200	1000	1450	1800	2000	45	65	-	400 V/50 Hz	1200
HWU 1500/65	650	1000	1500	1000	1600	2100	2000	60	90	-	400 V/50 Hz	1800
HWU 2000/65	650	1000	2000	1000	1600	2600	2000	80	116	-	400 V/50 Hz	2300
HWU 3000/65	650	1250	2400	1000	1850	3000	2000	100	145	-	400 V/50 Hz	3500
HWU 4000/65	650	1250	3200	1000	1850	3800	2000	120	175	-	400 V/50 Hz	4500
HWU 6000/65	650	1250	4000	1200	1850	4600	2200	140	205	_	400 V/50 Hz	6600
HWU 7000/65	650	1250	4000	1400	1850	4600	2400	160	235	-	400 V/50 Hz	8000
HWU 1000/85	850	850	1200	1000	1450	1800	2000	45	65	_	400 V/50 Hz	1200
HWU 1500/85	850	1000	1500	1000	1600	2100	2000	60	90	_	400 V/50 Hz	1800
HWU 2000/85	850	1000	2000	1000	1600	2600	2000	80	116	_	400 V/50 Hz	2300
HWU 3000/85	850	1250	2400	1000	1850	3000	2000	100	145	_	400 V/50 Hz	3500
HWU 4000/85	850	1250	3200	1000	1850	3800	2000	120	175	-	400 V/50 Hz	4500
HWU 6000/85	850	1250	4000	1200	1850	4600	2200	140	205	-	400 V/50 Hz	6600
HWU 7000/85	850	1250	4000	1400	1850	4600	2400	160	235	-	400 V/50 Hz	8000

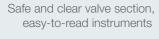
ROHDE uses the HWG series to combine the versatility of truck furnaces with the performance of modern forced draught burners. The burner system is very efficient and its high power density allows connected loads that if performed electrically, required much more expense.

Gas-fired truck furnaces can be used for annealing of heavy castings or firing of ceramics and meet the highest requirements imposed on the atmosphere. Depending on the required application, the burner position can be adapted to individual processes.

Combined with a wide range of optional equipment, ROHDE develops customised solutions to meet different requirements.

- Heating using powerful forced draught burners
- (m) Elster-Kromschröder Low NOx Burners
- 3-layer insulation structure
- ♠ All relevant functions combined in one system





Effective labyrinth seal, easy to re-adjust





Gas-fired Truck Furnaces **HWG** series to 1300°C

Model	Tmax	Interna	l dimens		Externa	l dimens		Output	Supply	Connector	Voltage	Weight
Volume												kg
HWG 1000/10	1000	850	1000	1200	1300	1800	2200	110	-	-	400 V/50 Hz	1600
HWG 2000/10	1000	1000	2100	1200	1450	2900	2200	160	-	-	400 V/50 Hz	2400
HWG 5000/10	1000	1500	2500	1350	1950	3300	2350	200	-	-	400 V/50 Hz	4500
HWG 10000/10	1000	1600	4500	1400	2050	5300	2400	240	_	-	400 V/50 Hz	9600
HWG 1000/13	1300	850	1000	1200	1300	1800	2200	130	-	-	400 V/50 Hz	1600
HWG 2000/13	1300	1000	2100	1200	1450	2900	2200	200	-	-	400 V/50 Hz	2400
HWG 5000/13	1300	1500	2500	1350	1950	3300	2350	300	_	-	400 V/50 Hz	4500
HWG 10000/13	1300	1600	4500	1400	2050	5300	2400	360	-	_	400 V/50 Hz	9600





Optional accessories for Gas-fired Truck Furnaces HWG series



Designed for use at 1400°C Tmax



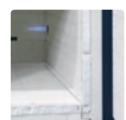
Electrically operated truck



Atmosphere control



Hydraulic lifting door



Reduction-resistant insulation structure



Loading station



Subsequent treatment of exhaust gases



Individual measuring and control technology





ROHDE HOOD FURNACES



Hood Furnaces HE series

ROHDE Hood Furnaces from the HE series comprise models with furnace volumes between 60 and 630 litres and are suitable for temperature ranges up to 1000°C and 1300°C.

This type of construction is characterised by a hood with linear movement allowing safe and easy loading on several sides even for heavy charges. The highquality insulation structure combined with 5-side heating make ROHDE Hood Furnaces ideally suitable for applications imposing high requirements on loading.

A linear guide rail allows precise hydraulic lifting and lowering of the robust hood. The in-frame ventilated furnace housing provides effective protection against corrosion. Like all ROHDE industrial furnaces, KANTHAL heating elements have been calculated with a minimal surface load minimising wear and ensuring a long service life.

On request, ROHDE develops customised solutions to meet your production requirements, such as the addition of an extendable floor (ELS Ergo Load System) to the hood construction.

- 5-side heating
- (m) Heating elements on support rods
- (III) 3-layer insulation structure
- (2) Easy loading on three sides





11

15

22

15

22

40







HE 210/13

Automatic exhaust air flaps



Electrically extendable furnace floor (ELS)



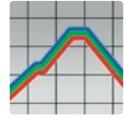
Automatic air supply and exhaust air flaps



Replacement floor, adjustable in height



Active cooling system



Multi-zone control



Semi gas-tight construction with protective gas connection



Individual measuring and control technology



Electric Hood Furnaces **HE** series to 1300°C

400

500

600

600

400

500

600

600

700

400

500

600

1000

1300

400

500

600

1000

1300

Easy-to-maintain switchgear at the back of furnace, easily accessible

400

500

600

600

700

500

600

600

700

1500 2150

1700 2350

1600 2250

1600

1400 1700 2350

800 1500 2125

1000 1700 2350

1700

1750 1850 2450

2250

2350

800

900

1000

1750

900

1400



16

16

22

32

22

32

58

CEE 16 A

CEE 16 A

CEE 32 A

CEE 32 A

CEE 63 A

CEE 16 A

CEE 32 A

CEE 32 A

CEE 63 A



400 V/50 Hz

400 V/50 Hz

400 V/50 Hz

400 V/50 Hz

400 V/50 Hz 1400

400 V/50 Hz 1800

400 V/50 Hz 1000

400 V/50 Hz 1800

1400

HE

HE

HE

HE

60/10

120/10

200/10

360/10

120/13

200/13

360/13

630/13 1300

1000

1000

1000

1000

1000

1300

1300

1300



ROHDE TOPLOADERS



This series has been designed for controlled and reliable burning-off of Diesel Particulate Filters (DPF) from exhaust systems in buses, construction machines, trucks, cars or generators.

The robust furnaces are ideally suited for heavy use in vehicle depots, on construction sites and in workshops. The TE-DPF series is characterised by a stable base frame with large, easy-to-move transport castors and a high-quality and energyefficient lightweight firebrick lining.

Particular importance was attached to the safe and especially intuitive control of thermal cleaning processes. The easy-to-operate process controller is pre-programmed but can be adjusted manually to suit different particulate filter sizes with just a few steps. This ensures a very quick and closed cleaning process.

- All-around heating with floor heating
- m Heating elements recessed into bricks
- 2-layer insulation structure
- Easy burning-off of particulate filters

Easy-to-operate using preset programs Stable and robust transport castors







Electric Toploaders **TE-DPF** series to 800°C

Model	Tmax	Internal dime		External	dimens		Output	Supply	Connector	Voltage	Weight
Volume											kg
TE 100/80 DPF	800	ø 470	570	750	750	900	5,0	8	CEE 16 A	400 V/50 Hz	95
TE 200/80 DPF	800	ø 590	800	830	880	1140	9,0	13	CEE 16 A	400 V/50 Hz	150

Shaft Furnace BT series

ROHDE Shaft Furnaces from the BT series comprise two models with furnace volumes between 300 and 500 litres and are suitable for the temperature range up to 1300°C.

This series combines 5-side heating in a robust chamber furnace construction with all the advantages of a toploader. The high-quality insulation structure and the even temperature distribution make the shaft furnace suitable for applications where as many goods as possible must be placed and processed in one firing process. The shaft furnace offers an excellent overview during charging.

The in-frame ventilated lid and the use of galvanized steel sheet in the furnace casing provide effective protection against corrosion. Another feature of this design is the carefully manufactured furnace lid. It is provided with a gas pressure spring that allows easy opening of the lid. KANTHAL heating elements have been calculated with minimal surface load to minimise wear and to ensure a long service life.

- 5-side heating
- m Heating elements recessed into bricks
- 2-layer insulation structure



2-layer wall structure, heating elements mounted in protected position recessed into bricks

> Easy lid opening and closing using gas pressure springs

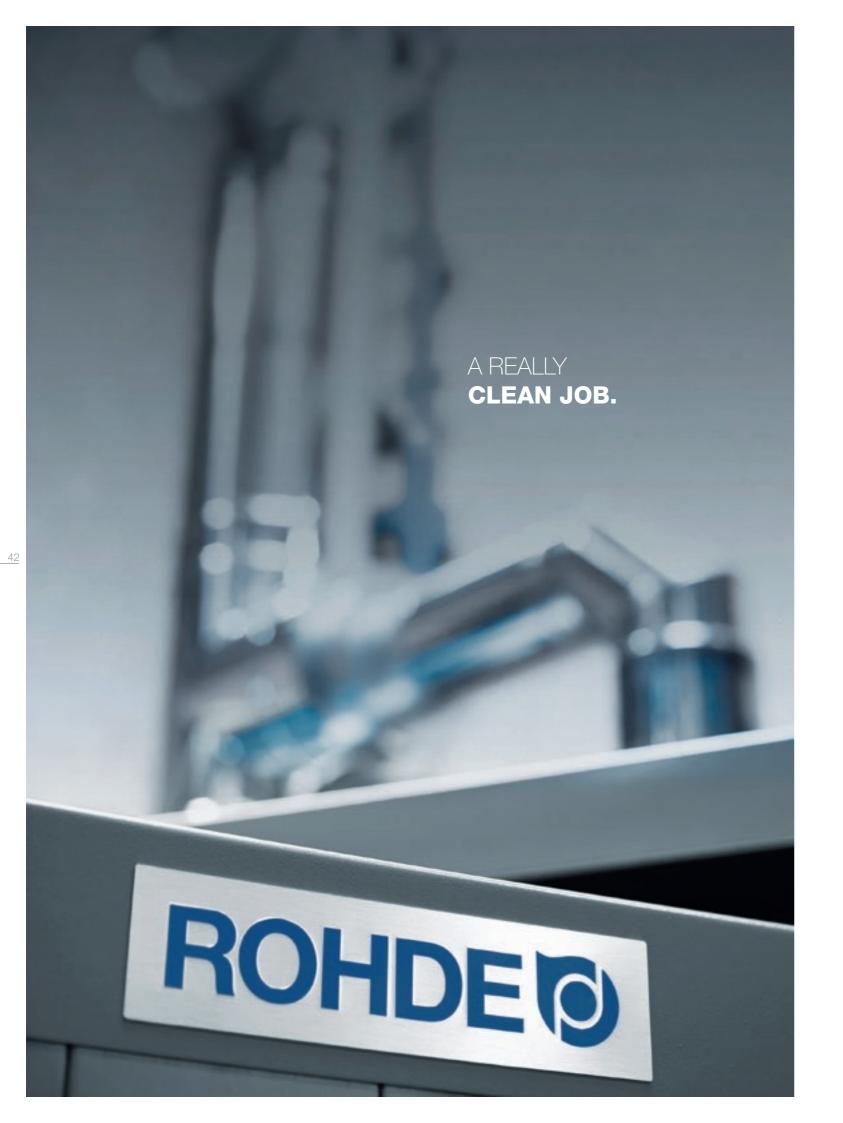




Electric Toploaders **BT** series to 1300°C

Mod	el	Tmax	Internal	dimens	ions mm	Externa	l dimens		Output	Supply	Connector	Voltage	Weight
											Plug		kg
BT	300/13	1300	920	570	610	1360	970	1070	15,0	25	CEE 32 A	400 V/50 Hz	400
BT	500/13	1300	1150	650	690	1620	1050	1150	24,0	34	CEE 63 A	400 V/50 Hz	535





ROHDE EXHAUST AIR CLEANING



Catalytic treatment of exhaust air is mainly used in small to medium exhaust gas flow rates and its energy is ideally suited to meet requirements imposed exclusively from cleaning of hydrocarbon compounds. When using catalytic post-combustion, exhaust air treatment can be effected at low temperatures – depending on the composition of the noxious gases, oxidation occurs between 250°C and 400°C in the catalyser. In many cases, the low reaction temperature allows cleaning without performing an additional heating of the noxious gas and thus a very efficient operation.

We are able to offer exhaust air treatment in one compact system comprising a furnace and CPC or in a stand-alone variant that can be installed in existing furnace concepts later.

The advantage of a solution from a single source: we customise the complete system comprising furnace, catalyst and shared process controller if needed to suit your required process thus allowing the best possible synergies.

The entire system i.e. furnace and catalytic exhaust air treatment is controlled along with the firing process inside the chamber taking into account a safe and energy-efficient manufacturing process.



Catalytic post-combustion, Allokat 320 (Allog Engineering)



KEU 600/75 with integrated catalytic exhaust air cleaning

We are also able to offer solutions for processes that generate noxious gases and require thermal postcombustion (TPC).

Thermal post-combustion is especially used for higher exhaust gas flow rates generated during cleaning or burning-out of plastics from moulds used for Rapid Prototyping.

The functional principle of thermal post-combustion is based on oxidation. With the exception of some substances such as halogens or sulphur that do not undergo thermal decomposition, all substances in the exhaust gas volume are converted to H₂O (water) and CO₂ (carbon dioxide). The system is therefore ideally suited for debinding processes generating high volumes of exhaust gases or damaging the catalyser with noxious gas components.

We are able to offer complete solutions that meet your requirements and integrate thermal post-combustion from well-known manufacturers in our furnace concepts to avoid unnecessary interfaces. You receive a complete system with a compact control unit for measuring and monitoring.

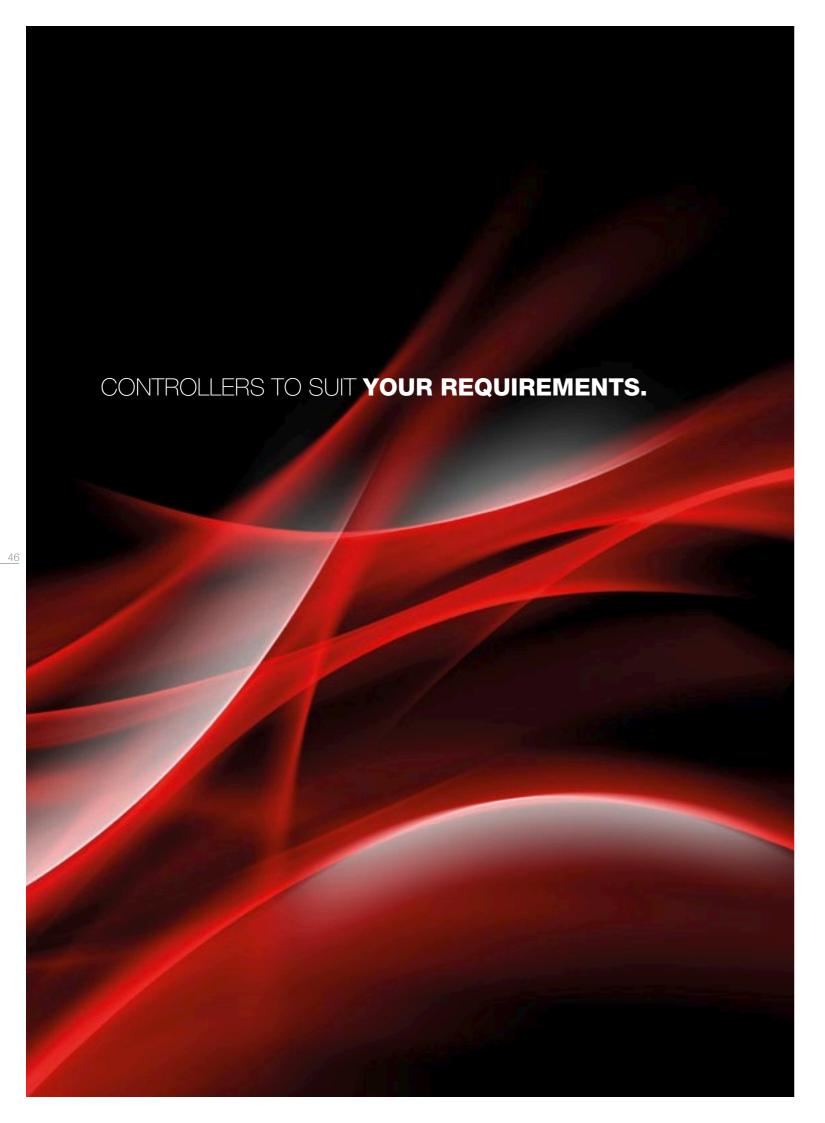




Thermal post-combustion TPC, vertical (Birk Wärmetechnische Anlagen)



Thermal post-combustion TPC, horizontal (Birk Wärmetechnische Anlagen)



ROHDE MEASURING AND CONTROL TECHNOLOGY



Clear presentation of actual and setpoint values in demanding workshop and laboratory applications.

- Units displayed on easy-to-read LED display (actual and setpoint values)
- · Clear and easy-to-read display, intuitive operating layout
- 10 freely programmable firing programs,2 segments each
- · Available with zone control

Manual Controller Bentrup TC 88e

High-performance control unit with the highest security standard and high operating comfort.

Clear presentation of actual and setpoint values in demanding workshop and laboratory applications.

- Units displayed on easy-to-read LED display (actual and setpoint values)
- · Clear and easy-to-read display, intuitive operating layout
- · 3 freely programmable firing programs, 9 segments each
- Program time delay or program start delay can be adjusted
- Optional version with 20 programs and up to 15 segments available

Manual Controller Bentrup TC 507

High-performance control unit with the highest security standard and high operating comfort.

Clear presentation of actual and setpoint values in demanding workshop and laboratory applications.

- Units displayed on easy-to-read LED display (actual and setpoint values)
- · Clear and easy-to-read display, intuitive operating layout
- 50 freely programmable firing programs,2 segments each
- · Available with zone control
- · Program time delay or program start delay can be adjusted
- · Additional switch outputs (optional)







Compact Controller JUMO dTRON

High-performance panel-mounted control unit with the highest security standard and high operating comfort. Clear presentation of actual and setpoint values in demanding workshop and laboratory applications.

- · Compact controller can be integrated into the kiln casing, saving space
- · Including ramp function, timer start, manual mode
- · Configurable user level enables setting of the most important parameters
- · Individual controller optimisation to adjust to furnace requirements
- · Clear presentation of actual and setpoint values

Compact Controller Bentrup TC 2088

High-performance panel-mounted control unit with the highest security standard and high operating comfort. Clear presentation of actual and setpoint values in demanding workshop and laboratory applications.

- Units displayed on easy-to-read LED display (actual and setpoint values)
- · Clear and easy-to-read display, intuitive operating layout
- · 3 freely programmable firing programs, 9 segments each
- Program time delay or program start delay can be adjusted
- Optional version with 20 programs and up to 15 segments available

Comfort Controller JUMO Dicon Touch

Universal process and program controller using brilliant TFT colour graphic screen visualisation, intuitive to operate with touch screen.

- · Alphanumeric display saves 10 programs with up to 50 program segments, 2 events (e.g. air supply and exhaust air flap) individually programmable
- · Clear presentation of relevant process values
- · Integrated paperless recorder, tamper-resistant data storage
- Process data can be collected using USB stick or Ethernet connection and exported to the PC using software
- · Integrated timer and time switch for program start
- · Available as completely attachable controller









Comfort Controller JUMO IMAGO 500

Comfortable program controller, clear program input and individual editing of program names.

- · Multi-channel process and program controller
- · 5" colour graphic display (27 colours)
- · 144 x 130 mm format (92 x 92 mm installation dimensions)
- · 50 programs with up to 100 program steps (segments)
- Freely configurable screen masks allow intuitive operation
- Clear presentation of relevant process values
- · Program start programmable using real time clock
- · Configuration using software or display

Paperless Recorder JUMO Logoscreen nt

Records and files up to 18 process values using different media with batch reporting via barcode scanner. A colour display ensures clear presentation of process values.

- · To be operated using one operating element (push and turn)
- · Presentation of measured values in different diagrams
- Batch reporting on 5.5" TFT colour graphics screen
- Ethernet, integrated web server
- Evaluation of firing curves using PC

Paperless Recorder JUMO LOGOSCREEN 600

Records and stores different process values using different media with batch reporting.

- · Paperless screen recorder with 5.7" TFT colour display
- · Intuitive touch operation
- · Up to 6 universal measurement inputs, up to 2 analogue outputs
- · Up to 24 external analogue or digital measurement
- · Up to 6 customer-specific process screens
- · Horizontal or vertical line diagram
- · Batch report recording
- · Efficient evaluation and setup software as accessory
- · IP 65 protection









Comfort Controller Siemens S7-1200 with Panel TP 700

Freely programmable control system to meet individual customer requirements. Controller is operated using Siemens Comfort Touchpanel with customised layout.

- · Siemens programmable logic controller to meet individual requirements
- · ROHDE user interface, individually programmable to suit your requirements
- · Controller operated using TP 700 Comfort Panel with 7" Touch TFT widescreen display
- · Switch outputs can be set separately at every program segment
- · Control zone offset can be set at every program
- · Presentation of firing curves and message archive for plant status reports
- · Clear presentation of processes and process information on display
- · User administration and process storage using USB port
- · Data recording and storing using different media
- · Remote maintenance optional

Comfort Controller Siemens S7-1500 with Panel TP 900

Freely programmable control system to meet individual customer requirements. Controller is operated using Siemens Comfort Touchpanel with customised layout.

- · Siemens programmable logic controller to meet individual requirements
- · ROHDE user interface, individually programmable to suit your requirements
- · Controller operated using TP 900 Comfort Panel 9" with Touch TFT widescreen display
- · Switch outputs can be set separately at every program segment
- · Control zone offset can be set at every program
- · Presentation of firing curves and message archive for plant status reports
- · Clear presentation of processes and process information on display
- · Data recording and storing using different media
- · User administration
- · Remote maintenance optional



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OUR **BEST REFERENCE:** CUSTOMER SATISFACTION

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Heraeus Quarzglas GmbH & Co. KG

Hase Kaminofenbau GmbH

IMBA Institut für Molekulare Biotechnologie Gmbl

Jenoptik Katasorb GmbH

KPM Königliche Porzellan-Manufaktur Berlin Gmbl-

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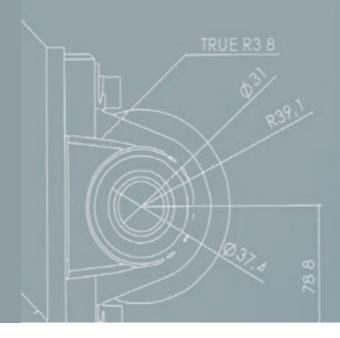


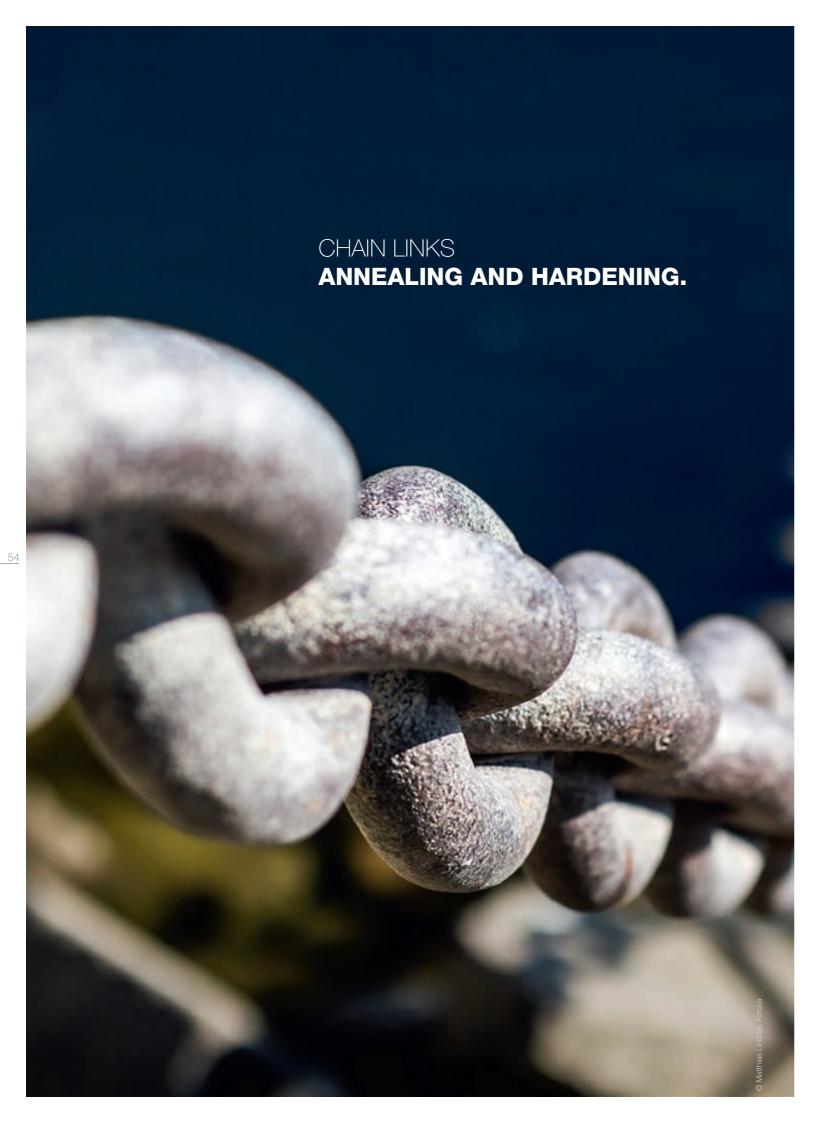
MISSION **POSSIBLE.**



Anything is possible. ROHDE provides the best solution for you either from its wide basic range of products or with a special customised construction. Contact ROHDE and see for yourself.







CUSTOM-DESIGNED CHAMBER FURNACES



Gradient Furnace ME 65/10

- (b) 20 kW
- © 1000°C
- 3 different temperature zones, customised feeder unit and charging tray



Preheating Furnace ELS 200/85 U

- (b) 13,2 kW
- © 800°C
- Extendable furnace floor (ELS), hydraulic lifting door



ROHDE

Burn-out Furnace KE 1000/11

- (b) 70 kW
- © 1100°C

② Controlled exchange of air to 300 m³/h, hot gas valve, automatic exhaust air flaps and cooling system

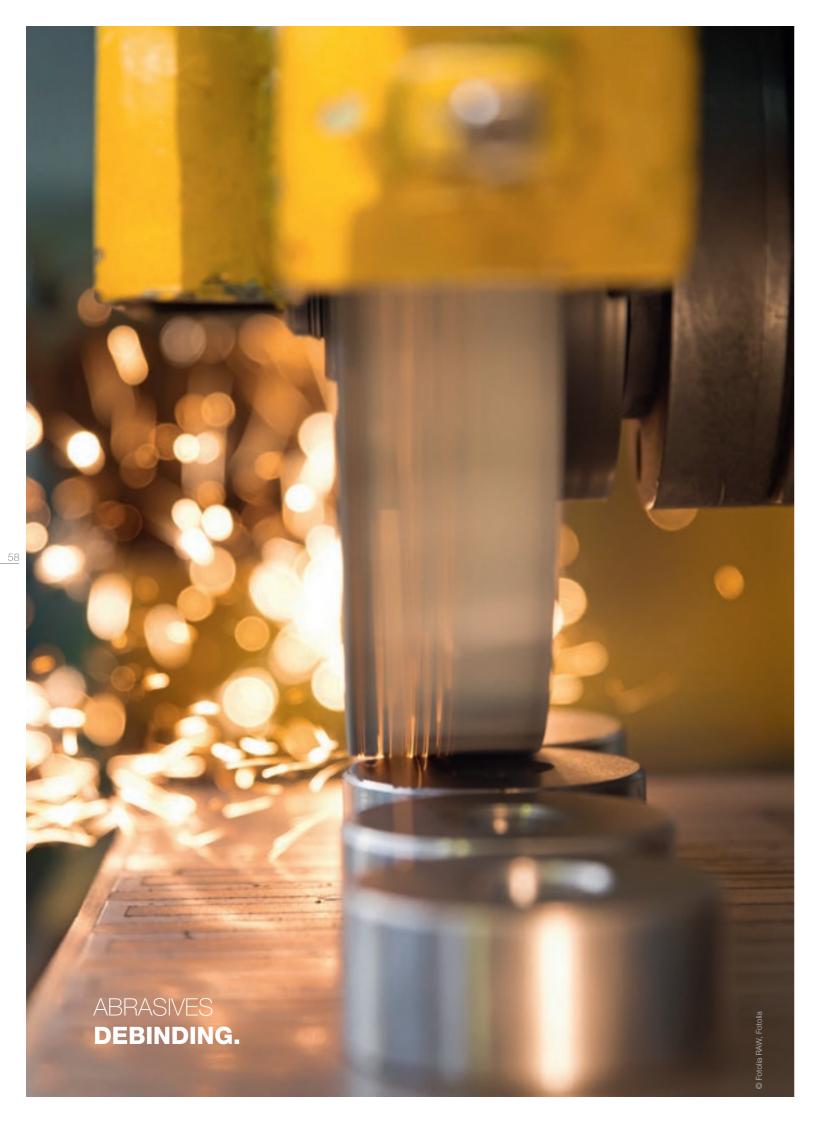


Sintering Furnace ELS 1000/13

- (b) 70 kW
- © 1350°C
- © Electrically extendable floor (ELS), separate data recording, automatic exhaust air flaps and cooling system







CUSTOM-DESIGNED TRUCK FURNACES



Debinding-Sintering Furnace HWE 4700/14 DB

- (b) 300 kW
- © 1400°C

Debinding package including air preheating, negative pressure control, second truck, process documentation



Preheating Furnace HWU 12500/65

- (b) 350 kW
- © 560°C





Annealing Furnace HWU 3300/75

- (b) 100 kW
- © 750°C
- Automatic exhaust air flaps, two hydraulic lifting doors, second truck, fully-automated process



Sintering Furnace HWE 2400/14 SG

- (b) 190 kW
- © 1400°C
- Semi-gas tight construction, hydraulic lifting door, automatic air supply and exhaust air flaps, controlled cooling system



CUSTOM-DESIGNED HOOD FURNACES





- ② 25 kW
- © 800°C
- ☼ Hydraulic lifting table, separate storage area, automated movement, special voltage (480 V)





Fusing Furnace FE 5200/10

- (b) 110 kW
- © 1000°C

☼ Hydraulic hood movement, furnace floor can be moved, automatic exhaust air flaps



Hood Furnace FE 1200/10

- (b) 80 kW
- © 1000°C

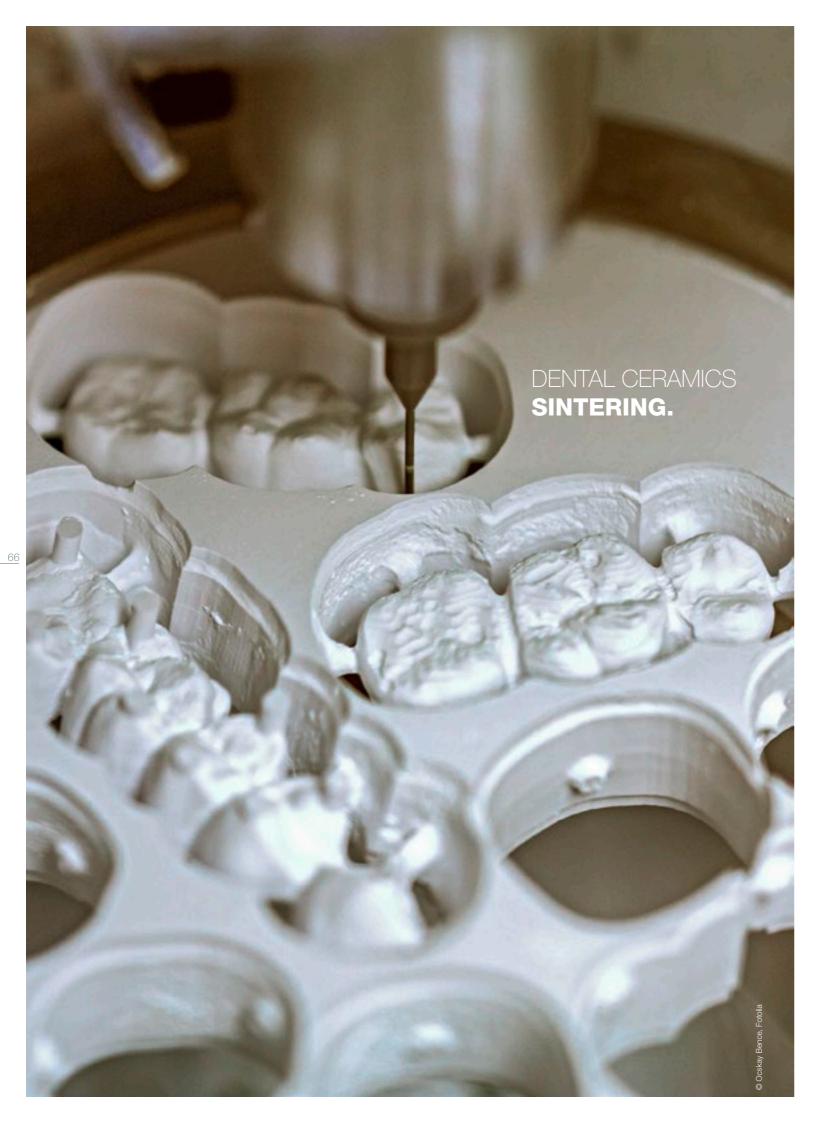
② Pneumatic hood lifting, integration into robot cell, comprising transport castors



Annealing Furnace HE 210/80

- (b) 22 kW
- © 800°C
- hydraulic hood lifting





CUSTOM-DESIGNED TOPLOADERS



Curing Furnace TE 585/12

- (b) 33 kW
- © 1250°C
- ② Pneumatic lid opening



Preheating Furnace BT 290/10

- (b) 22 kW
- © 1000°C
- ② 2 heating zones, customised device to collect components



Vertical Furnace S 40/10

- ② 24 kW
- © 1050°C
- ② Pneumatic lifting gear



Tin Bath Furnace ZT 250/50

- (b) 30 kW
- © 550°C
- ☼ Melting tank, cascade control





This guarantees safe, fast and successful commencement of production from the start. Of course, ROHDE is your partner when it comes to service and on-site maintenance work.

Warranty and spare part service

ROHDE deliberately refuses to reduce the warranty period. Despite commercial furnaces being used intensely, ROHDE guarantees a 2-year warranty on all standard products excluding parts that are subject to wear.

ROHDE assures reliable and quick supply of spare parts when service is required. Spare parts are usually ready for dispatch 24 hours after receipt of order.

ROHDE always uses environmentally friendly materials and guarantees acceptance of each ROHDE product for the recycling of reusable parts or environmentally sound disposal.



Delivery and set-up service



On-site instruction and initial operation



2-year warranty

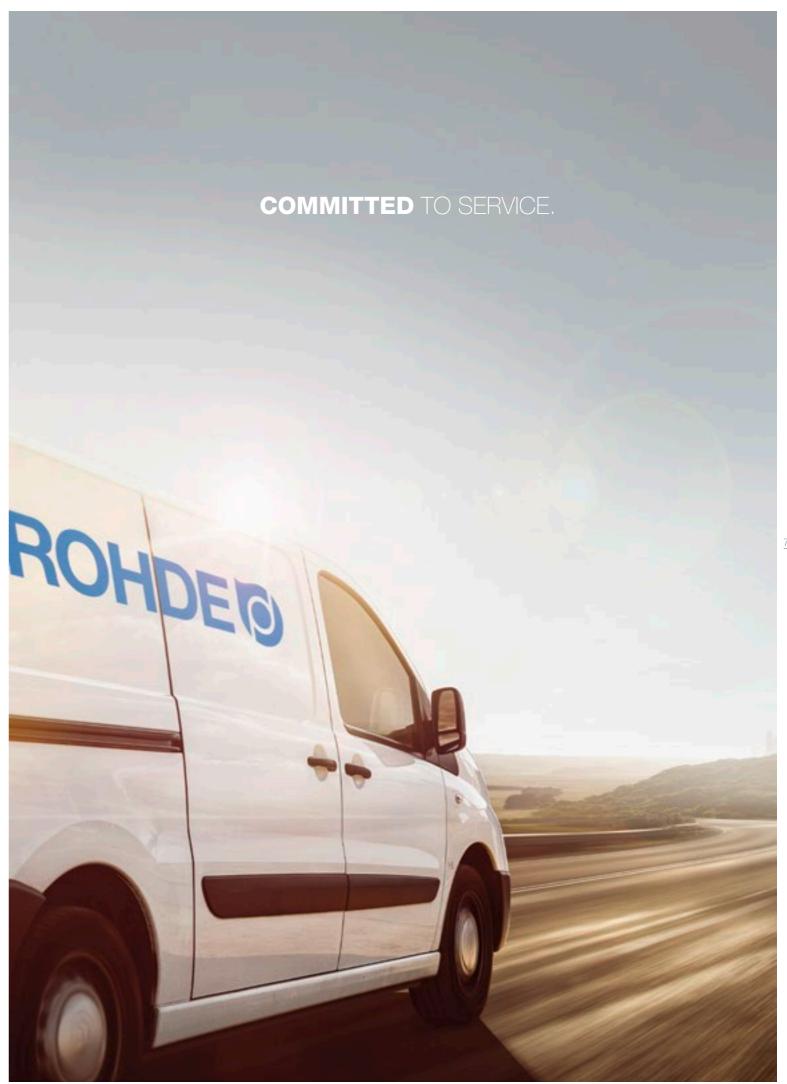


Spare parts and service



Environmentally sound materials and recycling





Please visit www.rohde-online.net/industry for further information.



11/2017 989321

ROHDE

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