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# **Instruction Manual**

Toploader Series TR & TR Vario



**Series TR & TR Vario**

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## **1. INTRODUCTION**

Congratulations! You have opted for a ROHDE Toploading-Raku Kiln / Toploading-Raku Vario Kiln – a high-quality product for highest requirements.

This Toploading-Raku Kiln / Toploading-Raku Vario Kiln is the result of our ongoing and profound improvement of small and medium sized ceramic kilns. It is suitable for firing up to 1150°C and is equipped with a reduction resistant lining for Raku applications.

This instruction manual will make it easy for you to get familiar with your new ROHDE Toploading-Raku Kiln / Toploading-Raku Vario Kiln. We have compiled a collection of important information and guidelines in order to make operating your ROHDE Kiln as simple and safe as possible.

Please read the instruction manual carefully before you operate your ROHDE Toploading-Raku Kiln / Toploading-Raku Vario Kiln for the first time.

Get familiar with the features of your Toploading-Raku Kiln / Toploading-Raku Vario Kiln.

## 2. PRODUCT FAMILY

### Raku Toploaders **TR** series to 1150°C

Model	Volume	Tmax °C	Int. dimensions mm			Ext. dimensions mm			Output kW	Burners Quantity	Furniture batts w x d mm	Weight kg
			w	d	h	W	D	H				
TR	44	1150	400	400	350	620	650	790	30	1	350	60
TR	80	1150	460	460	610	620	620	840	30	1	350	80
TR	80 vario	1150	460	460	610	620	620	840	30	1	350	80
ZWR	80	–	460	460	230	620	620	230	–	–	–	24
TR	170	1150	610	610	580	620	850	920	30	1	540	120

## 3. OVERVIEW



## 4. IMPORTANT SAFETY INSTRUCTIONS

### 4.1. General Information

Please pay attention to both the safety instructions and the safety icons, in order to eliminate potential hazards. It is in your own best interest to read through the following safety instructions carefully before you start operating your Kiln.

Always keep your instruction manual in a safe place and in the interest of your own safety do only use ROHDE spare parts!

### 4.2. Safety Instructions



**Caution:**

Hot surface, do not open while kiln is hot.



**Caution:**

Repairs and maintenance work on gas components may only be carried out by a qualified and competent gas specialist.



**Caution:**

Only open the furnace using adequate protective clothing (safety gloves, raku tongs, heat-resistant face shield, blacksmith's apron, etc.)! High, escaping temperatures lead to the risk of fire and injury as well as premature wear of the furnace.

### 4.3. Safety Instructions for Operation

For a safe operation of the ROHDE Toploading-Raku Kiln / Toploading-Raku Vario Kiln please follow these safety instructions:

- Repair and maintenance of the burner unit must be carried out by a specialist, which is authorised by the manufacturer. Maintenance of the gas supply must be carried out by a qualified **gas specialist**.
- Do not place inflammable objects in the close proximity of the Kiln.
- Due to its mode of operation the Kiln must only be used outdoors.
- The Kiln has to be placed in a free-standing position. The heat radiation must not be blocked. Do not place any objects on top of or around the Kiln.
- Always wear protective clothing (protective gloves, Raku tong, heat resistant face shield, blacksmith apron, etc.) when you are opening the Kiln! High temperatures released from the Kiln can cause fire or injuries and will lead to premature wear of the Kiln.
- Never use your Kiln to fire inflammable materials or food.



**CAUTION ! DANGER FOR LIFE:**  
**The lid of the Raku-Toploader/ Raku-Toploader Vario must always be opened entirely when igniting the burner unit !!!**

## 5. INITIAL OPERATION

### 5.1. Delivery / Unpacking of Kiln

ROHDE top loaders are usually delivered on pallet by freight forwarding. Please check the delivery immediately for visible damage. Should you find any damage on the packing, unpack the pallet together with the driver and check the product for any damage. Write down any damage found on the delivery note and do not forget to have the note countersigned by the driver. Keep a copy of the damage complaint. Notify the forwarding agent immediately about the damage. **We regret that later claims cannot be accepted.**

### 5.2. Dispose of Packing Material

Please contribute to a clean environment by disposing of the wood, cardboard and plastic packing material in your nearest recycling centre. For further information on the disposal of packing material please contact your retailer or community council.

### 5.3. Kiln Environment / Place of Operation

When you choose a suitable place for your Kiln, please take note of the following guidelines and prepare the Kiln environment accordingly:

- Due to its mode of operation the Kiln can only be used outdoors.
- Place the Kiln on an even, fire-proof surface.
- The distance to the walls should be at least 50 cm on all sides.
- Floor, walls, separating walls, panelling etc. have to be made of material that is not easily flammable.
- If you are using gas cylinders you have to make sure that you are not storing or operating more than one 11 kg cylinder of propane gas in a closed room!

## 5.4. Kiln Transport

If you have to transport your Toploading-Raku Kiln / Toploading-Raku Vario Kiln, please take note of the following instructions:

- **CAUTION: The floor plate including stilts has to be disassembled for transporting the Toploading-Raku Kiln / Toploading-Raku Vario Kiln!**
- Carefully insert the fork of the forklift under the door of the kiln in the direction of the rear wall.
- Now you can lift the fork and carefully move the kiln to its final place of operation.
- If you do not have a forklift you can lift the Toploading-Raku Kiln / Toploading-Raku Vario Kiln carefully at its legs and carry it.

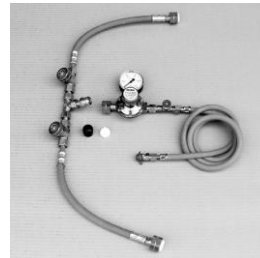
## 5.5. Assembly of the Kiln

Please check if the included equipment is complete:

- 1 atmospheric medium-pressure Raku burner 30 kW



- hose connection incl. pressure regulator and manometer
- 2-bottle connection (optional equipment)



- 1 thermocouple NiCr/Ni
- 1 temperature meter G 1200



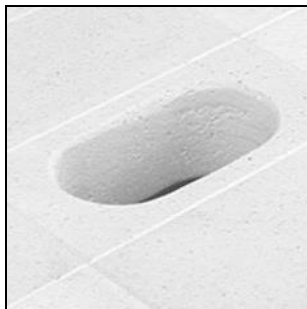
- 1 furniture plate
- 3 hollow stilts
- 2 plugs
- 1 chimney brick



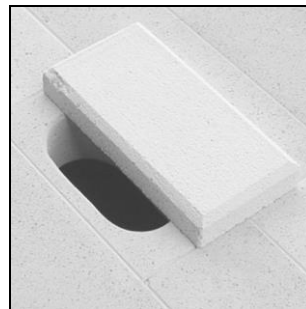
## 5.6. Chimney / Chimney brick

All Toploading-Raku Kilns / Toploading-Raku Vario Kilns are equipped with a chimney opening (picture 4).

The chimney brick you find included is not necessary for regular Raku firing. You can use it in order to produce a reduction-friendly atmosphere in the kiln by reducing the chimney cross section (picture 5). This is not the usual procedure as with the Raku method though, as the reduction takes place after the actual firing process.



picture 4



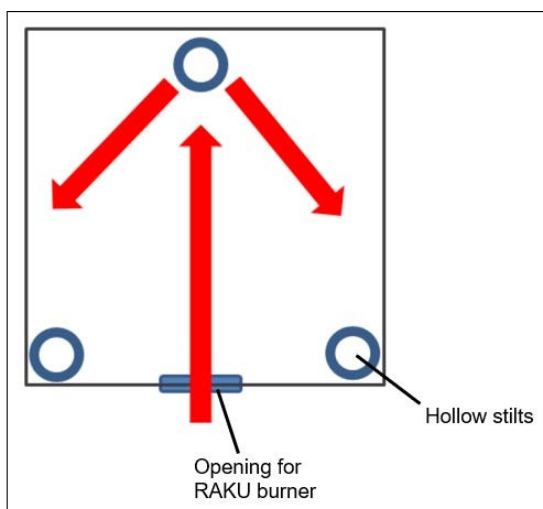
picture 5

## 5.7. Kiln Furniture

Place the included hollow stilts on the floor of the Toploading-Raku Kiln / Toploading-Raku Vario Kiln so that they form a triangle (picture 6).

**IMPORTANT:** Make sure that the burner flame aims directly at the upper hollow stilt (see arrow in picture 6) . This will lead to a good heat distribution.

Then place the furniture plate carefully on top of the stilts (picture 7).



picture 6



picture 7



### 5.8. Install Thermocouple

At the side of the Toploading-Raku Kiln / Toploading-Raku Vario Kiln you will find a fastening flange for the included GAL NiCr/Ni thermocouple. Carefully insert the thermocouple into this flange (picture 8) and fasten the thermocouple with the fastening screw to the matching flange.



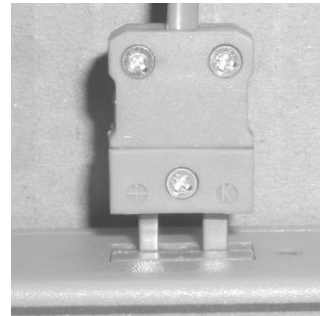
picture 8

Plug the yellow plug of the thermocouple into the matching socket at the temperature meter G 1200.

**Please make sure that you plug small with small and big with big!**



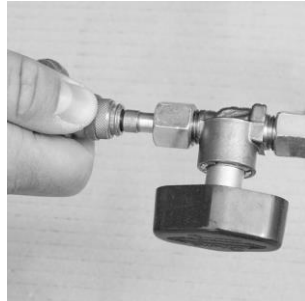
picture 9



picture 10

### 5.9. Connect Raku Burner

Now pick up the Raku burner. Push the quick-lock coupling onto the connection piece of the Raku burner. The gas connection is safe when all connections have clicked.



picture 10

Finally you have to screw the bottle connection onto the propane gas bottle.

Remove the protective lid (Picture 11) from the propane gas bottle (Caution: left threaded!). Then screw the threaded connection piece of the connection hose onto the connection thread of the propane gas bottle (Picture 12).



picture 11



picture 12

### 5.10. Correct Position for the Raku Burner

Now the Raku burner has to be placed centrally in front of the burner hole. It is important that you leave approx. 2 cm distance (Picture 13) between the burner head and the Toploading-Raku Kiln / Toploading-Raku Vario Kiln.



picture 13

## 5.11. Ignite Burner Unit



**Caution. Danger to life:**

The lid of the Raku-Toploader/ Raku-Toploader Vario must always be opened entirely when igniting the burner unit !!!



**Caution:**

Remove the protection foil and all Styrofoam plates from the kiln first!

Open the lock valve of the propane gas cylinder (labelled at the valve head).

Regulate the pressure reducer so that it indicates 0.5 bar gas pressure. Now press the hose breakage protection briefly and the propane gas will reach the burner.

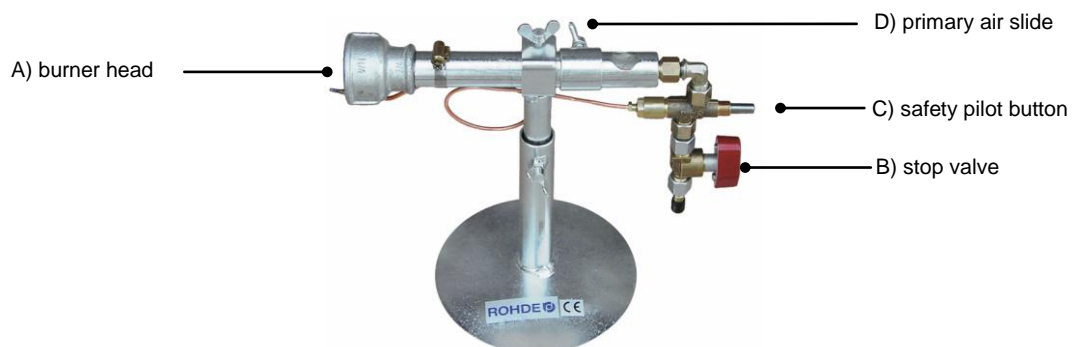
When you ignite the burner unit for the first time, the primary air supply slide (D) should be opened entirely. In order to change its position, please loosen the wing bolt. If you have fixed the bolt in this position during the first ignition you will not have to repeat this procedure during the next firing.

Open the stop valve (B) in the direction of the gas flow. Then press the red safety pilot button (C) and keep it pressed down (picture 16).

Now you can ignite the burner with a lighter (A). You might have to do this several times until the gas flame has been ignited.



picture 14



### 5.12. Fine-adjustment of Burner Flame

After the burner has been ignited entirely the flame can be fine-tuned. For this purpose you have to loosen the wing bolt of the primary air supply slide (D).

- You can move the slide away from the air intake opening – the flame turns blue, stronger and louder.

**Result:**

There is a high oxygen surplus in the Kiln, the burner flame oxidises strongly.

- Now try moving the air supply slide towards the air intake opening until the colour of the flame changes to green.

**Result:**

The flame is calm and neutral. In this state reduction can be achieved easily – your burner operates efficiently!

**CAUTION: Please fasten the primary air supply slides with the wing bolt in the chosen position!**

### 5.13. Burning in Kiln and Furniture

**Caution: Please remove the protection foil from the entire Kiln first !**

**CAUTION: Remove all Styrofoam plates which might still be there for transport and protection.**

Before you start using your Kiln for regular service you should run a firing with the empty Kiln. The “burning-in” is necessary to eliminate the remaining moisture from the Kiln walls.

Please choose the following settings for the process of “burning-in”:

- At 0.2 to 0.3 bar gas pressure
- fire for approximately 5 hours

## **6. GENERAL INSTRUCTIONS FOR OPERATION**

### **6.1. Correct Firing**

- The Kiln has to be operated in a free-standing position. The heat release should not be blocked. Do not place objects on top of or around the Kiln.
- Always wear protective clothing (protective gloves, Raku tong, heat resistant face shield, blacksmith apron, etc.) when you are opening the Kiln! High temperatures released from the Kiln can cause fire or injuries and will lead to premature wear of the Kiln. The manufacturer does not take over any liability for these cases!

## **7. MAINTENANCE / CARE / CLEANING**

Please take care that no clays or glazing make contact with the heating elements. This would result in the failure of the elements during the following firings. Should nevertheless the heating elements be stained by any substance please clean them off immediately, as burned-in glazing etc. will damage the heating elements and firebricks. In the case of substantial damage please contact us, or your retailer.

Please clean your gas-fired Kiln regularly with a broom and a vacuum cleaner in order to remove clay and stone-dust. This will prolong the service-life of your Kiln.

## **8. TIPS FOR TROUBLE SHOOTING**

**The burner unit cannot be switched on.**

- Check the gas level of the propane gas cylinder.
- Check if the lock valve of the gas cylinder is open.
- Check if the hose breakage protection (red button) has been pressed.
- Check the position of the stop valve at the burner (in direction of gas flow = open)

**Each ROHDE Kiln is checked for functionality before it leaves our factory!**

## 9. GUARANTEE REGULATIONS

We guarantee the faultless workmanship and function of the delivered Kiln and grant a 36-month guarantee from date of invoice.

The following instances are excluded from the guarantee:

- Damage caused by the customer.
- The hose material of the 2-bottle connection is subject to natural ageing process and wear especially when operated outdoors. It has to be checked and exchanged by a gas technician in regular intervals.
- Damage caused by fired goods, e.g. by exceeding the maximal temperature.
- Damage caused by improper transport(s).
- Damage caused by chemical reactions for which the Kiln has not been constructed (e.g.: salt glazed ceramics).
- The manufacturer does not take over any liability for improper operation and resulting damage.

**Attention:** The firebricks of the lining are exposed to heavy temperature fluctuations. This can cause small cracks in the firebrick lining. This process is normal and does not affect the functions of the Kiln. It therefore cannot be a reason for reclamation.

### **What to do in the event of guarantee/damage:**

Please notify your retailer - before any costs arise. Your retailer will then talk to us, the manufacturer, how to proceed.

In the case of a reclamation, please state the **Kiln type**, **product number** and the **date of purchase** or the **year of construction** (see **type plate** on the Kiln side).

## 10. COPYRIGHT / TRADE NAMES / DISCLAIMER

The content of the instruction manual is purely informative. It may be changed without prior notice and may not be seen as a liability of Helmut Rohde GmbH. We do not guarantee or take over responsibility for the correctness or preciseness of the contents in this instruction manual.

We mention names, trade names, product identifications etc. without special identification, as they are commonly known. Those names and identifications, however, may be the property of companies or institutes.

## 11. SERVICE CONTACT DETAILS

Should you have any questions regarding your Kiln, spare parts or additional equipment please contact your retailer.

We wish much success and excellent firing results with your new  
ROHDE kiln!

Your ROHDE team



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