Manual Dehumidifier KT 1130







Introduction

Overview

This manual covers the following type of Wilms portable dehumidifiers:

KT 1130 Order-Number 3111300

Warning

It is the responsibility of the operator to read and understand this service manual and to use the correct operating procedures.

Read the entire manual before the initial start-up of the dehumidifier. It is important to know the correct operating procedure for the unit and all safety precautions to prevent the possibility of property damage and/or personal injury.

Target Group: The target group for this service manual are the technicians who install, maintain, and exchange parts on the units.

> The device can be used by children from 8 years of age and persons with limited physical, sensory or mental abilities or persons who do not have the required experience and knowledge, provided that they are supervised or have received instructions on how to use the device and understand associated dangers. Children are not allowed to play with the device. Cleaning and maintenance by the user must not be carried out by children without supervision.

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Reservations: Hans Wilms GmbH & Co. KG reserves the right to make changes and alterations to the product and the service manual at any time without prior notice or obligation.

Contents

This service manual covers the following main topics:

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General Information

Introduction: This section gives the general information about this service manual and about the unit.

(EC – Declaration of Conformity

Conformity Declaration:

Hans Wilms GmbH & Co. KG - Erftstr. 34 - 41238 Moenchengladbach – hereby declares that the units mentioned below:

Dehumidifier, Type KT 1130

covered by this declaration, is in conformity with the following directives:

2006/42/EG Directive on the Safety of Machines

2014/30/EU EMC Directive 1907/2006/EU Reach Regulation

2011/65/EU RoHs-Guidline (electric- and electronic cold devices)

as well as in accordance with the following harmonized standards:

DS/EN ISO 12100:2010 Safety of machines

EN 60 335-1:2012 Safety of electrical appliances for use at home or similar purposes Safety of electrical appliances for use at home or similar purposes EN 60 335-2-40:A12006 Safety of electrical appliances for use at home or similar purposes

EN 378-1:2016 Refrigerating systems and heat pumps - Part 1 EN 378-2:2016 Refrigerating systems and heat pumps - Part 2

Moenchengladbach, 28.02.2021

Place – Date Signature

Jochen Wilms

Managing Director

Recycling:

The unit is designed to last for many years. When the time comes for the unit to be recycled, the unit should be recycled according to national rules and procedures to protect the environment.

General warnings

Warning:

The dehumidifiers contain a <u>flammable refrigerant</u>. Take the following precautions, to avoid any danger

Attention

Please note that refrigerants may not have an odour.

Site requirements (installation and storage):

- The device must be installed, operated and stored in a room with a floor area greater than 4 m². Check if there are any local regulations that you have to observe when installing or storing the device.
- The device must be installed in a room without a permanently active ignition source (for example: open fire, a gas device or electric air-heater in operation).
- Keep the ventilation openings free of foreign objects during operation.

Actions to be avoided (operation and handling)

- Be extra careful when handling the device so as not to cause damage that can lead to a leak in the cooling circuit.
- Use to speed up the defrosting process or to clean no other means recommended by the manufacturer.
- Do not drill or press with an open flame.

In case of fire:

 A fire can produce toxic fumes. In case of fire therefore, you need to leave the room as soon as possible.

Product- and functional description

Introduction: This section will give you a description of the type KT 1130 and the functions:

Principles of The **operation:** thro

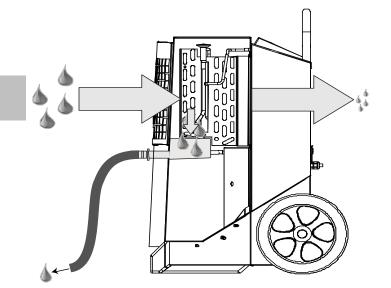
The following describes the air flow through the dehumidifier:

The air flow through the dehumidifier.

A fan draws in humid air through a filter to the dehumidifier.

The air is cooled down and humidity/water drops are led down to the water tank.

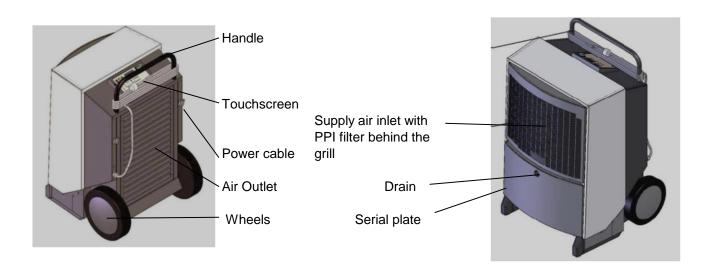
The air is re-heated by e.g. the operation of the dehumidifier (approx. increase in temperature is +5°C/41°F).



Due to the repeated air circulation through the dehumidifiers, the air humidity is continuously reduced whereby achieving rapid, but gentle drying.

The dehumidifier can operate continuously or it can be controlled by the built-in hygrostat.

Illustration: This illustration gives an overview of the dehumidifier:



Front View Rear View

Drain:

The condensed water is collected in the integrated drip tray and then about a 1/2'-hose connection is redirected to a drain.

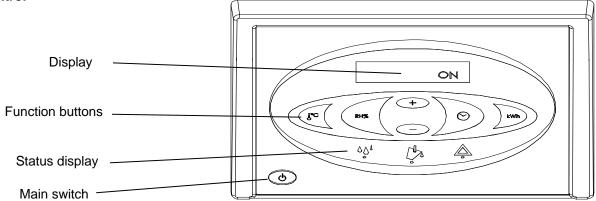
The hose connection should be be mounted directly after unpacking.

Product- and functional description, Continuation

Illustration: This illustrates the operator control:

Display/Operator

Control

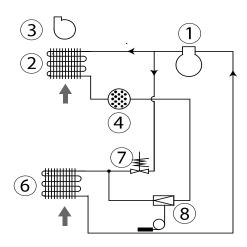


Functions Main functions:

- Manual or automatic operation (built-in adjustable hygrostat)
- Socket for external hygrostat
- Display for temperature, relative humidity, hour meter and kW/h-consumption
- Hour meter and display for consumed kWh without 230V-connection
- Adjustable service interval counter

For correct operation look at the detailed instructions in this manual

Cooling Circuit Diagram



| Pos. | Description | Pos. | Description |
|------|-------------|------|-------------------------|
| 1 | Compressor | 6 | Vaporizer |
| 2 | Condenser | 7 | Solenoid valve |
| 3 | Fan | 8 | Thermic expansion valve |
| 4 | Filter | | |

Set up and transport of the unit

Introduction: This section provides information required for:

unwrapping the unit, making it ready for use and transportation of the unit.

Warning: If the dehumidifier has been laid down during transport, it is imperative to place it in

upright position for at least one hour before put into service!!!

Procedure:

| | - | | |
|--------|-----------|---|---------------------|
| Follov | w these s | steps to unwrap the unit and mak | e it ready for use: |
| Step | | Action | Illustration |
| | 1 | Unpack the dehumidifier. Remove carton. | |
| | 2 | Remove dehumidifier from pallet. The unit can now be set up as described below. | |
| | 3 | Connect the drain sleeve. | |

Remove the protective film from the control panel 4

Instructions for set up and transport of the unit, continuation

Placing

Place the dehumidifier at a spot with good air circulation, where the minimum distance from the air intake side should be 60 cm to the wall and from the air outlet side 3 m.

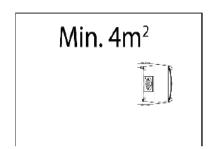


Location

Since the appliances contain a flammable refrigerant, the following requirements for

requirements: the location must be fulfilled.

The device must be installed, operated and stored in a room with a area larger than than 4 m².
 Check whether there are any local regulations that you have to obey when installing or storing of the device.



- The device must be stored in a well-ventilated area, with the room size must correspond to the room areas of 4 m².
- The device must be installed in a room without permanently active ignition sources (e.g. open fire, a gas appliance in operation or an electric air heater in operation).

Optimal operation:

Make sure that the room to be dehumidified is closed and the device is not

placed near a heat source, such as e.g. a radiator.

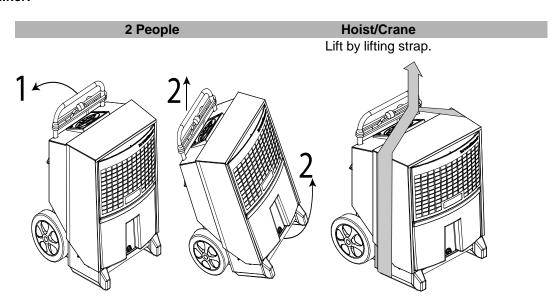
Electrical
Connection:

The dehumidifier is complete with a 3.5 m cable and plug and ready for connection to a 230 V / 50 Hz socket. Protect the socket with a 10 A fuse or a 16 A circuit breaker.

Stairs: The wheels are mounted so that the unit can easily be pulled upstairs without damaging

the housing or the stairs.

Transport/- The dehumidifier can be lifted by two persons or with a crane, see instructions below: **Replacing of** Note: Observe local working environment rules regarding heavy lifting. **the dehumidifier:**



Operating Manual

Introduction All fun

All functions are controlled from the integrated touchscreen.

The operating instruction contains the following chapters:

| Switching On-/Off and operating status | 8 – 9 |
|--|---------|
| Displaytext | 10 – 11 |
| Textdisplay without main power | 10 |
| Exchange of the Data-memory battery | 11 |
| Fault reports | 11 |

On-/Off- The following table shows the operation of the on-/off-function and the display texts Switching and operating status

Push button Display

ON – Continuous operation

INT HYG ON – Operation controlled by internal hygrostat INT HYG STOP, if the preset value of the internal hygrostat is reached EXT HYG ON – operation controlled by external hygrostat EXT HYG STOP, if the preset value of the external hygrostat has

been reached



Switching off



The green LED shows active dehumidification.

Operating Manual, Continuation

The following table shows the operation of the hygrostat function and the display texts

Operation of the built-in hygrostat

| Step | Button | Explanation |
|---------------------------------|--------|---|
| keep pressed | RH% | HYG SET Rhxxx% - flashes for 5 seconds. Dehumidifier changes then to the operation controlled by the internal hygrostat with preset value (if the preset value has been reached the display shows: INT HYG STOP) |
| press | | Shortly press +/- in order to set the relative humidity value in the |
| (if it | +20 | mentioned 5-second-time (lowest value 40 %). The new value will be |
| flashes) | E C | stored after another 5 seconds if the last button has been pushed |
| hold | | HYG SET RHxxx% - flashes for 5 seconds. |
| down | | The dehumidifier switches to continuous operation. |
| 1 x press (if it flashes) | RH% | HYG Off will flashes. The setting is stored after 5 seconds. The dehumidifier then switches to the continuous operation. |

Operation of an external hygrostat If an external hygrostat has been connected the unit automaticly changes to operation with this hygrostat.

Changes of the preset value can be done only on the external hygrostat. (If the preset value has been reached the display shows: **EXT HYG STOP**)

Hour meter

The built-in hour meter counts the total operating hours (can not be reset) as well as the hours until the next service which can be changed. The service hour meter is switched off when the unit is delivered.

| Step | Button | Explanation |
|---------------------------------|----------|--|
| keep pressed | | SERVICE xxxxh – shows the hours until next authorised service. This value is automaticly stored after 5 seconds of flashing and the function is activated if not already done. When the time for the service intervall has been reached the display shows: SERVICE . |
| | The Year | Shortly press +/- in order to preset a new service interval. The new value will be stored 5 seconds after pressing of the last button |
| press 1 x (if it flashes) | | SET SERVICE OFF – pressing once more switches the servicetimer function off |

Operating Manual, Continuation

Display texts The following table shows how to operate the operating informations.

Button

Explanation



XX°C – shows the ambient temperature



Actual RH% - shows the actual relative humidity



XX kWh – shows the total energy consumption. Cannot be reset.



xxxxh – shows the total of operating hours. Cannot be reset.

without main power

Text displays The dehumidifier has a built-in battery which makes it possible to read the display also if not connected to a power supply. Without main power the following can be read:

| Button | Explanation |
|--------|-------------|
|--------|-------------|



keep pressed



and

press once

shows the total energy consumption in kW/h



keep pressed



press once

shows the total operating hours of the dehumidifier

Operating Manual, Continuation

Exchange of the Data store-battery

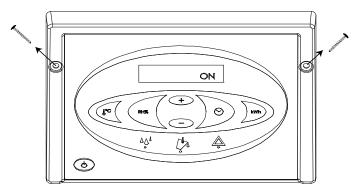
If the hour meter is separated from the power supply and can no longer be read then the cause is most probably an empty data store-battery.

Procedure how to exchange the battery:

Measure

Warning: Before exchanging the battery make sure that the dehumidifier is disconnected from the power supply

1 Loosen screws on both sides of the touchscreen and lift the touchscreen carefully.



2 Cut the cable strap which holds the battery. Exchange battery and use a new maximum 2.5 mm wide cable strap.

Use only batteries of type Alkaline AAA.

Ilustration of circuit board with battery in the wiring diagramm on page 25.

An overview of possible faults which make a normal operation impossible

Fault informations

| S | Fault information | Illustration | Cause | Remmedy |
|---|---|--------------|---|---|
| | Red light on right warning-LED HIGH TEMP on display | | Pressure or temperature in the high-pressure element too high | Check filter and dehumidifier for dirt in the airstream |
| | Red light on right warning-LED AMBIENT TEMP on display | | Room temperature above normal operating sector | Place dehumidifier in specified temperature sector of 3°-32°C |
| | Red light on right warning-LED | | SE | NSOR FAIL |
| | SENSOR FAIL on display. | | 1: EVAP FAIL | Call for authorized |
| | One of the internal sensors is defective. | | Thermo sensor of evaporator defective | service technician |
| | Use + / - buttons in order to | | 2: COND FAIL | Call for authorized |
| | change between 3 possible faults | | Thermo sensor of the condensor defective | service technician |
| | | | 3: ROOM FAIL | Call for authorized |
| | | | Built-in room temperature sensor defective | service technician |
| | Red light on right warning-LED LP STOP on display | | Leak in the cooling circuit | Call for authorized service technician |

Accessories:

Introduction Further information about each separate accessory is available on request to

Hans Wilms GmbH & Co. KG

List A list with illustration, description and part numbers of accessories for the KT 1130 follows:

| Accessory | Illustration | Description | KT-Type | PartNo. |
|-----------|--------------|------------------------------------|---------|---------|
| Hygrostat | | Hygrostat with cable and jack plug | KT 1130 | 3102004 |

Preventive Maintenance

Warnings Proper maintenance of the unit is necessary in order to achieve trouble-free operation.

Important! Always disconnect the power cable from the unit before doing any preventive maintenance.

This product contains a flammable refrigerant. Before working on the system, carry out security checks to reduce the risk of fire to a minimum.

- No open fire.
- No electrical ignition sources (open electrical contacts).
- No mechanical ignition sources (grinding processes).
- No combustible material near the workplace.
- Good ventilation of the area.
- Check the presence of refrigerants.

Other security measures

- Technicians and others working on site must be instructed in the nature of the work to be carried out.
- The area around the workstation must be separated.
- Place a "No Smoking" sign around the separation.

If hot work must be carried out on the refrigerant equipment or other related parts, you have to have suitable fire extinguishing equipment at hand. (Powder extinguisher A,B,C. CO2 extinguisher.)

Inspection by the operator:

The inspection checklist has been developed for operators for preventive maintenance. No special skills are required for this service check. The checklist contains information:

- which components need to be inspected.
- on the frequency of inspection (Annual, Monthly, Weekly, Daily).
- how the inspection is to be carried out.
- criteria for acceptance or non-acceptance.

Annual Return the dehumidifier to an authorised service centre at the end of the service interval or **maintenance** or at least once a year.

or The device is carefully maintained and inspected there, for leaks in the cooling system **maintenance** and tested for electrical safety.

according to Wilms also offers fixed service contacts where these devices can be repaired.

service For more details, please contact your nearest Wilms dealer.

interval counter:

Checklist User

| What to do? | Frequency Procedure | Procedure | Criteria | > | × |
|---|---------------------|---|--|----|----------|
| User guide | O | Visual | Acceptance: User manual is available | | |
| Is the user manual in | | | 8 | | |
| the local language | | | | | |
| Labelling | | | | | + |
| Type plate | ٨ | Visual | Acceptance: Labels are readable. | 9. | |
| PartNo. | Y | Check that all labels are readable | Non-acceptance: The labels must | | |
| Inspection identification | > | and in their original form without any | be replaced if they are damaged or unreadable. | | |
| Warnings | > | damage or changes. | | | |
| Electrical equipment: Power cord | wer cord | | | | |
| Plugs and cables | × | Visual. | Acceptance: No damage or breakage of | | _ |
| | | Check that plug | plugs and cables. | | |
| | | and cables have no damage. | | | |
| PE plug (grounding) | Σ | Visual | Acceptance: | | \vdash |
| | | Check that plug on the cable | Plug fits the mains socket. | | |
| | | to the power outlet fits. (Grounding). | This is properly grounded. | | |
| Electrical equipment: Internal wiring | ernal wiring | | | | |
| Pay attention to hot survaces! Remove the front | es! Remove th | ne front grille and check the cabels inside the device. | s inside the device. | | |
| Assembly | \ | Visual | Acceptance: | | |
| SW COLOR | | Check that all connections | Cables plugged into clamps. | | |
| | | are fastened and connected | | | |
| | | correctly to the clamps. | | | |
| | | | | 1 | 1 |

Checklist User

| | | | | User | Checklist |
|---------------------------------------|---------------------|--------------------------|---|------|-----------|
| What to do? | Frequency Procedure | Procedure | Criteria | 2 | |
| Plugs and cables | > | Visual | Acceptance: | | |
| | | Check that plug | No damage or breaks from plugs | | |
| | | and cable have no damage | and cables. | | |
| | | of breaks. | | | |
| Does the operating hours | > | Visual | Acceptance: Start dehumidifier, check that | | |
| meter work? | | | the hour meter works. | | |
| Display | | Visual | Acceptance: Lighting in the display; display | | 43 |
| Housing of the dehumidifier | fier | | 200000000000000000000000000000000000000 | | |
| Cleaning | Σ | Visual | Acceptance: Clean, free of oil and dirt. | | |
| Free passage through | | Visual | Acceptance: The ventilation openings are free of | | |
| the ventilation openings. | | | dust and dirt. | | |
| Deformation, cracks | Y | Visual , Measuring tape | Acceptance: Deformation < 500 mm deep. Openings | | |
| or breaks | | | between the plates < 5mm. | | |
| Fixation and damage of the handle. | > | Manual review | Acceptance: No loose or missing screws. No obvious damage to the handle. | | 0. |
| | | | The handle cannot go up and pushed up and down. The handle cannot go up and pushed down when the kninfed screws are tightened. | | |
| | | | wifelf the Kildhed Screws are ugliteried. | | |
| Seals | \ | Visual | Acceptance: Seals are complete and | | |
| | | | have no cracks. | | 4 |
| Visual inspection of the wheels. | > | Visual | Acceptance: The wheels run free - without obstacle. No obvious damage to the treads. | | |
| Front and rear | > | Visual | Acceptance: The filter is mounted. The blow-off grid | | |
| filter grid. (Function and fastening) | | | is mounted and fixed with 4 screws. | | |
| | | | | | |

| | | | | Checklist User |
|---|---------------------|--------------------------------|--|-------------------|
| What to do? | Frequency Procedure | Procedure | Criteria | $\overline{}$ |
| Water drainage | | | | |
| Is the drain nozzle free from the drip tray? | > | Fill with water and check that | Acceptance: Free passage in the drain nipple is given. | /3 |
| | | drip tray. | | |
| Control box: | Σ | | Acceptance for starting: The dehumidifier starts | |
| Start/Stop | | press and to turn off | after 2 sec. | |
| | | press again. | Acceptance for switching off: The dehumidifier | |
| | 60 | | switches off after 2 sec. | 20 |
| Cooling circuit | | | | |
| Is the insulation | > | Visual | Acceptance: The insolation is complete | |
| okay? | | | and has no holes or cracks. | |
| Leaks on the pipes | \ | Are the pipes undamaged and | Acceptance: Pipes are undamaged, without | 65 |
| | | without signs of corrosion? | corrosion or dents. No oil accumulates at the bottom | |
| | | Accumulates oil at the | of the compressor. | |
| | | bottom of the compressor? | 22 | |
| | | Are there other signs of | | |
| | | leaks on the compressor or | | |
| | 16 | in the cooling circuit? | | |
| Does the cooling circuit | \ | Start the dehumidifier and | Acceptance: The surfaces become cold. | |
| work? | | check that the surfaces | | |
| | 8 | get cold. | | - 12 |
| | | | | |

Checklist User

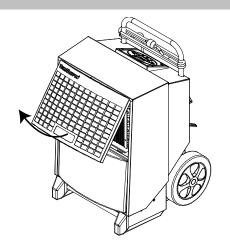
| What to do? | Frequency Procedur | Procedure | Criteria | ٨ | ΧQ | |
|---------------------------|--------------------|---|--|------|-----|--|
| Are the heating-/cooling | ٨ | Remove air filter and check | Clean dirty surfaces with a soft | | | |
| surfaces clean? | | visually heating-/cooling surfaces brush. | brush. | | | |
| Are the slats without | > | Remove air filter and check | Bent slats are straightened. | | | |
| damages? | | visually. | | | | |
| Ventilation | | | | | 5 3 | |
| Are the fans | \ | Visual | Acceptance: Clean, free of oil and dirt. | | | |
| clean? | | | | | | |
| Does the fan run freely - | ٨ | Visual | Acceptance: The fan runs freely - without obstacles, | 0 | | |
| without obstacles? | | Many activity of profess | when turned by hand. | | | |
| Are the filters clean and | ٨ | Visual | Acceptance: Clean, free of oil and dirt. | 0.00 | | |
| without damages? | 3 | | | | | |

Monthly Inspection:

Please follow this procedure to carry out the monthly preventive maintenance:

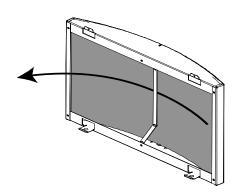
Step Measure

Open the front grill by tilting it outwards.



2 Remove the filter, either rinse it with lukewarm soapy water or vacuum-clean it if the filter is only a little dirty.

Change the filter if it is very dirty. See chapter Spare parts.



Preventive Maintenance, Continuation

| | Step | Measure | |
|--|--------|--|--|
| Monthly Inspection, Continuation | 4 4 | Remove the two screws on both sides 1. Open the cover by approx. 5° 2. Lift the cover 1-2 cm until its loose from the housing 3. Pull the cover carefully over the hose nipple | 3x 21 21 000 000 000 000 000 000 000 000 0 |
| | 6 | Clean the evaporator coil by brushing with a soft brush, a vacuum-cleaner or with compressed air. | |
| | 3 | Remove both TX20-screws on the front of the dripping bowl, remove and clean the bowl. TIP: When putting the dripping bowl back into place, make sure that the rear edge of the dripping bowl is placed on the edge insides of the dehumidifier. | |
| | 1 | Put cover back in place by rupping it through the base conne | action |

4 Put cover back in place by running it through the hose connection and then lift them over the upper edge of the housing.

During the monthly maintenance do $\ensuremath{\text{NOT}}$ reset the service interval counter.

Fault finding and solving
Use this table to identify and remedy a problem or fault:

Fault finding and fault solving:

Note!

Further help:

| VII | ıg. | | | | |
|---|---|---|--|--|--|
| | Problem | Cause | Action | | |
| | The unit does not startDisplay not switched on | No power input | Check that the power cable is correctly connected to power source and unit | | |
| | | | If the power cable is connected, check the branch fuse | | |
| | Unit does not work Green control lamp illuminates HYG STOP shown on the display | Hygrostat has sensored a relative humidity which is below the preset value and has shut off the unit to save energy | Reduce preset value of the hygrostat or change to manual operation Refer the chapter about use of built-in hygrostat on page 9 | | |
| | Red control lamp illuminates | Fault which results in operation interruption | Refer table of manual on page 11 about fault reports | | |
| | Dehumidifier operates Green control lamp illuminates SERVICE flashes in display | Time for service interval is run off | Maintain the dehumidifier as described in the chapter about the service interval counter | | |
| | Dehumidifier operates When RH% is activated the display shows SENSOR FAIL | RH%-Sensor defective | Replace RH%-Sensor | | |
| | kWh and operating hour are not on display without main power supply | Data-store-battery empty | Exchange battery refer page 11 | | |
| If the unit is not working correctly, shut it down immediately! | | | | | |
| | Wait one minute before starting to locate the fault as the electronic equipment may have switched off the dehumidifier for safety reasons (Fuse). | | | | |
| | Contact a dealer if the dehumidifier does not start again. This is also applicable when the dehumidifier is operating without extracting water which is probably a defect in the cooling circuit. Contact a service technichian to remedy the defect. | | | | |

Technical data:

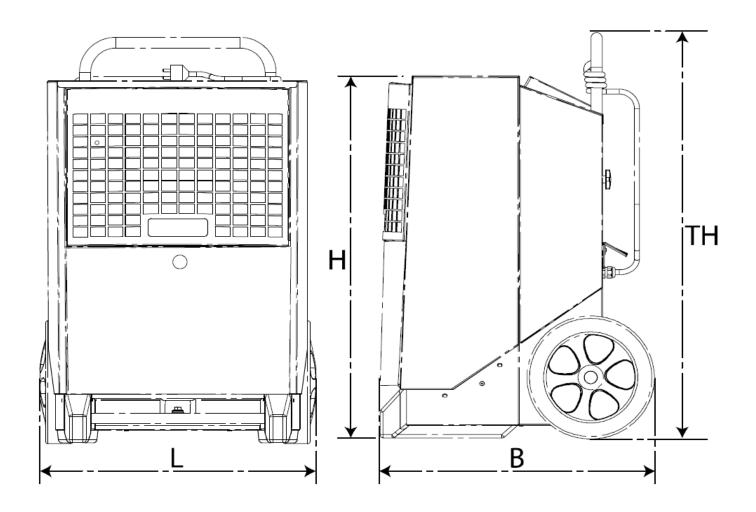
General data: The following table provides general technical data:

| Data | Norm | KT 1130 |
|---------------------------------------|--------|---------|
| Operating range – humidity | %RH | 40 -100 |
| %RH – hysteresis | %RH | 4 |
| Operating range – temperature | °C | 3 – 35 |
| Power supply | V/Hz | 230/50 |
| Max. amperage | Α | 8,3 |
| Max. input | kW | 1,9 |
| Air output | m³/h | 1000 |
| Refrigerant | - | R454C |
| Refrigerant charge | kg | 1,6 |
| Dehumidifying capacity 35°C – 80 % RH | l/24 h | 105 |
| Noise level 1 m distance | dB (A) | 62 |
| Weight | kg | 62 |
| Safety class | IP | x 4 |
| Filter | PPI | 15 |
| kW/h-display accuracy | % | ± 5% |
| GWP factor | | 146 |
| CO2 equivalent | t | 0,23 |

Hermetic system. Contains fluorinated greenho

Measurements:

Illustration



| Pos. | Size |
|------|--------|
| L | 635 mm |
| W | 615 mm |
| Н | 896 mm |
| TH | 980 mm |

Disposal

The device is designed for long-term operation. If it is to be disposed off, this must be done in an environmentally friendly manner in accordance with all relevant legal regulations.

Refrigerant

This product contains flammable refrigerant.

Before disposal, empty the refrigerant using the following procedure:

Handling:

- 1. Disconnect the device electrically from the mains.
- 2. Before starting work, ensure that:
 - if necessary, mechanical auxiliary devices for the handling of refrigerant cylinders are available.
 - all personal protective equipment is available and used correctly.
 - the recovery process is continuously monitored by a competent person.
 - recovery equipment and cylinders comply with the appropriate standard.
- Use only appropriate refrigerant recovery cylinders and set sure that they are on a scale before recovery takes place.
 - Do not mix refrigerants in recovery units and specially not in the cylinders.
- 4. Start the recovery machine and operate it according to the instructions of the manufacturer.
 - Do not overfill cylinders. (No more than 80 % of the maximum possible filling quantity)
 - Do not exceed the maximum working pressure of the cylinder, even temporarily.
- 5. When the cylinders are filled correctly and the process is complete, attach a sticker indicating that the system:
 - is decommissioned.
 - no longer contains a refrigerant.
 - make sure that the equipment is provided with stickers indicating that the equipment contains a flammable refrigerant.

The sticker must be dated and signed by the responsible technician.

- Make sure that the cylinders and equipment are immediately removed from the site and that all shut-off valves on the equipment are closed.
- 7. Recovered refrigerant must be returned to the refrigerant supplier.
 - Do not pour recovered refrigerant into another refrigeration system unless it has been cleaned and checked.

Batteries/ Electronics

Electrical and electronic devices and their batteries contain substances, components and substances that may harm human health and the environment, if the waste is not disposed off properly.

Electrical and electronic equipment and batteries are equipped with a crossed garbage can. This means that electrical and electronic devices and batteries are not combined with household waste, but must be collected separately.

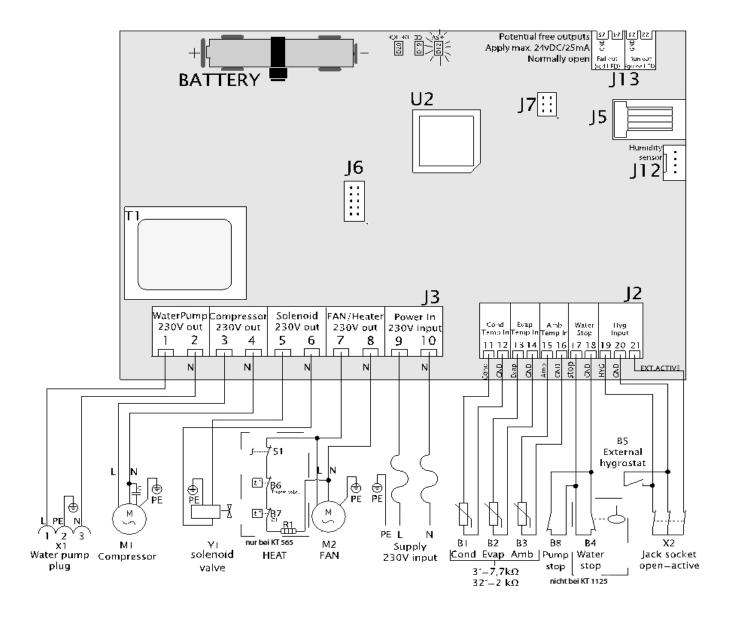


Some batteries are also with the chemical signs Hg (mercury), Cd (cadmium) or Pb (lead). These are particularly harmful substances.

Therefore, it is very important that such batteries are collected on an approved collection point. In this way, you help to ensure that the batteries are recycled in accordance with legal regulations and do not unnecessarily harm the environment.

This product has a built-in data-store battery. If your local authorities have a collection point or recycling center where electrical and electronic equipment and batteries are accepted, dispose off the products and its battery there. For more details, contact your local authorities.

Wiring Diagram KT 1130



| Pos. | Description | Pos. | Description |
|------|---|------|--------------------------------|
| B1 | Temperature sensor for the condensator area | J6 | not in use |
| B2 | Temperature sensor for the evaporator area | J7 | Manufactory settings |
| B3 | Ambient Temperature sensor | J12 | Internal hygrostat |
| B4 | na : not available | J13 | Aditional exit |
| B5 | External hygrostat (optional) | M1 | Compressor |
| B6 | na : not available | M2 | Fan motor |
| B7 | na : not available | R1 | na: not available |
| B8 | External pump alarm (optional) | S1 | na: not available |
| D12 | LED + 5V DC control | T1 | Transformer |
| D19 | LED Ice on evaporator | U2 | CPU |
| D20 | LED de-icing activated | X1 | Plug for condensation pump |
| J2 | Low voltage connections | X2 | Bushing for external hygrostat |
| J3 | 230V-connections | Y1 | Solenoid valve for pressure |
| J5 | not in use | | compensation |

Spare Part List KT 1130

| 1 3110203 Front grip including filter 1 2 3110204 Filter 1 3 3110214 Cover for front 1 4 3110210 Front housing complete 1 5 3103860 Humidity sensor digital 1 6 3110103 Evaporator 1 7 3110230 Condenser 1 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103881 Top for electric box 1 11 3103881 Top for electric box 1 12 3110224 Cable 3,5 m 1 12 3110224 Cable 3,5 m 1 13 3102121 Solenoid valve 1 14 3103815 Coll for solenoid valve 1 15 31102201 Fan blade 350 mm 1 16 3103887 Bracket 2 16 3103887 Bracket 2 17 3108104 Fan motor 1 | Pos. | Part No.: | Description | Each |
|---|-----------|-----------|---------------------------------------|------|
| 2 3110204 Filter 1 3 3110214 Cover for front 1 4 3110210 Front housing complete 1 5 3103860 Humidity sensor digital 1 6 3110103 Evaporator 1 7 3110230 Condenser 1 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110221 Sole noid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3103887 Bracket 2 16 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110205 Exhaust grid 1 19 3110232 Compressor 1 | | | | |
| 3 3110214 Cover for front 1 4 3110210 Front housing complete 1 5 3103860 Humidity sensor digital 1 6 3110103 Evaporator 1 7 3110230 Condenser 1 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103817 Coli for solenoid valve 1 15 3110211 Fan blade 350 mm 1 16 3103219 Fan bracket 2 16 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110205 Exhaust grid 1 19 3110235 Dry filter 1 20 3110235 Dry filter 1 | | | | |
| 4 3110210 Front housing complete 1 5 3103860 Humidity sensor digital 1 6 3110103 Evaporator 1 7 3110230 Condenser 1 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3.5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan bracket 2 16 31038219 Fan bracket 2 16 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110235 Dry filter 1 20 3110235 Dry filter 1 21 3110235 Dry filter 1 | | | | |
| 5 3103860 Humidity sensor digital 1 6 31101030 Evaporator 1 7 3110230 Condenser 1 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coli for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 3103878 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110235 Dry filter 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 </td <td></td> <td></td> <td></td> <td></td> | | | | |
| 6 3110103 Evaporator 1 7 3110230 Condenser 1 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103879 Bracket 2 17 3108104 Fan motor 1 18 3110205 Handle 1 20 3110205 Handle 1 21 3110205 Handle 1 21 3110205 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103867 | | | | |
| 7 3110230 Condenser 1 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103869 <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> | | | · · · · · · · · · · · · · · · · · · · | |
| 8 3103830 Gasket for switch board cover 1 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3108219 Fan bracket 2 16 a 3108219 Fan motor 1 18 3110204 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103867 Wheel 2 25 3103 | | | | |
| 9 3103878 Control 1 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110205 Exhaust grid 1 19 31102205 Exhaust grid 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110209 Foot 2 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 29 3110220 | | | | |
| 10 3103861 Top for electric box 1 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blacke 350 mm 1 16 3108219 Fan bracket 2 16 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 30 3110224 Thermostatic valve 1 not shown 310216 Hogs Adaptor 1 | | | | |
| 11 3103862 Control panel 1 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110208 Axle 1 23 3110209 Foot 2 24 3103867 Wheel 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell <td></td> <td></td> <td></td> <td>· ·</td> | | | | · · |
| 12 3110224 Cable 3,5 m 1 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103867 Washer 2 25 3103868 Lock washer 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110223 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 </td <td></td> <td></td> <td>·</td> <td></td> | | | · | |
| 13 3110212 Solenoid valve 1 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103867 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110224 Thermostatic valve 1 not shown 310216 | | | · | |
| 14 3103815 Coil for solenoid valve 1 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 21 3110208 Axle 1 22 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110224 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown | | | | |
| 15 3110201 Fan blade 350 mm 1 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 30 3110220 Bushing 1 30 3110224 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 310385 <td></td> <td></td> <td></td> <td></td> | | | | |
| 16 3108219 Fan bracket 2 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hose Adaptor 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103167 Dampener sensor 2600 mm 3 not shown | | | | |
| 16 a 3103887 Bracket 2 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hose Adaptor 1 not shown 310216 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | | | | |
| 17 3108104 Fan motor 1 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hose Adaptor 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | | | | |
| 18 3110206 Exhaust grid 1 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 310385 Bracket for humidity sensor 1 | 16 a | 3103887 | Bracket | 2 |
| 19 3110205 Handle 1 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hose Adaptor 1 not shown 310216 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 310385 Bracket for humidity sensor 1 | | 3108104 | Fan motor | 1 |
| 20 3110232 Compressor 1 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3102016 Hose Adaptor 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 18 | 3110206 | Exhaust grid | 1 |
| 21 3110235 Dry filter 1 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3102016 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 310385 Bracket for humidity sensor 1 | 19 | 3110205 | Handle | 1 |
| 22 3110208 Axle 1 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 20 | 3110232 | Compressor | 1 |
| 23 3110209 Foot 2 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 21 | 3110235 | Dry filter | 1 |
| 24 3103870 Washer 2 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 310216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 22 | 3110208 | Axle | |
| 25 3103867 Wheel 2 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 23 | 3110209 | Foot | |
| 26 3103868 Lock washer 2 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 24 | 3103870 | Washer | |
| 27 3103869 Wheel cover 2 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 25 | 3103867 | Wheel | 2 |
| 28 3110221 Condensate shell 1 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 26 | 3103868 | Lock washer | |
| 29 3110220 Bushing 1 30 3110234 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 27 | 3103869 | Wheel cover | 2 |
| 30 3110234 Thermostatic valve 1 not shown 3110216 Hose Adaptor 1 not shown 3102016 Hygrostat connector 1 not shown 3103167 Dampener sensor 2600 mm 3 not shown 3103885 Bracket for humidity sensor 1 | 28 | 3110221 | Condensate shell | 1 |
| not shown3110216Hose Adaptor1not shown3102016Hygrostat connector1not shown3103167Dampener sensor 2600 mm3not shown3103885Bracket for humidity sensor1 | 29 | 3110220 | Bushing | 1 |
| not shown3102016Hygrostat connector1not shown3103167Dampener sensor 2600 mm3not shown3103885Bracket for humidity sensor1 | 30 | 3110234 | Thermostatic valve | 1 |
| not shown3103167Dampener sensor 2600 mm3not shown3103885Bracket for humidity sensor1 | not shown | 3110216 | Hose Adaptor | 1 |
| not shown 3103885 Bracket for humidity sensor 1 | not shown | 3102016 | Hygrostat connector | 1 |
| not shown 3103885 Bracket for humidity sensor 1 | not shown | 3103167 | Dampener sensor 2600 mm | 3 |
| · | not shown | 3103885 | Bracket for humidity sensor | |
| not snown 3110233 Capacitor 1 | not shown | 3110233 | Capacitor | 1 |
| not shown 3102039 Schrader valve 1 | not shown | 3102039 | · | 1 |

Exploded View KT 1130

