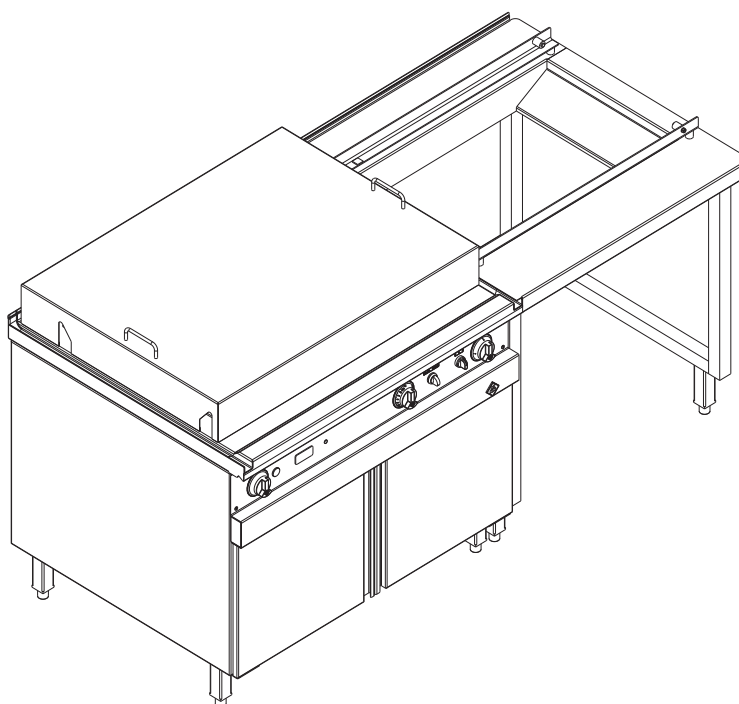




Read the operating instructions prior to commissioning

Operating instructions

Deep-fat fryer



Unit	Type of energy	Unit type	Version	Model
Large deep-fat fryer Köln (Cologne)	Electric	Floor-standing unit	Manual	OPEFRIKN...
			Manual Discharge system	OPEFRIKN...SAZ
		Suspended unit	Manual	OIEFRIKN...
			Manual Discharge system	OIEFRIKN...-SAZ

Operating and display elements

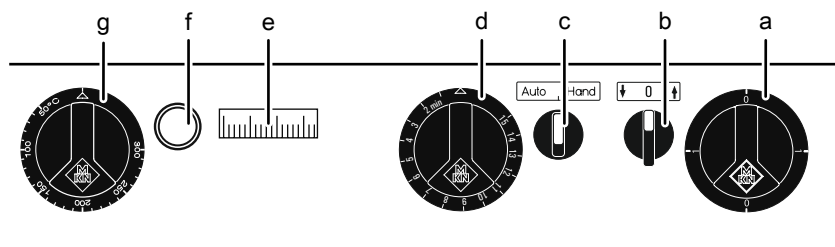
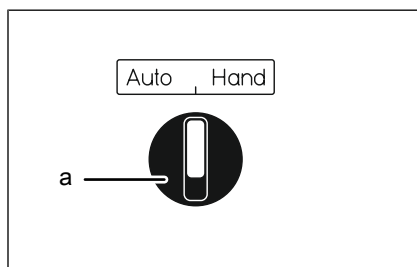
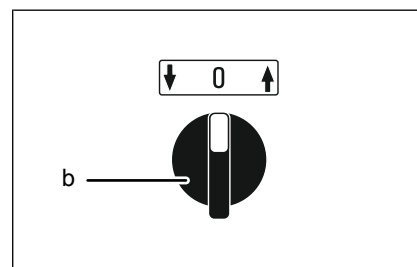


Image: Köln deep-fat fryer

- | | | | |
|---|-------------------------------|---|--------------------------|
| a | On/Off control knob | e | Temperature display |
| b | Lift control knob | f | Heating indicator light |
| c | Manual/Automatic control knob | g | Temperature control knob |
| d | Time control knob | | |



a Manual/Automatic control knob



b Lift control knob

Manufacturer

MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG
Halberstädter Straße 2a
38300 Wolfenbüttel
Germany

Phone +49 5331 89-0
Fax +49 5331 89-280
Internet www.mkn.com

Copyright

All rights to text, graphics and pictures in this documentation are held by MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG. Distribution or duplication is only permitted with the prior written consent of MKN.

Copyright by MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG.



1 Introduction	7
1.1 About this manual	7
1.1.1 Explanation of signs	8
1.2 Intended use	9
1.3 Guarantee, warranty and liability	9
2 Safety information	10
3 Description of the unit	13
3.1 Overview of the unit	13
3.1.1 Köln deep-fat fryer without discharge system	13
3.1.2 Köln deep-fat fryer with discharge system	14
3.2 Function of the operating and display elements	15
3.3 Application	15
3.3.1 Fill quantities	15
3.3.2 Operating temperature	15
4 Operating the unit	17
4.1 Tips for use	17
4.2 Switching the unit on and off	17
4.2.1 Switching on	17
4.2.2 Switching off	17
4.3 Basic functions	17
4.3.1 Setting the cooking temperature	17
4.3.2 Setting the cooking time	18
4.4 Starting the deep-frying cooking mode	19
4.4.1 Starting the deep-frying cooking mode automatically	19
4.4.2 Starting the deep-frying cooking mode manually	20
4.5 Ending the deep-frying cooking mode	22
4.5.1 Ending the deep-frying cooking mode automatically	22
4.5.2 Ending the deep-frying cooking mode manually	22
4.6 Pausing and end of use	22
4.6.1 Short pause	22
4.6.2 Longer pauses and end of use	23
4.7 Handling deep-frying oil	23
4.7.1 Ensuring that the oil is fit for human consumption	25
4.8 Filling the deep-frying oil	26
4.8.1 Gently heating up deep-frying oil	26
4.9 Emptying the deep-frying oil	27
4.10 Inserting the oil clarifying tray	28
4.11 Putting the lift frame on	29
4.12 Raising and lowering the lift frame with deep-frying basket ...	30
4.12.1 Lowering and raising manually	30
4.12.2 Lowering and raising automatically	31

4.13 Emptying the unit	31
4.13.1 Emptying the deep-frying basket	31
4.13.2 Emptying the deep-frying basket by means of the discharge system ...	32
5 Cleaning and caring for the unit	33
5.1 Preventing corrosion	33
5.2 Removing rust spots	34
5.3 Cleaning the housing	34
5.4 Cleaning the deep-frying basin	34
5.4.1 Deep-fat fryer without discharge system	34
5.4.2 Deep-fat fryer with discharge system	35
5.5 Cleaning the heating element	37
5.6 Cleaning the drain	38
6 Troubleshooting	39
6.1 Cause of failure and the remedy	39
6.2 Nameplate	39
7 Carrying out maintenance	40
7.1	40
7.1.1 Filling out the maintenance certificate	40
7.2	41
8 Disposing of the unit in an environmentally responsible manner	42
9 Manufacturer's declaration	43



1 Introduction

1.1 About this manual

The operating instructions are part of the unit and contain information:

- On safe operation,
- On cleaning and care,
- On remedies in case of faults.

Be aware of the following notes and adhere to them:

- Read the operating instructions completely before operating the unit for the first time.
- Make the operating instructions available to the operator at all times at the operating site of the unit.
- Insert any supplements from the manufacturer.
- Keep the operating instructions throughout the service life of the unit.
- Pass on the operating instructions to any subsequent operator of the unit.

Target group The target group of the instruction manual is the operator, who is entrusted with the operation, cleaning and care of the unit.

Figures All figures in this manual are intended as examples. Discrepancies between these and the actual unit can arise.

1.1.1 Explanation of signs



DANGER
Imminent threat of danger

Failure to comply will lead to death or very severe injuries.



WARNING
Possible threat of danger

Failure to comply can lead to death or very severe injuries.



CAUTION
Dangerous situation

Failure to comply can lead to slight or moderately severe injuries.

ATTENTION
Physical damage

Failure to comply can cause physical damage.



Notes for better understanding and operation of the unit.

Symbol / sign	Meaning
•	Listing of information.
→	Action steps, which can be performed in any sequence.
1. 2.	Action steps, which must be performed in the specified sequence.
↳	Result of an action performed or additional information about it.

1.2 Intended use

This unit is intended to be used solely for commercial purposes, particularly in commercial kitchens.

This unit may only be used with suitable accessories and for the cooking of food.

It is forbidden to use the unit for purposes, which include the following:

- Heating acids, alkaline solutions or other chemicals
- Heating flammable liquids
- Heating of closed containers (for example preserves)
- Thawing of frozen food

The use of the unit is prohibited in the following countries:

- USA
- Canada

1.3 Guarantee, warranty and liability

The warranty is void and safety is no longer assured in the event of:

- Improper conversion or technical modifications of the unit,
- Improper use,
- Incorrect startup, operation or maintenance of the unit,
- Problems resulting from failure to observe these instructions.

2 Safety information

The unit complies with applicable safety standards. Residual risks associated with operation or risks resulting from incorrect operation cannot be ruled out and are mentioned specifically in the safety instructions and warnings.

The operator must be familiar with regional regulations and observe them.

Operation Individual below 16 years of age are not allowed to operate the unit.

During operation, the following group of individuals must be supervised by an individual who is responsible for safety:

- Individuals with physical, sensory, or mental handicaps, or who lack the knowledge and experience to operate the unit properly.

The supervising individual must be familiar with the unit and the risks associated with it.

Hot surfaces Risk of burns from hot surfaces

- Protect arms and hands by wearing suitable protective gloves.
- Do not touch heating elements, hot surfaces or accessories immediately after use.
- Allow surfaces to cool prior to cleaning.

Hot liquids Risk of burns from hot liquids

- Protect arms and hands by wearing suitable protective gloves.
- Remove, transport and empty baskets carefully.
- Observe the maximum filling quantity.
- Open the drain carefully and empty the unit.

Risk of scalding from hot oil

- Protect arms and hands by wearing suitable protective gloves.
- Prior to deep frying, remove excess ice from frozen foods to be cooked.
- Prior to deep frying, dry wet foods to be cooked.

Risk of chemical burns from evaporating cleaners

- Follow the instructions of the cleaning agent manufacturer.

Risk of burns from steam

- Protect arms and hands by wearing protective gloves.
- Open the drain carefully and empty the unit.
- Dry unit completely after cleaning it.

Defective unit Risk of injury from a defective unit

- Disconnect a defective unit from the electric mains.
- Do not operate a defective unit.
- Allow only an authorized technician to repair the unit.

Fire prevention Risk of fire from dirt and grease deposits

- Clean the unit when finished using it.
- When the oil starts to become rancid, replace the deep-frying oil completely; do not add oil.

Risk of fire from overheating

- Observe the unit during operation.
- Observe the maximum filling quantity.
- Observe the minimum filling quantity.

Firefighting

- In the event of a fire, disconnect the unit from the electric mains.
- Use a Fire Class F fire extinguisher, never water, to extinguish grease fires. Other fires, for instance, can be extinguished with fire extinguishers suitable for Fire Classes A, B, C, CO₂ fire extinguishers or extinguishing media suitable for the fire class confronted.

Unit on casters Risk of injury from a unit on casters

- Move the unit only for cleaning or maintenance.
- Lock casters during operation.
- Only move an empty unit.

Risk of a line breaking if subjected to high tensile load

- Secure the unit with a chain as a strain relief for the power connection at the installation site so that no tensile load is applied to the power connection if the unit is moved.

Improper cleaning Risk of chemical burns from cleaning agent

- Follow the instructions of the cleaning agent manufacturer.
- Take appropriate protective measures when handling aggressive cleaning agents.

Risk of falling on smooth floors

- Keep the floor in front of the unit clean and dry.

Risk of injury from improper cleaning

- Dry the unit completely after cleaning it.

Risk of physical damage from improper cleaning

- Clean the unit after using it.
- Do not clean the unit with a high-pressure cleaner or water jet.
- Do not clean the housing with highly abrasive or chemically aggressive cleaning agents.
- Do not clean the housing with highly abrasive sponges.
- Follow the instructions of the cleaning agent manufacturer.
- Do not cool shock the unit by cooling it abruptly.
- Do not use any bleaching or chlorine-containing cleaners or disinfectants.

Hygiene Hygiene risk from rancid oil

- When the oil starts to become rancid, replace the deep-frying oil completely; do not add oil.

Health risk from insufficient hygiene

- Observe applicable regional hygiene regulations.
- Follow the cleaning instructions.

Improper use Risk of physical damage from improper use

- Do not operate the unit outdoors.
- Use only original accessories.
- Train operators regularly.
- Do not heat food warmer plates or tins of preserved food.
- Observe the unit during operation.
- Do not melt solid deep-frying oil in the deep-frying pan.
- Use only commercially available deep-frying oils when operating the unit.

3 Description of the unit

The unit is intended for universal use in commercial kitchens for cooking food. The unit may only be used for deep-frying starch- and protein-containing food with suitable deep-frying oils.

3.1 Overview of the unit

3.1.1 Köln deep-fat fryer without discharge system

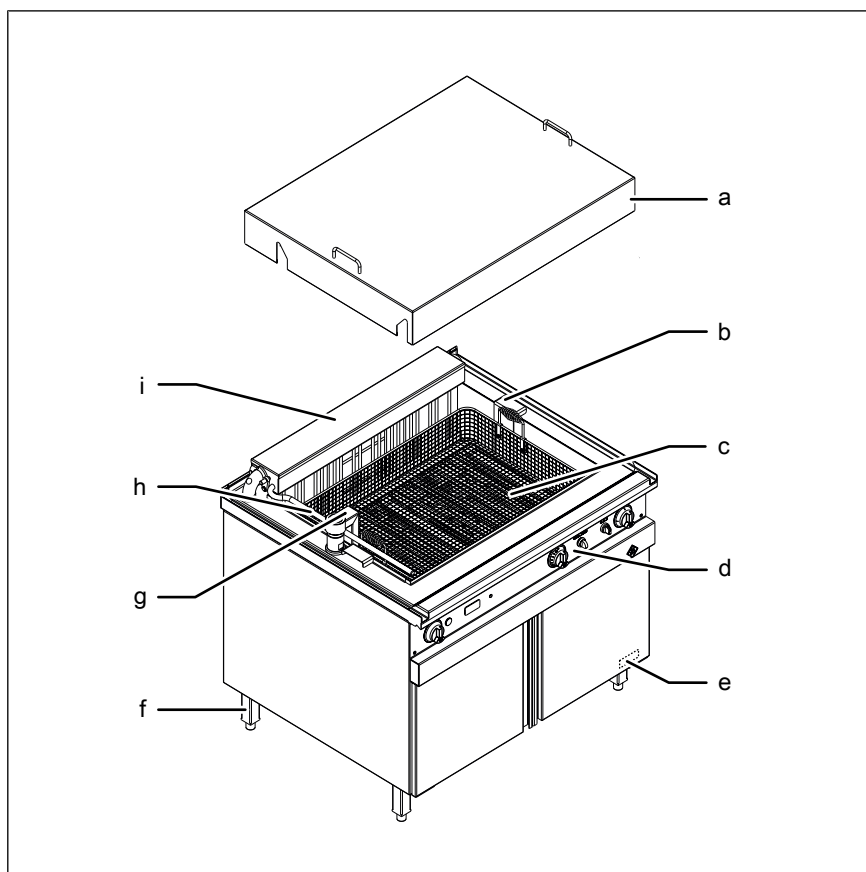


Image: Cologne deep-fat fryer (lifting motor on left)

- | | |
|------------------------------|----------------------------------|
| a Lid | f Equipment leg (optional) |
| b Oil clarifying tray | g Lift frame |
| c Cologne deep-frying basket | h Swivel mechanism control lever |
| d Operating elements | i Swivel mechanism housing |
| e Nameplate | |

3.1.2 Köln deep-fat fryer with discharge system

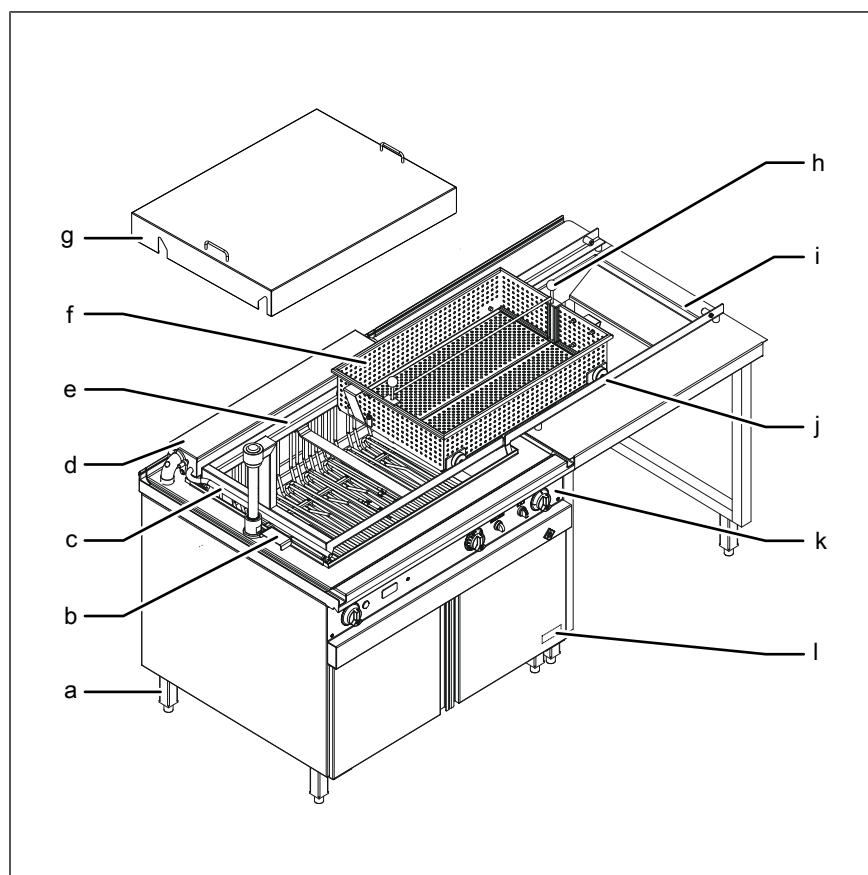


Image: Cologne deep-fat fryer with discharge system (lifting motor on left)

- | | | | |
|---|--------------------------------|---|------------------------------|
| a | Equipment leg | g | Lid |
| b | Oil clarifying tray | h | Discharge flap control lever |
| c | Swivel mechanism control lever | i | Discharge table |
| d | Swivel mechanism housing | j | Rail |
| e | Lift frame | k | Operating elements |
| f | Cologne deep-frying basket | l | Nameplate |

3.2 Function of the operating and display elements

Operating/display element	Symbol	Designation	Function
<i>On Off</i> control knob	0	Off	Switching off the unit
	1	On	Switching on the unit
<i>Manual Automatic</i> control knob	Hand	Manual	Manually operates the lift mechanism
	Auto	Automatic	Automatically operates the lift mechanism
<i>Lift</i> control knob	↑	Raise	Raises the lift frame
	↓	Lower	Lowers the lift frame
<i>Temperature</i> control knob		Off	Heating element off
	100 – 185 °C	Temperature	Adjusts the heating element; adjustable temperature
<i>Temperature</i> display		Display scale	Displays the current temperature
<i>Heating</i> indicator light		Light	Illuminates, if the heating element is active
<i>Time</i> control knob		Off	Timer off
	2 — 15 min	Time	Adjustable time

3.3 Application

3.3.1 Fill quantities

Tip

Before using solidified deep-frying oil, heat it up in a cooking pot or liquefy it with the optional melting stage for deep-frying oil.

Unit	Fill quantity of food to be cooked (kg)	Fill quantity of oil (l)
	Maximum	Minimum / Maximum
Köln	1 x 7.5 *	1 x 85 / 1 x 115
*Fill quantity based on chips		

3.3.2 Operating temperature

Quantity	Temperature
Small to medium quantity	150 °C
Large quantity	160 – 180 °C

Recommended cooking temperature and cooking time

Food to be cooked	Cooking temperature (°C)	Cooking time (minutes)
Doughnuts	170	3 — 4
Cauliflower	170	2 — 3
Fish fillet	170	2 — 6
Trout	160	2 — 4
Chicken, portioned	170	3 — 8
Quick-frying food	170	2 — 4
Chips, pre-blanching and deep-frozen	175	3 — 5
Chips, pre-blanching and defrosted	175	2 — 3
Fried pastries	180	2 — 3
Onion rings	170	1 — 3

4 Operating the unit

4.1 Tips for use

In order to use the unit to its optimum and avoid heat loss:

- Reduce the temperature during brief pauses.
- Put the lid on during brief pauses.

4.2 Switching the unit on and off

4.2.1 Switching on

→ Turn the *On Off* control knob to "1".

↳ The unit is now on.

4.2.2 Switching off

ATTENTION

Risk of physical damage from switching off improperly

If there is a power failure or the unit is switched off by a main switch, it does not switch off automatically. When the power supply is switched on again, the unit is still on.

- Make sure that the unit is switched off, when the power supply is switched on again.
-

Requirement The unit is on
Cooking process completed
The food being cooked has been removed

→ Turn the *On/Off* control knob to "0".

↳ The unit is off.

4.3 Basic functions

4.3.1 Setting the cooking temperature

Requirement The unit is on
Deep-frying oil filled and level correct

→ Turn the *Temperature* control knob to the desired temperature.

↳ The *Heating* indicator light illuminates.

↳ The *Temperature* display shows the current temperature.

↳ The *Heating* indicator light goes out when the temperature is reached.

4.3.2 Setting the cooking time

Requirement The unit is on
Cooking temperature set

→ Set the *Time* control knob to the desired cooking time.

↳ The cooking time is set.

4.4 Starting the deep-frying cooking mode

ATTENTION

Risk of physical damage from contaminants

An excess amount of panade residue in the fat or oil can lead to slow draining when cleaning.

When the food being cooked has a high panade content, always use the oil clarity insert.



Reduction of acrylamide level

Regulation EU 2017/2158 applies in Europe with effect from 2018-04-11.

This requires that the lowest possible acrylamide level must be achieved when cooking potato products, for example in a deep-fat fryer.

MKN therefore recommends the following for potato products:

- Do not exceed a deep-frying temperature of 175 °C, as long as the food manufacturer states, that this is safe for his product.
- Avoid excessive deep-frying.
- In the case of lower deep-frying temperatures, reduce the quantity of food to be cooked, so that you prevent excessive absorption of fat by the food being cooked.
- If possible, use pre-blanching products.
- Observe the cooking instructions on the product packaging or otherwise stated by the food manufacturer.
- Check regularly that the desired oil temperatures in the deep-fat fryer are being maintained.

4.4.1 Starting the deep-frying cooking mode automatically



CAUTION

Risk of injury from deep-frying oil foaming over

- Protect arms and hands by wearing suitable protective gloves.
- Briefly defrost and dry any frozen food to be cooked.
- Dry wet food to be cooked.
- Do not exceed the maximum fill quantity for the food being cooked.

ATTENTION

Risk of physical damage from too small a fill quantity

Observe the *Minimum fill level* mark.

Check the fill quantity regularly during operation.

ATTENTION

Risk of physical damage from blocking of the lift frame

Ensure that the lift frame is lying on the end stop of the lifting cylinder.

Tip

Observe the recommended cooking temperature and cooking time when deep-frying.

Requirements

Drain closed

Deep-frying oil filled and the level is correct

The unit is on

Manual/Automatic control knob is on "Auto"

1. Place the lift frame on the lifting cylinder as far as the end stop.
↳ The lift frame is lying on the end stop.
2. Place the deep-frying basket on the lift frame.
3. Load the food to be cooked into the deep-frying basket.
↳ Do not exceed the maximum capacity of the deep-frying basket.
4. Set the cooking temperature.
↳ The Heating indicator light goes out, after the cooking temperature has been reached.
5. Set the cooking time.
6. Press the *Time* control knob and the deep-frying cooking mode starts.
↳ The deep-frying basket is lowered automatically into the deep-frying tank.
↳ An audible signal sounds, after the cooking time has expired.
↳ The deep-frying basket is raised automatically out of the deep-frying tank.

4.4.2 Starting the deep-frying cooking mode manually



CAUTION

Risk of injury from deep-frying oil foaming over

- Protect arms and hands by wearing suitable protective gloves.
 - Briefly defrost and dry any frozen food to be cooked.
 - Dry wet food to be cooked.
 - Do not exceed the maximum fill quantity for the food being cooked.
-

ATTENTION

Risk of physical damage from too small a fill quantity

Observe the *Minimum fill level* mark.

Check the fill quantity regularly during operation.

ATTENTION

Risk of physical damage from blocking of the lift frame

Ensure that the lift frame is lying on the end stop of the lifting cylinder.

Tip

Observe the recommended cooking temperature and cooking time when deep-frying.

Requirements

Drain closed

Deep-frying oil filled and the level is correct

The unit is on

Manual/Automatic control knob is on "Manual"

1. Place the lift frame on the lifting cylinder as far as the end stop.
 - ↳ The lift frame is lying on the end stop.
2. Place the deep-frying basket on the lift frame.
3. Load the food to be cooked into the deep-frying basket.
 - ↳ Do not exceed the maximum capacity of the deep-frying basket.
4. Set the cooking temperature.
 - ↳ The Heating indicator light goes out, after the cooking temperature has been reached.
5. Set the cooking time.
6. Turn the *Lift* control knob anticlockwise and hold it.
 - ↳ The lift frame with deep-frying basket is lowered into the deep-frying tank automatically.
7. Set the *Lift* control knob to "0".
8. Press the *Time* control knob.
 - ↳ The deep-frying cooking mode starts.
 - ↳ An audible signal sounds, after the cooking time has expired.
9. Turn the *Lift* control knob clockwise and hold it.
 - ↳ The lift frame with deep-frying basket is raised out of the deep-frying tank.

4.5 Ending the deep-frying cooking mode

4.5.1 Ending the deep-frying cooking mode automatically

- Requirements** The unit is on
Cooking process started
Cooking time has not expired
Manual/Automatic control knob is on "Auto"
- Press the *Time* control knob.
- ↳ A signal sounds.
 - ↳ The deep-frying basket is raised automatically out of the deep-frying tank.
 - ↳ The deep-frying cooking mode is ended.

4.5.2 Ending the deep-frying cooking mode manually

- Requirements** The unit is on
Cooking process started
Cooking time has not expired
Manual/Automatic control knob is on "Manual"
1. Set the *Lift* control knob to "0".
 2. Press the *Time* control knob.
 - ↳ A signal sounds.
 - ↳ Cooking process is ended.
 3. Turn the *Lift* control knob clockwise and hold it.
 - ↳ The deep-frying basket is raised automatically out of the deep-frying tank.
 4. Release the *Lift* control knob.
 - ↳ The deep-frying basket stops.
 - ↳ The deep-frying cooking mode is ended.

4.6 Pausing and end of use

4.6.1 Short pause

- Requirements** The unit is on
Lift mechanism with deep-frying basket is raised
The food being cooked has been removed
- Turn the *Temperature* control knob to "110 °C".
- ↳ Unit is ready for use.

4.6.2 Longer pauses and end of use

- Requirement** The unit is on
 The deep-frying basket is lifted out of the deep-frying tank
 The food being cooked has been removed
1. Turn the *Temperature* control knob to "△".
 2. Turn the *On Off* control knob to "0".
 3. Place the lid on.
- ↳ The unit is off.

4.7 Handling deep-frying oil



DANGER **Risk of explosion from hot oil or fat**

Risk of a fat explosion when extinguishing burning fat or oil with water or an extinguishing agent that contains water.

- Always use a **Fire Class F** fire extinguisher to extinguish fat fires.
- Never extinguish burning fat with water!



DANGER **Risk of burns due to hot oil or fat being sprayed about suddenly from an explosion of fat**

Risk of delayed explosion of fat, if water (100 to 2000 ml) gets into hot fat or deep-frying oil.

- Switch off the deep-fat fryer immediately, even if nothing appears to be happening. The delayed explosion of fat can occur between a few seconds and several minutes.
- Remove yourself immediately from the deep-fat fryer.
- Warn persons near to the deep-fat fryer.
- All persons must keep a safety distance of at least 5 metres from the unit.
- If the deep-fat fryer was not switched off immediately, switch it off from a safe distance via the fuse box for example.
- Before emptying the fat, allow it to cool down and then dispose of it properly.



WARNING **Risk of scalding from hot steam**

Hot deep-frying oil causes residual water to vaporise explosively.

- Dry deep-fat fryers completely after cleaning.



CAUTION**Risk of burns from hot oil or fat that is foaming over**

The use of old fat or fat with a high proportion of frying or coating residue increases the risk, that hot fat will foam over.

- Clean or replace fat in accordance with the manufacturer's instructions.
-



CAUTION**Risk of burns from emptying hot oil or fat**

- Before emptying the fat, allow it to cool down sufficiently.
 - ⇒ Fill hot fat or oil into heat-resistant containers.
 - ⇒ Only decant oil or fat into plastic containers after it has cooled down, so that the containers are not damaged.
-



CAUTION**Hygiene risk from fat residue**

Fat residue is a hygiene risk.

- Avoid fat residue underneath the heating element.
 - When replacing the fat, warm it to a temperature of maximum 100 °C.
 - ⇒ Stir the fat with a suitable implement until it has reached temperature, so that the fat underneath the heating element is completely liquefied.
-



CAUTION**Hygiene risk from rancid oil**

- When the oil starts to become rancid, replace the deep-frying oil completely; do not add oil.
 - Observe the manufacturer's information regarding the duration of use of the deep-frying oil.
-

ATTENTION**Risk of fire from hot oil or fat**

Spontaneous combustion of hot fat or oil can occur above approximately 350 °C.

The greater the proportion of frying or coating residue, the higher the risk of fire.

- Do not leave the unit unattended.
 - Do not overheat the fat.
 - "Smoking" fat means an increased risk of fire.
 - Clean or replace fat in accordance with the manufacturer's instructions.
-

ATTENTION**Risk of fire from hot oil or fat**

Old oil or fat has a lower ignition point.

The use of old fat or oil increases the risk of fire.

- Do not overheat the fat.
 - "Smoking" fat means an increased risk of fire.
 - Clean or replace fat in accordance with the manufacturer's instructions.
-

4.7.1 Ensuring that the oil is fit for human consumption

Deep-frying oil counts as food. It must be fit for human consumption.

The suitability of the deep-frying oil for human consumption can be checked with quick-tests from specialist shops (e.g. 3M oil test strip).

The suitability of the deep-frying oil for human consumption can be extended by the following measures:

- Shake loose breadcrumbs from breaded food, before the food is fried.
- Do not overheat deep-frying oil (160 – 180 °C is sufficient).
- Cover the unit with the lid during pauses.
- Do not reduce the temperature of the deep-frying oil below 120 °C during longer interruptions in operation.
- Deep-frying oil that has been consumed during operation should be supplemented by the amount consumed.
- Replace the deep-frying oil before it becomes rancid.
- Filter the deep-frying oil.
- Clean the unit carefully.
- Empty, clean and cover the unit when unused.
- If the deep-frying oil is not being used, store it hermetically sealed and cool away from light.

Collect rancid deep-frying oil in suitable containers and dispose of it properly in accordance with the regulations.

4.8 Filling the deep-frying oil



WARNING

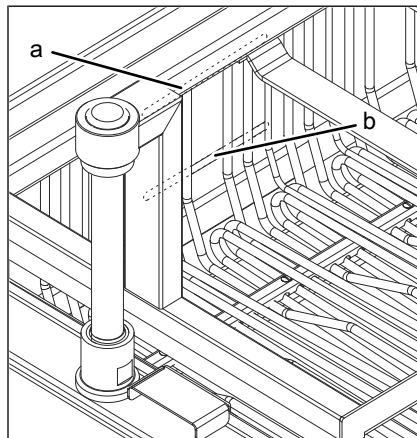
Risk of burns from the oil

The deep-frying oil can ignite, if the minimum fill quantity is not met.

- Observe the fill level mark.

Tip

To prevent excess foaming, fill with cold deep-frying oil up to approx. 3 cm below the *maximum fill level* mark.



- a Maximum fill level mark
b Minimum fill level mark

Requirements Unit switched off and cooled down
Drain closed

1. Remove the lid.
2. Warm solidified deep-frying fat in a saucepan before pouring in.
3. Fill the deep-frying oil in the quantity required for the food to be cooked.

4.8.1 Gently heating up deep-frying oil

To extend the useful life of the deep-frying oil, do not use the highest temperature setting when first heating the oil at the start of work. The oil should be heated slowly.

4.9 Emptying the deep-frying oil



CAUTION

Risk of scalding from hot oil

- Protect arms and hands by wearing suitable protective gloves.
- Use heat-resistant containers with handles and lockable lids for transportation.
- Observe the maximum fill quantity for the unit.



CAUTION

Risk of burns from emptying hot oil or fat

- Before emptying the fat, allow it to cool down sufficiently.
 - ⇒ Fill hot fat or oil into heat-resistant containers.
 - ⇒ Only decant oil or fat into plastic containers after it has cooled down, so that the containers are not damaged.

Requirement

Deep-frying oil is liquid

Unit switched off

Deep-frying basket removed

Lift frame removed from the lifting cylinder

Heating element swung out and engaged in position

1. Place a suitable collection container underneath.
2. Open the drain slowly.
3. Empty out the deep-frying oil.
4. Close the drain.
5. Close the lid on the collection container when transporting.
6. Collect rancid oil in suitable containers in accordance with regulations on harmful substances and dispose of it correctly.

4.10 Inserting the oil clarifying tray

ATTENTION

Risk of physical damage from blocking the deep-frying basket

Ensure that the deep-frying basket can be raised and lowered freely.

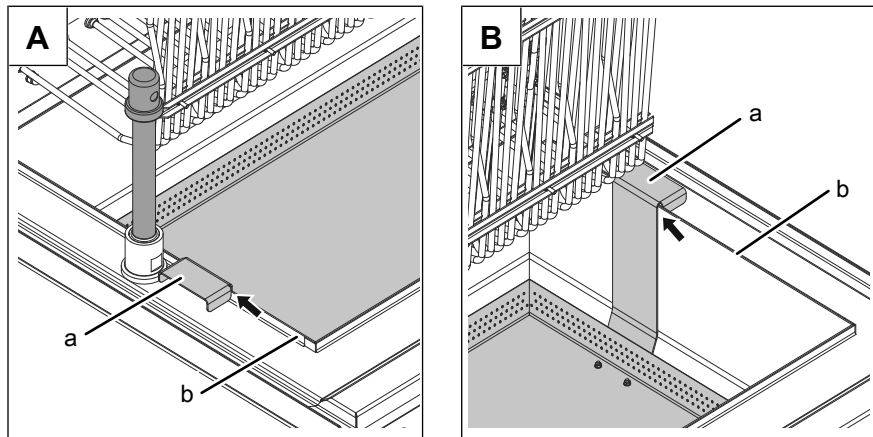


Image: Hooking the oil clarifying tray over the collar edge of the cover

a Oil clarifying tray

b Collar edge

Requirement Deep-frying oil emptied out
Unit switched off and cooled down
Deep-frying basket removed
Heating element swung out and engaged in position

→ Place the bracket on the oil clarifying tray over the edge of the cover.

↳ The edge snaps into the notch in the bracket.

4.11 Putting the lift frame on

ATTENTION

Risk of physical damage from blocking of the lift frame

Ensure that the lift frame is lying on the end stop of the lifting cylinder.



When being lowered, the lift frame presses the end stop of the rails to the side.

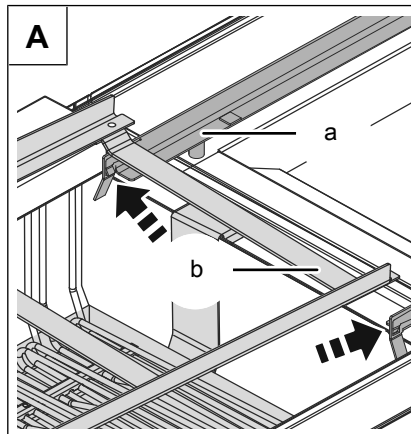
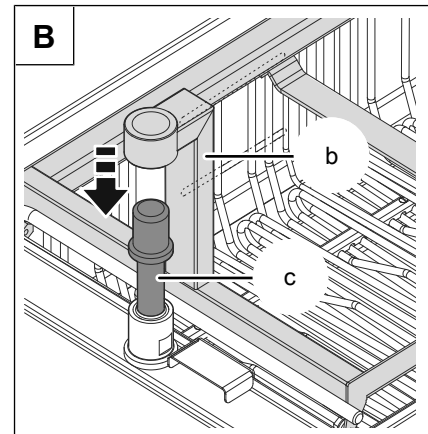


Image: Inserting lift frame



a Rail
b Lift frame

c Lifting cylinder

Requirements Lifting cylinder is half retracted

- Place the lift frame on the lifting cylinder as far as the end stop.
- ↳ The lift frame is lying on the end stop.
- ↳ The lift frame is put on.

4.12 Raising and lowering the lift frame with deep-frying basket



Only units with a discharge system

- If the rails are deformed, do not put the unit into service.
- When lifting, move the lift frame against the end stop of the rail.

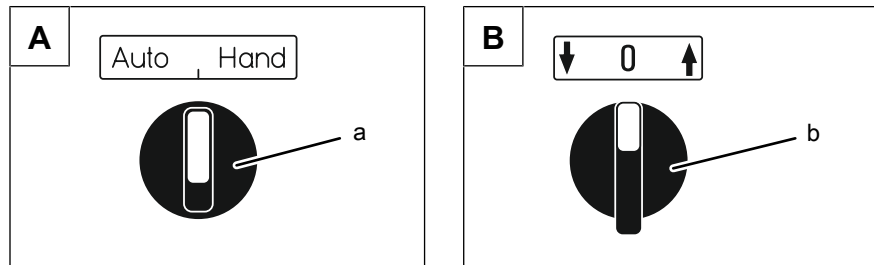


Image: Lowering and raising the lift frame through switch operation

a *Manual Automatic* control knob

b *Lift* control knob

The lift frame is raised and lowered by motor automatically or manually.

4.12.1 Lowering and raising manually

Lower

Requirement The unit is on
Oil clarifying tray inserted
Deep-frying oil is liquid

1. Turn the *Manual Automatic* control knob to "Hand".
2. Turn the *Lift* control knob to the left and stop.
 - ↳ The lift frame is lowered into the deep-frying tank automatically.
3. Release the *Lift* control knob.
 - ↳ The lift frame stops.

Raise

1. Turn the *Lift* control knob to the right and stop.
 - ↳ The lift frame is raised out of the deep-frying tank automatically.
2. Release the *Lift* control knob.
 - ↳ The lift frame stops.

4.12.2 Lowering and raising automatically

Requirement The unit is on

Oil clarifying tray inserted

Deep-frying oil is liquid

1. Turn the *Manual Automatic* control knob to "Auto".
2. Set the *Time* control knob to the desired cooking time.
 - ↳ An audible signal sounds briefly.
3. Press the *Time* control knob.
 - ↳ The lift frame with deep-frying basket is lowered into the deep-frying tank automatically.
 - ↳ An audible signal sounds, after the cooking time has expired.
 - ↳ The lift frame with deep-frying basket is raised out of the deep-frying tank automatically.

4.13 Emptying the unit



CAUTION

Risk of scalding from hot oil

- Protect arms and hands by wearing suitable protective gloves.
- Use heat-resistant containers with handles and lockable lids for transportation.
- Observe the maximum fill quantity for the unit.

4.13.1 Emptying the deep-frying basket

Emptying the cooked food from the deep-frying basket

Insensitive food such as chips, croquettes and meat loaf can be removed easily by shaking.

Use a grille tongs or turner to remove sensitive food such as fish fillets or breaded pork cutlets

4.13.2 Emptying the deep-frying basket by means of the discharge system

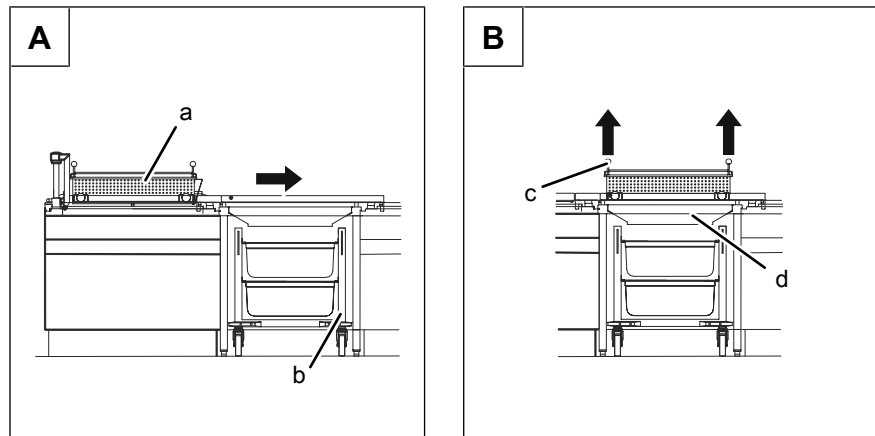


Image: Emptying the deep-frying basket by means of the discharge system

a Deep-frying basket
b Portion cart

c Discharge flap operating lever
d Filling funnel

Requirement The unit is on

Lift frame with deep-frying basket raised out of the deep-frying tank

1. Place the portion cart with suitable containers under the emptying table.
2. Slide the deep-frying basket onto the emptying table as far as possible.
3. Pull the *discharge flap* operating lever upward.
 - ↳ The discharge flaps open.
 - ↳ The cooked food drops into the container(s).
4. Press the *discharge flap* operating lever downward.
 - ↳ The discharge flaps close.
5. Slide the deep-frying basket onto the lift frame as far as possible.

5 Cleaning and caring for the unit

**WARNING****Risk of scalding from hot steam**

Hot deep-frying oil causes residual water to vaporise explosively.

- Dry deep-fat fryers completely after cleaning.

**CAUTION****Risk of burns from hot surfaces**

- Allow surfaces to cool prior to cleaning.

ATTENTION**Risk of physical damage from improper cleaning**

- Do not clean the unit with a high-pressure cleaner or water jet.

ATTENTION**Risk of physical damage due to incorrectly placed temperature sensor**

Displaced or loose temperature sensors can lead to malfunctioning of the safety devices.

After cleaning, always check that the temperature sensors are seated properly.

5.1 Preventing corrosion

- Keep the surfaces of the unit clean and with access to air.
- Remove lime, grease, starch and protein deposits.
- Only expose parts made from non-rusting steel to brief contact with highly acidic foods, spices, salts or the like.
- Avoid damaging the stainless steel surface with other metal items, for example steel spatulas or steel wire brushes.
- Prevent contact with iron and steel, for example steel wool and steel spatulas.
- Do not use bleaching or chlorine-containing cleaning agents.
- Clean contact surfaces with water.

5.2 Removing rust spots

- Remove fresh rust spots with a mild abrasive or fine sandpaper.
- Always remove rust spots completely.
- Expose treated areas to fresh air for at least 24 hours. During this time, do not allow any contact with greases, oils or foods so that a new protective layer can form.

5.3 Cleaning the housing

Requirement Unit switched off and cooled down

→ Clean the housing with warm water and commercially available washing-up liquid.

5.4 Cleaning the deep-frying basin

5.4.1 Deep-fat fryer without discharge system

ATTENTION

Risk of physical damage from blocking the deep-frying basket

Ensure that the deep-frying basket can be raised and lowered freely.

Requirements Deep-frying oil emptied

Unit switched off and cooled down

Manual/Automatic control knob is on "Manual"

1. Close the drain.
2. Place a suitable collection container underneath.
3. Turn the *Lift* control knob clockwise and hold it.
↳ The lift frame moves upwards.
4. Remove the deep-frying basket.
5. Remove the lift frame from the lifting cylinder.
6. Use the swivel mechanism control lever to swing out and engage the heating element.
7. Lift the oil clarifying tray carefully out of the deep-frying tank and empty it.
8. Thoroughly clean the deep-frying tank, deep-frying basket and oil clarifying tray with warm water and a mild cleaning agent.
9. Let the cleaning water drain away.
10. Rinse with clear water and then dry.
11. Clean and dry the drain and drain pipe thoroughly with a bottle brush.
12. Empty the collection container.

13. Place the bracket on the oil clarifying tray over the edge of the cover.
↳ The edge snaps into the notch in the bracket.
14. Lift the heating element slightly with the swivel mechanism control lever and then fold in the swivel mechanism locking lever.
15. Swing the heating element back into the deep-frying basin with the swivel mechanism control lever.
16. Place the lift frame on the lifting cylinder as far as the end stop.
↳ The lift frame is lying on the end stop.
17. Place the deep-frying basket on the lift frame.
18. Turn the *Lift* control knob anticlockwise and hold it.
↳ The lift frame moves downwards.
19. Put the lid on.

5.4.2 Deep-fat fryer with discharge system

ATTENTION

Risk of physical damage from blocking the deep-frying basket

Ensure that the deep-frying basket can be raised and lowered freely.



Only units with a discharge system

- If the rails are deformed, do not put the unit into service.
- When lifting, move the lift frame against the end stop of the rail.

Requirements

Deep-frying oil emptied

Unit switched off and cooled down

Manual/Automatic control knob is on "Manual"

1. Close the drain.
2. Place a suitable collection container underneath.
3. Turn the *Lift* control knob clockwise and hold it.
↳ The lift frame moves upwards.
4. Slide the deep-frying basket onto the emptying table.
5. Turn the *Lift* control knob anticlockwise.
↳ The lift frame moves downwards.
↳ Lower the lift frame halfway into the deep-frying tank.
6. Remove the lift frame from the lifting cylinder.
7. Use the swivel mechanism control lever to swing out and engage the heating element.
8. Lift the oil clarifying tray carefully out of the deep-frying tank and empty it.
9. Thoroughly clean the deep-frying tank, deep-frying basket and oil clarifying tray with warm water and a mild cleaning agent.
10. Let the cleaning water drain away.

11. Rinse with clear water and then dry.
12. Clean and dry the drain and drain pipe thoroughly with a bottle brush.
13. Empty the collection container.
14. Place the bracket on the oil clarifying tray over the edge of the cover.
 - ↳ The edge snaps into the notch in the bracket.
15. Lift the heating element slightly with the swivel mechanism control lever and then fold in the swivel mechanism locking lever.
16. Swing the heating element back into the deep-frying basin with the swivel mechanism control lever.
17. First insert the lift frame under the rails.
18. Place the lift frame on the lifting cylinder as far as the end stop.
 - ↳ The lift frame is lying on the end stop.
19. Turn the *Lift* control knob clockwise.
 - ↳ The lift frame moves upwards against the end stop of the rails.
20. Slide the deep-frying basket back onto the lift frame.
21. Turn the *Lift* control knob anticlockwise and hold it.
 - ↳ The lift frame moves downwards.
22. Put the lid on.

5.5 Cleaning the heating element

Requirements Deep-frying oil emptied

Unit switched off and cooled down

Deep-frying basket removed

Lift frame removed from the lifting cylinder

1. Close the drain.
2. Place a suitable collection container underneath.
3. Load with water up to the *Maximum fill level* mark.
4. Switch on the unit and heat the water to 90 °C.
5. Switch off the unit.
6. Allow incrustation to soak for approx. 30 minutes.
 - ↳ Add several drops of commercially available cleaning agent.
7. Open the drain slowly and allow the water to run into the container.
8. Close the drain.
9. Use the swivel mechanism control lever to swing out the heating element.
 - ↳ The swivel mechanism locking device engages.
 - ↳ The heating element cools down.
10. Clean the heating element with a soft brush, warm water and commercially available cleaning agent.
11. Rinse with clear water and then dry.
12. Open the drain and let the water run into the collection container.
13. Lift the heating element slightly with the swivel mechanism control lever and then fold in the swivel mechanism locking lever.
14. Swing the heating element back into the basin with the swivel mechanism control lever.
15. Check that the temperature sensors are seated properly.

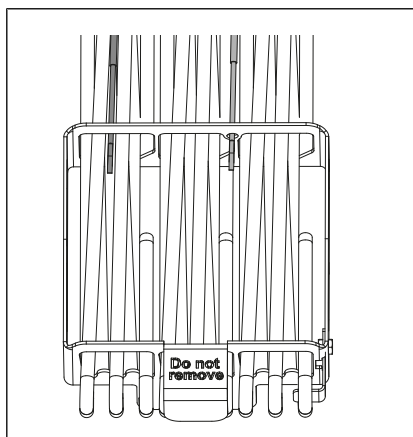


Image: Temperature sensors for deep-fat fryer

5.6 Cleaning the drain

- Requirement**
- Deep-frying oil emptied out
 - Unit switched off and cooled down
 - Deep-frying basket removed
 - Lift frame removed from the lifting cylinder
 - Heating element swung out and engaged in position
 - Oil clarity insert removed
 - Suitable collection container placed underneath
1. Open the drain completely.
 2. Clean the drain thoroughly with a bottle brush.
 3. Clean the drain with clear water.
 - ↳ Use a mild cleaning agent if required.
 - ↳ Rinse thoroughly with clear water.
 4. Close the drain completely.

6 Troubleshooting

6.1 Cause of failure and the remedy

Failure	Possible causes	Remedy
The unit does not react	Operating element defective	• Disconnect the unit from the electric mains. • Contact customer service.
	Fuse defective	• Disconnect the unit from the electric mains. • Contact customer service.
	Ambient temperature is below 0 °C, the safety temperature limiter has tripped	• Disconnect the unit from the electric mains. • Contact customer service.
The unit does not heat up	Unit defective	• Disconnect the unit from the electric mains. • Contact customer service.
	Power supply interrupted	• Contact the authorized technical personnel.
	Temperature control knob or heating element is defective	• Disconnect the unit from the electric mains. • Notify Customer service.
	The unit is switched off	• Switch on the unit.
	Turn the Temperature control knob to the "△" position	• Set the temperature.
Insufficient heat output	Heating element defective	• Disconnect the unit from the electric mains. • Contact customer service.
	Mains phase missing	• Contact the authorized technical personnel.
Unit switches off	No mains voltage	• Contact the authorized technical personnel.
The <i>Heating</i> indicator light does not illuminate	Unit or <i>Heating</i> indicator light defective	• Disconnect the unit from the electric mains. • Contact customer service.

6.2 Nameplate

When contacting Customer service, please always provide the following data from the nameplate:

Serial number (SN)	
Type number (TYP)	

7 Carrying out maintenance

7.1

7.1.1 Filling out the maintenance certificate

The regular maintenance of the unit must be performed and logged in accordance with the maintenance instructions.

Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature

Maintenance task	Date	Company, person	Signature
Maintenance task	Date	Company, person	Signature

7.2

8 Disposing of the unit in an environmentally responsible manner

Do not dispose of unit or the unit's components together with non-recyclable waste. If the unit is disposed of together with non-recyclable waste or treated improperly, toxic substances contained in the unit can damage health and pollute the environment.

Dispose of the unit in accordance with local regulations for used appliances. Clarify any open questions with the responsible agencies (for instance, solid waste management).

We are a registered manufacturer at the **elektro-altgeräte** register foundation, and we are listed in the **ear** directory. If required, please contact one of the foundation's disposal agents. (WEEE-Reg.-Nr.DE 19459438)

Unit In addition to valuable materials, used electrical and electronic equipment also contains harmful substances that were needed for their operation and safety.

Oil and fat Residue that contains oil and fat must be collected in suitable containers and disposed of in accordance with the local disposal regulations.

Cleaning agents Dispose of leftover cleaning agents and cleaning agent containers in accordance with the information provided by the cleaning agent's manufacturer. Observe applicable regional regulations.

9 Manufacturer's declaration



EC Declaration of Conformity



Manufacturer

MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG • Halberstädter Straße 2a • 38300 Wolfenbüttel, Germany

We hereby declare, that the following product:

Description of the unit							
Unit for cooking food in commercial applications							
Unit type							
Köln electric deep-fat fryer							
Type number							
10010520	10011678	10012739	10012742	10013059	10017790	10017791	10017792
2020310A	2020311	2020353P					

complies with the relevant provisions of the following directives and regulations, but does not contain any assurance of properties:

- Directive 2006/42/EC dated 17 May 2006 on machinery
- Directive 2011/65/EU (RoHS) dated 08 June 2011
- Directive 2014/30/EU dated 26 February 2014 on electromagnetic compatibility
- REGULATION (EC) No. 1935/2004 dated 27 October 2004 on materials and objects, which are intended to come into contact with food

Adduced basis for verification
EN ISO 12100:2010
DIN EN 55014-1:2012-05
EN 60335-1:2012/A11:2014
EN 55014-2:2015
EN 60335-2-37:2002/AC:2007

The manufacturer bears the sole responsibility for issuing this Declaration of Conformity. This Declaration of Conformity becomes invalid, if changes are made which are not agreed with us.

Translation from the original document • 2020310A-0KODE--

Wolfenbüttel, 05/09/2022

Person authorised to compile the technical documents:

ppa. Peter Helm

ppa. Peter Helm, Chief Technical Officer (address as manufacturer)

1 / 1

2020310A-0KODE--

en-GB

2020310-20ABBE-D





Declaration of Conformity



Manufacturer

MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG • Halberstädter Straße 2a • 38300 Wolfenbüttel, Germany

We hereby declare, that the following product:

Description of the unit							
Unit for cooking food in commercial applications							
Unit type							
Köln electric deep-fat fryer							
Type number							
10010520	10011678	10012739	10012742	10013059	10017790	10017791	10017792
2020310A	2020311	2020353P					

complies with all relevant provisions of the following Directives and Regulations. Furthermore, this declaration does not contain any assurance of characteristics or properties.

- Directive 2006/42/EC dated 17 May 2006 on machinery
- Directive 2011/65/EU (RoHS) dated 08 June 2011
- Electromagnetic Compatibility Regulations 2016
- REGULATION (EC) No. 1935/2004 dated 27 October 2004 on materials and objects, which are intended to come into contact with food

Added basis for verification
EN ISO 12100:2010
BS EN 55014-1 + A11:2017-05
EN 60335-1:2012/A11:2014
EN 55014-2:2015
EN 60335-2-37:2002/AC:2007

The manufacturer bears the sole responsibility for issuing this Declaration of Conformity. This Declaration of Conformity becomes invalid, if changes are made which are not agreed with us.

Wolfenbüttel, 05/09/2022

Person authorised to compile the technical documents:

ppa. Peter Helm, Chief Technical Officer (address as manufacturer)

1 / 1

2020310A-0KOBEE--UKCA en-GB





Declaration of Conformity



Manufacturer

MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG • Halberstädter Straße 2a • 38300 Wolfenbüttel, Germany

We hereby declare, that the following product:

Description of the unit							
Unit for cooking food in commercial applications							
Unit type							
Köln electric deep-fat fryer							
Type number							
10010520	10011678	10012739	10012742	10013059	10017790	10017791	10017792
2020310A	2020311	2020353P					

complies with all relevant provisions of the following Directives and Regulations. Furthermore, this declaration does not contain any assurance of characteristics or properties.

- Directive 2006/42/EC dated 17 May 2006 on machinery
- Directive 2011/65/EU (RoHS) dated 08 June 2011
- Electromagnetic Compatibility Regulations 2016
- REGULATION (EC) No. 1935/2004 dated 27 October 2004 on materials and objects, which are intended to come into contact with food

Adduced basis for verification
EN ISO 12100:2010
BS EN 55014-1 + A11:2017-05
EN 60335-1:2012/A11:2014
EN 55014-2:2015
EN 60335-2-37:2002/AC:2007

The manufacturer bears the sole responsibility for issuing this Declaration of Conformity. This Declaration of Conformity becomes invalid, if changes are made which are not agreed with us.

Wolfenbüttel, 05/09/2022

Person authorised to compile the technical documents:

ppa. Peter Helm

ppa. Peter Helm, Chief Technical Officer (address as manufacturer)

1 / 1

2020310A-0KOB--_UKNI en-GB





www.mkn.com

