

TOMA

Introduction


This kiln is a Dutch product manufactured by **TOMA** of Volkel using only the highest quality bricks, insulation and heating elements.


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Safety instructions

All the text in this user manual with the symbol  must be regarded as safety instructions. Always observe these instructions.

 Packaging: Keep the plastic packaging away from children, as it may cause choking if swallowed.

All materials and parts used by **TOMA** are guaranteed to be free of asbestos and bear the  hallmark.

Please do not hesitate to call your dealer if you have any problems or questions.

TOMA wishes you every success with your kiln.

General

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ⓘ The kiln should only be used within the limits of its capabilities, for the purpose for which it was designed and by qualified persons who are familiar with kilns, regulating equipment and the products to be fired.

Safety symbols

Yellow: danger, indicates the possibility or presence of electrical and temperature danger.

Red: warning, to prevent, counteract or interrupt damaging actions or situations.



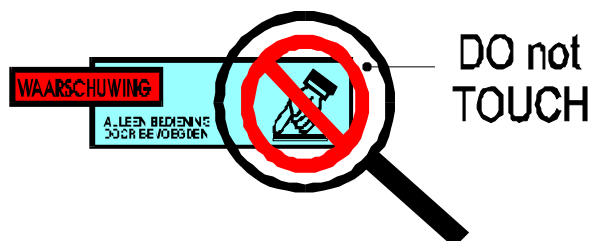
Beware of electrical voltage!.

ⓘ Never remove the guards marked with this symbol while the kiln is connected to the power supply. Always remove the plug first.



ⓘ The high temperature in the kiln can cause burns. To prevent this, keep the kiln closed until it has cooled down and ensure that nobody opens or touches the kiln during use.

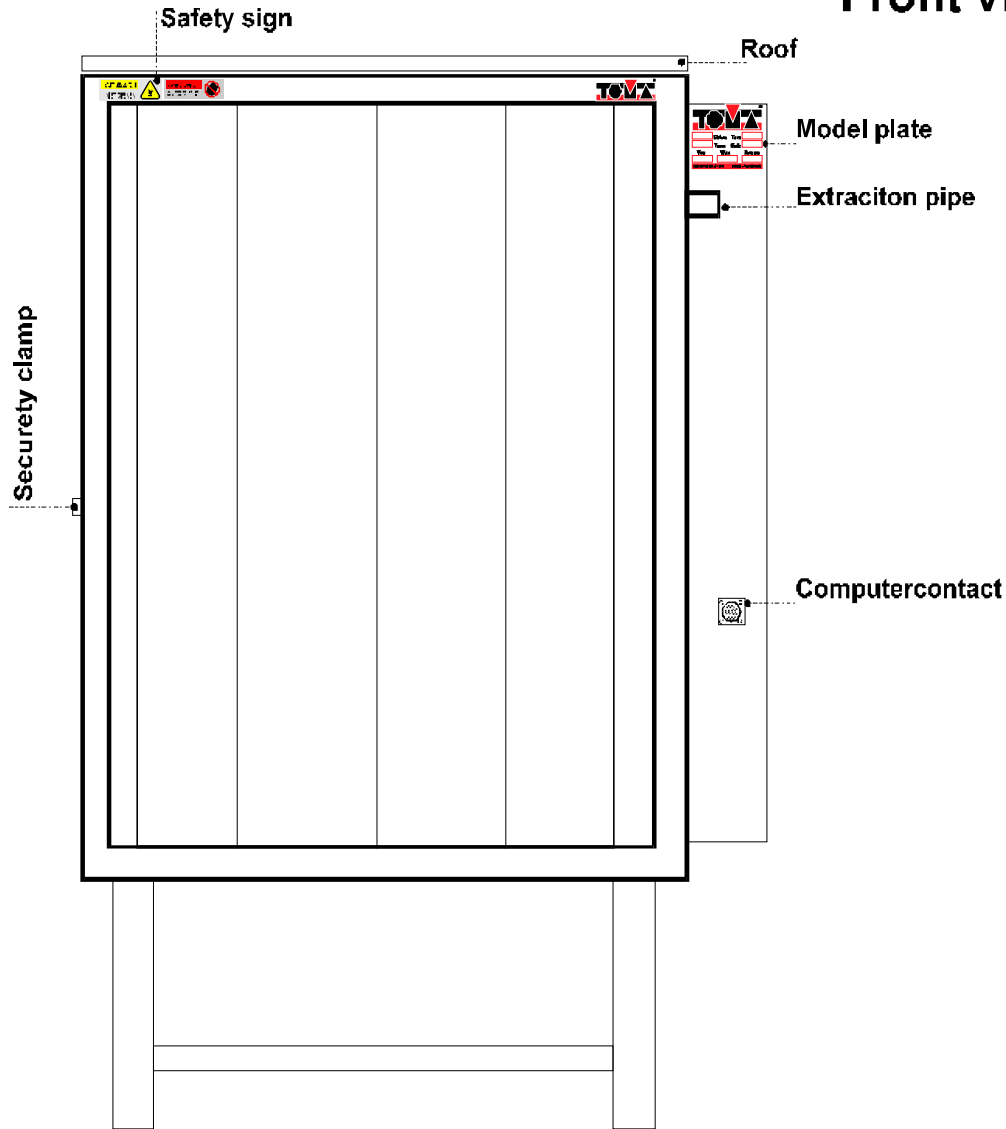
Check the temperature before opening.



ⓘ Ensure that the kiln is operated by qualified and responsible persons only.

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Front view



Top view

Installing the kiln.

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Location and environment.

Poor ambient conditions can affect the safe operation of the kiln. An easily accessible, dry, frost-free and well-ventilated room is the best place for the kiln. Select a position close to a wall socket and use this socket for the kiln only. The exterior temperature of the kiln will be higher in an unventilated room.

ⓘ Ensure that the electrical cable used is of the appropriate thickness and that a suitable wall socket is available.

ⓘ Always connect the kiln to an earthed wall socket to prevent electrical shocks and to protect the kiln and the control unit.

Connecting

The kiln and the control unit are connected to one another by means of fourteen-pin plug and a female plug. The female plug is located on the side of the kiln. Insert the plug of the control cabinet into the female plug and tighten the locking ring. Do not plug in the kiln if the control cabinet has not been connected.

ⓘ Always connect the deactivated control unit to the kiln before inserting the plug of the kiln in the wall socket.

ⓘ First switch off the control unit and always remove the plug from the wall socket before removing the control unit.

Drying

As a new kiln always is slightly damp, it is necessary to stoke it dry. This opportunity can also be used to check the control unit. The kiln may exude an unpleasant smell and water is usually expelled during the drying process.

The drying process must be allowed to take place gradually with the extraction flue open. Heat the kiln to 650° C over a period of ten hours, then rapidly stoke it to 1050° C and maintain this temperature for 30 minutes. Repeat this process if the kiln has not been used for some time (9 months or longer).

Owing to the action of the bricks and the high temperatures, hairline cracks may appear. This is a normal phenomenon and does not affect the kiln or its operation in any way.

Closing

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The kiln door is closed by means of a security clamp. To open the door, press the clamp outwards and remove the eye from the hook. Reverse this procedure to close the door. Slip the eye over the hook first, then draw the clamp towards you. This fastening can be adjusted if necessary.

ⓘ Always use the padlock provided to prevent unauthorised persons from opening the door.

Extraction flue

The pipe of the extraction flue is located at the top of the side wall of the kiln. This flue ensures that moisture is removed from the kiln and the fired products. You can close the extraction flue using the enclosed cap. (This is only recommended at high temperature once all the moisture has been removed.) If necessary, a flue gas discharge (chimney) can be installed above the pipe.

ⓘ Avoid any contact with the hot vapour that emerges from the extraction flue. Make sure that the electrical cables of the kiln and the control unit do not hang in front of the extraction flue.

Loading the kiln.

When loading the kiln, place the first products on low supports so that the heat can circulate underneath. Try to distribute the product as evenly as possible throughout the kiln.

Be careful not to break the thermocouple that is located on the hinge side of the side wall.

Prevent any of the material to be fired from dripping on the heating elements, as this will cause burning.

Work neatly and carefully while loading the kiln to prevent damage.

Cooling down

ⓘ While cooling down the kiln must remain closed until the temperature has dropped below 50° C.

It is dangerous (fire) to open the door any sooner and it will damage the kiln.

Safety switch

TOMA kilns are fitted with a safety switch that automatically deactivates the kiln when the door is opened.

Heating elements

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The heating elements are manufactured from the highest quality materials. During the first firing, the filament oxidises and turns a grey-white colour. This is protective layer that continuously renewed. The filament is not resistant to liquids or reducing firing.

Maintenance


It is advisable to clean the kiln using a vacuum cleaner. Make sure that the grooves along the coils are also cleaned carefully.

The kiln heating is operated by means of magnetic switches, which emit audible clicks. This is a mechanical device and subject to wear and tear. Ask your supplier or reputable electrical firm to check these switches every four years.

Description model plate

A model plate as shown below has been attached to the kiln. The data it bears is important for the maintenance of and repairs to the kiln.

We recommend that you enter the kiln numbers on the example below so that this data remains available in the event that the plate is damaged.



Datum Type

Temp Serie

Volt **Watt** **Ampère**

Tel. 0413 27 45 30 Volkel - Nederland

Date: year and month of construction

TYPE: model

TEMP: maximum operating temperature

Series: number that corresponds with files kept by the manufacturer

VOLT: the kiln is intended for the voltage indicated

Watt: total power consumption

AMPÈRE: this indicates the value of the fuse to be fitted

Appendix diagrams

Drawing one: is a diagram of a 230 Volt kiln with a capacity of 65 litres.

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Drawing 2: is a diagram of 230/400 Volt kiln with a capacity greater than 65 litres.

Parts

A: Heating element: These are developed and manufactured under our own management. Total power capacity is indicated on the model plate.

C: Regulating equipment

RC: Extinguishing filter

S: Glass fuse. This is fitted in the control unit

V1: Door switch, XCK P591

V2: Gold fuse (optional)

14-pin plug

1: Thermocouple + type S (Pt Rh Pt 10 %)

2: Thermocouple - type S (Pt Rh Pt 10 %)

4: Thermocouple + type K (Ni Cr Ni)

5: Thermocouple - type K (Ni Cr Ni)

8: Port L1 230 Volt

9: Port N 230 Volt

3, 11: earth control cabinet

12: Port L magnetic switch (safety)

13: Port L magnetic switch

14: Port N magnetic switch

T: Thermocouple

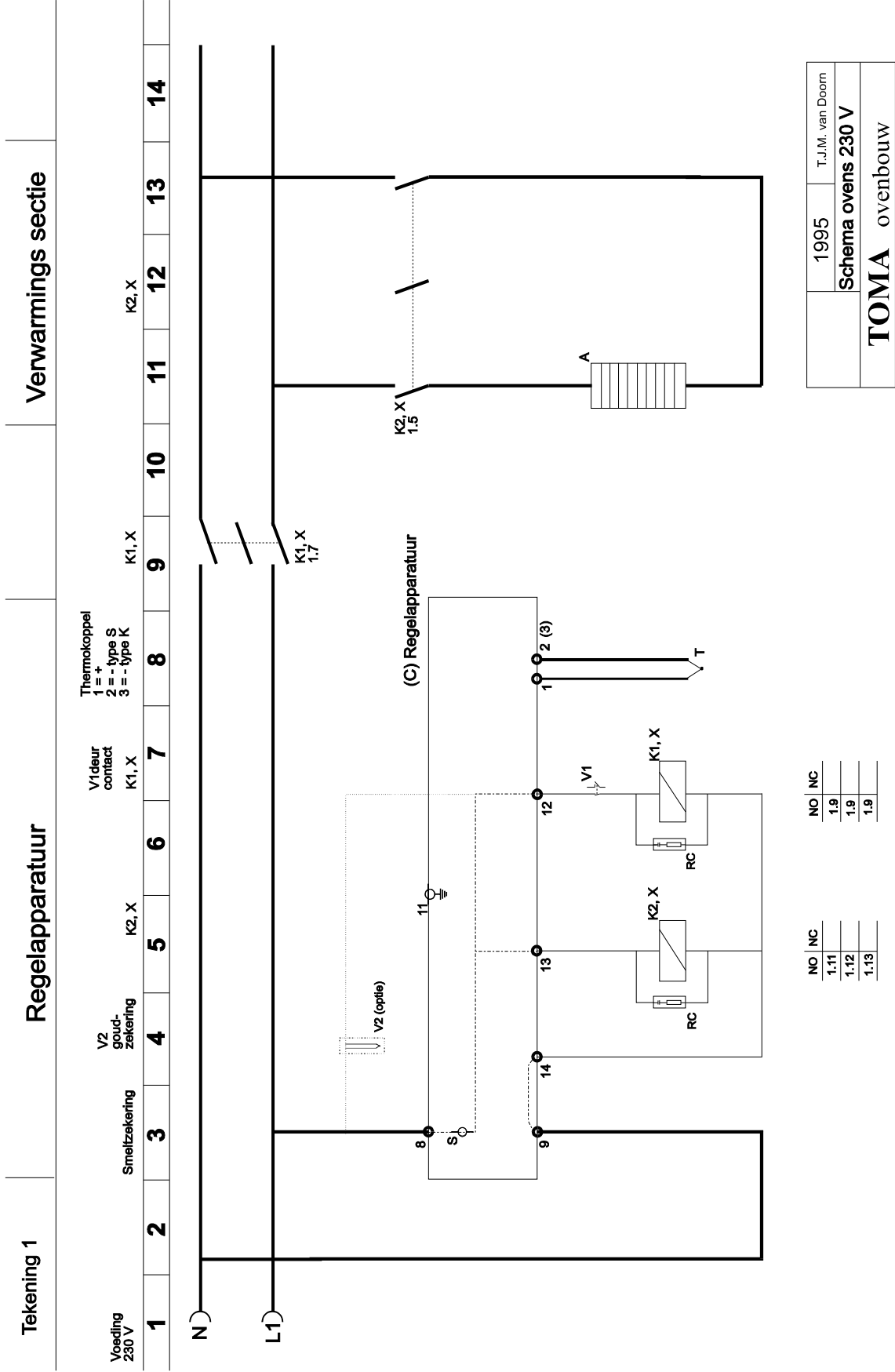
K1: Magnetic switch

K1,1: Magnetic switch

K2: Magnetic switch (safety)

K2,1: Magnetic switch (safety)

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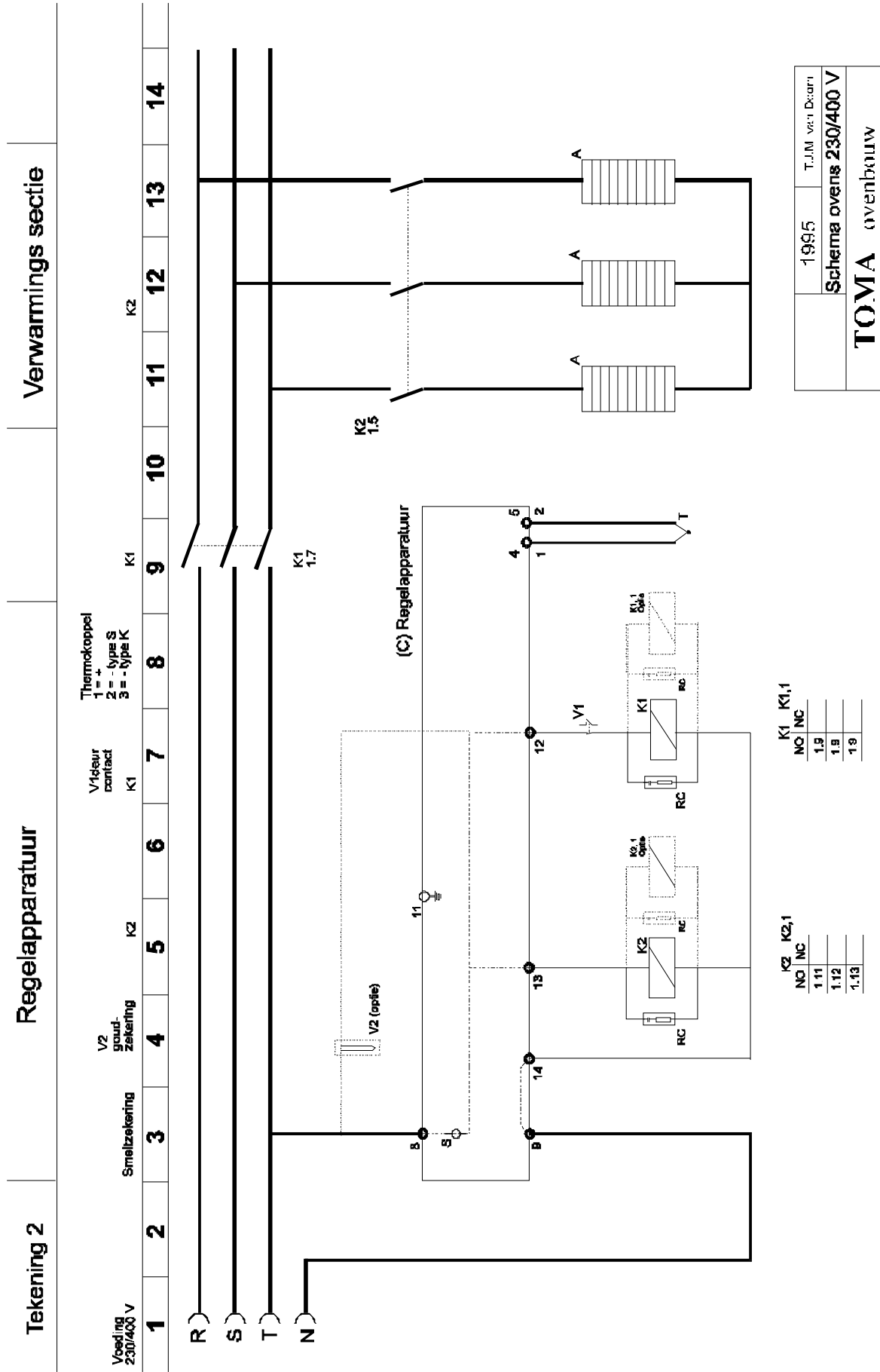


NO	NC
1,11	1,9
1,12	1,9
1,13	1,9

NO	NC
1,11	1,9
1,12	1,9
1,13	1,9

	1995	T.J.M. van Doorn
Schema ovens 230 V		
TOMA ovenbouw		

TOMA



1995	T.J.M. v.d. Driess
Schema ovens 230/400 V	
TOMA ovenbouw	

K1	K1,1	NO	NC
1,9		1,9	
1,9		1,9	
1,9		1,9	

K2	K2,1	NO	NC
1,11		1,11	
1,12		1,12	
1,13		1,13	