

MiniMax refrigerated counters

Depths (incl. door): 560 mm | 440 mm

Models: MM22STF / MM222STF / MM2222STF /
MM22GLSTF400 / MM222GLSTF400 / MM2222GLSTF400



Propane (R290)



Your distributor:

Maintenance and service:

This operating manual must be read before assembly/installation/commissioning.

Assembly and installation must only be carried out by a refrigeration specialist.

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EC Declaration of Conformity



Address: K. & M. Holland GmbH
Industriestr. 14 | D-94327 Bogen

Product: MiniMax refrigerated counters

Model designation: MM22STF / MM222STF / MM2222STF /
MM22GLSTF400 / MM222GLSTF400 / MM2222GLSTF400

The product meets the requirements of the following European Directives:

EN 378 Refrigerating systems and heat pumps – Safety and environmental requirements

2004/108/EC EMC Directive

2006/42/EC Machinery Directive

2009/125/EC Ecodesign Directive

517/214 F-gas Regulation

Compliance with the Directives was accounted for by application of the following standards:

EMC: EN 55014-1:2006+A1:2009
EN 55014-2:1997+A2:2008
EN 61000-3-2:2006+A1:2009+A2:2009
EN 61000-3-3:2008

Machinery Directive: EN ISO 12100:2010
EN 60335-2-89:2010 in conjunction with
EN 60335-1:2002+A11:2004+A1:2004+A12:2006+
Corr. 2006 + A2:2006+Corr. 2007-01+Corr. 2007-02+A13:2008+
Corr. 2009+Corr. 2010+A14:2010

Responsible for assembling the technical documentation is:

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Bogen, 14. December 2020

Martin Holland, Geschäftsführer

This declaration only refers to the appliance in the condition in which it was placed on the market; retrofitted parts and/or retrospective interventions and modifications are not taken into consideration. This declaration is no longer valid should the appliance be modified without our consent.

Identifikation

Manufacturer

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About this manual

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The content of the document is based on the most recent data available at the time of printing. K. & M. Holland GmbH reserves the right, at any time and without prior notice, to make improvements and changes of a functional or aesthetic nature. Please note that these instructions apply to different types of refrigerated counters. It may therefore contain details that your refrigerated counter may not contain. Due to the wide range of options, the refrigerated counter may differ from those shown here.

Keep this operating manual for future use!

1. Notices to the user

1.1 Purpose of the manual

This operating manual describes the installation, operation, control and maintenance of the refrigerated counter. It also gives important instructions and advice for safe and efficient use of the refrigerated counter.

1.2 Indication of safety notices

Safety notices are indicated by a pictogram and a signal word. The signal word describes the severity of the relevant risk.



WARNING

Potential risk to life and health (severe injuries or death).



DANGER

Potentially dangerous situation (slight injuries or material damage).



IMPORTANT

Special behaviour or action required for safe handling of the refrigerated counter.



NOTE

Tips for use and particularly useful information.

2. Safety guidelines and warnings

This refrigerated counter meets the prescribed safety regulations. Improper use can, however, lead to personal injury and material damage.

Read through this operating manual carefully before operating the refrigerated counter. It includes important instructions for the installation, use and maintenance of the refrigerated counter. By doing so, you protect yourself and prevent damage to the refrigerated counter.

Keep the operating manual and pass it on to any subsequent owner!



IMPORTANT

If the refrigerated counter is connected to other devices/systems that are already at the installation site, the customer / installer will take over the CE marking of the entire system.

2.1 Intended use

The refrigerated counter (also in combination with other devices/systems that are already at the installation site) is intended exclusively for the cooling of packaged or hygienically harmless goods, e.g. for use as a drinks, bottles or kegs cooler.

All other uses (such as the storage of unwrapped foodstuffs or medicines) are not permitted and can be dangerous.

This does not apply to refrigerated counters that are made of stainless steel on the inside especially for this purpose and are thus used as food storage counters.

Intended use also includes:

- the observance of all guidelines and warnings in this operating manual,
- the compliance with service and maintenance requirements,
- the exclusive use of original parts.

Persons who, because of their physical, sensory or mental abilities, or their inexperience or ignorance, are not in a position to operate the refrigerated counter safely, must not use this refrigerated counter without the supervision of or instruction from a responsible person.

Supervise children in the vicinity of the refrigerated counter. Never let children play with the refrigerated counter.



IMPORTANT

Use the refrigerated counter only as intended and in a faultlessly safe condition! The manufacturer is not liable for damage resulting from misuse or incorrect operation of the refrigerated counter.

2.2 Reasonably foreseeable incorrect operation

Use other than as set out under „Intended use“ or going beyond such use counts as misuse, e.g.:

- use of the refrigerated counter in combination with other cooling cabinets/furniture,
- cooling of unwrapped/open foodstuffs or medicines

2.3 Damage caused by misuse

- The operator/distributor/refrigeration company is solely responsible.
- The manufacturer accepts no liability.



NOTE

Risks can arise from misuse. Misuse is, e.g. exceeding the limits defined for normal operation of the refrigerated counter. See page 12 „Technical data“.

2.4 Modifications or alterations

In the event of unauthorised modifications or alterations to the refrigerated counter, the manufacturer is absolved of any liability!

The electromagnetic compatibility of the refrigerated counter can be affected by additions or alterations of any kind. You should therefore carry out no modifications or alterations to the refrigerated counter without consulting the manufacturer and obtaining his written agreement.

2.5 Spare and wearing parts and auxiliary materials

The use of spare parts from third party manufacturers can engender risks. Use only original parts or parts approved by the manufacturer. The spare parts list can be obtained from K. & M. Holland GmbH or downloaded from www.kmholland.com

The manufacturer accepts no liability for damage arising from either the use of spare or wearing parts or auxiliary materials not approved by the manufacturer.

2.6 Risks when handling or using the refrigerated counter



IMPORTANT

Always keep the operating manual at the place of use of the refrigerated counter! The operating manual must be freely accessible for operators and maintenance personnel. Furthermore, general and local regulations for the prevention of accidents and environmental protection are to be observed.

When using the refrigerated counter, risks and adverse effects can arise:

- for the life and limb of the operator or third parties,
- for the refrigerated counter itself,
- for other material assets.

The basis for safe handling and fault-free operation of this refrigerated counter is knowledge of the safety and user instructions contained in this manual.

2.7 Technical safety

► Before installation, check the refrigerated counter for visible external damage. Do not commission or operate a damaged refrigerated counter. A damaged refrigerated counter can endanger your safety! In this case please contact the customer service or your specialist distributor.



WARNING

If the mains connection cable of the refrigerated counter is damaged, it must be replaced before operating the refrigerated counter by the manufacturer or your specialist distributor to avoid endangerment.

This refrigerated counter contains the refrigerant propane (R290). Propane is a colourless combustible gas and belongs to the hydrocarbons. It has a low global warming potential, no ozone depletion potential and serves as a substitute for R12, R22, R134a and other chlorofluorocarbons.



NOTE

According to version, other refrigerants are possible. Please take into consideration the marking on the refrigerated counter.

In addition to the running noise of the compressor, flow noises can occur in the whole refrigeration circuit. These effects are, unfortunately, unavoidable but have no influence on the performance of the refrigerated counter.

- When transporting and installing the refrigerated counter, ensure that no part of the refrigeration circuit is damaged.
- The power socket must be positioned so that it is outside the machine compartment and freely accessible at all times.



WARNING

Open fire, ignition sources, electrical appliances and anything that can produce sparks or has a hot surface is not permitted inside the cooling cabinet.



WARNING

Under no circumstances place the refrigerated counter in areas exposed to direct sunlight or heat sources (e.g. cooker, oven).

2.8 In the event of damage

- Avoid open flames or sources of ignition.
- Pull out the mains plug.
- For a few minutes, ventilate the room in which the refrigerated counter is placed.
- Inform the customer service.

Safe operation of the refrigerated counter is guaranteed only if it is installed and connected in accordance with the manual.

It is essential, before connecting the refrigerated counter, to compare the electrical ratings (voltage and frequency) on the type plate with those of the supply network. It is indispensable that these data are in agreement in order to avoid damage to the refrigerated counter. In the event of doubt, please contact the customer service.

The refrigerated counter may not be connected to the mains via extension cables or socket bars since these do not afford the required safety (e.g., danger of overheating).

The electrical safety of the refrigerated counter is guaranteed only if it is connected to a system with protective earth, installed in accordance with regulations. It is very important that this basic safety requirement is met. In case of doubt, have the mains installation checked by a specialist.

The manufacturer cannot be held responsible for damage arising from a missing or broken earth conductor (e.g., electric shock).

Installation, maintenance and repair work may be carried out only by specialists authorised by the manufacturer. Incorrect installation and maintenance work or repairs can give rise to significant dangers to the user for which the manufacturer is not liable.

Repair of the refrigerated counter during the guarantee period may be carried out only by a customer service authorised by the manufacturer, e.g., your refrigeration specialist, otherwise the guarantee becomes null and void.

For installation, maintenance and repair work, the refrigerated counter must be isolated from the mains supply. The refrigerated counter is only electrically isolated from the mains if one of the following conditions is fulfilled:

- The refrigerated counter mains plug is pulled out. Do not pull on the connecting cable but on the plug to isolate the refrigerated counter from the supply.
- The fuse or circuit breaker of the house installation is switched off.

Defective components may be exchanged only for original components (see spare parts list on page 22). Only for these components does the manufacturer guarantee that they meet the safety requirements.

2.9 Correct use

The refrigerated counter is designed for a particular climate class (SN: ambient temperatures from +10 to +32 °C, humidity up to 75 %).

Leave the doors open only so long as necessary, otherwise the temperature in the cooled space will rise. Too high a temperature leads to an increase in energy consumption, longer compressor run-times or, in extreme cases, the emergency switch-off of the cooling system by safety elements.

Do not cover the air inlet and outlet openings. This will impede a free flow of air. The electricity consumption will rise, and damage to components cannot be excluded.

Do not treat the door / drawer seals with oils or greases. With time, this will render the door / drawer seals porous.



NOTE

The manufacturer cannot be held responsible for damage arising from the non-observance of the safety guidelines and warnings.

2.10 Residual risks

The refrigerated counter is manufactured in accordance with the state of the art and the recognised safety rules.

2.11 Responsibility of the operator

The operator should only permit persons to work on the refrigerated counter if they:

- are familiar with the basic regulations for safety at work and prevention of accidents,
- have been instructed in the use of the refrigerated counter,
- have read and understood this operating manual.

The requirements of the EC Directive on the Use of Work Equipment, 2007/30/EC are to be observed.

2.12 Personal protection equipment

For assembly/disassembly of the refrigerated counter we recommend the following personal protection:

- protective gloves,
- safety shoes.

2.13 Responsibility of the personnel

All persons charged with working on the refrigerated counter should, before starting work,

- observe the basic regulations for safety at work and prevention of accidents,
- read and observe the safety chapter and safety guidelines in this operating manual.

For open questions, please contact the manufacturer. See page 4.

2.14 Qualification of the personnel

You should have the following work carried out only by specially trained personnel:

- transport to and from,
- commissioning,
- fault-finding and correction,
- setting up and fitting out,
- maintenance,
- disposal/recycling.

2.15 Safety and protection devices



IMPORTANT

The refrigerated counter is to be operated only connected and in a finished condition, as only then will all safety devices operate.

Description of the safety and protection devices

- protective earthing of all metallic components in the refrigerated counter,
- illuminated mains switch,
- water drip protection on the outside of the refrigerated counter,
- overheat protection on the compressor,
- over-current protection switch on the compressor motor,
- finger penetration protection of the fan,
- R290 gas sealing,
- all fans in ATEX design,
- all components are approved by the manufacturer for flammable refrigerants.

Controls for shut-down in case of emergency

The following are installed on the refrigerated counter for shut-down in case of emergency:

- mains switch,
- mains plug.

Warning devices

The following warning devices are installed on the refrigerated counter:

- cooled volume over or under temperature via thermostat available in option.

In the event of faulty safety and protection devices

Faulty safety and protection devices can lead to dangerous situations. In such case:

- immediately switch off the refrigerated counter,
- secure against switching on again,
- isolate the refrigerated counter from the electricity supply.

2.16 Machine markings and warning plates

As a warning of residual risks that cannot be eliminated by design, the following are marked on the refrigerated counter:

- warning signs



General warning sign

– marked on the door of the machine compartment



Danger – High voltage

– marked at the electrical box and in the machine compartment at the door



Warning – Highly flammable

– marked on the condenser, on the evaporator and in the machine compartment



Danger – High voltage

Warning – Crush hazard / Mind your hand

Disconnect from mains before opening

Do not clean with splash water

– marked on each evaporator

- mandatory signs,
- safety instructions,
- other markings,
- type plate with technical data of the refrigerated counter.

3. Description

3.1 Functional description

The refrigerated counter (also in combination with other devices/systems that are already at the installation site) is intended exclusively for the cooling of packaged or hygienically harmless goods, e.g. for use as a drinks, bottles or kegs cooler.

All other uses (such as the storage of unwrapped foodstuffs or medicines) are not permitted and can be dangerous.

The refrigerated counters operate with a refrigeration loop filled with Propane (R290). According to version, other refrigerants are possible; please check the marking on the refrigerated counter.

The refrigerated counter is controlled by a thermostat that uses the air circulating in the cooled space as measured quantity. The evaporator is defrosted by switching off the compressor under the cyclical control of thermostats.

The recirculation fan runs continuously, the permanent air circulation causes an even temperature and air distribution in the entire interior of the cooling cabinet. The aggregate cools until the factory-set temperature of +4 °C is reached.

3.3 Technical data

Cooling power ($t_0 = -10\text{ °C}$)	300 – 600 W (depending on model and size, see type plate)
Dimensions	Widths: 986 / 1440 / 1995 / 2550 mm (with countertop + 100 mm) Depths: 520 and 400 mm (560 / 440 mm incl. door) Height: 850 mm (+ adjustable feet 12 – 30 mm)
Nominal voltage	230 V / 50 Hz
Fuse/circuit breaker rating	16 A
Current consumption / power consumption	1,1A / 250VA (depending on model and size, see type plate)
Refrigerant; refrigerant quantity	Propane (R290); filling quantity depending on model and size, see type plate
Operating noise level	51,5 dBA (from approx. 1 m)
Electrical protection class	IP22
Climatic class	SN: ambient temperature +10 to +32 °C

4. Unpacking/Scope of delivery



IMPORTANT

Ensure that the package with the refrigerated counter is always transported upright as otherwise damage to the refrigeration loop can occur and the functionality of the refrigerated counter can no longer be guaranteed. It is therefore essential to observe the corresponding markings on the packaging!

The refrigerated counter is always delivered individually packaged in the carton. In the presence of the delivery driver, check first the packaging and then the refrigerated counter for visible damage and have this signed off on the spot (with photo if need be). Otherwise, no claim can be made for compensation for damaged goods.

► To process damage claims, we need exact details of the defect (photo if need be), the type designation and the manufacturer's serial number.

4.1 Disposal of the transport packaging

► Before disposal of the packaging materials, make sure that it contains no loose parts.

The packaging protects the refrigerated counter from transport damage. The packaging materials are selected from the viewpoints of environmental compatibility and disposability and are therefore recyclable.

4.2 Scope of delivery

- Operating Manual
- Depending on model; e.g. separating rods for drawer, keys, beer tower, draining grid, etc.

5. Commissioning

5.1 Before commissioning

**WARNING**

In rooms smaller than 4 m³ it is recommended to provide a gas warning system. Also in places where propane can accumulate due to poor ventilation, a risk assessment must be carried out on site and, if necessary, adequate ventilation or a gas warning device must be provided. The need for such safety devices must be assessed at installation.

**WARNING**

Connection of the refrigerated counter to an external refrigeration system may be carried out only by an authorised refrigeration specialist since, if the work is carried out inexpertly, health and environmental risks cannot be excluded.

**IMPORTANT**

When choosing where to install the refrigerated counter, please ensure that the air intake and outlet are completely unobstructed. The air intake and outlet openings must at all times be free and uncovered.

- ▶ The bottom plate at the place of installation must be even, stable, rigid (not sag under load) and level.

**WARNING**

Avoid rolling the refrigerated counter when the doors are open or the drawers are pulled out. Danger of tipping over !!!

- ▶ The complete refrigerated counters are supplied with adjustable feet, permitting residual unevenness to be compensated by adjustment with an allen key.
- ▶ When setting up, please ensure that the bottom plate or other supporting surface can permanently support the maximum total weight of the refrigerated counter.
- ▶ The temperature of the installation area should lie in the range from +10 to +32 °C (refrigerated counters without winter control) or from -5 to +32 °C (refrigerated counters with winter control). The relative humidity must not exceed 75 %.
- ▶ Avoid locations subject to direct sunshine and the like. Poorly ventilated areas are not suitable.

**WARNING**

Hand injury possible in the fan area. Please pay attention to the warnings on the refrigerated counter.

**WARNING**

Possibility of breathing difficulties/suffocation in the event of escape of refrigerant.

5.2 Commissioning

Before initial use, clean the refrigerated counter, the cooling machine cabinet inside and out, and the accessories. For cleaning, use lukewarm water and then wipe everything dry with a cloth.

- 1 Before commissioning, wipe out the interior with a damp cloth and then wipe dry.
- 2 Connect the mains plug of the refrigerated counter to a socket with earth contact, installed in accordance with regulations. The mains voltage must agree with the rating data on the type plate (230 V / 50 Hz; 16 A).
- 3 Turn on at the main switch. The digital thermostat shows the current temperature in the cooling cabinet, and the circulation fan will run continuously. The refrigerated counter will run until the factory temperature setting of 4 °C is reached.
- 4 Ensure that the air inlet and outlet are free of obstruction so that the refrigerated counter can operate correctly.
- 5 If you do not need the refrigerated counter for a considerable time, pull out the mains plug. The cooling cabinet doors and drawers must be open to avoid odour build-up in the unrefrigerated interior.

5.3 Installation of a beer tapping system

If a beverage dispensing system / beer tapping system is planned, have it installed only by a refrigeration specialist. They will inform you about safety aspects and the regional regulations regarding approval, maintenance and their verification. Plastic caps in the central boreholes to achieve an optimum seal.

If the refrigerated counter is to be connected to other devices/systems already located at the installation site, the CE marking of the entire system is at the customer's expense.

6. What to do if...?

... if the refrigerated counter does not cool?

- ▶ Check that the refrigerated counter is switched on. The temperature display should light up.
- ▶ Check that the refrigerated counter mains plug is properly inserted in the socket.

... the frequency with which the refrigerated counter switches on and the time for which it runs increase?

- ▶ Check that the air inlet and outlet openings of the refrigerated counter are not covered or choked with dirt.
- ▶ The cooling cabinet doors and drawers has been opened frequently or are large quantity of fresh material has been loaded for cooling.
- ▶ Check that the cabinet doors and drawers can be properly closed.
- ▶ Check that the door / drawer seals is working and correctly seated.

7. Operation

7.1 Requirements for operation

- Refrigerated counter switched on,
- refrigerated counter running with factory settings,
- no active error message.



WARNING

The storage of explosives or flammable substances, pressurised containers (spray cans) or other dangerous materials in the waste cooler is not permitted. This does not include CO₂ bottles for tapping beer from kegs.



IMPORTANT

If you do not need the refrigerated counter for a considerable time, pull out the mains plug. It is essential, in this case, that the cooling cabinet doors are left open to prevent odour build-up in the unrefrigerated interior.

7.2 Defrosting

Defrosting takes place fully automatically every two hours. The refrigerated counter stops running for about 12 minutes. The digital display of the thermostat changes „dEF“ (defrost).

The display switches back to temperature indication if either the adjusted cooling cabinet temperature is reached or 10 minutes have passed.

During defrost, the interior temperature may rise slightly, especially if, during this time, the cooling cabinet is opened. This will, however, have little influence on the core temperature of the material being cooled.

The defrosting time and defrosting intervals are variable and can be adapted to the ambient conditions or requirements by reprogramming the thermostat.

The defrost water from the evaporator is led into the defrost water evaporation bowl heated by the hot gas and there evaporated. The evaporation capacity is matched to normal central European ambient temperature and humidity.



IMPORTANT

In the event of extreme defrost water quantities due to high humidity or excessive air exchange in the cooled space, a direct defrost drain must be installed!

8. Digital thermostat

Installed on your refrigerated counter is a LAE AT1-5 thermostat that should guarantee you optimum temperature and security. The thermostat is pre-programmed, reprogramming and/or repairs may be carried out only by specialists.



IMPORTANT




If any fault should arise in the refrigerated counter or the thermostat, please read chapter 10 on page 20.

8.1 Display indications







In normal operation, the display shows the measured temperature or one of the following values:

DEF	Defrosting in progress
HI	Temperature in the cooler too high
REC	Re-establishing set temperature after defrost
LO	Temperature in the cooler too low
OFF	Thermostat in stand-by mode
E1	Defect in T1 sensor/probe
CL	Condenser needs cleaning
E2	Defect in T2 sensor/probe
DO	Door open alarm



Changing temperature setting

- 1 Press & hold the  button ⇒ temperature value will be shown.
- 2 With the  or  button, change the temperature.
- 3 To quit the menu, wait 10 seconds.

Activate/de-activate key-pad lock

- 1 Press the  button briefly ⇒  will be shown.
- 2 Press  once ⇒ LOC will be shown.
- 3 Press and hold the  button. To activate/de-activate, press the  or  button until the thermostat indicates YES or NO ⇒ keypad lock respectively activated or de-activated.

Turn thermostat on/off

- 1 Hold the  button pressed for at least 3 seconds ⇒ thermostat switches to ON (normal operation).
- 2 To switch off, use the  button (hold for 3 seconds).

Manual defrost

- 1 Hold the  button pressed for at least 2 seconds ð thermostat starts defrost.



NOTE

Detailed operating manuals and descriptions of the digital thermostats can be downloaded from www.kmholland.com

9. Maintenance and cleaning

In the following you will find information on cleaning and fault-finding in the refrigerated counter. Regular service in accordance with the service schedule is essential to the efficient use of the refrigerated counter.

► We recommend that you conclude a service contract with your refrigeration specialist. This will also enable your refrigeration system to be optimally adjusted to the local conditions (e.g., re-programming of the thermostat if need be).

If you require various wearing or spare parts, please also contact your specialist distributor.



NOTE

Some of the above-named work is very dependent on the use and ambient conditions. The cycles stated below are minimum requirements. In individual cases, the maintenance cycles may differ. In such cases, instruct the operating personnel appropriately.

9.1 Maintenance and cleaning by operator

Clean the refrigerated counter at least every 4 weeks. The operating personnel can carry out this work after being suitably instructed.



IMPORTANT

For cleaning, lukewarm water with a little washing-up liquid is suitable. Never use cleaning agents containing sand, scouring agents, soda, acid or chlorides or chemical solvents.

- 1 Remove the cooled goods from the cooling cabinet and store them in a suitable place.
- 2 For cleaning, take out all parts that can be removed.
- 3 Clean the outside of the refrigerated counter inside and out with lukewarm water (a small amount of washing up liquid can be added), rinse with clear water and dry well with a cloth.
- 4 Clean the air inlet and outlet openings of the machine compartment door with a hand brush.
- 5 Clean or replace the air filter mat.
- 6 Clean the door / drawer seals of the cooling cabinet regularly with clear water and then dry thoroughly with a cloth. Do not treat the door seal with oils or greases. Otherwise, it will slowly become porous.

The door seal can be obtained from the Customer Service (see spare parts list on page 22). Recommendation: regular treatment with talcum powder can prolong the service life of the door and drawer seals.

- 7 The condenser should be thoroughly cleaned and checked annually by a specialist company.

9.2 Maintenance and cleaning by refrigeration specialist



IMPORTANT

The condenser should be thoroughly cleaned and checked annually by a specialist company. If the condenser is not cleaned, the power consumption, safety and longevity of the refrigerated counter will be greatly affected.

- 1 Switch off the refrigerated counter at the main switch and pull out the mains plug.
- 2 Unscrew the cooling aggregate and pull it out.
- 3 Remove the condenser fan = plastic grille (handle protection based on sketch).
- 4 Clean the air inlet and outlet openings with a hand brush or order vacuum cleaner.
- 5 Mount the condenser fan again.
- 6 Insert the power plug into the power outlet.

10. Fault finding and correction

If any fault should occur, please first use the following table to check that you have followed all the instructions and advice in this operating manual. A minor detail may be the cause.

If the cooling system is no longer working properly, remove all ignition sources from the room, cigarettes, candles or electrical devices that can produce a spark. Then ventilate the room. Due to the low filling quantity, an ignitable mixture cannot occur in rooms larger than 4 m³. Please ensure that nothing can accumulate anywhere. Then call a specialist company!



DANGER

Whenever working on the refrigerated counter, the mains connection must be isolated and secured!

The following summary gives information on faults, their causes and correction.

Fault/Indication	Possible cause	Possible cure
No temperature indication	No voltage at mains plug	Establish mains contact. Fuses/circuit breakers may need checking
Main switch does not light up	Main switch is off	Have the push-on contacts on the thermostat checked (specialist electrical knowledge required!)
Thermostat indicates "DEF"	Refrigerated counter is in defrost phase	Wait for end of defrost phase (max. 15 min). Have length and frequency of defrost corrected by a specialist on the thermostat
Thermostat indicates "E1"	Fault on temperature sensor/probe	Check contacts on rear of thermostat (specialist electrical knowledge required!)
		Change sensor/probe (specialist electrical knowledge required!)
Temperature in cooled area too low	Setting error on thermostat	Correct thermostat setting

Temperature in cooled area too high	Setting error on thermostat	Correct thermostat setting
	Inadequate ventilation of condenser	Have condenser checked, cleaned if need be (first pull out mains plug!)
	Door / drawers seals leaky	Change door / drawer seals
	Evaporator fan defective	Have fan changed (specialist electrical knowledge required!)
	Cooling system defective	Repair by specialist
	Doors / drawers standing open too long	Avoid unnecessarily long open times
	Too much icing on evaporator	Have defrost interval or duration corrected (specialist electrical knowledge required!)
Remove any cooled material that is wet and insufficiently covered		

In the event of faults not covered in this table:

- inform trained service personnel,
- if need be, inform your specialist distributor.



WARNING

Please do not try yourself to correct a fault that is not covered in the table. This can make the damage greater and – to the extent that electrified parts are involved – an intervention can be dangerous.

11. Energy savings and care of the environment

- ▶ A dirt-clogged condenser leads to higher energy consumption. Clean this as described under „Cleaning“.
- ▶ High room temperatures, direct sunlight or installation near a source of heat (cooker, heating) increase the energy consumption.
- ▶ Open the cooling cabinet doors or drawers only for as long as necessary.
- ▶ As a part of regular servicing, have the condition of your door / drawer seals checked.
- ▶ The lower the temperature inside the cooling cabinet, the higher the energy consumption!
- ▶ Always keep clear the ventilation openings of the cooling machine compartment door.

12. Wearing and spare parts

Seal 1/2-drawer (drawer front dimension 494 x 399 mm)	45-301-741
Seal 1/3-drawer + 1/3-Glaszug (drawer front dimension 494 x 264 mm)	45-301-742
Seal Euro-drawer (drawer front dimension 494 x 339 mm)	45-301-743
Seal Liter-drawer (drawer front dimension 494 x 459 mm)	45-301-556
Seal Euro-glass drawer (drawer front dimension 494 x 350 mm)	45-301-745
Seal Liter-glass drawer (drawer front dimension 494 x 439 mm)	45-301-746

Handle 192 mm for glass drawers, matt chrome	43-100-004
Handle 128 mm for the compartment under the sink, matt chrome	43-100-003
Cover cap for tear open latch for refrigerated counters newer than 10/2006	46-100-150
Tear open latch for refrigerated counters newer than 10/2006	50-100-150
Strike for tear open latch for refrigerated counters newer than 10/2006	43-300-150
Closing mechanism for conchiform handles, at drawers	50-103-100

Handle for glass doors, silver anoxal	50-102-111
Strike for glass doors	43-300-110
Key HRS 6188/6189, lock 1001	28-002-089

Upper hinge for doors	43-200-310
Lower left hinge for doors	43-200-320
Lower right hinge for doors	43-200-321

Lock Nr. 9 for refrigerated counters older than 2007 or for retrofitting to a non-lockable refrigerated counter	50-104-300
Key POS 2038-1 for lock Nr. 9, for refrigerated counters older than 2007	28-002-109

Lock chrome 5801 (42-49 mm) for MiniMax drawers / MaxiMax doors and drawers, for refrigerated counters newer than 2007	50-104-110
Lock chrome 5801 (35-42 mm) MiniMax doors, for refrigerated counters newer than 2007	50-104-111
Key HRS 6188/6189 for lock 1001	28-002-089

Shelf rail, 600 mm, alu blank	43-200-000
Hooks for shelf rail	43-300-000
Shelf with 4 shelf hooks	MMRH

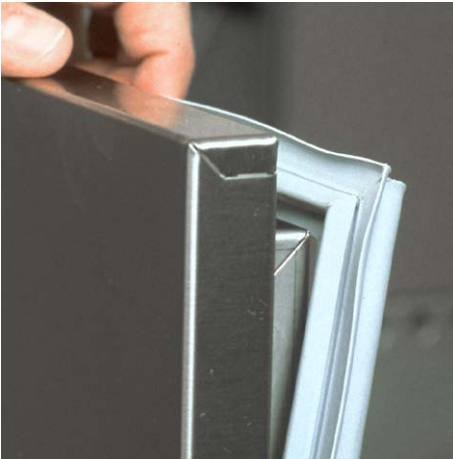
Left rail for drawers, length 450 mm	50-410-450-KL
Right rail for drawers, length 450 mm	50-410-450-KR
Left middle rail for drawers, length 435 mm	50-410-450-ML

Right middle rail for drawers, length 435 mm	50-410-450-MR
Transverse connector	40-120-460
Door (without hinges), please specify: MiniMax / MaxiMax Front: st. steel / anthracite / conchiform handle / handle rail	TOB
Drawer, please specify: MiniMax / MaxiMax Front: st. steel / anthracite / conchiform handle / handle rail Drawer type: Euro / Liter / Half / 3 drawers above/middle/below	ZOB
Bottle rack for drawer, please specify: MiniMax / MaxiMax Drawer type: Euro / Liter / Half / 3 drawers above/middle/below	ZWANN
Red switch, IP65	32-203-100
Green switch, IP65	32-203-102
LED strip	35-400-200
LED transformer 24/15 W	35-402-200
LED IR-switch 24 V	35-401-210
LED line with plug	35-212-200
LED line with connector	35-212-210
Digital thermostat LAE AT1-PROPAN	32-106-010
Temperature sensor for digital thermostat LAE AT1-PROPAN, length 3,0 m	32-107-043
Starting relay for compressor SECOP DLE4.8CN	90-031-000
Starting capacitor 60µF for compressor SECOP DLE4.8CN	90-031-001
Cover for compressor SECOP DLE4.8CN + DLE5.7CN	90-031-002
Cord relief for compressor SECOP DLE4.8CN + DLE5.7CN	90-031-003
Starting relay for compressor SECOP DLE5.7CN	90-031-010
Starting capacitor 80µF for compressor SECOP DLE5.7CN	90-031-011
White filter mat for condenser, cut to size on site	27-350-000

This is only an excerpt, the complete spare parts list is available from your dealer or on www.kmholland.com

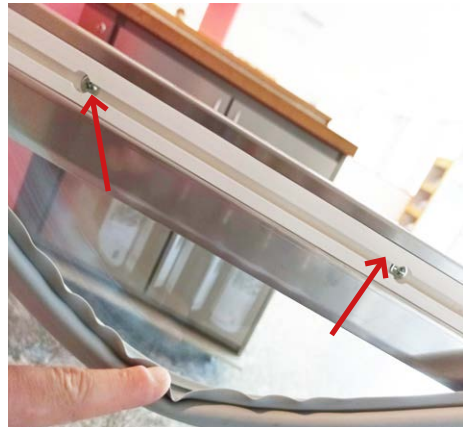
13. Repairing / replacing the wearing parts

Door / drawer seals



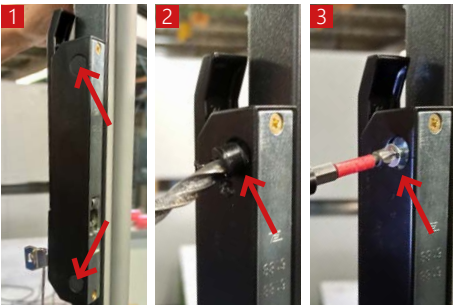
You do not need any tools to change the seal. It can simply be pulled off and pressed back in.

Handle for glass drawer



Open the drawer and pull off the seal at the upper edge. Underneath or behind the seal are the screws that fix the handle.

Handle / closure

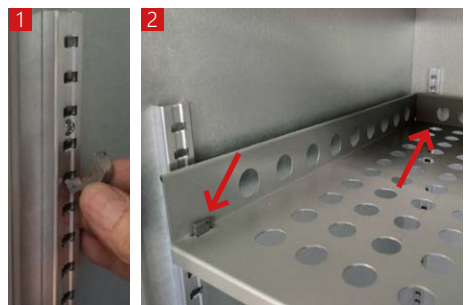


1 To avoid damaging the handle, NEVER remove the caps with a screwdriver, knife or similar tool.

2 Drill into the caps and remove them.

3 After that, the screws can be loosened and the handle can be changed.

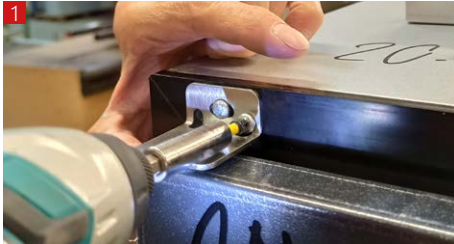
Rails / shelves



1 The shelf hooks can be adjusted or replaced without tools. Simply tilt upwards and pull out.
▶ The rails are fastened with 2 screws each.

2 The front shelf hooks must be fitted 2 recesses further down than the rear ones.

Door / hinges



1 With the door closed, loosen the 3 screws and **2** pull the hinge out upwards.



3 Open the door and pull it upwards out of the lower hinge.

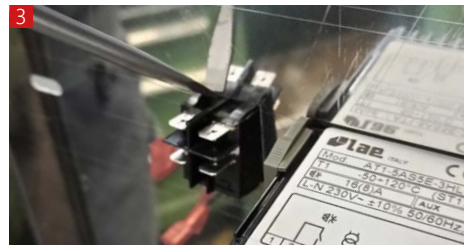


3 Now the lower hinge can also be changed.

Switches red/green



1 Open the door of the cooling machine compartment and **2** disconnect the cables from the switch



3 By pressing the clamps in **4** the switch can be removed.

► Please ensure that the connection is correct --> **2** Upper left = blue; Upper right = brown; lower left = white; lower right = black

14. Requirements for de-installation, recovery and recycling

Our refrigerated counters do not correspond to 100% to the regenerative system „Circular Economy“, but we come close to this.

Please note the following

- ▶ The pure cooling corpus is robustly manufactured so that it can continue to be used even after dismantling. Doors, panels, cables and other replaceable components can be reordered and converted quickly and easily. The refrigeration aggregate can be replaced by your specialist dealer/refrigeration company in the event of a defect or inefficiency due to age. The st. steel covers can be disposed of as scissors scrap. Lighting can also be either retrofitted or replaced.
- ▶ You have a door on your refrigerated counter but want the convenience of drawers? There are corresponding conversion kits available: st. steel tubular frame racks are mounted in the carcase and the drawers are simply pushed in.

Disposal of the old refrigerated counter

- ▶ If your refrigeration refrigerated counter should be disposed of, please do so only after consulting a refrigeration technician. The refrigerant used in the refrigerated counter should only be disposed of by a competent specialist. Ignorant work with propane (R290) can lead to dangerous accidents, as this refrigerant is flammable and, with the correct gas-air mixture, also tends to deflagrate.
- ▶ It is best to contact a refrigeration company that disposes of the refrigerant. The rest can then be disposed of by a hazardous waste disposal company.
- ▶ Please ensure that, until taken away, your waste refrigerated counter is stored out of reach of children. For more information, see the operating manual, chapter „Safety Guidelines and Warnings“ on page 5.



NOTE

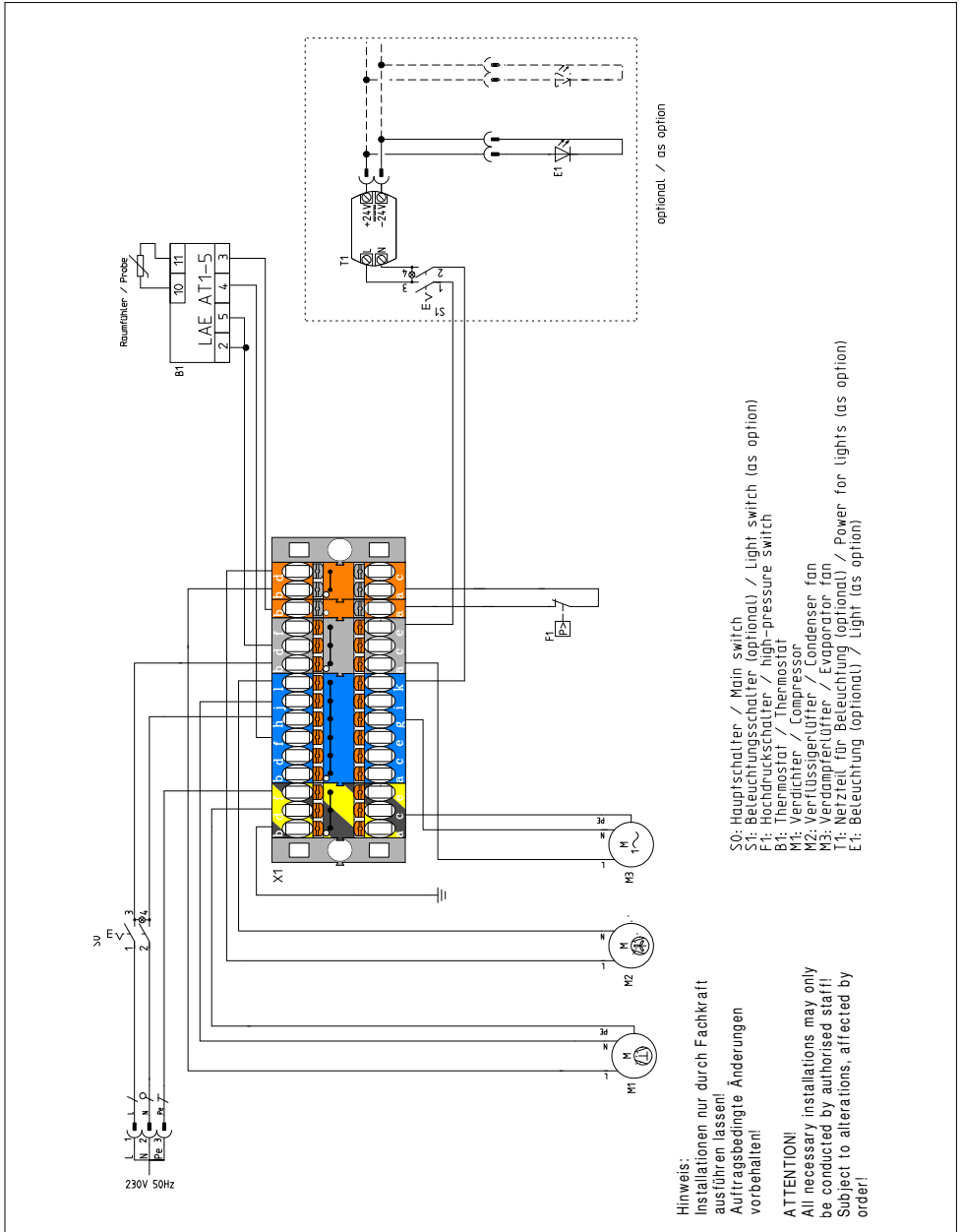
For any open questions on disposal/recycling, please contact the manufacturer!

De-installation

- 1 Switch off the refrigerated counter.
- 2 Pull out the mains plug, roll up the supply cable and fasten it securely to the refrigerated counter.
- 3 De-installation and transport should be carried out in the reverse order of installation, see chapter 5.
- 4 Secure the doors against closing.
- 5 For final decommissioning, the refrigerant propane (R290) must be disposed of by the refrigeration company in accordance with the applicable disposal guidelines.



15. Circuit diagram



Your distributor:

Maintenance and service: