

# Operating and installation instructions

**REMKO RXT series**

**Wall and ceiling chests for cooling and heating**

RXT 525 DC, RXT 685 DC, RXT 1055 DC, RXT 1405 DC





**Read these operating instructions carefully before commissioning / using this device!**

**These instructions are an integral part of the system and must always be kept near or on the device.**

Subject to modifications; No liability accepted for errors or misprints!

**Translation of the original**

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# 1 Safety and usage instructions

## 1.1 General safety notes

Carefully read the operating manual before commissioning the units or their components for the first time. It provides useful tips and notes such as hazard warnings to prevent injury and material damage. Failure to follow the directions in this manual can endanger persons, the environment and the equipment itself or its components and will void any claims for liability.

Store this manual and the information required for the operation of this system (e.g. refrigerant data-sheet) in the vicinity of the unit.

The refrigerant used in the system is flammable. If applicable, observe the local safety conditions.



**Warning of inflammable substances!**

## 1.2 Identification of notes

This section provides an overview of all important safety aspects for proper protection of people and safe and fault-free operation. The instructions and safety notes contained within this manual must be observed in order to prevent accidents, personal injury and material damage.

Notes attached directly to the units must be observed in their entirety and be kept in a fully legible condition.

Safety notes in this manual are indicated by symbols. Safety notes are introduced with signal words which help to highlight the magnitude of the danger in question.



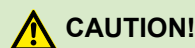
Contact with live parts poses an immediate danger of death due to electric shock. Damage to the insulation or individual components may pose a danger of death.



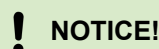
This combination of symbol and signal word warns of a situation in which there is immediate danger, which if not avoided may be fatal or cause serious injury.



This combination of symbol and signal word warns of a potentially hazardous situation, which if not avoided may be fatal or cause serious injury.



This combination of symbol and signal word warns of a potentially hazardous situation, which if not avoided may cause injury or material and environmental damage.



This combination of symbol and signal word warns of a potentially hazardous situation, which if not avoided may cause material and environmental damage.



*This symbol highlights useful tips and recommendations as well as information for efficient and fault-free operation.*

## 1.3 Personnel qualifications

Personnel responsible for commissioning, operation, maintenance, inspection and installation must be able to demonstrate that they hold a qualification which proves their ability to undertake the work.

## 1.4 Dangers of failure to observe the safety notes

Failure to observe the safety notes may pose a risk to people, the environment and the units. Failure to observe the safety notes may void any claims for damages.

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In particular, failure to observe the safety notes may pose the following risks:

- The failure of important unit functions.
- The failure of prescribed methods of maintenance and repair.
- Danger to people on account of electrical and mechanical effects.

## 1.5 Safety-conscious working

The safety notes contained in this manual, the existing national regulations concerning accident prevention as well as any internal company working, operating and safety regulations must be observed.

## 1.6 Safety instructions for the operator

The operational safety of the units and components is only assured providing they are used as intended and in a fully assembled state.

- The units and components may only be set up, installed and maintained by qualified personnel.
- Protective covers (grills) over moving parts must not be removed from units that are in operation.
- Do not operate units or components with obvious defects or signs of damage.
- Contact with equipment parts or components can lead to burns or injury.
- The units and components must not be exposed to any mechanical load, extreme levels of humidity or extreme temperatures.
- Rooms in which refrigerant may escape shall be adequately aerated and ventilated. Otherwise, a risk of suffocation or fire exists.
- Do not leave children unsupervised when close to the system.
- Commissioning must be performed by authorised specialists exclusively. Deficient commissioning may lead to water leaks, electric shocks or fire. Commissioning must take place as described in the user manual.
- Only instruct authorised specialist personnel to perform maintenance or servicing.
- The system is filled with a flammable refrigerant. Never thaw any frozen unit components independently!
- Do not operate any further devices that produce high heat or naked flames in the same room.

- All housing parts and unit openings, e.g. air inlets and outlets, must be kept clear.
- The units must be inspected by a service technician to ensure that they are safe to use and fully functional at least once yearly. Visual inspections and cleaning may be performed by the operator when the units are disconnected from the mains.

## 1.7 Safety notes for installation, maintenance and inspection

- The refrigerant R32 used in the system is flammable. If applicable, observe the local safety conditions.
- Keep the cooling circuit clear of other gases and foreign substances. Only fill the cooling circuit with the refrigerant R32.
- Only use the accessories, components and appropriately marked parts provided. The use of non-standardised components may result in water leaks, electric shocks and fire.
- Only install and store the units in rooms larger than 4 m<sup>2</sup>. With a failure to comply, leaks may result in the room filling with a flammable mixture!

The minimum room size of 4 m<sup>2</sup> required for installation and storage pertains to the basic fill quantity of the unit. This varies according to the installation type and total fill quantity of the system. The calculation must take place in accordance with valid DIN standards. Make sure that the installation site is suitable for safe unit operation.

- Only mount the unit components on structurally suitable brickwork.
- The units must not be installed in rooms in which further devices that produce heat are operated (heaters, open hearths).
- Make sure the installation room is sufficiently ventilated.
- Interventions in the cooling circuit are only possible after completely draining the refrigerant. Never solder or grind unit components!
- Note that refrigerant may be odourless.
- Never operate the air conditioning unit in a humid room, such as a bathroom or laundry room. If the humidity is too high, this can cause short circuits on electrical parts.
- The product must be correctly earthed at all times, otherwise it may induce electric shocks.
- Attach the condensate drain as described in the operating manual. The inadequate drainage of condensate can lead to water damage in your apartment.
- All persons who intervene in the cooling circuit must hold a valid certificate from the chamber of industry and commerce, which confirms their ability to work with refrigerant.

- Appropriate hazard prevention measures must be taken to prevent risks to people when performing installation, repair, maintenance or cleaning work on the units.
- The setup, connection and operation of the units and its components must be undertaken in accordance with the usage and operating conditions stipulated in this manual and comply with all applicable regional regulations.
- Regional regulations and laws as well as the Water Ecology Act must be observed.
- The power supply should be adapted to the requirements of the units.
- Units may only be mounted at the points provided for this purpose at the factory. The units may only be secured or mounted on stable structures, walls or floors.
- The units and components should not be operated in areas where there is a heightened risk of damage. Observe the minimum clearances.
- The units and components must be kept at an adequate distance from flammable, explosive, combustible, abrasive and dirty areas or atmospheres.
- Safety devices may not be modified or bypassed.
- The connection of the indoor unit must be established as a permanent connection; a detachable, reusable connection is not permissible.

## 1.8 Unauthorised modification and changes

Modifications or changes to units and components are not permitted and may cause malfunctions. Safety devices may not be modified or bypassed. Original replacement parts and accessories authorised by the manufacturer ensure safety. The use of other parts may invalidate liability for resulting consequences.

## 1.9 Intended use

Depending on the model, the units and the additional fittings with which they are equipped are only intended to be used as an air-conditioner for the purpose of cooling or heating the air in an enclosed space.

Any different or additional use is a non-intended use. The manufacturer/supplier assumes no liability for damages arising from a non-intended use. The user bears the sole risk in such cases. Intended use also includes working in accordance with the operating and installation instructions and complying with the maintenance requirements.

The threshold values specified in the technical data must not be exceeded.

## 1.10 Warranty

For warranty claims to be considered, it is essential that the ordering party or its representative complete and return the "certificate of warranty" to REMKO GmbH & Co. KG at the time when the units are purchased and commissioned.

The warranty conditions are detailed in the "General business and delivery conditions". Furthermore, only the parties to a contract can conclude special agreements beyond these conditions. In this case, contact your contractual partner in the first instance.

## 1.11 Transport and packaging

The devices are supplied in a sturdy shipping container. Please check the equipment immediately upon delivery and note any damage or missing parts on the delivery and inform the shipper and your contractual partner. For later complaints can not be guaranteed.

### **WARNING!**

**Plastic films and bags etc. are dangerous toys for children!**

Why:

- Leave packaging material are not around.
- Packaging material may not be accessible to children!

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## 1.12 Environmental protection and recycling

### Disposal of packaging

All products are packed for transport in environmentally friendly materials. Make a valuable contribution to reducing waste and sustaining raw materials. Only dispose of packaging at approved collection points.



### Disposal of equipment and components

Only recyclable materials are used in the manufacture of the devices and components. Help protect the environment by ensuring that the devices or components (for example batteries) are not disposed in household waste, but only in accordance with local regulations and in an environmentally safe manner, e.g. using certified firms and recycling specialists or at collection points.



## 2 Technical data

### 2.1 Unit data

Series		RXT 525 DC	RXT 685 DC	RXT 1055 DC	RXT 1405 DC
Operating mode		Inverter wall/ceiling-mounted room air conditioner combination for cooling and heating			
Nominal cooling output <sup>1)</sup>	kW	5,30 (2,70-5,90)	7,00 (2,70-7,70)	10,60 (2,70-11,80)	14,10 (3,50-15,20)
Energy efficiency ratio SEER <sup>1)</sup>		6,2	6,1	6,4	---
Power consumption, annual, Q <sub>CE</sub> <sup>3)</sup>	kWh	305	413	574	---
Energy efficiency ratio, cooling <sup>1)</sup>		A++	A++	A++	---
Nominal heat capacity <sup>2)</sup>	kW	5,60 (2,40-6,30)	7,60 (2,70-8,30)	11,70 (2,80-12,80)	16,10 (4,10-17,0)
Energy efficiency ratio SCOP <sup>4)</sup>		4,0	4,0	4,0	---
Power consumption, annual, Q <sub>HE</sub> <sup>3)</sup>	kWh	1400	1925	2937	---
Energy efficiency ratio, heating <sup>2)</sup>		A+	A+	A+	---
Rated power consumption, electrical cooling <sup>1)</sup>	kW	1.63	2.19	3.75	5.50
Rated elec. curr. consump., cooling <sup>1)</sup>	A	7.20	10.00	5.80	9.10
Rated power consumption, electrical heating <sup>2)</sup>	kW	1.50	2.05	3.00	5.05
Rated elec. curr. consump., heating <sup>2)</sup>	A	6.60	9.50	4.80	8.14
Max. power consumption	kW	2.95	2.95	5.60	6.20
Max. current consumption	A	13.50	13.50	10.00	11.20
EDP no.		1619550	1619560	1619570	1619580

<sup>1)</sup> Air inlet temp. TK 27 °C/FK 19 °C, outside temperature TK 35 °C, FK 24 °C, max. air flow volume, 5 m pipe length

<sup>2)</sup> Air inlet temp. TK 20 °C, outside temperature TK 7 °C, FK 6 °C, max. air flow volume, 5 m pipe length

<sup>3)</sup> The specified value is based on results from standard testing.  
The actual consumption depends on the use and location of the unit

<sup>4)</sup> The specified value is based on the average heating period

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Data specific to indoor unit		RXT 525 DC IT	RXT 685 DC IT	RXT 1055 DC IT	RXT 1405 DC IT
Power supply	V/Ph/Hz	230/1~/50			
Application area (room vol.) approx.	m <sup>3</sup>	160	230	320	470
Adjustment range room temperature	°C	+17 to +30			
Operating range	°C/ RH %	+17 to +30 / 35 to 65			
Air flow volume per stage	m <sup>3</sup> /h	723/839/ 958	853/1023/ 1192	1504/1728/ 1955	1600/1850/ 2100
Sound pressure level per stage <sup>5)</sup>	dB (A)	24/37/41/44	32/43/46/49	39/45/48/51	36/45/50/53
Sound power (turbo mode)	dB(A)	59	65	65	65
Enclosure class	IP	X0			
Condensate drainage connection	mm	25			
Dimensions: H/W/D	mm	675/1068/235		675/1650/235	
Weight	kg	28.0	26.8	39.0	41.2
EDP no.		1619552	1619562	1619572	1619582

<sup>5)</sup> At distance of 1 m in the open air; specified values are maximum values

Data specific to outdoor unit		RXT 525 DC AT	RXT 685 DC AT	RXT 1055 DC AT	RXT 1405 DC AT
Power supply	V/Ph/Hz	230/1~/50		400/3~/50	
Operating range, cooling	°C	+5 to +50 <sup>7)</sup>			
Operating range, heating	°C	+5 to +24 <sup>7)</sup>			
Air flow rate, max.	m³/h	2000	2700	4000	7500
Enclosure class	IP	24			
Sound pressure level <sup>5)</sup>	dB (A)	55	62	64	66
Sound power level max.	dB (A)	63	64	68	72
Refrigerant <sup>6)</sup>		R32			
Refrigerant, basic quantity	kg	1.15	1.50	2.40	2.90
CO <sub>2</sub> equivalent	t	0.78	1.01	1.62	1.89
Operating pressure, max.	kPa	4200/1500			
Refrigerant, additional quantity >5 m	g/m	30	30	30	30
Refrigerant piping, max. length	m	30	50	65	65
Refrigerant piping, max. height	m	20	25	30	30
Refrigerant connection Liquid line	Inches (mm)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
Refrigerant connection Suction pipe	Inches (mm)	1/2 (12.70)	5/8 (15.90)	5/8 (15.90)	5/8 (15.90)
Dimensions: H/W/D	mm	554/800/333	673/962/380	810/946/410	1333/952/410
Weight	kg	33,5	43,9	80,5	103,7
EDP no.		1619551	1619561	1619571	1619581

<sup>5)</sup> At distance of 1 m in the open air; specified values are maximum values

<sup>6)</sup> Contains greenhouse gas per the Kyoto protocol, GWP 675 (for further information, see chapter "Adding refrigerant")

<sup>7)</sup> This can be extended to -15 °C with the appropriate accessory kit

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## 2.2 Unit dimensions

### Outdoor units

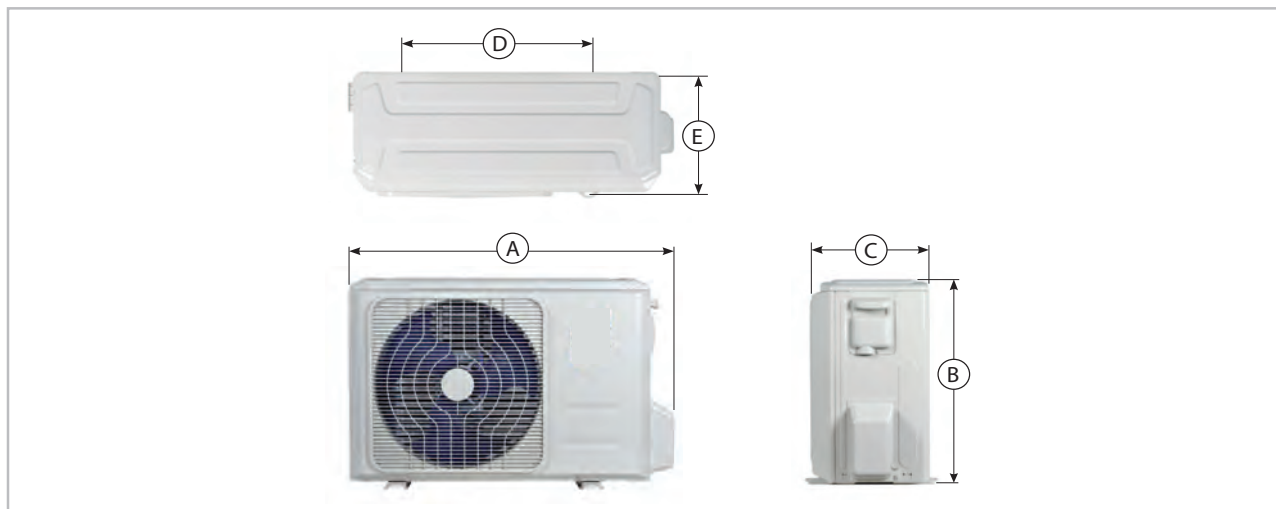


Fig. 1: Dimensions RXT 525-1405 DC AT (all measurements in mm)

Measurements (mm)	A	B	C	D	E
RXT 525 DC AT	874	511	317	554	346
RXT 685 DC AT	962	663	348	673	380
RXT 1055 DC AT	946	810	410	673	403
RXT 1405 DC AT	952	1333	410	634	404

### Indoor units

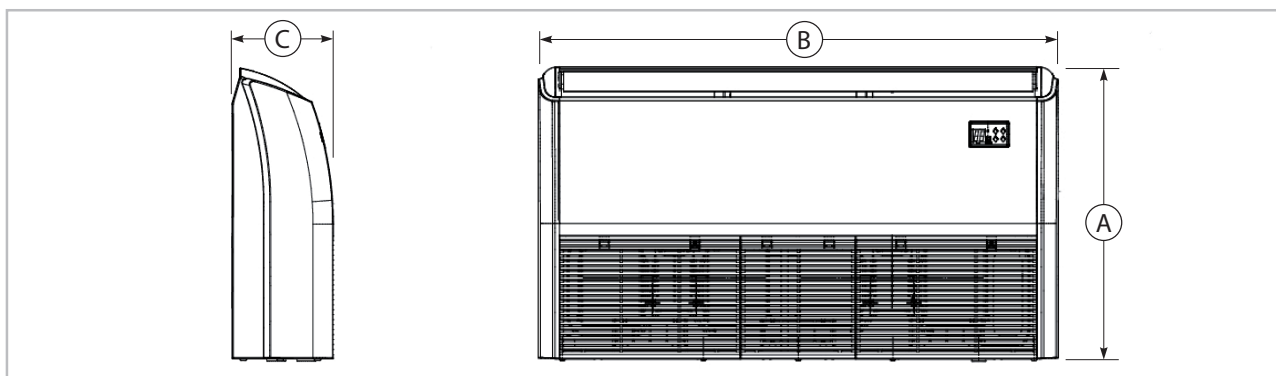


Fig. 2: Unit dimensions, indoor unit RXT 525-1405 DC IT

Measurements (mm)	A	B	C
RXT 525 DC IT	675	1068	235
RXT 685 DC IT	675	1068	235
RXT 1055 DC IT	675	1650	235
RXT 1405 DC IT	675	1650	235

## 3 Design and function

### 3.1 Unit description

The RXT room air conditioners have a REMKO RXT...DC AT outdoor unit as well as a RXT...DC IT indoor unit.

In cooling mode, the outdoor unit serves to output the heat extracted by the indoor unit from the room being cooled. In heating mode, the heat taken up by the outdoor unit can be discharged by the indoor unit into the room to be heated. In both operating modes, the output produced by the compressor precisely matches requirements, and thereby regulates the nominal temperature with minimal temperature deviations. This "inverter technology" results in energy savings over conventional split systems and also reduces noise emissions to a particularly low level. The outdoor unit can be installed in an outdoor area or, providing that certain requirements are met, an indoor area. The outdoor unit consists of a cooling cycle with compressor, fin condenser, condenser fan, reversing valve and electronic expansion valve. The outdoor unit is controlled by the regulation of the indoor unit.

The indoor unit is designed both for both wall and ceiling-mounted operation in indoor areas. It is operated by an infrared remote control. The indoor unit consists of a fin evaporator, evaporator fan, controller and condensate tray.

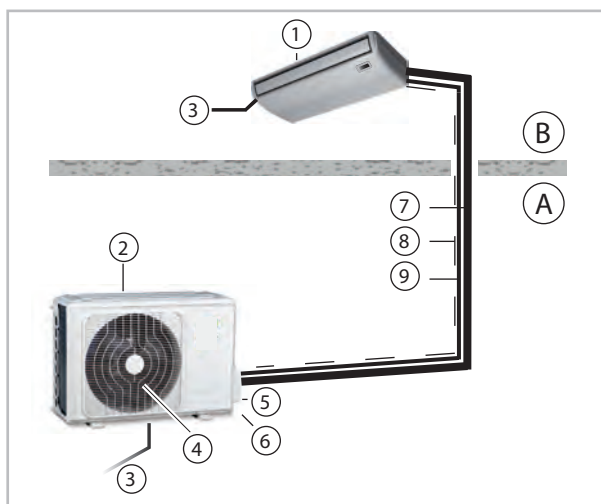


Fig. 3: System layout RXT 525-1405 DC

- A: Outdoor area / B: Indoor area
- 1: Indoor unit / 2: Outdoor unit
- 3: Condensate drainage line / 4: Condenser fan
- 5: Power supply / 6: Shut-off valve
- 7: Suction pipes / 8: Injection pipes
- 9: Control lines

Floor consoles, wall consoles, refrigerant piping, wired remote controls and condensate pumps are available as accessories.

Refrigerant piping is used to connect the indoor unit to the outdoor unit.

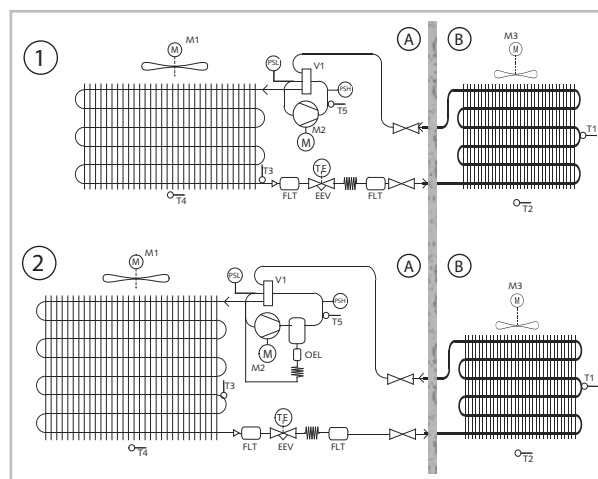


Fig. 4: Cooling cycle schematic

- A: Outdoor area
- B: Indoor area
- 1: RXT 525-685 DC
- 2: RXT 1055-1405 DC
- M1: Condenser fan
- M2: Compressor
- M3: Evaporator fan IT
- V1: Changeover valve C/H
- EEV: Electr. expansion valve
- FLT: Filter
- OEL: Oil return line
- PSH: High pressure switch AT
- PSL: Low pressure switch AT
- T1: Probe, evaporator IT
- T2: Probe, air inlet IT
- T3: Probe, condenser AT
- T4: Probe, air inlet AT
- T5: Probe, heat gas AT

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## 4 Operation

### 4.1 General notes

The indoor unit is easily operated using the standard infrared remote control. The indoor unit beeps to acknowledge the correct transmission of data. If it is not possible to program the indoor unit with the remote control, then it can also be manually operated.

#### Manual mode

The indoor unit can also be started manually. By pressing the "Manual" key (on the display board) multiple times, the unit can be activated with the following functions:

The following settings apply for manual operation:

Pressing once: Automatic mode 24°C, fan speed automatic

Pressing twice: Cooling mode, fan speed high

Pressing three times: Unit OFF

#### Infrared remote control

The infrared remote control sends the programmed settings a distance of up to 6 m to the receiver of the indoor unit. Data will only be received correctly if the remote control is pointed at the receiver and no objects are obstructing the transmission path.

Two AAA batteries must be inserted into the remote control in preparation. To do so, remove the flap from the battery compartment and insert the batteries the correct way around (see markings).



*Fig. 5: Maximum distance*

#### ! NOTICE!

Immediately replace flat batteries with a new set, otherwise there is a risk of leakage. It is recommended that the batteries are removed if the equipment is shut down for longer periods.

## Wired remote control

Connection of the optional wired remote control

1. The plug for connection of a wired remote control is located behind the panel at the display board (Fig. 6). The 5-core cable, coming from the display panel, is marked with the designations "A-E" (Fig. 7).



Fig. 6: Indoor unit panel

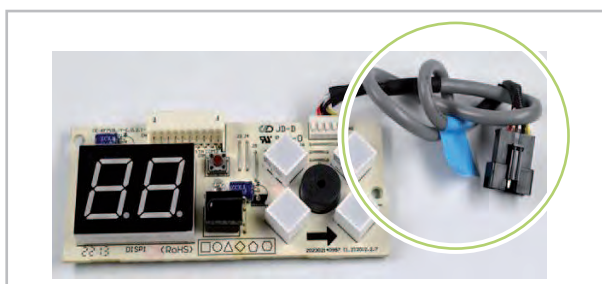


Fig. 7: Display circuit board



Alarms are indicated by a code (see chapter Troubleshooting and customer service).



Help save on energy consumption in stand-by mode! If the device, system or component is not in use, we recommend disconnecting the power supply. Components with a safety function is excluded from our recommendation!

## 4.2 Display on indoor unit

### Display on indoor unit

The LED indicators illuminate to indicate the settings:

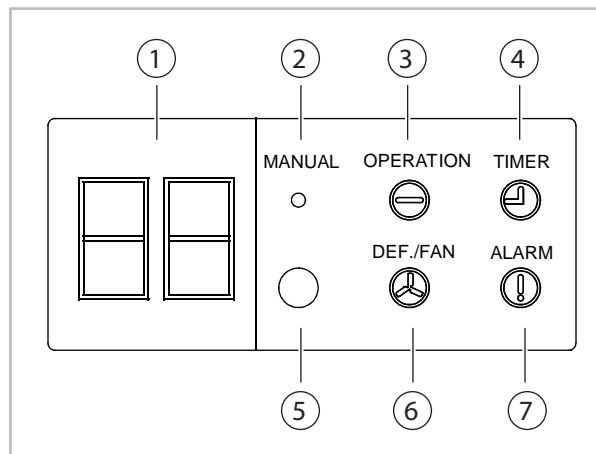


Fig. 8: Display for setpoint/errors

- 1: Digital display
- 2: Manual operation
- 3: Operation display
- 4: Timer indicator
- 5: Unit for receiving signals from the remote control
- 6: Defrosting fan
- 7: Alarm indicator

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## 4.3 Keys on the remote control

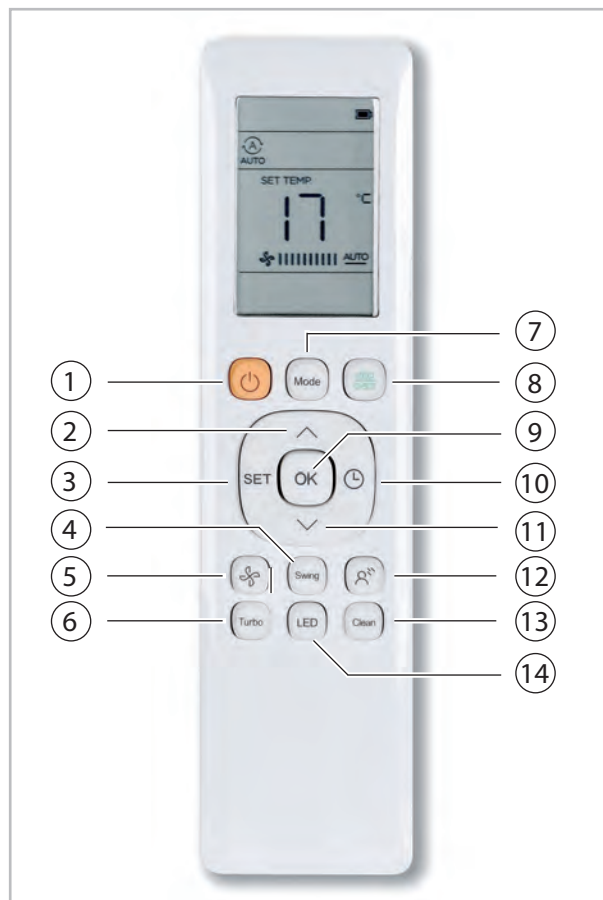


Fig. 9: Keys on the remote control

### ① “On/Off” key

Press this key to switch the air conditioning unit on and off.

### ② “Arrow up” temperature key

Increases the setpoint in 1 °C steps up to a temperature of max. 30 °C.

### ③ “SET” key

Makes it possible to switch between different operating functions as follows:

“Follow me” function (⌘)

- Network configuration (📶)

- “Follow me” function (⌘)

The selected function flashes in the display, confirm with the “OK” key.

### ④ “Swing” key

Starts and stops the horizontal fin movement. Press and hold the key for 2 seconds to start the vertical fin movement (available depending on the unit model).

### ⑤ “Fan speed” key

Allows switching between the different fan speeds in the following order:

Automatic → Low → Medium → High

Note: To activate the silence function (available depending on the appliance model) of the appliance, press and hold the key for 2 seconds.

### ⑥ “Turbo” key

Activating the turbo function ensures that the set-point is reached as quickly as possible.

### ⑦ “Mode” key

This key allows switching between the different operating modes in the following order:

Automatic → Cooling → Dehumidifying → Heating → Recirculation

### ⑧ “Sleep” key

Activates/deactivates the energy saving function of the unit (e.g. overnight).

### ⑨ “OK” key

Required to confirm various functions of the IR remote control.

### ⑩ “Timer” key

Activates/deactivates the time-delayed start of the unit or the unit switch-off.

### ⑪ “Arrow down” temperature key

Decreases the setpoint in 1 °C steps down to a temperature of min. 17 °C.

### ⑫ “Fresh” key

Activates/deactivates the REMKO BioClean function (ionisation).

### ⑬ “Clean” key

Activates/deactivates the self-cleaning function of the unit (available depending on the unit model).

### ⑭ “LED” key

Enables switching on/off the unit lighting and the signal tones (depending on the unit).

### Indicators on the LCD

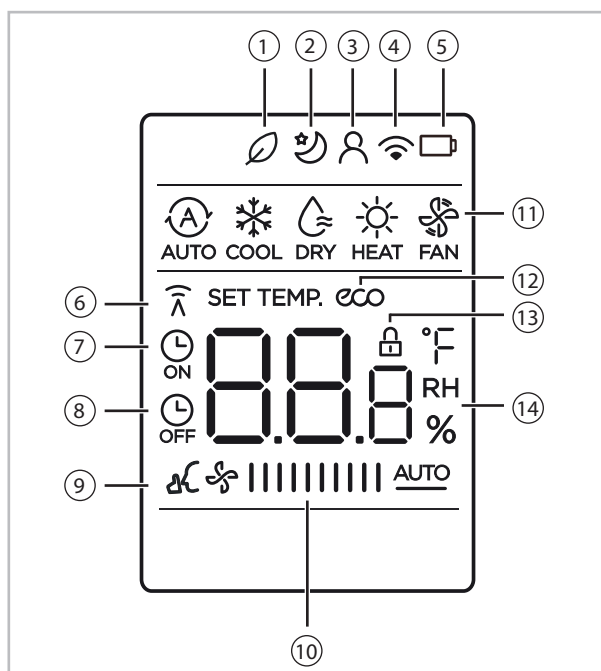


Fig. 10: Indicators on the LCD

① BioClean function active (available depending on the unit type).

② Sleep function active.

③ Follow-me function active.

④ Network configuration active.

⑤ Battery low (flashing).

### ⑥ Signal transmission

Lights up when a signal is sent from the IR remote control to the air conditioning unit.

⑦ Time-delayed switch-on active.

⑧ Time-delayed switch-off active.

⑨ Silent mode active.

### ⑩ Fan speed

Displays the set fan speed as follows:

Low: ♣||||

Medium: ♣||||||

High: ♣|||||||

Automatic: ♣||||||| AUTO

### ⑪ Mode selection

Shows the current operating mode.

### ⑫ Eco function

Lights up when the Eco function is active (available depending on the unit).

### ⑬ Key lock

Symbol appears when the key lock is activated.

### ⑭ Temperature/Timer/Fan speed

Shows the current temperature setpoint in the basic view. When using the additional function “Timer”, the corresponding time values are shown.

# REMKO RXT series

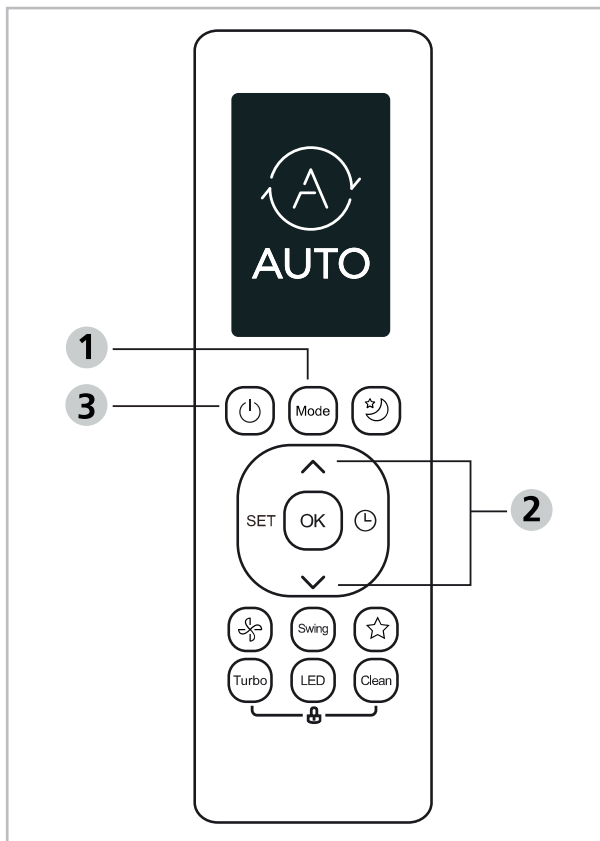
## Temperature setting

The temperature setting can be made within a range of 17-30 °C. The setpoint is adjusted in 1 °C steps.

### Automatic mode

In automatic mode, the unit automatically selects the operating mode based on the set temperature setpoint.

1. ➤ Press the "Mode" key to activate the "Auto" function.
2. ➤ Set the desired temperature using the "Λ" and "V" keys.
3. ➤ The unit can be switched on by pressing the "ON/OFF" key.



## Cooling mode

1. ➤ Press the "Mode" key and activate the "Cool" function.
2. ➤ Set the desired temperature using the "Λ" and "V" keys.
3. ➤ Press the "FAN" key to select the fan speed. The following are available: Automatic, Low, Medium and High
4. ➤ The unit can be switched on by pressing the "ON/OFF" key.

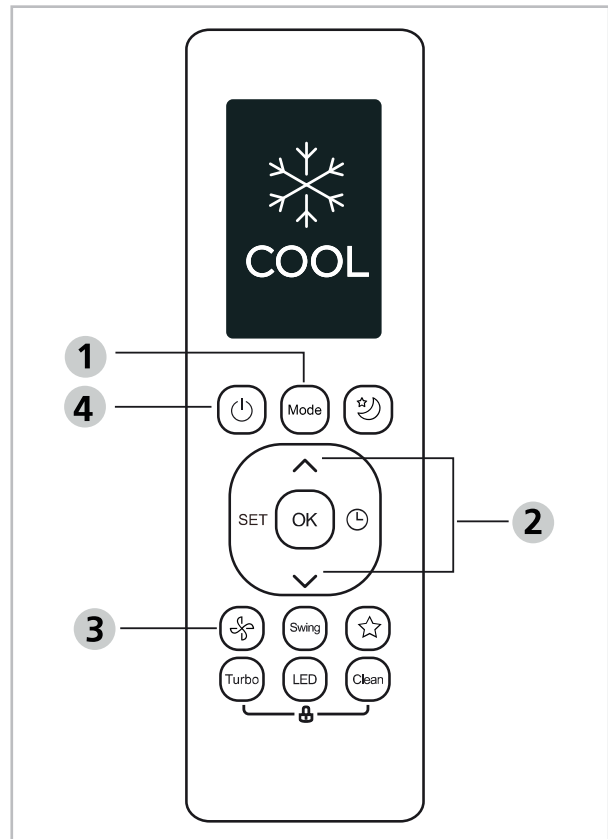


Fig. 11: Cooling mode



*The fan speed cannot be set in automatic mode!*

## Timer function

With the “Timer” function, the unit can switch on with a switch-on delay or switch off with a switch-off delay.

### Time-delayed switch-on

1. ➤ Press the “Timer” key to enter the “Time ON” setting
2. ➤ Use the arrow keys to select the desired number of hours after which the air conditioning unit is to switch on
3. ➤ Point the remote control towards the air conditioning unit and wait 1 sec. The timer is now active (symbol in the display of the remote control)

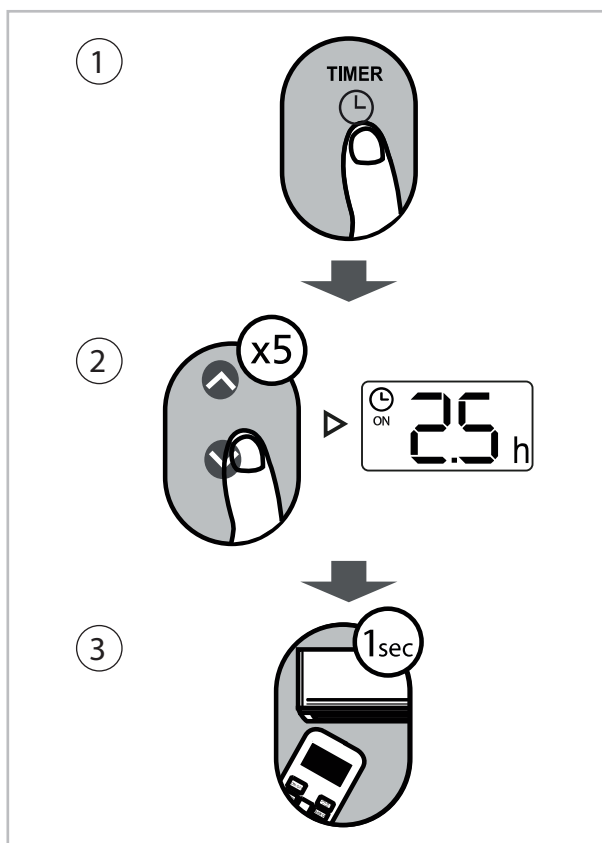


Fig. 12: Time-delayed switch-on

### Time-delayed switch-off

1. ➤ Press the “Timer” key to enter the “Time OFF” setting
2. ➤ Use the arrow keys to select the desired number of hours after which the air conditioning unit is to switch off
3. ➤ Point the remote control towards the air conditioning unit and wait 1 sec. The timer is now active (symbol in the display of the remote control)

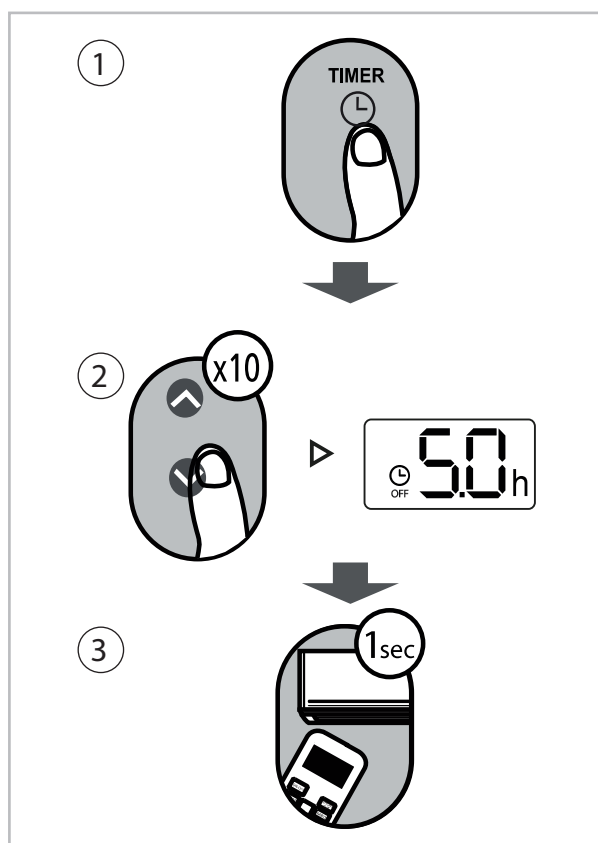


Fig. 13: Time-delayed switch-off

# REMKO RXT series

## Combining time-delayed switching on and off

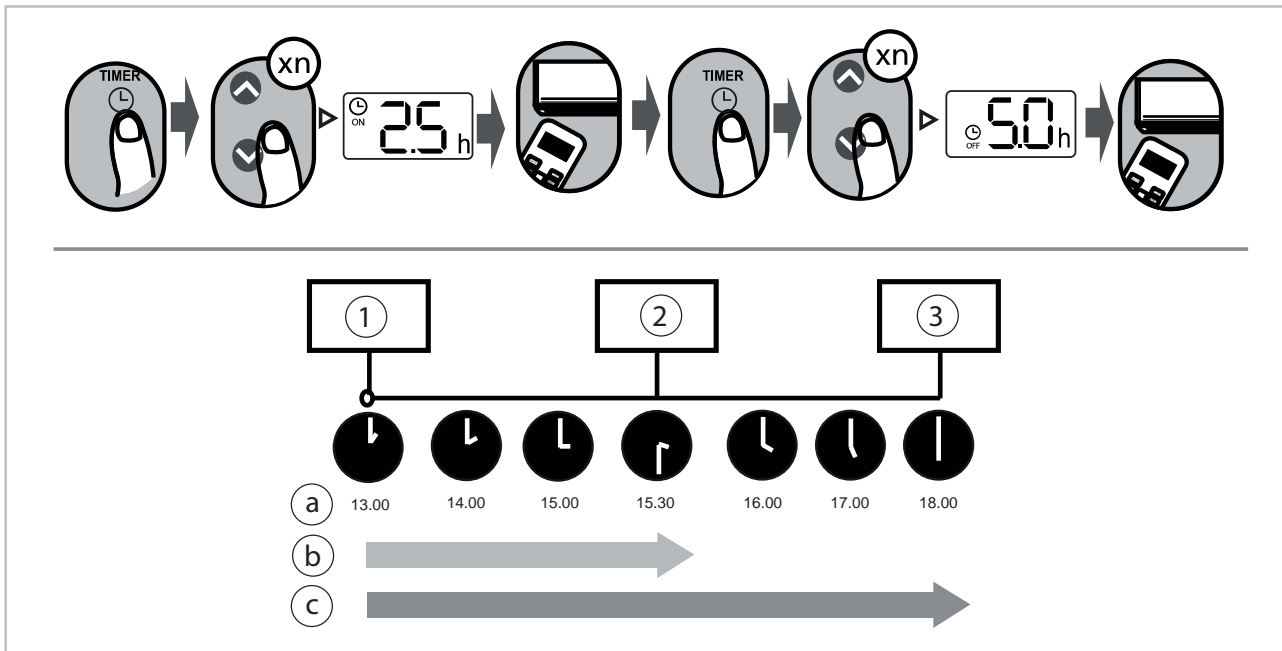


Fig. 14: Combining time-delayed switching on and off

- |                      |                    |
|----------------------|--------------------|
| 1: Timer starts      | a: current (13:00) |
| 2: Unit switches on  | b: 2.5 hours later |
| 3: Unit switches off | c: 5 hours later   |

Example: If both timers are activated at 13:00, the unit switches on 2.5 hours later (at 15:30) and switches off 5 hours later (at 18:00).

## “Swing” function

Press the “Swing” key

1. ➤ The horizontal air guide fin starts to rise and fall automatically. Pressing again stops the fin at the desired position
2. ➤ On units with 3D swing function, pressing the “Swing” key for 2 seconds activates the vertical fin movement

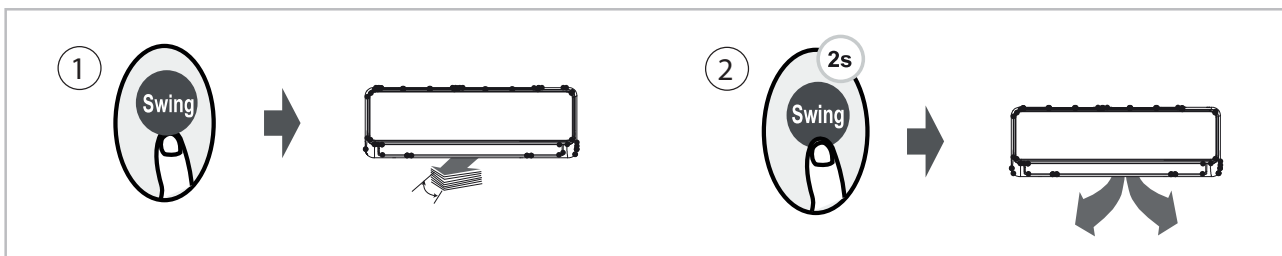


Fig. 15: “Swing” function

### Deactivate lighting and signal tones

1. ➤ Press the “LED” key to switch the unit lighting on and off.
2. ➤ Press and hold the “LED” key for longer than 5 seconds, the ACTUAL temperature appears in the unit display (not available for all unit types)

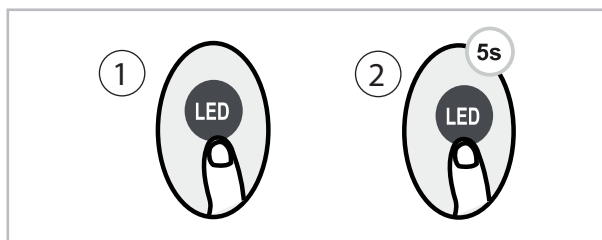


Fig. 16: Deactivate lighting and signal tones

### Activating Silent function

Depending on the unit type, the Silent function (low-noise unit operation) can be activated. To do this, the “FAN” key must be pressed and held for 2 seconds. The unit now operates in a particularly quiet mode. It must be taken into account that the unit cannot call up the full cooling or heating capacity.

The silent mode can be deactivated again by pressing the “ON/OFF”, “Mode”, “Sleep”, “Turbo” or “Clean”.

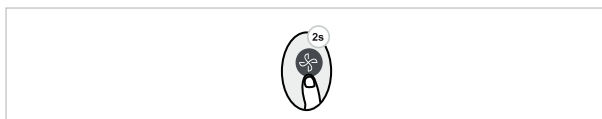


Fig. 17: Silent function

### Eco function

Press the “Eco” key (not available on all models) to activate the energy-saving function of the unit.

Note: Function only available in cooling mode!

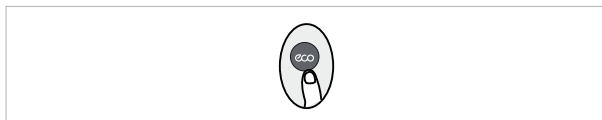


Fig. 18: COS Eco function

Function description:

Pressing this key in cooling mode automatically sets the temperature setpoint to 24 °C. When the room temperature is <24 °C, the fan goes into energy-saving mode. If the room temperature is >24 °C, the fan speed remains in the “Automatic” operating mode.

### Frost protection function

The air conditioning unit operates at high fan speed with a fixed setpoint of 8 °C (only available in heating mode).

To activate this function, heating mode must be activated and the setpoint must be set to 17°C.

Pressing the “Arrow down” key twice within one second activates the FP function.

The function can be deactivated again by pressing the “On/Off”, “Sleep”, “Mode”, “Fan” keys and the temperature setting.



Fig. 19: Frost protection function

### Activating key lock

Hold the “Clean” and “Turbo” keys simultaneously for 5 seconds to activate the key lock.

To deactivate the key lock, both keys must be pressed again for 2 seconds.

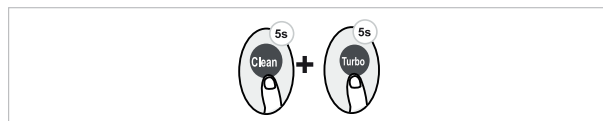


Fig. 20: Activating key lock

### “Shortcut” key

Pressing this key (not available on all unit models) while the unit is in operation will reset all settings (including operating mode, setpoint, fan speed and sleep function) to the last used settings.



Fig. 21: “Shortcut” key

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## Self-cleaning function

Press the “Clean” key (not available on all unit models).

Due to the formation of condensate on the heat exchanger and the residual moisture that remains, bacteria can multiply quickly. In regular normal operation, the heat exchanger is dried by the air volume flow. This drying process can also be started manually with the “Clean” function (for example, if the unit is not in regular use). In cooling or dehumidification mode, the self-cleaning function can be activated. The unit switches off automatically after cleaning.

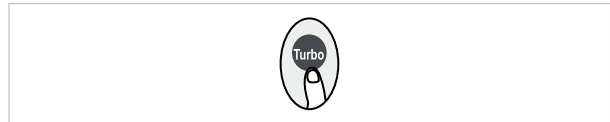


*Fig. 22: Self-cleaning function*

## “Turbo” function

If the “Turbo” key is pressed in cooling mode, the unit operates with the highest possible cooling capacity and at the same time with the highest fan speed.

This allows the desired setpoint to be reached as quickly as possible.



*Fig. 23: “Turbo” function*

## “Set” key

Press the “Set” key to enter the settings menu. Press the “Set” key or the arrow keys again to select the desired function. The corresponding function flashes on the display of the remote control. Press the “OK” key to select it.

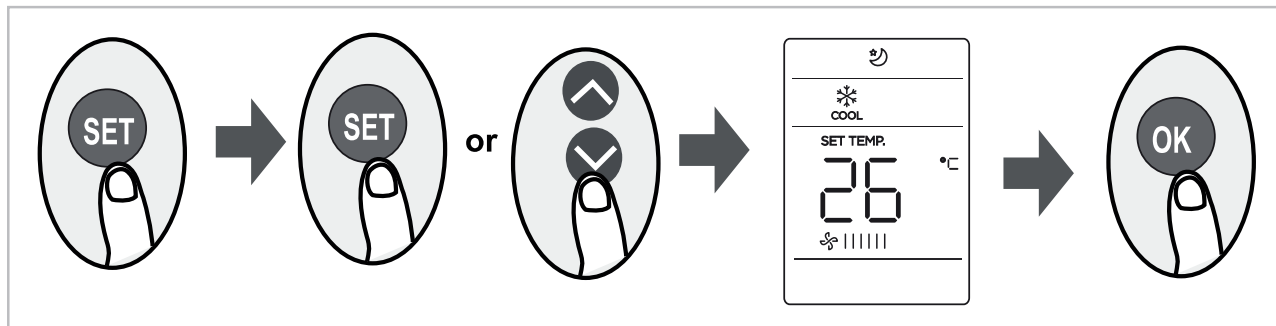


Fig. 24: “Set” key

The additional functions are shown in the following order:

BioClean function (🌀) → Sleep function (🌙) → Follow-Me function (👤) → Network configuration (📶)



*If your remote control has the “Fresh” and “Sleep” keys, these functions cannot be operated via the “SET” key.*

### “BioClean” function (🌀)

When the BioClean function is activated, negatively charged ions are released into the air stream to increase the air quality.

### Sleep function (🌙)

The sleep function can be used to save energy during night operation. This function is not available in the “Recirculation” and “Humidification” operating modes. The “Sleep” key should be pressed before going to bed. In cooling mode, the unit will increase the setpoint by 1 °C after 1 operating hour. After another operating hour, the temperature is increased by 1 °C again. In heating mode, the setpoint is lowered by the previously mentioned parameters.

The sleep function deactivates automatically after an operating time of 8 hours.

### AP mode (network configuration)

Not available for all unit types and can only be used in combination with the optional REMKO WifiStick. AP mode can be activated by pressing the “LED” key several times within 10 seconds. The unit is now in network configuration mode. For integration via WLAN, please observe the assembly and operating instructions of the REMKO Wifi-Stick.

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## 5 Installation instructions for qualified personnel

### 5.1 Important notes prior to installation

- Transport the unit in its original packaging as close as possible to the installation location. You avoid transport damage by doing so.
- Check the contents of the packaging for completeness and check the unit for visible transport damage. Report any damage immediately to your contractual partner and the shipping company.
- Lift the unit on the corners and not on the refrigerant or condensate drainage connections.
- The refrigerant piping (injection and suction pipe), valves and connections must be insulated against vapour density. If necessary also insulate the condensate drainage line.
- Select an installation location which allows air to freely flow through the air inlet and outlet (see section "Minimum clearances").
- Do not install the unit in the immediate vicinity of devices which generate intensive thermal radiation. Installation in the vicinity of thermal radiation reduces the unit output.
- Only open the shut-off valves on the refrigerant piping after installation is complete.
- Seal off open refrigerant piping with suitable caps or adhesive strips to prevent the infiltration of moisture and never kink or compress the refrigerant piping.
- Avoid unnecessary bends. This minimises the pressure loss in the refrigerant piping and ensures that the compressor oil can flow back without obstruction.
- Make special preparations regarding the oil return if the outdoor unit is located above the indoor unit (see section "Oil return measures").
- Add refrigerant if the basic length of the refrigerant piping exceeds 5 metres. For the quantity of additional refrigerant, refer to chapter "Adding refrigerant".
- Perform all electrical wiring in accordance with applicable DIN and VDE standards.
- Ensure the electrical cables are properly connected to the terminals. Otherwise there is a risk of fire.
- Use suitable fastening materials for the installation location of the units.

### 5.2 Selection of installation location

#### Indoor unit

The indoor unit is designed for horizontal wall installation underneath windows. However, it can also be used in the upper wall area (max. 1.25 m above the floor). The unit is also designed for horizontal ceiling installation. Observe the condensate drainage in particular here.

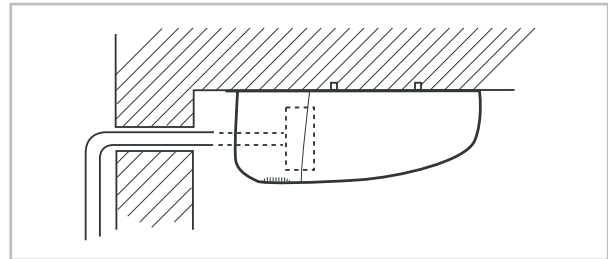


Fig. 25: Horizontal positioning

#### Outdoor unit

The outdoor unit is designed for horizontal installation on a base in outdoor areas. The installation site must be level, flat and firm. The unit should also be secured to prevent it from tipping over. The outdoor unit can be set up outside as well as inside a building. For external installation, please observe the following notes to protect the unit from the influence of the weather.

#### Rain

For floor or roof set-up, the unit should be installed with at least 10cm ground clearance. A floor bracket is available as an optional accessory.

#### Sun

The condenser on the outdoor unit emits heat. Exposure to sunlight further increases the temperature of the fins and reduces the heat released by the finned heat exchanger. The outdoor unit should be installed on to the north side of the building whenever possible. If necessary, take measures to provide sufficient shade (responsibility of customer). One possible solution is to build a small roofed area over the unit. These measures should not affect the flow of warm outlet air.

## Wind

If the unit is being installed in windy areas, ensure that the warm outlet air is discharged in the prevailing wind direction. If this is not possible, it may be necessary to install a windbreak (to be provided by the customer). Ensure that the windbreak does not adversely affect the air intake to the unit.

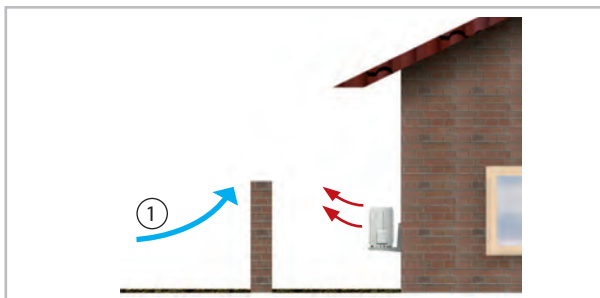


Fig. 26: Windbreak

1: Wind

## Snow

The unit should be wall-mounted in areas of heavy snowfall. Installation should be at least 20cm above the expected level of snow to prevent snow from entering the outdoor unit. An optional wall bracket is available as an accessory.

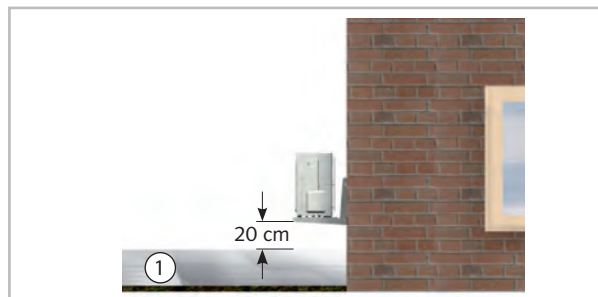


Fig. 27: Minimum clearance to snow

1: Snow

## Installation inside buildings

- Ensure that heat can dissipate adequately when placing the outdoor unit in cellars, lofts, adjoining rooms or halls (Fig. 28).
- Install an additional fan with a rated flow comparative to that of the outdoor unit being installed in the room and which can compensate any additional pressure loss in ventilation ducts (Fig. 28).
- Comply with any regulations and conditions affecting the statics of the building. If necessary, fit acoustic installation.

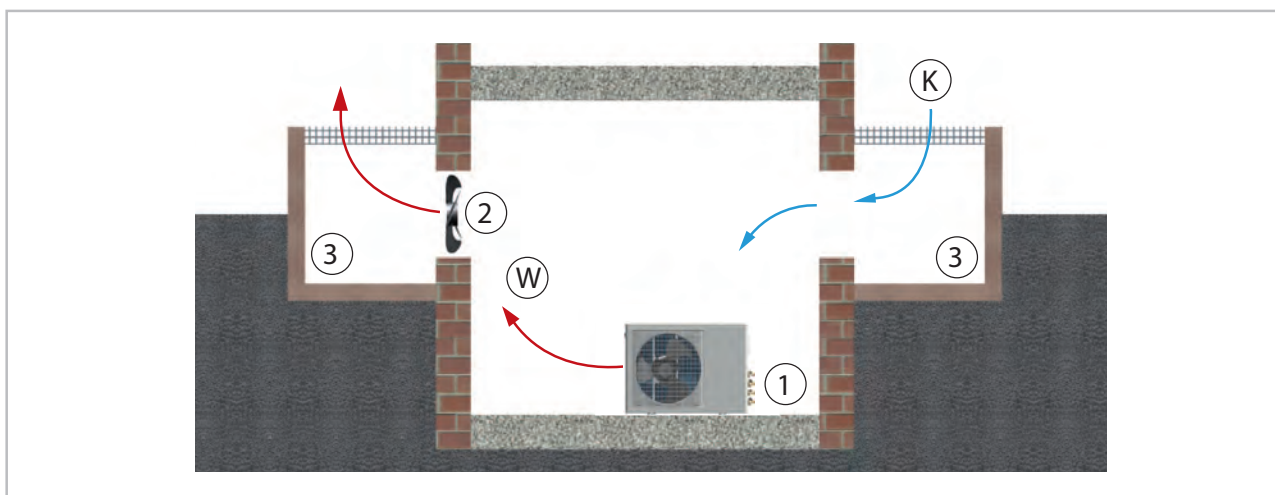


Fig. 28: Installation inside buildings

K: Cold fresh air  
W: Warm air  
1: Outdoor unit

2: Additional fan  
3: Air shaft

## 5.3 Installation materials

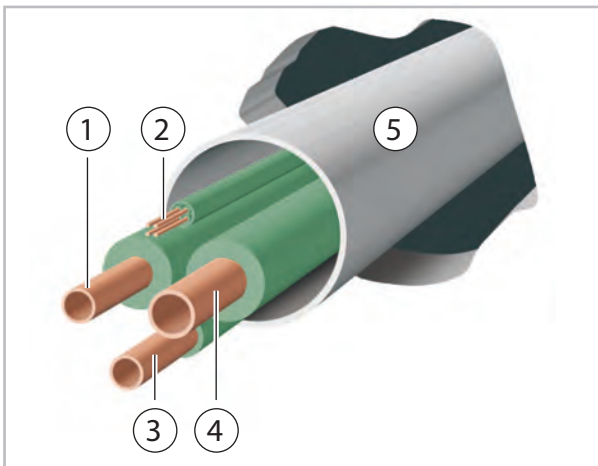
The indoor unit is attached to the wall by a wall bracket and 4 screws (to be provided by the customer).

The outdoor unit is attached by 4 screws and a wall bracket to the wall or fixed by a floor bracket to the ground.

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## 5.4 Wall openings

- A wall opening of at least 70 mm diameter and 10 mm incline from the inside to the outside must be created.
- To prevent damage to the lines, the interior of the wall opening should be padded or, for example, lined with PVC pipe (see figure).
- After installation has been completed, use a suitable sealing compound to close off the wall opening, taking account of fire protection regulations (provided by the customer). Do not use cement or lime containing substances!



*Fig. 29: Wall opening*

- 1: Injection pipe
- 2: Control line
- 3: Condensate drainage line
- 4: Suction pipe
- 5: PVC pipe

## 5.5 Fastening options for the indoor unit

If wall-mounted, the indoor units are mounted with fastening hooks and hanger bolts, and if ceiling-mounted then with fastening hooks and threaded rods.

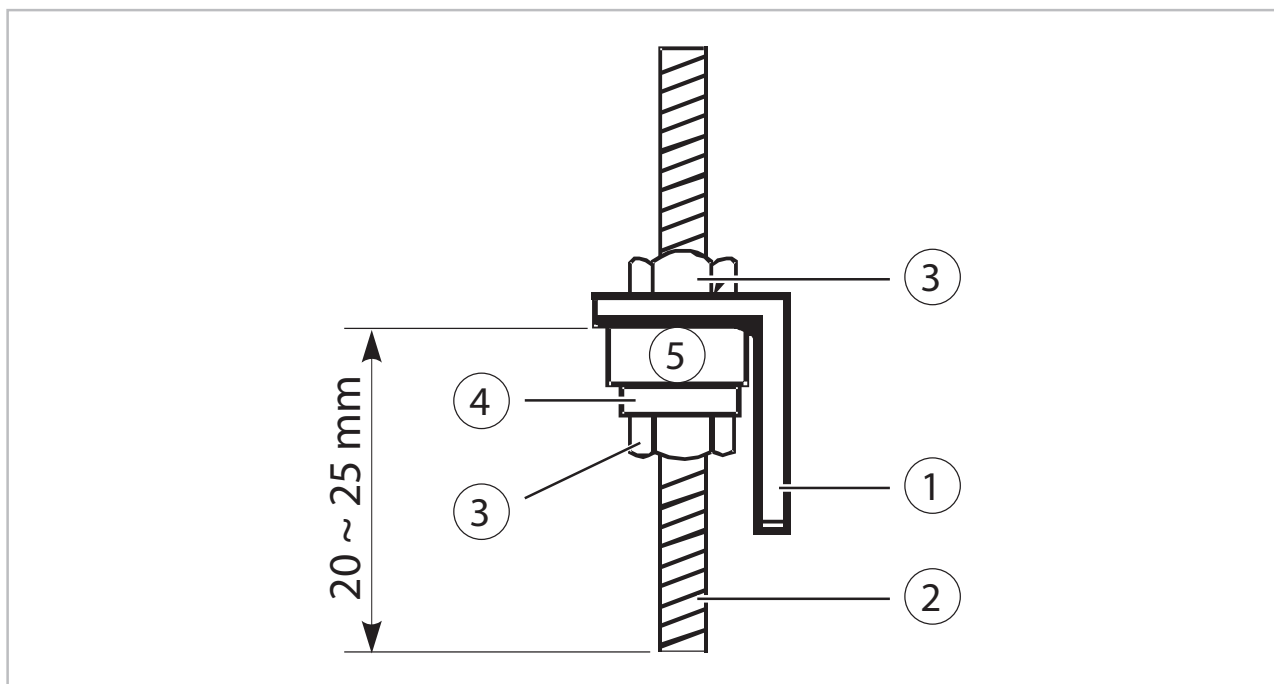


Fig. 30: Unit fastening with threaded rod

- |                     |                                |
|---------------------|--------------------------------|
| 1: Unit mount       | 4: Washer                      |
| 2: Threaded rod M10 | 5: Vibration damper (optional) |
| 3: Nut M10          |                                |

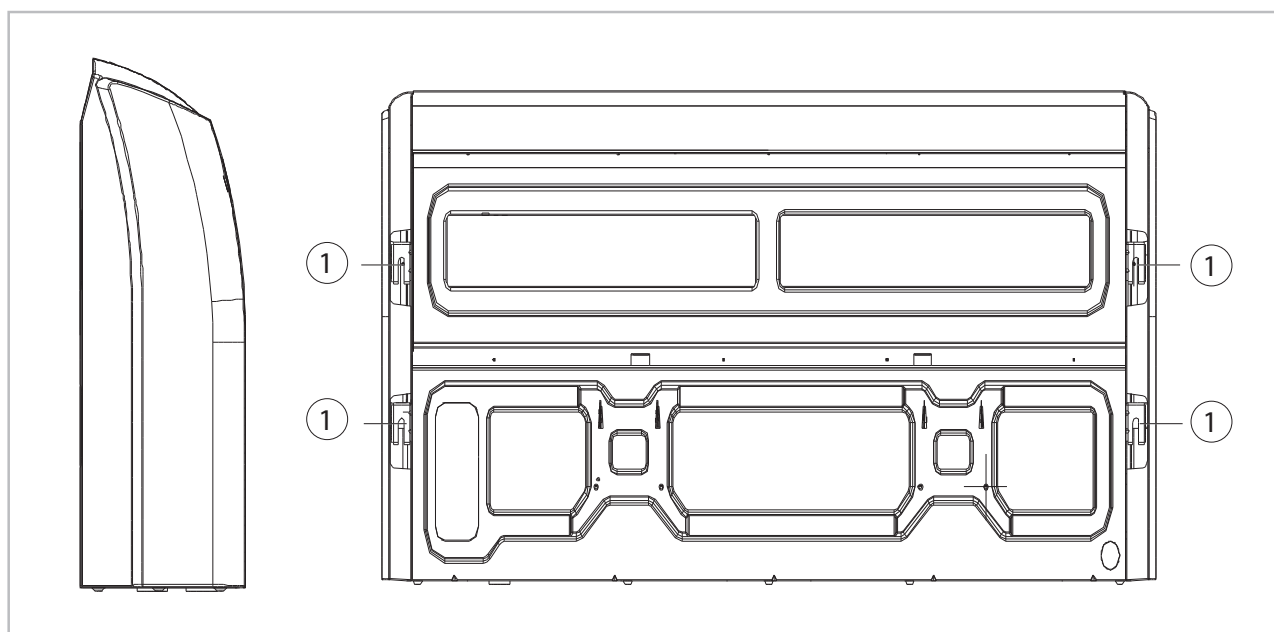
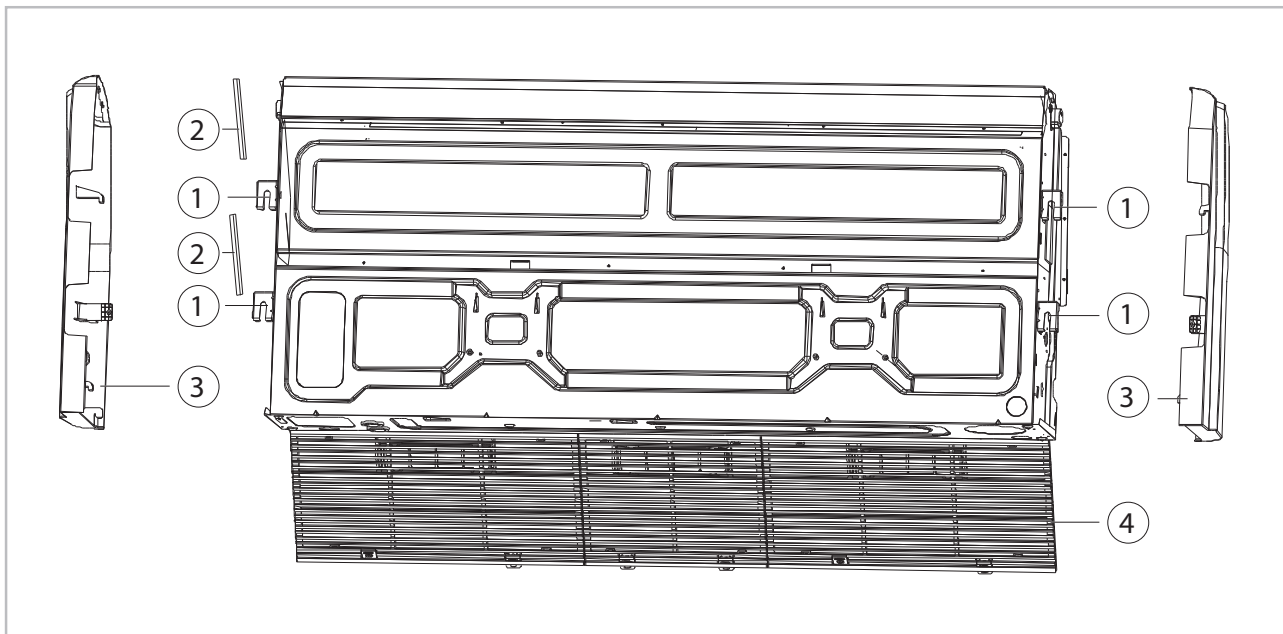


Fig. 31: Unit fastening

- 1: Unit mount

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*Fig. 32: Unit fastening without housing*

1: Unit mount  
2: Hanger bolts or threaded rods

3: Side part  
4: Air inlet grill

## 5.6 Minimum clearances

Observe the minimum clearances to allow access for maintenance and repair work and facilitate optimum air distribution.

### Minimum clearances, outdoor units RXT 525-1405 DC AT

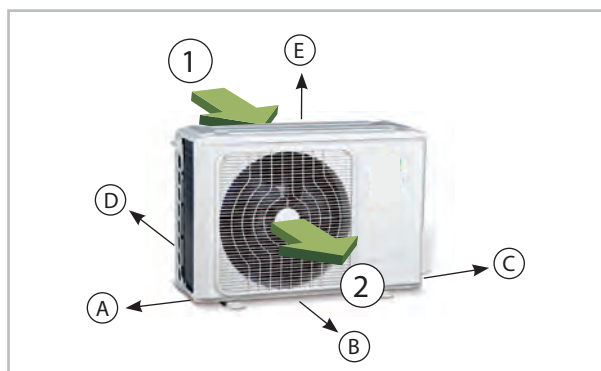


Fig. 33: Minimum clearances, outdoor units

1: Air inlet / 2: Air outlet

Measurements (mm)	RXT 525-1405 DC AT
A	300
B	2000
C	600
D	200
E	400

### Minimum clearances, indoor units RXT 525-1405 DC IT

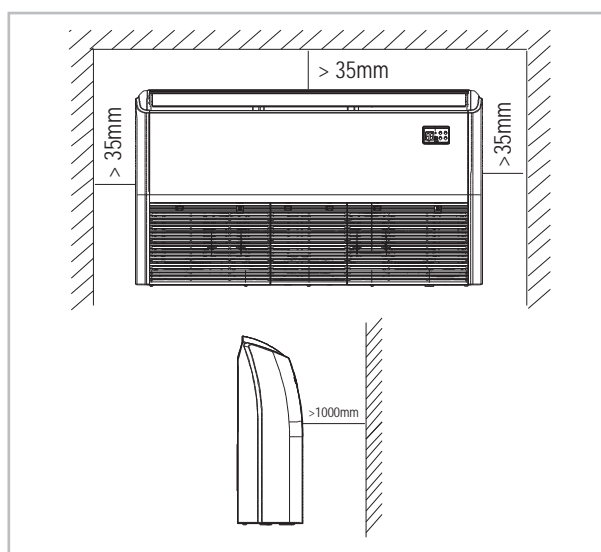


Fig. 34: Minimum clearances, indoor units (all measurements in mm)

A: Wall installation / B: Ceiling installation

## 5.7 Connection variants

The following connection variants can be used for the refrigerant, condensate and control lines.

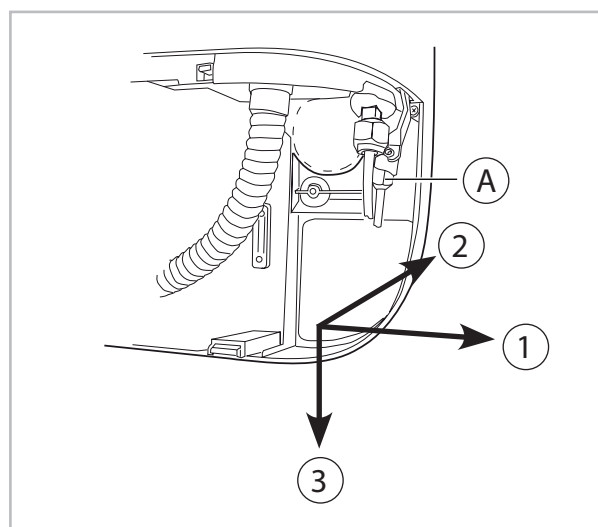


Fig. 35: Connection variants

A: Refrigerant piping  
1: Outlet on the wall, right  
2: Outlet through the wall, right  
3: Outlet on the wall, down

## 5.8 Oil return measures

If the outdoor unit is installed at a higher level than the indoor unit, suitable oil return measures must be taken. Usually, an oil pump bend is installed for every 7 metres of height difference.

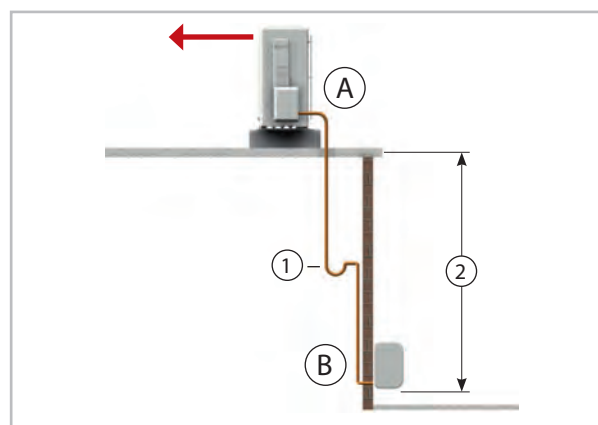


Fig. 36: Oil return measures

A: Outdoor unit  
B: Indoor unit  
1: 1 x oil pump bend in suction pipe to outdoor unit every 7 metres of height difference, radius: 50 mm  
2: Max. 10 m

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## 6 Installation

### 6.1 Preparations for installation

#### Removing the air inlet grill

#### ! NOTICE!

Installation should only be performed by authorised specialists.

1. ➤ Fold the air inlet grill forwards.
2. ➤ Remove the middle retainer by releasing the two bars from the fastening.
3. ➤ Undo the lateral fastening screws and remove the grill.
4. ➤ After installation, all parts that were removed must be fitted again.

### 6.2 Installation of the indoor unit

#### Wall installation

The unit is attached by means of a wall bracket, taking account of the air outlet side located towards the top of the unit.

1. ➤ Mark the mounting points on the structurally permissible building sections according to the dimensions of the wall bracket.
2. ➤ If necessary, remove the break out opening of the housing.
3. ➤ Hook the unit on to the previously attached bracket.
4. ➤ Connect the refrigerant piping, electrical cables and condensate drainage line to the indoor unit as described below.
5. ➤ Hang the indoor unit onto the wall bracket by tilting it back slightly and by pressing the bottom part of the unit against the bracket.
6. ➤ Check again that the unit is level.

The wall bracket for the units must be attached with suitable screws and anchors.

#### Ceiling installation

The unit is attached by means of the integrated ceiling bracket, taking account of the air outlet side located on the front of the unit.

1. ➤ Mark the mounting points on the structurally permissible building sections according to the dimensions of the wall bracket.
2. ➤ If necessary, remove the break out opening of the housing.
3. ➤ Hook the unit onto the four previously installed screws/threaded rods.
4. ➤ Fit the unit such that it is attached 5 mm lower in the connection area (air inlet) than on the air outlet side!
5. ➤ Connect the refrigerant piping, electrical cables and condensate drainage line to the indoor unit as described below.

### 6.3 Connection of refrigerant piping

The refrigerant piping is connected on the back side of the units.

It may be necessary to fit a reducer or flared adapter to the indoor unit. These fittings are included with the indoor unit as an accessory kit. Once installed, the connections should be insulated to make them vapour diffusion proof.

#### ! NOTICE!

Installation should only be performed by authorised specialists.

#### ! NOTICE!

The unit is factory filled with dry nitrogen for leak testing purposes. The pressurised nitrogen is released when the union nuts are undone.

#### ! NOTICE!

Use only tools which are approved for use in an HVAC environment. (z. B.: bending pliers, pipe/tubing cutters, de-burrers and flaring tools). Do not cut refrigerant pipes with a saw.

#### ! NOTICE!

All work must be carried out in a way that prevents dirt, particles, water etc. from entering, refrigerant lines!

The following instructions describe the installation of the cooling cycle and the assembly of the indoor unit and the outdoor unit.

1. ➤ The required pipe diameters are given in the table "Technical data".
2. ➤ Install the indoor unit and connect the refrigerant piping as described in the operating manual for the indoor unit.
3. ➤ Use the wall or floor brackets to fit the outdoor unit against structural parts approved to support the static load (refer to the installation instructions for the brackets).
4. ➤ Ensure that structure-borne sound is not transferred to parts of the building. Use vibration dampers to reduce the effects of structure-borne sound!
5. ➤ Lay the refrigerant piping from the indoor unit to the outdoor unit. Ensure that the fastenings are adequate and if necessary, take appropriate oil return measures!
6. ➤ Remove the factory-fitted protective caps and union nuts on the connections. These should be used later in the installation process.
7. ➤ Before flanging the refrigerant piping, ensure that the union nut is fitted on the pipe.
8. ➤ Prepare the laid refrigerant piping as shown below (Fig. 37 and Fig. 38).
9. ➤ Verify that the shape of the flange is correct (Fig. 39).
10. ➤ First connect and hand-tighten the refrigerant piping to ensure it is correctly seated.
11. ➤ Then tighten the fittings with 2 appropriately-sized open-ended spanners. Use one spanner to counter the force when tightening the fitting (Fig. 40).
12. ➤ Use insulation hoses which are designed for this temperature range and are diffusion proof.
13. ➤ Observe the permitted bending radius for the refrigerant piping during installation. Never bend a pipe twice in the same place. Brittleness and cracking can result.
14. ➤ Apply appropriate heat insulation to the installed refrigerant piping, including connector.
15. ➤ Take the same action at the shut-off valves for all subsequent refrigerant piping.

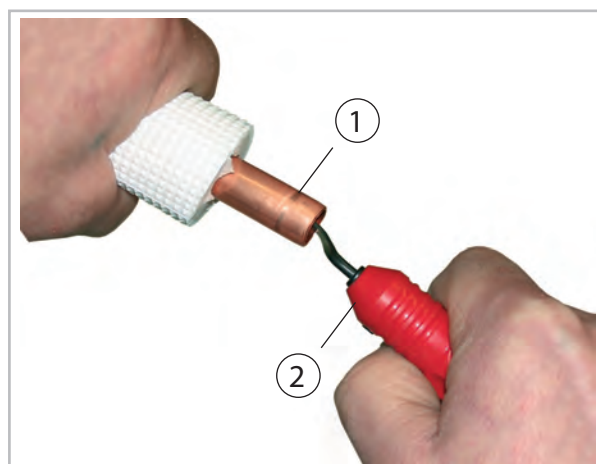


*Label the refrigerant piping (injection and suction pipes) as well as the associated electrical control lines of each interior unit with a letter. Only connect the lines to their associated connections.*

### ! NOTICE!

Always pay attention to the affiliation of the electrical lines and refrigerant piping! The connections of the individual circuits must not be mixed up. Mixing up the assignment of control lines and refrigerant piping can have fatal consequences (compressor damage)!

Commissioning of the individual circuits must be carried out successively.



**Fig. 37: Deburring the refrigerant piping**

- 1: Refrigerant piping
- 2: Deburrer

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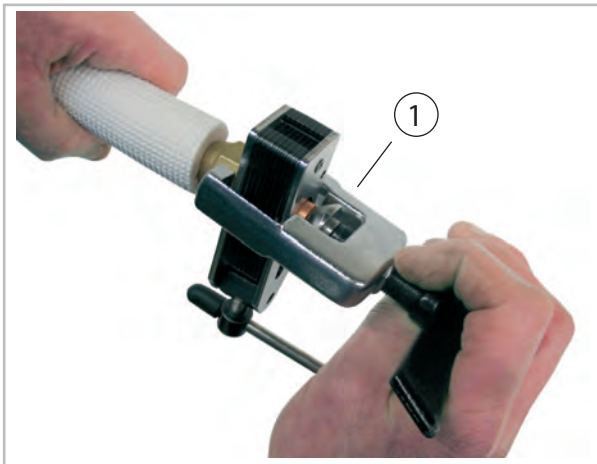


Fig. 38: Flanging the refrigerant piping

1: Flanging tool

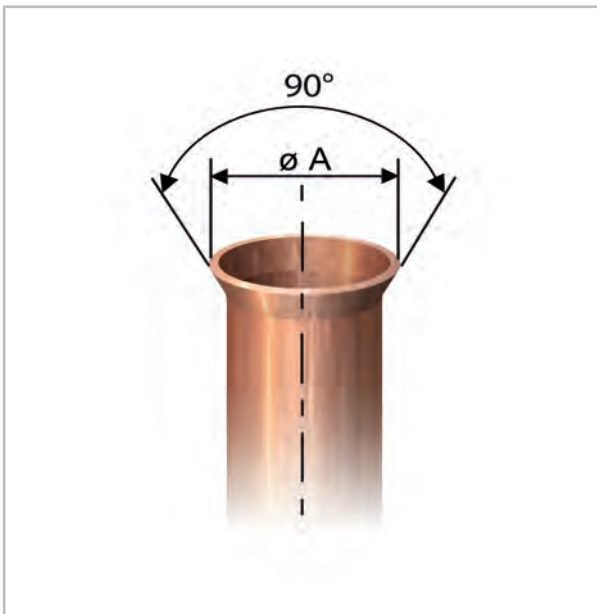


Fig. 39: Correct flange shape

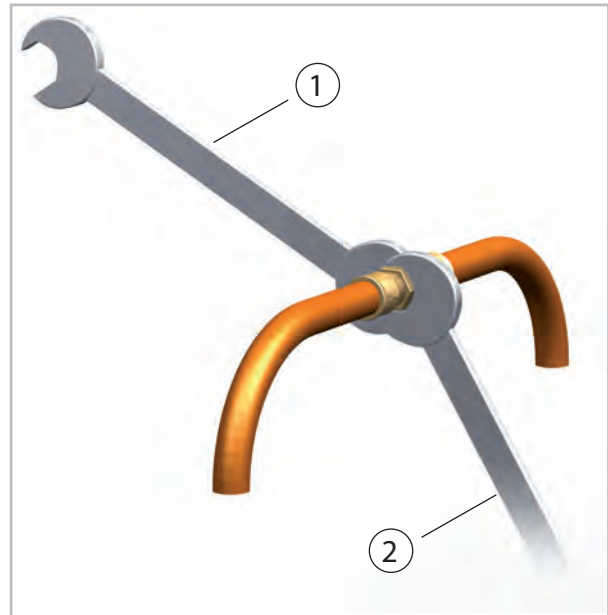


Fig. 40: Tightening the fitting

- 1: Tighten with the first open-ended spanner
- 2: Counter with the second open-ended spanner

Pipe dimension in inches	Tightening torque in Nm
1/4"	15-20
3/8"	33-40
1/2"	50-60
5/8"	65-75
3/4"	95-105

## 6.4 Additional notes on connecting the refrigerant piping

- When combining the outdoor unit with some indoor units, the procedure for connecting the refrigerant piping may differ. Install the provided reducer or expansion fittings to the indoor unit.
- If the basic length of the connecting line exceeds 5m, add refrigerant when commissioning the system for the first time (see chapter "Adding refrigerant").

### ! NOTICE!

A flare connection may only be established outside the room. Detachable, reusable connections are not permissible inside!

## 6.5 Leak testing

Once all the connections have been made, the pressure gauge station is attached to the Schrader valve as follows (if fitted):

red = small valve = high pressure

blue = large valve = suction pressure

Once the connection has been made successfully, the leak test is carried out with dry nitrogen.

Leak testing involves spraying a leak detection spray onto the connections. If bubbles are visible, the connections have not been made properly. In that case, tighten the connection or, if necessary, create a new flange.

After completing a successful leak test, the excess pressure in the refrigerant piping is removed and a vacuum pump with an absolute final partial pressure of min. 10 mbar is used to remove all of the air and empty the pipes. Any moisture present in the pipes will also be removed.

### ! NOTICE!

A vacuum of at least 20 mbar must be produced!

The time required to generate the vacuum is dependent on the final pressure pipe volume of the indoor units and the length of the refrigerant piping. However, the process will take at least **60 minutes**. Once any foreign gases and humidity have been completely extracted from the system, the valves on the pressure gauge station are closed and the valves on the outdoor unit are opened as described in the "Commissioning" section.

## 6.6 Adding refrigerant

The units contain a basic quantity of refrigerant. In addition, an additional amount of refrigerant must be added for refrigerant piping lengths exceeding 5 metres per circuit. Refer to the following chart:

	Up to and incl. 5m	From 5m to max. length
RXT 525-1405 DC	0 g/m	30 g/m

### ! CAUTION!

Wear protective clothing when handling refrigerant.

### ! DANGER!

Only refrigerant in a liquid state may be used to fill the cooling cycle!

### ! NOTICE!

Check the overheating to determine the refrigerant fill quantity.

### ! NOTICE!

The escape of refrigerant contributes to climatic change. In the event of escape, refrigerant with a low greenhouse potential has a lesser impact on global warming than those with a high greenhouse potential.

This unit contains refrigerant with a greenhouse potential of 675. That means the escape of 1 kg of this refrigerant has an effect on global warming that is 675 times greater than 1 kg CO<sub>2</sub>, based on 100 years. Do not conduct any work on the refrigerant circuit or dismantle the unit - always enlist the help of qualified experts.

# REMKO RXT series

## 7 Condensate drainage connection and safe drainage

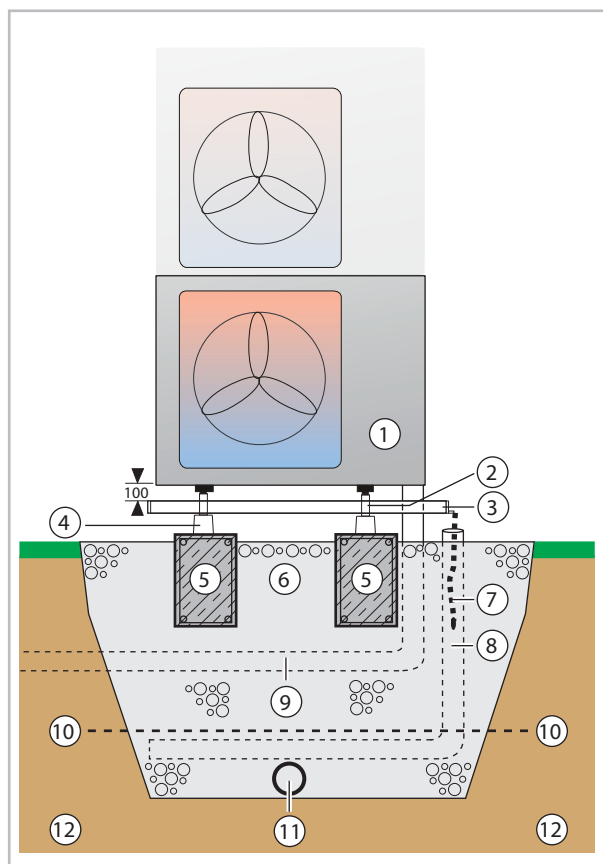


Fig. 41: Condensate drainage, seepage of condensate and strip foundation (cross-section)

- 1: Outdoor unit
- 2: Leg
- 3: Condensate collection tray
- 4: Floor bracket
- 5: Reinforced strip foundation  
HxWxD = 300x200x800mm
- 6: Gravel layer for seepage
- 7: Condensate drainage heating
- 8: Drainage channel
- 9: Conduit for refrigerant piping and electrical  
connecting line (temperature-resistant up to at  
least 60°C)
- 10: Frost line
- 11: Drainage pipe
- 12: Soil

### Condensate drainage connection

If the temperature falls below the dew point, condensation will form on the finned condenser during **heating mode**.

A condensate tray should be installed on the underside of the unit to drain any condensate.

- The condensate drainage line should have an incline of min. 2%. This is the responsibility of the customer. If necessary, fit vapour-diffusion-proof insulation.
- When operating the unit at outside temperatures below 4 °C, ensure the condensate drainage line is laid to protect it against frost. The lower part of the housing and condensate tray is also to be kept frost free in order to ensure permanent draining of the condensate. If necessary, fit a pipe heater.
- Following installation, check that the condensate run off is unobstructed and ensure that the line is durably leak tight.

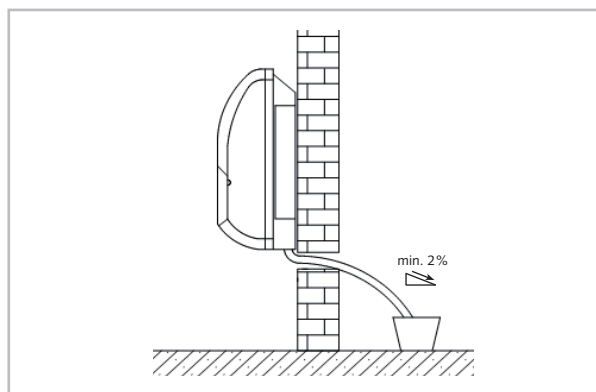


Fig. 42: Condensate drainage connection IT on the wall

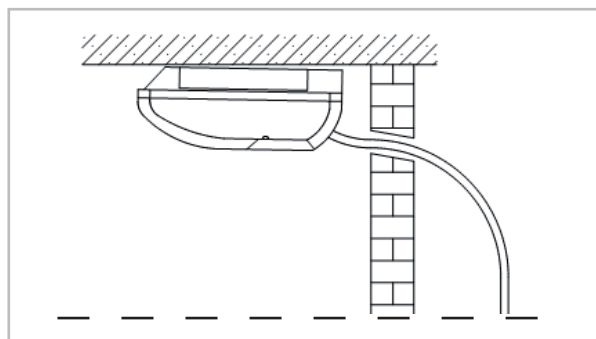


Fig. 43: Condensate drainage connection IT on the ceiling

### Safe drainage in the event of leakages

The REMKO oil separator OA 2.2 fulfils the following list of requirements from regional regulations and laws.

#### **! NOTICE!**

Local regulations or environmental laws, for example the German Water Resource Law (WHG), can require suitable precautions to protect against uncontrolled draining in case of leakage to provide for safe disposal of escaping refrigerator oil or hazardous media.

#### **! NOTICE!**

If condensate is removed via a duct in accordance with DIN EN 1717, ensure that any microbiological contamination present on the wastewater side (bacteria, fungi, viruses) cannot enter the unit connected to it.

# REMKO RXT series

## 8 Electrical wiring

### 8.1 General notes

A mains cable must be installed as the power supply to the outdoor unit and a control line to the indoor unit, with appropriate protection.

#### **DANGER!**

All electrical installation work is to be performed by specialist companies. Disconnect the power supply when connecting the electrical terminals.

#### **WARNING!**

All electric lines are in accordance VDE regulations to dimension and to lay.

#### **NOTICE!**

The electrical connection for the units must be made at a separate feedpoint with a residual current device in accordance with local regulations and should be laid out by an electrician.



*We recommend using shielded wires for the control lines.*



*Check all plugged and clamped terminals to verify that they are seated correctly and make permanent contact. Tighten as required.*

Make the connection as follows:

1. ➤ The connection terminal block is located on the right inside the unit (Fig. 44).
2. ➤ Connect the unit to the control line from the outdoor unit. See “Electrical wiring diagram”.
3. ➤ Re-assemble the unit.



Fig. 44: Connecting the indoor unit

- 1: Electrical connection (terminal box)
- 2: Connection of refrigerant lines

### 8.2 Connecting the indoor unit

The unit requires a six-wired control line from the indoor unit to the outdoor unit.

- We recommend installing a main / repair switch on the building close to the indoor unit. This is the responsibility of the customer.
- Power is supplied to the outdoor unit, the indoor unit is supplied via the control line from the outdoor unit to the indoor unit.
- The terminal blocks for establishing the connections are located inside the unit.
- If an optional condensate pump is used as an accessory in conjunction with the unit, it may be necessary to install an additional relay with a higher contact rating after the switch-off contact on the pump to switch off the compressor.

### 8.3 Outdoor unit connection

Proceed as follows to connect the line:

1. ➤ Remove the side-panel cover.
2. ➤ Choose the cable cross-section in accordance with the relevant specifications.
3. ➤ Connect the lines as shown on the electrical connection diagram.

4. ➤ Fix the line in the strain relief and re-assemble the unit.

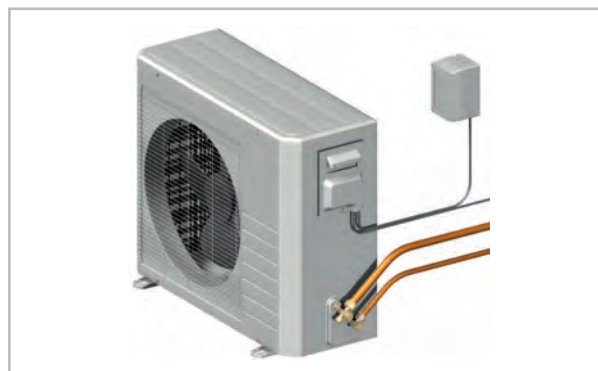


Fig. 45: Outdoor unit connection

### 8.4 Electrical wiring diagram

Connection RXT 525-685 DC

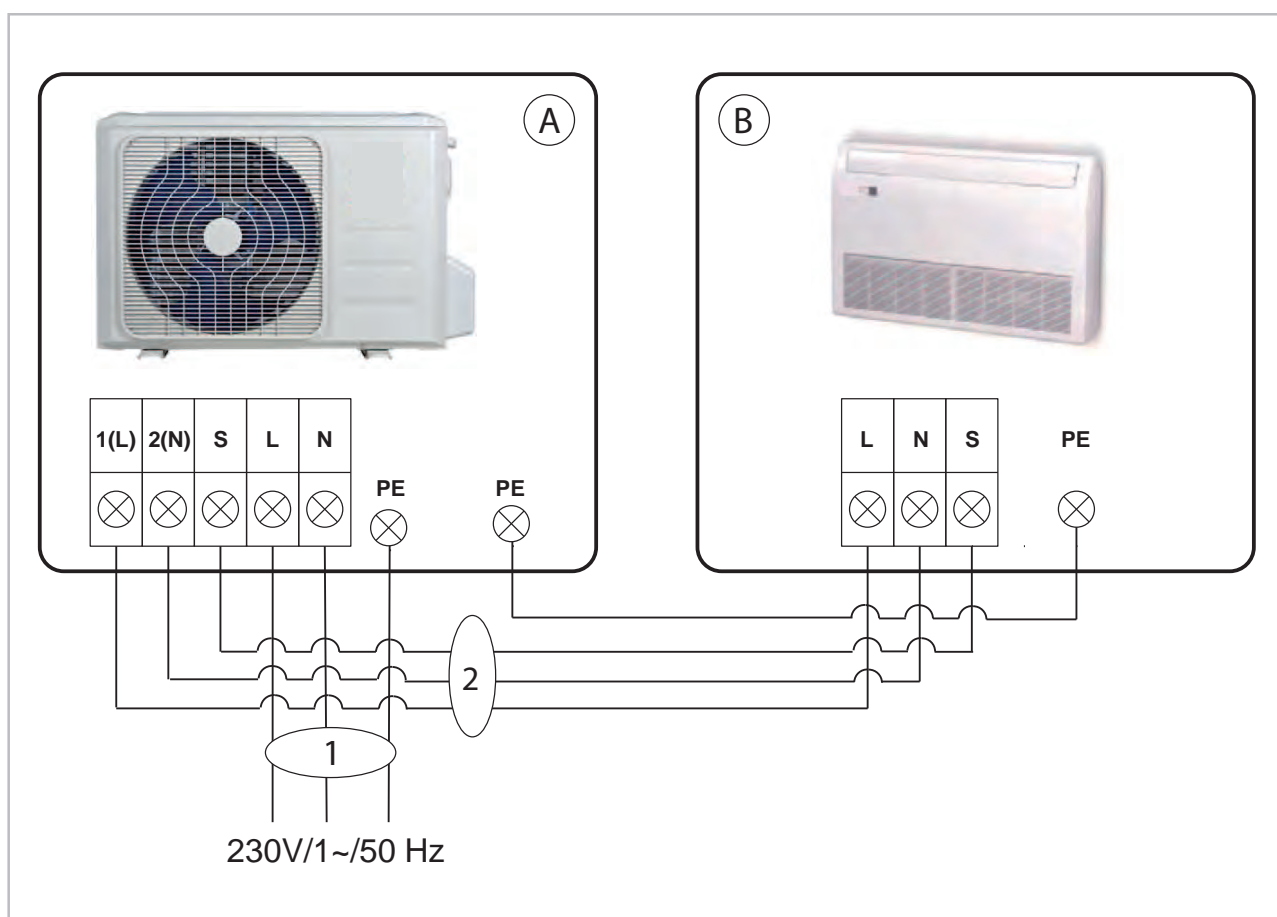


Fig. 46: Electrical wiring diagram

A: Outdoor unit RXT 525-685 DC AT  
B: Indoor unit RXT 525-685 DC IT

1: Mains cable  
2: Communication lines

# REMKO RXT series

## Connection RXT 1055-1405 DC

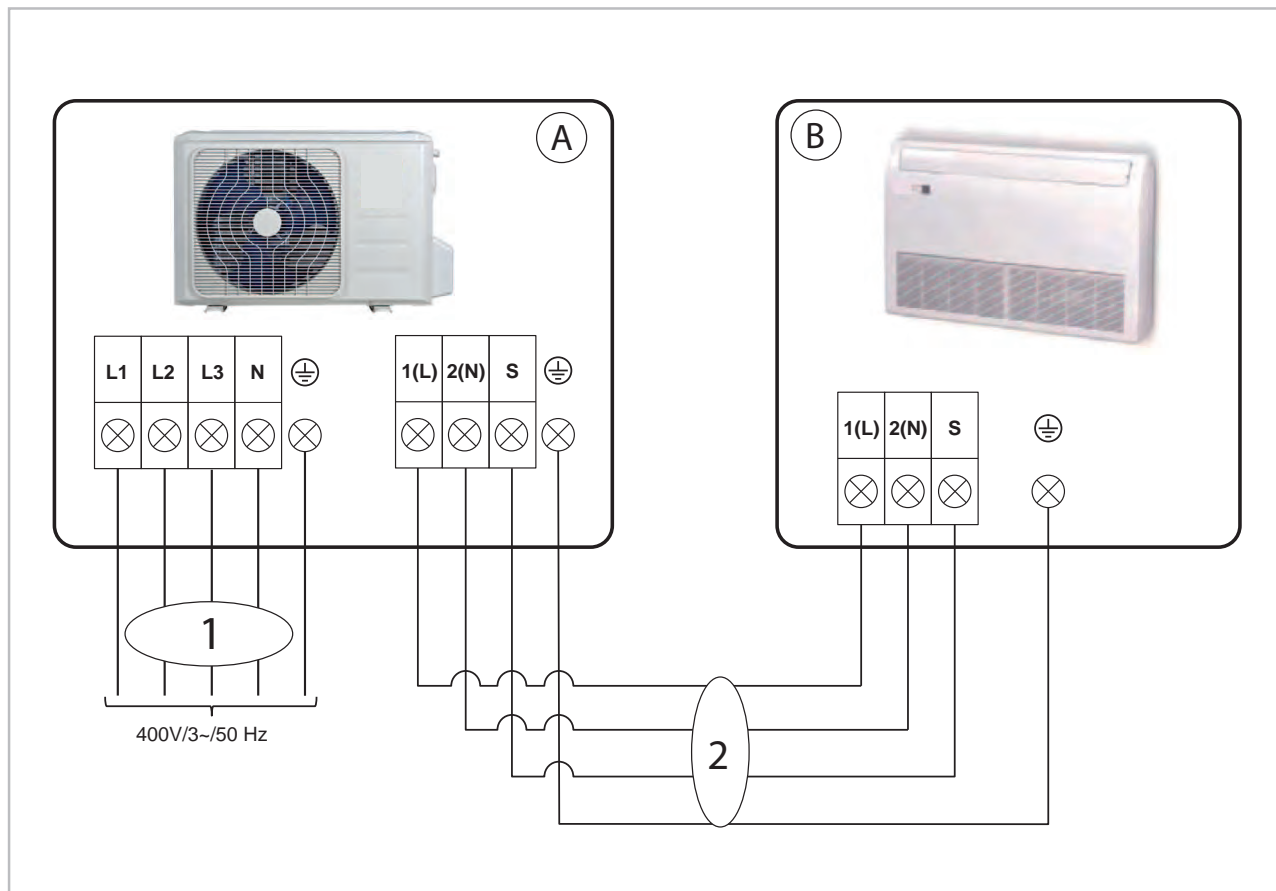


Fig. 47: Electrical wiring diagram

A: Outdoor unit RXT 1055-1405 DC AT  
B: Indoor unit RXT 1055-1405 DC IT

1: Power supply cable  
2: Communication lines

## 8.5 Electrical drawings

### Indoor units RXT 525-1405 DC IT

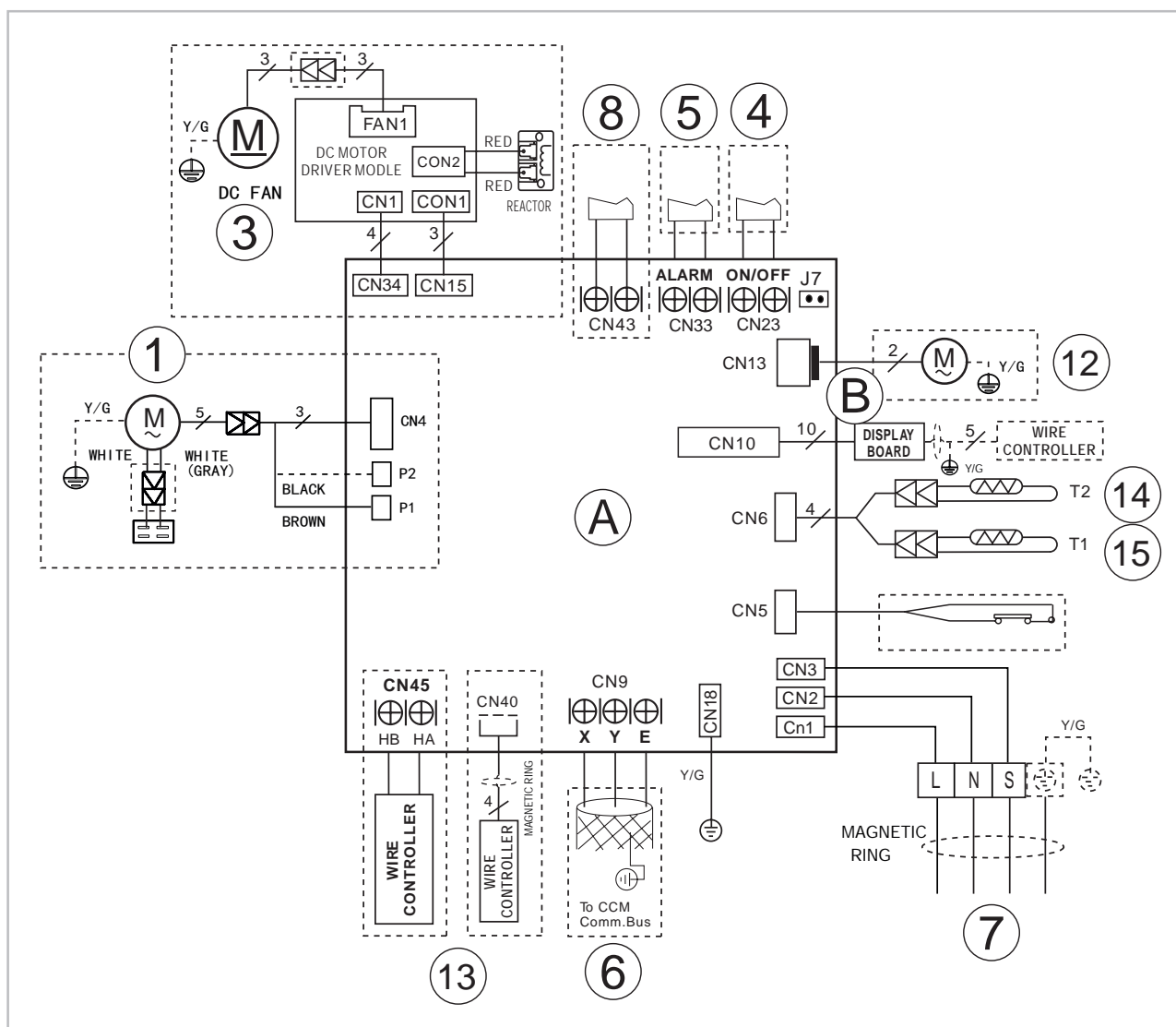


Fig. 48: Electrical drawings IT

- |  |  |
|--|--|
| A: Control board                               | 7: Communication line to outdoor unit          |
| B: Display circuit board                       | 8: Optional connection external fan motor      |
| 1: AC fan motor                                | 12: Connection of condensate pump              |
| 3: DC fan motor                                | 13: Wired remote control connection (optional) |
| 4: Potential-free external contact on/off      | 14: Temperature probe, evaporator              |
| 5: Potential-free alarm contact                | 15: Temperature probe, room temperature        |
| 6: MCC-1 controller/SC-1 connection (optional) |  |

# REMKO RXT series

## Outdoor unit RXT 525 DC AT

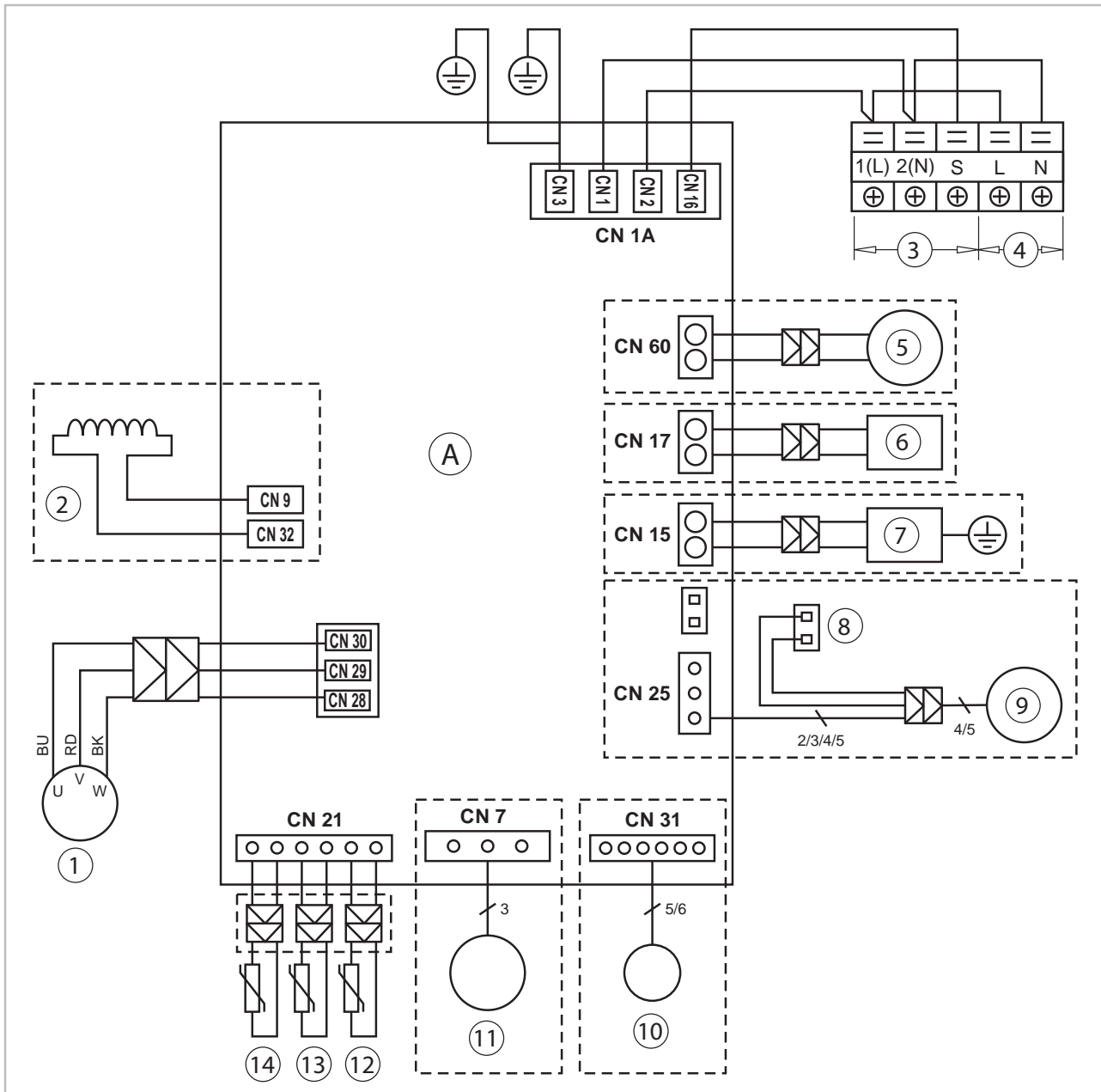


Fig. 49: Electrical drawings

- |                                       |  |
|---------------------------------------|--|
| A: Control board                      | 8: Capacitor                               |
| 1: Compressor                         | 9: AC fan                                  |
| 2: Transformer                        | 10: Electronic E-valve                     |
| 3: Connecting line to the indoor unit | 11: DC fan motor                           |
| 4: Power supply                       | 12: Air inlet temperature probe            |
| 5: 4-way reversing valve              | 13: Temperature probe for condenser outlet |
| 6: Crankcase heating                  | 14: Temperature probe for heat gas line    |
| 7: Condensate tray heating            | ---: Optional                              |

# Outdoor unit RXT 685 DC AT

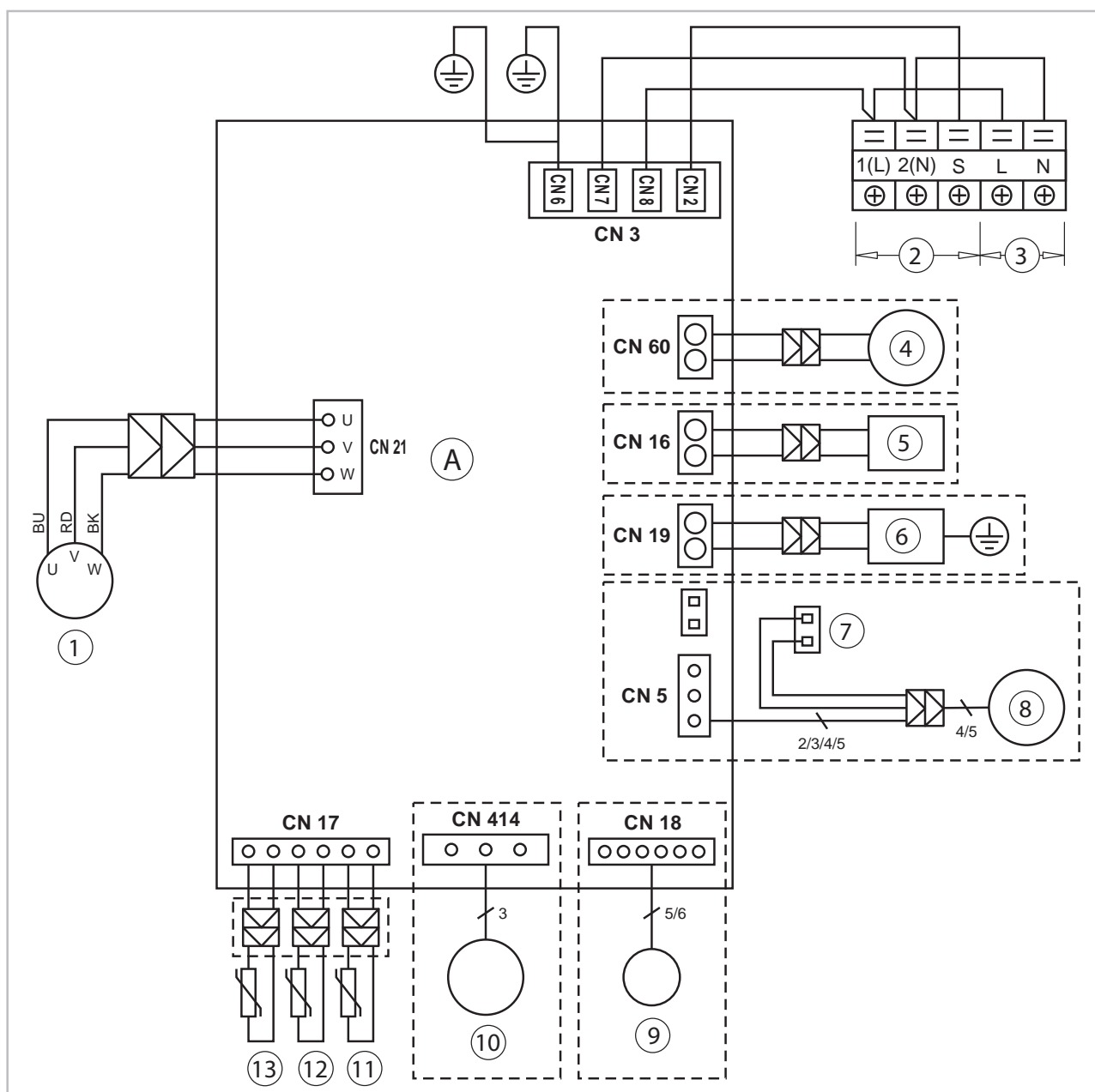


Fig. 50: Electrical drawings

- |                                       |  |
|---------------------------------------|--|
| A: Control board                      | 8: AC fan                                  |
| 1: Compressor                         | 9: Electronic E-valve                      |
| 2: Connecting line to the indoor unit | 10: DC fan motor                           |
| 3: Power supply                       | 11: Air inlet temperature probe            |
| 4: 4-way reversing valve              | 12: Temperature probe for condenser outlet |
| 5: Crankcase heating                  | 13: Temperature probe for heat gas line    |
| 6: Condensate tray heating            | ---: Optional                              |
| 7: Capacitor                          |  |

# REMKO RXT series

## Outdoor unit RXT 1055-1405 DC AT

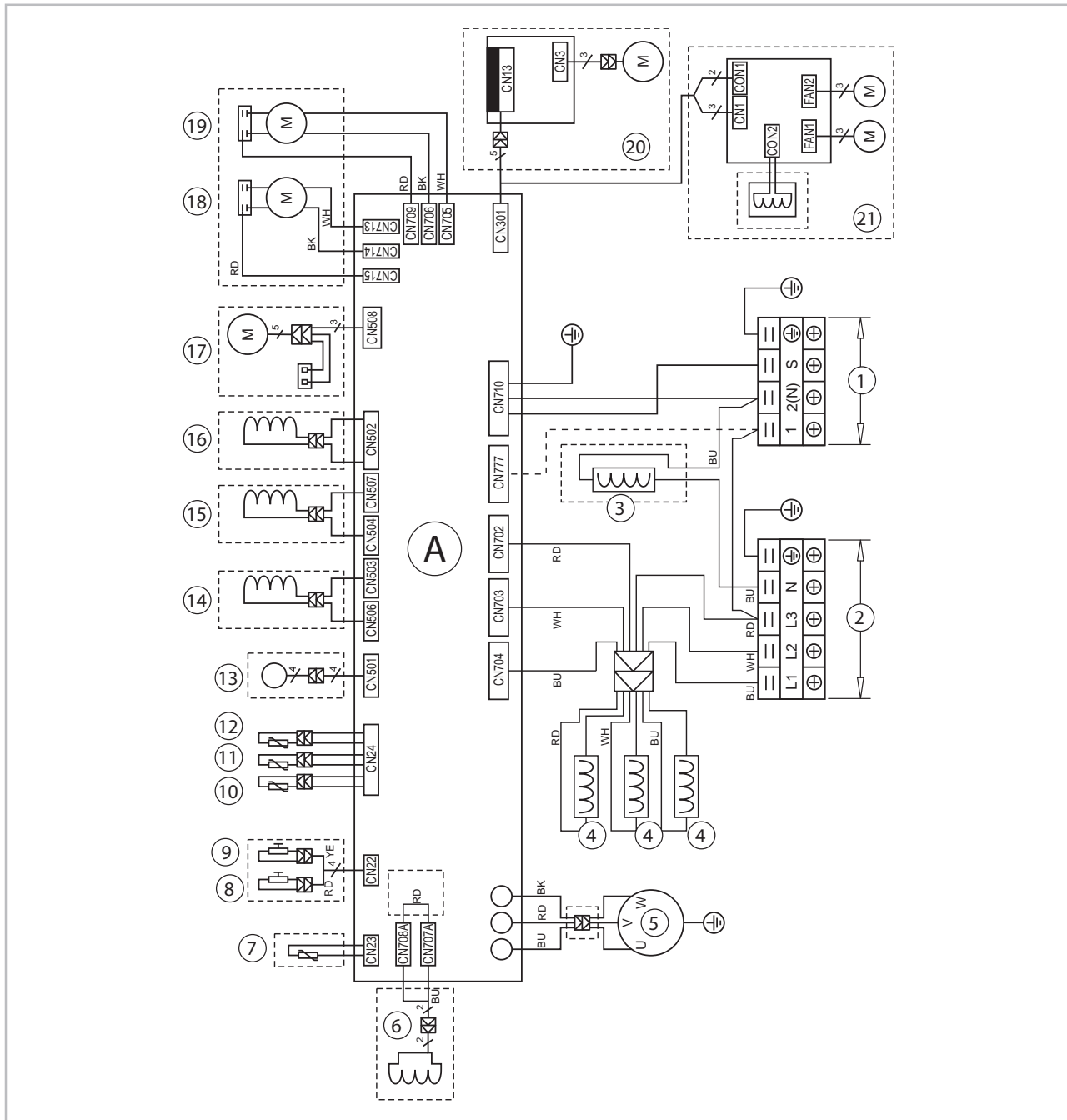


Fig. 51: Electrical drawings

- |   |                                       |
|---|---------------------------------------|
| A: Control board                          | 8: Crankcase heating                  |
| B: Inverter board                         | 9: 4-way reversing valve              |
| 1: Klaxon                                 | 10: Communication line to indoor unit |
| 2: Low pressure switch                    | 11: Power supply cable                |
| 3: High pressure switch                   | 12: Supply line to indoor unit        |
| 4: Air inlet temperature probe            | 13: DC fan motor                      |
| 5: Temperature probe for condenser outlet | 14: Compressor                        |
| 6: Temperature probe for heat gas line    | 15: Transformer                       |
| 7: Condensate tray heating                | ---: Optional                         |

## 9 Before commissioning

After leak testing has been successfully completed, connect the vacuum pump via the pressure gauge station to the valve connections on the outdoor unit (see chapter "Leak testing") and create a vacuum.

Perform the following checks prior to putting the unit into operation for the first time and after any work on the cooling cycle. Record the results in the commissioning report:

- Check all refrigerant piping and valves for leak-tightness using leak detection spray or soapy water.
- Check the refrigerant piping and insulation for damage.
- Check the electrical connection between the indoor unit and the outdoor unit for correct polarity.
- Check that all fastenings, mountings, etc. are firm and at the correct level.

## 10 Commissioning

### ! NOTICE!

Commissioning should only be performed by specially trained personnel and documented after the certificate has been issued. Observe the operating manuals for the indoor unit and outdoor unit when commissioning the entire system.

Once all the components have been connected and tested, the system can be put into operation. A functional check should be performed to verify its correct function and identify any unusual operating behaviour prior to handing it over to the operator.

### ! NOTICE!

Check that the shut-off valves and valve caps are tight after carrying out any work on the cooling cycle. Use appropriate sealant products as necessary.

### Functional checks and test run

Check the following points:

- Leak-tightness of the refrigerant piping.
- Compressor and fan running smoothly.
- In cooling mode, cold air output by the indoor unit, and warm air output by the outdoor unit.
- Function test of the indoor unit and all program sequences.
- Check of the surface temperature of the suction pipe and that the vaporiser is not overheating. To measure the temperature, hold the thermometer to the suction pipe and subtract the boiling point temperature reading on the pressure gauge from the measured temperature.
- Record the measured temperatures in the commissioning report.

# REMKO RXT series

## Function test of the cooling and heating modes

1. ➤ Remove the protective caps from the valves.
2. ➤ Start the commissioning procedure by briefly opening the shut-off valves on the outdoor unit until the pressure gauge indicates a pressure of approx. 2 bar.
3. ➤ Check all connections for leaks with leak detection spray and suitable leak detectors.
4. ➤ If no leaks are found, fully open the shut-off valves by turning them anti-clockwise using a spanner. If leaks are found, remedy the faulty connection. It is imperative that the vacuum creation and drying steps are repeated.
5. ➤ Activate the main circuit breaker or fuse.
6. ➤ Use the remote control to switch on the unit and select the cooling mode, maximum fan speed and lowest target temperature.
7. ➤ Check the overheating, outside, inside, outlet and vaporisation temperatures and record the measured values in the commissioning report. Check the correct function and settings of all regulation, control and safety devices.
8. ➤ Check the unit control system using the functions described in the chapter "Operation". Timer, temperature setting, fan speeds and switching to ventilation or dehumidification mode.
9. ➤ Check the correct function of the condensate drainage line by pouring distilled water into the condensate tray. A bottle with a spout is recommended for pouring the water into the condensate tray.
10. ➤ Switch the indoor unit to heating mode.
11. ➤ During the test run, check the functionality of all of the previously described safety devices.
12. ➤ Record the measured values into the commissioning report and familiarise the operator with the system.
13. ➤ Remove the pressure gauge. Check that seals have been fitted in the sealing caps.
14. ➤ Re-install all disassembled parts.

## 11 Shut-down

### Temporary shut-down

1. ➤ Allow the indoor unit to run for 2 to 3 hours in air circulation mode or in cooling mode at the maximum temperature setting in order to remove any residual moisture from the unit.
2. ➤ Shut down the system using the remote control.
3. ➤ Switch off the voltage supply to the unit.
4. ➤ Check the unit for visible signs of damage and clean it as described in the chapter "Care and maintenance"

### Permanent shut-down

Ensure that equipment and components are disposed of in accordance with the applicable regulations, e.g. through authorised disposal and recycling specialists or at collection points.

REMKO GmbH & Co. KG or your contractual partner will be pleased to provide a list of certified firms near you.

## 12 Troubleshooting, customer service and fault analysis

### 12.1 Troubleshooting and customer service

The unit and components are manufactured using state-of-the-art production methods and tested several times to verify their correct function. However, if malfunctions should occur, please check the functions as detailed in the list below. For systems with an indoor unit and outdoor unit, refer to the chapter "Troubleshooting and customer service" in both operating manuals. Please inform your dealer if the unit is still not working correctly after all function checks have been performed!

#### Operational malfunctions

Malfunction	Possible causes	Checks	Remedial measures
The unit does not start or switches itself off	Power failure, under-voltage, defective mains fuse / main switch in OFF position	Does all other electrical equipment function correctly?	Check the voltage and if necessary, wait for it to come back on
	Damaged power supply	Does all other elec. equipment function correctly?	Repair by specialist firm
	Wait time after switching on is too short	Have approx. 5 minutes elapsed since the restart?	Schedule longer wait times
	Temperature outside operating range	Are the fans in the indoor unit and outdoor unit working correctly?	Observe temperature ranges of indoor unit and outdoor unit
	Electrical surges caused by thunderstorms	Have there been lightning strikes in the area recently?	Switch off the mains breaker and switch it back on. Have it inspected by a specialist
	Malfunction of the external condensate pump	Has the pump shut down due to a malfunction?	Check and if necessary clean the pump
	High-pressure / low-pressure switches have triggered	Check refrigerant pressure and look for leaks if necessary	Rectify leakage and restart
The unit does not respond to the remote control	Transmission distance too far / receiver affected by interference	Does the indoor unit beep when pressing a key?	Reduce the distance to less than 6 m or change position
	Defective remote control	Is the unit running in manual mode?	Replace the remote control
	Receiver or transmitter unit exposed to excessive solar radiation	Does it function correctly in the shade?	Place the receiver and/or transmitter unit in the shade
	Electromagnetic fields are interfering with transmission	Does it function after removing potential sources of interference?	Signal is not transmitted when interference sources are operational
	Key in remote control jammed / two buttons pressed at same time	Does the "Transmitting" symbol appear on the display?	Release the key / only press one key
	Batteries in remote control are flat	Have new batteries been inserted? Is the display incomplete?	Insert new batteries

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Malfunction	Possible causes	Checks	Remedial measures
The unit is running but only provides reduced or no cooling or heating capacity	Filter is dirty / air inlet / outlet opening is blocked by debris	Have the filters been cleaned?	Clean the filters
	Windows and doors open. Heating / cooling load has increased	Have structural / usage modifications been made?	Close windows and doors / install additional units
	Neither cooling nor heating mode has been set	Does the cooling symbol appear on the display?	Correct the settings for the unit
	Fins on outdoor unit blocked by foreign objects	Is the fan on the outdoor component running? Are the fins unobstructed?	Check the fan or winter fan speed control, reduce the air resistance
	Leaking cooling cycle	Are there signs of frost on the exchanger fins of the indoor unit?	Repair by specialist
	Outdoor unit iced up	Check outdoor unit. Has the cassette probe on the outdoor unit been correctly positioned?	De-ice and fit the probe at the point where the most ice forms
Condensate discharge on unit	Drainage pipe on collection container clogged / damaged	Can the condensate drain off without any obstruction?	Clean the drainage pipe and collection container
	Faulty external condensate pump or float	Is the collection tray full of water and the pump not running?	Call out a specialist to replace the pump
	Condensate has not drained away and has collected in the condensate drainage line	Is there an incline on the condensate drainage line? Check there is no blockage in the pipe.	Route the condensate drainage line with an incline and clean
	Condensate does not drain off	Are the condensate drainage lines unblocked and is there a steady incline? Are the condensate pump and liquid level switch functioning correctly?	Route the condensate drainage line with an incline and clean it. If the liquid level switch or the condensate pump is defective, have them replaced
	Float is stuck or jammed due to excessive dirt	Are the LEDs on the receiver unit of the indoor unit flashing?	Should be cleaned by specialist firm

## NOTE

*If the outdoor unit makes noises at low outside temperatures, even although it is switched off, this is not a malfunction. This is the winding of the compressor being run briefly in order to heat up the oil within it and also to guarantee the viscosity at low ambient temperatures. If you do not use the unit in the winter then you can switch off the breaker. Switch it back on again at least 12 hours before the next time that the unit will be required!*

# Malfunction indicated by flashing code RXT 525-1405 DC

Error description	Number of flashes per second)	LED timer	Error code
EEPROM error, indoor unit	1	OFF	E0
Communication error between indoor unit and outdoor unit	2	OFF	E1
Evaporator fan motor speed control not OK	4	OFF	E3
Room air temperature probe faulty	5	OFF	E4
Evaporator temperature probe faulty	6	OFF	E5
No cooling capacity after 30 minutes	7	OFF	EC
Condensate pump liquid level switch triggered	8	OFF	EE
Safety shut-down due to increased power consumption	1	ON	F0
Outdoor unit air inlet temperature probe faulty	2	ON	F1
Condenser outlet temperature probe faulty	3	ON	F2
Temperature probe for heat gas line faulty	4	ON	F3
EEPROM error, outdoor unit	5	ON	F4
Condenser fan speed control not OK	6	ON	F5
Suction pipe temperature probe in AT faulty	7	ON	F6
Inverter error	1	FLASHES	P0
Over/undervoltage error	2	FLASHES	P1
Safety shut-down compressor excess temperature	3	FLASHES	P2
Safety shut-down due to low outside temperature	4	FLASHES	P3
Compressor control faulty	5	FLASHES	P4
Mode conflict	6	FLASHES	P5
Low pressure alarm	7	FLASHES	P6

# REMKO RXT series

## Probe resistance

Indoor unit probe, evaporator; indoor unit probe, ambient air

Temperature [°C]	Resistance [kΩ]
0	35.20
5	26.88
10	20.72
15	16.12
20	12.64
25	10.00
30	7.97
35	6.40

## 12.2 Indoor unit fault analysis

<b>Error code:</b>	<b>E0 / F4</b>
<b>Reason:</b>	The control board of the outdoor unit or indoor unit cannot read the unit memory (EEPROM)
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Installation error</li> <li>■ Control boards of outdoor unit or indoor unit defective</li> </ul>

Switch off voltage, switch on again 2 minutes later. Is the error still present?	
↓YES	
Replace the circuit boards of the outdoor unit and indoor unit in turn, in order to locate the defective EEPROM	

<b>Error code:</b>	<b>E1</b>
<b>Reason:</b>	The indoor unit does not receive a signal from the outdoor unit within 110 seconds.
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Electrical connection not configured correctly</li> <li>■ Control boards outdoor unit or indoor unit defective</li> </ul>

Switch off voltage, switch on again 2 minutes later. Is the error still present?		
↓YES		
Measure the voltage between the "S" and "N" terminals of the outdoor unit. Is the measured value positive?	NO →	Check electrical connections in the indoor unit. Are they OK?
↓YES		↓YES
Check electrical connections in the outdoor unit. Are they OK?		Replace the control boards of the indoor unit. Is the fault remedied?
↓YES		↓NO
Is the transformer OK?		Replace the control boards of the outdoor unit
	NO →	Replace the transformer
↓YES		
Replace the control boards of the outdoor unit. Is the fault remedied?		
↓NO		
Replace the control boards of the indoor unit		

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<b>Error code:</b>	<b>E3 / F5</b>
<b>Reason:</b>	If the fan speed of the indoor unit/outdoor unit falls below 300 rpm, the unit switches off and the display shows error code E3 or E5
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Electrical connection faulty</li> <li>■ Evaporator fan wheel defective</li> <li>■ Evaporator fan motor defective</li> <li>■ Control board faulty</li> </ul>

Switch off voltage, switch on again 2 minutes later. Is the error still present?	NO →	The unit operates normally.
↓YES		
De-energise the unit and attempt to turn the fan wheel by hand. Does it rotate freely?	NO →	Check the motor and the fan wheel bearing, and replace the defective parts.
↓YES		
Check the electrical connections. Are these correctly implemented?	NO →	Correctly establish the electrical connection
↓YES		
Measure the voltage at the corresponding connector plug on the control board (see section <i>Procedure</i> on page 51). Does the measured voltage lie within the tolerance range?	NO →	Replace the control board.
↓YES		
Replace the fan motor. Is the fault remedied?	NO →	

## Procedure

DC fan motor of the indoor unit (control chip is installed in the motor):

Switch on the voltage to the unit. In standby mode, measure the unit between terminals 1-3 and 4-3 of the connector plug. Check the measured values against those listed in the table below. If these differ, there is a problem with the control board and it must be replaced.

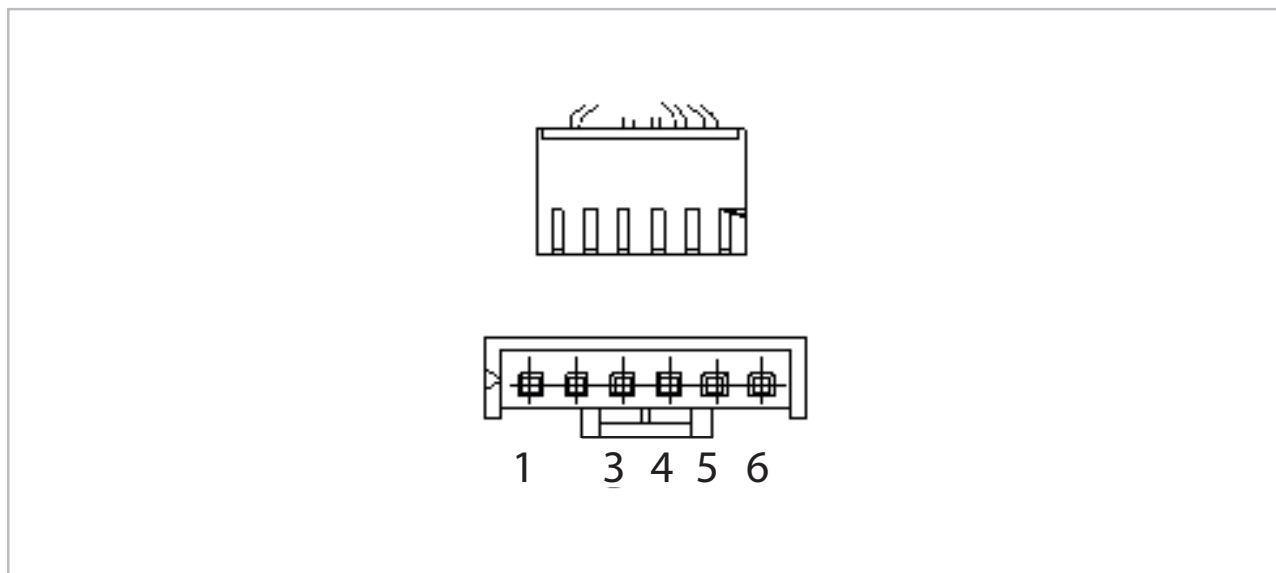


Fig. 52: Motor measurements

Terminal	Colour	Voltage
1	Red	280V~380 V
2	---	---
3	Black	0 V
4	White	17-17.5V
5	Yellow	0~5.6V
6	Blue	17-17.5V

DC fan motor of the outdoor unit (control chip is installed in the motor):

Measure the resistance between terminals 1-3 and 4-3. This should be roughly identical. If the resistance deviates significantly, assume that the motor is defective and must be replaced.

# REMKO RXT series

<b>Error code:</b>	<b>EC</b>
<b>Reason:</b>	The evaporator probe T2 measures the actual value with the compressor start and takes this as the reference value $T_{Start}$ . If, 5 minutes after the compressor start, the value $T_{Start}$ has not dropped by 2 °C for at least 4 seconds then the system assumes that the refrigerant is low. The measurement is performed a total of 3 times before the display shows the error code "EC".
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Refrigerant low or cooling circuit blocked</li> <li>■ Evaporator probe T2 defective</li> <li>■ Indoor unit control board defective</li> </ul>

Switch off voltage, switch on again 2 minutes later. Is the error still present?		
↓YES		
Check whether the indoor unit blows out cold air.	JOO →	Check the position and function of the evaporator probe T2. Is it correctly seated and with the correct resistance?
↓NO		↓YES
Check the cooling circuit for leaks. Leaks found?		Exchange the control boards of the indoor unit.
	JOO →	Remedy leaks and put the unit back into operation.
↓NO		
Check the cooling circuit for any blockages. Are the shut-off valves on the outdoor unit open?		

<b>Error code:</b>	<b>E4 / E5 / F1 / F2 / F3</b>
<b>Reason:</b>	If the test voltage of the probes is lower than 0.06 V or higher than 4.94 V then the display shows the error code of the corresponding probe.
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Electrical connection faulty</li> <li>■ Temperature probe defective</li> <li>■ Control board defective</li> </ul>

Check the connecting cable between the control board and the temperature probe. Is it OK and correctly connected?	NO ↓	Establish a proper connection.
↓YES		
Check the probe for correct resistance, depending on the temperature (see resistance table)	NO ↓	Replace the probe.
↓YES		
Replace the corresponding control board.		

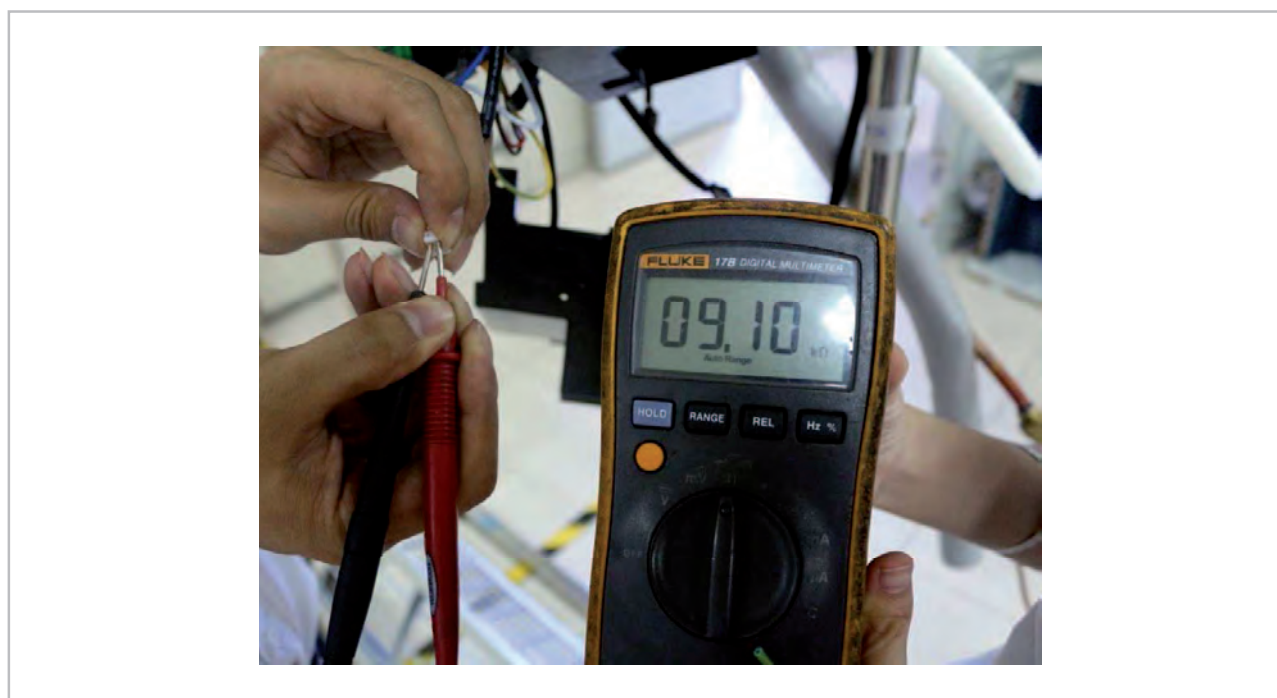


Fig. 53: Check the probes

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<b>Error code:</b>	<b>F0</b>
<b>Reason:</b>	Safety shutdown due to overly high current consumption of individual unit components
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Faulty power supply</li> <li>■ Cooling circuit blocked</li> <li>■ Faulty control board</li> <li>■ Electrical connections faulty</li> <li>■ Compressor defective</li> </ul>

Check the supply voltage. Is this correct?	<b>NO</b> →	Switch the unit off and ensure correct supply voltage.
↓YES		
Check the cooling circuit for any blockages. Is the cooling circuit OK?	<b>NO</b> →	Remove the blockage (shut-off valve open?)
↓YES		
Check the winding resistances of the compressor. Are they OK?	<b>NO</b> →	Replace the compressor.
↓YES		
Check the electrical connections. Are these correctly implemented?	<b>NO</b> →	Replace or correct the electrical connections.
↓YES		
Does the transformer operate fault-free?	<b>NO</b> →	Replace the transformer or control boards of the outdoor unit.
↓YES		
Replace the outdoor unit.		

<b>Error code:</b>	<b>P0</b>
<b>Reason:</b>	If the power supply to the compressor controller is faulty, the display shows the error code "P0" and the unit switches off
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Electrical connection faulty</li> <li>■ Faulty control board</li> <li>■ Condenser fan motor defective or blocked</li> <li>■ Compressor defective</li> </ul>

Check the connecting cables between the control board and compressor? Are they faulty?	<b>JO</b> →	Establish a correct connection between the control board and compressor.
↓NO		
Check the inverter controller (see section <i>↗ 'Check the inverter controller' on page 55</i> ). Fault eliminated?	<b>NO</b> →	Replace the control board.
↓YES		
Check the condenser fan motor. Is it working correctly?	<b>NO</b> →	See troubleshooting fault F5
↓YES		
Check the winding resistances of the compressor. Are they OK?	<b>NO</b> →	Replace the compressor.
↓YES		
Exchange the control boards of the outdoor unit.		

### Check the inverter controller

Switch off the power supply to the unit. Wait until the capacitors are fully discharged and disconnect the compressor from the control board.

Check the resistances at the outputs of the control board with the aid of a digital voltmeter as follows:

Voltmeter		Normal resistance
(+) Red	(-) Black	
U	N	∞ (multiple MΩ)
V		
W		
(+) Red		

# REMKO RXT series

<b>Error code:</b>	<b>P1</b>
<b>Reason:</b>	Overvoltage or undervoltage protection has tripped
<b>Cause:</b>	<ul style="list-style-type: none"> <li>■ Faulty supply voltage</li> <li>■ Refrigerant low or cooling circuit blocked</li> <li>■ Faulty control board</li> </ul>

Check the power supply. Is the supply voltage correct?	<b>NO</b> →	Switch the unit off and have the power supply checked/corrected.
↓YES		
Check the electrical connections. Are they OK?	<b>NO</b> →	Replace the electrical connections.
↓YES		
Switch the power on and put the unit into standby mode. Measure the voltage on the board, at contacts "P" and "N". This should be approx. 310 V, 340 V or 380 V DC. Now start the unit. The voltage between "P" and "N" should now be between 220-400V. Is the correct voltage applied?	<b>NO</b> →	Replace the control board.
↓YES		
Check the transformer. Is a defect present?	<b>NO</b> →	Replace the control board.
↓YES		
Replace the transformer.		

<b>Error code:</b>	<b>P2 (with units with a thermal contact)</b>
<b>Reason:</b>	If the test voltage of the thermal contact does not lie at 5 V, then the display shows the error message "P2"
<b>Cause:</b>	<ul style="list-style-type: none"> <li>Faulty supply voltage</li> <li>Refrigerant low or cooling circuit blocked</li> <li>Faulty control board</li> </ul>

Check the air flow volumes of the indoor unit and outdoor unit. Are they blocked or dirty?	JOO →	Clean the filter or heat exchanger and ensure a sufficient air flow volume.	
↓NO			
Switch off the power supply to the unit and switch it on again after 10 mins. Does the unit start up?			
↓YES			
Check the temperature of the compressor. Has it heated up?	NO →	Check the thermal contact. Is it correctly connected?	
		↓YES	↓NO
		Measure the resistance of the thermal contact. Is it 0?	Connect it correctly.
↓YES	↓YES	NO →	Replace the thermal contact.
Check the cooling circuit. Is it OK?	JOO →	Replace the control board of the outdoor unit.	

# REMKO RXT series

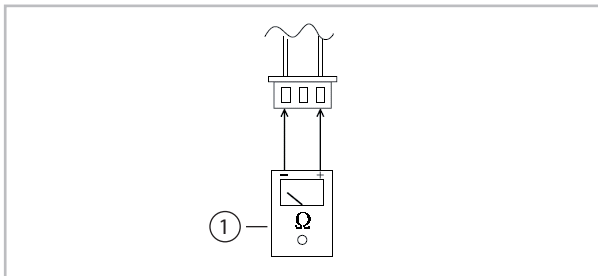
<b>Error code:</b>	<b>P4</b>
<b>Reason:</b>	Safety shutdown of inverter controller. Internal system monitoring triggered (e.g. communication problem between board and compressor, the compressor speed is not OK)
<b>Cause:</b>	<ul style="list-style-type: none"> <li>Faulty electrical connections</li> <li>Inverter regulation on board defective</li> <li>Condenser fan motor defective</li> <li>Compressor defective</li> <li>Control board defective</li> </ul>

Check the electrical connection between the control board and compressor. Are these correctly implemented?	<b>JOO</b> →	Establish a proper connection.
↓NO		
Check the inverter controller. Is this functional?	<b>NO</b> →	Replace the control board.
↓YES		
Check the condenser fan motor. Is it OK?	<b>NO</b> →	Follow the instructions for troubleshooting fault F5
↓YES		
Check the winding resistances of the compressor. Are they OK?	<b>NO</b> →	Replace the compressor
↓YES		
Replace the control boards of the outdoor unit.		

## Check individual components

### Check the temperature probes

Disconnect the temperature probe from the control board and measure the resistance on the plug's contacts.



1: Multimeter

<b>Error code:</b>	<b>dF</b>
<b>Reason:</b>	The unit is in heating mode and the outdoor unit is being defrosted. After the defrost phase, the indoor unit automatically switches back to the last operating mode.

## 12.3 Resistances of the temperature probes

Probe T1, T2, T3 and T4

Temp. (°C)	Resistance (kΩ)	Temp. (°C)	Resistance (kΩ)
-20	115.27	12	18.72
-19	108.15	13	17.80
-18	101.52	14	16.93
-17	96.34	15	16.12
-16	89.59	16	15.34
-15	84.22	17	14.62
-14	79.31	18	13.92
-13	74.54	19	13.26
-12	70.17	20	12.64
-11	66.09	21	12.06
-10	62.28	22	11.50
-9	58.71	23	10.97
-8	56.37	24	10.47
-7	52.24	25	10.00
-6	49.32	26	9.55
-5	46.57	27	9.12
-4	44.00	28	8.72
-3	41.59	29	8.34
-2	39.82	30	7.97
-1	37.20	31	7.62
0	35.20	32	7.29
1	33.33	33	6.98
2	31.56	34	6.68
3	29.91	35	6.40
4	28.35	36	6.13
5	26.88	37	5.87
6	25.50	38	5.63
7	24.19	39	5.40
8	22.57	40	5.18
9	21.81	41	4.96
10	20.72	42	4.76
11	19.69	43	4.57

Temp. (°C)	Resistance (kΩ)	Temp. (°C)	Resistance (kΩ)
44	4.39	79	1.21
45	4.21	80	1.17
46	4.05	81	1.14
47	3.89	82	1.10
48	3.73	83	1.06
49	3.59	84	1.03
50	3.45	85	1.00
51	3.32	86	0.97
52	3.19	87	0.94
53	3.07	88	0.91
54	2.96	89	0.88
55	2.84	90	0.85
56	2.74	91	0.83
57	2.64	92	0.80
58	2.54	93	0.78
59	2.45	94	0.75
60	2.36	95	0.73
61	2.27	96	0.71
62	2.19	97	0.69
63	2.11	98	0.67
64	2.04	99	0.65
65	1.97	100	0.63
66	1.90	101	0.61
67	1.83	102	0.59
68	1.77	103	0.58
69	1.71	104	0.56
70	1.65	105	0.54
71	1.59	106	0.53
72	1.54	107	0.51
73	1.48	108	0.50
74	1.43	109	0.48
75	1.39	110	0.47
76	1.34	111	0.46
77	1.29	112	0.45
78	1.25	113	0.43

# REMKO RXT series

Temp. (°C)	Resistance (kΩ)	Temp. (°C)	Resistance (kΩ)
114	0.42	127	0.30
115	0.41	128	0.29
116	0.40	129	0.28
117	0.39	130	0.28
118	0.38	131	0.27
119	0.37	132	0.26
120	0.36	133	0.26
121	0.35	134	0.25
122	0.34	135	0.25
123	0.33	136	0.24
124	0.32	137	0.23
125	0.32	138	0.23
126	0.31	139	0.22

## Probe T5

Temp. (°C)	Resistance (kΩ)	Temp. (°C)	Resistance (kΩ)
-20	542.7	-2	200.7
-19	511.9	-1	190.5
-18	483.0	0	180.9
-17	455.9	1	171.9
-16	430.5	2	163.3
-15	406.7	3	155.2
-14	384.3	4	147.6
-13	363.3	5	140.4
-12	343.6	6	133.5
-11	325.1	7	127.1
-10	307.7	8	121.0
-9	291.3	9	115.2
-8	275.9	10	109.8
-7	261.4	11	104.6
-6	247.8	12	99.69
-5	234.9	13	95.05
-4	222.8	14	90.66
-3	211.4	15	86.49

Temp. (°C)	Resistance (kΩ)	Temp. (°C)	Resistance (kΩ)
16	82.54	51	18.96
17	78.79	52	18.26
18	75.24	53	17.58
19	71.86	54	16.94
20	68.66	55	16.32
21	65.62	56	15.73
22	62.73	57	15.16
23	59.98	58	14.62
24	57.37	59	14.09
25	54.89	60	13.59
26	52.53	61	13.11
27	50.28	62	12.65
28	48.14	63	12.21
29	46.11	64	11.79
30	44.17	65	11.38
31	42.33	66	10.99
32	40.57	67	10.61
33	38.89	68	10.25
34	37.30	69	9.90
35	35.78	70	9.57
36	34.32	71	9.25
37	32.94	72	8.94
38	31.62	73	8.64
39	30.36	74	8.36
40	29.15	75	8.08
41	28.00	76	7.82
42	26.90	77	7.57
43	25.86	78	7.32
44	24.85	79	7.09
45	23.89	80	6.86
46	22.89	81	6.64
47	22.10	82	6.43
48	21.26	83	6.23
49	20.46	84	6.03
50	19.69	85	5.84

Temp. (°C)	Resistance (kΩ)	Temp. (°C)	Resistance (kΩ)
86	5.66	109	2.86
87	5.49	110	2.78
88	5.32	111	2.70
89	5.16	112	2.63
90	5.00	113	2.56
91	4.85	114	2.49
92	4.70	115	2.42
93	4.56	116	2.36
94	4.43	117	2.29
95	4.29	118	2.23
96	4.17	119	2.17
97	4.05	120	2.12
98	3.93	121	2.06
99	3.81	122	2.01
100	3.70	123	1.96
101	3.60	124	1.91
102	3.49	125	1.86
103	3.39	126	1.81
104	3.30	127	1.76
105	3.20	128	1.72
106	3.11	129	1.67
107	3.03	130	1.63
108	2.94		

# REMKO RXT series

## 13 Care and maintenance

Regular care and observation of some basic points will ensure trouble-free operation and a long service life.



### DANGER!

Prior to performing any work, ensure the equipment is disconnected from the voltage supply and secured to prevent accidental switch-on!

### Care

- Ensure the unit is protected against dirt, mould and other deposits.
- Only clean the unit using a damp cloth. Do not use any caustic, abrasive or solvent-based cleaning products. Do not use a jet of water.
- Clean the fins on the unit prior to long shut-down periods.

### Maintenance

- It is recommended that you take out a maintenance contract with an annual service from an appropriate specialist firm.



*This enables you to ensure the operational reliability of the plant at all times!*

- For systems which operate year-round (e.g. in server rooms), the maintenance intervals must be reduced accordingly.



### NOTICE!

Statutory regulations require an annual leak test for the cooling cycle dependant on the refrigerant quantity. Inspection and documentation of the work performed is to be carried out by specialist technicians.

Type of task	Commissioning	Monthly	Half-yearly	Yearly
Checks/maintenance/inspection				
General	●			●
Check voltage and current	●			●
Check function of compressor/fans	●			●
Dirt on condenser/evaporator	●	●		
Check the refrigerant volume	●		●	
Check condensate drainage	●		●	
Check insulation	●			●
Check moving parts	●			●
Sealing test for cooling cycle	●			● <sup>1)</sup>

<sup>1)</sup> see note

### Cleaning the housing

1. ➤ Disconnect the power supply to the unit.
2. ➤ Open the air inlet grill on the front side and fold it forwards or backwards.
3. ➤ Clean the grill and cover with a soft, damp cloth.
4. ➤ Close the grill.
5. ➤ Switch the power supply back on.

### Air filter for indoor unit

Clean the air filter at intervals of no more than 2 weeks. Reduce this interval if the air is especially dirty.

### Cleaning the filter

1. ➤ Disconnect the power supply to the unit.
2. ➤ Open the front side of the unit by folding the grill down/forwards (Fig. 54).
3. ➤ Pull the filter out in an upwards direction (Fig. 54).
4. ➤ Clean the filter with a commercially available vacuum cleaner. To do so, turn the dirty side so it is facing upwards (Fig. 55).
5. ➤ Dirt can also be removed by carefully cleaning with lukewarm water and mild cleaning agents (Fig. 56). The dirty side should be face down.
6. ➤ If water is used, let the filter dry out properly in the air before fitting it back into the unit.
7. ➤ Carefully insert the filter. Ensure that it locates correctly.
8. ➤ Close the front side as described above in reverse order.
9. ➤ Switch the power supply back on.
10. ➤ Switch the unit back on.



Fig. 55: Cleaning with a vacuum cleaner



Fig. 56: Cleaning with lukewarm water

### Cleaning the condensate pump (accessories)

The indoor unit may contain an optional integrated or separate condensate pump, which pumps out any accumulated condensate into higher positioned drains.

Observe the care and maintenance instructions in the separate operating manual

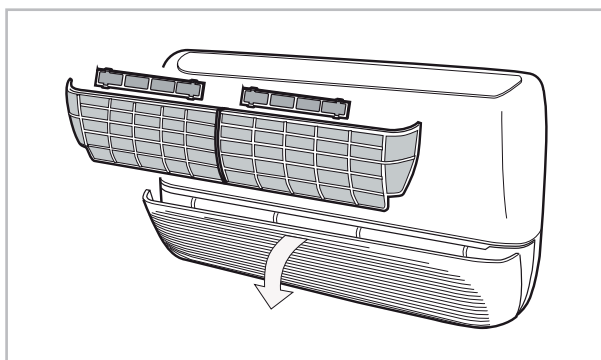


Fig. 54: Fold the guard forwards

# REMKO RXT series

## 14 Exploded view and spare parts lists

### 14.1 Exploded view - Indoor unit RXT 525-685 DC

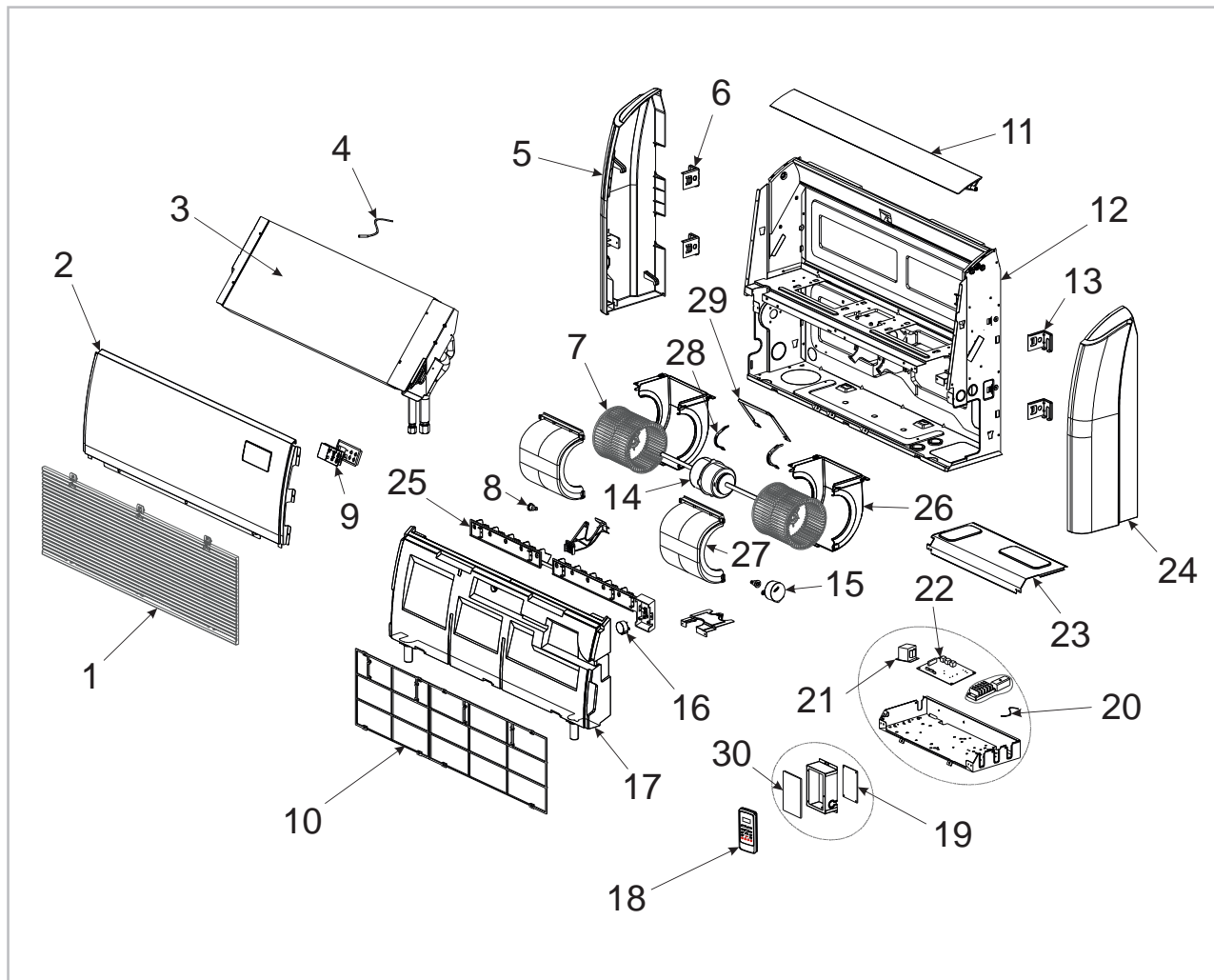


Fig. 57: Exploded view of the unit RXT 525-685 DC IT

We reserve the right to modify the dimensions and design as part of the ongoing technical development process.

## 14.2 Spare parts list - Indoor unit RXT 525-685 DC



### **IMPORTANT!**

*To ensure the correct delivery of spare parts, please always the device type with the corresponding serial number (see type plate)*

No.	Designation
1	Air inlet grill
2	Front panel
3	Evaporator
4	Temperature probe, evaporator
5	Side covering, left
6	Wall bracket, left
7	Fan wheel
8	Fastening protection
9	Display board
10	Air filter
11	Air outlet fins
12	Housing
13	Wall bracket, right
14	Fan motor
15	Fin motor
16	Fin motor (vertical)
17	Condensate tray
18	Infrared remote control
19	Inverter module
20	Temperature probe, indoor air
21	Transformer
22	Control board
23	E-box cover
24	Side covering, right
25	Air outlet fin (vertical)
26	Fan casing (rear)
27	Fan casing (front)
28	Fan motor mount
29	Fan motor mounting plate
30	Cooling fin

# REMKO RXT series

## 14.3 Exploded view - Indoor unit RXT 1055-1405 DC

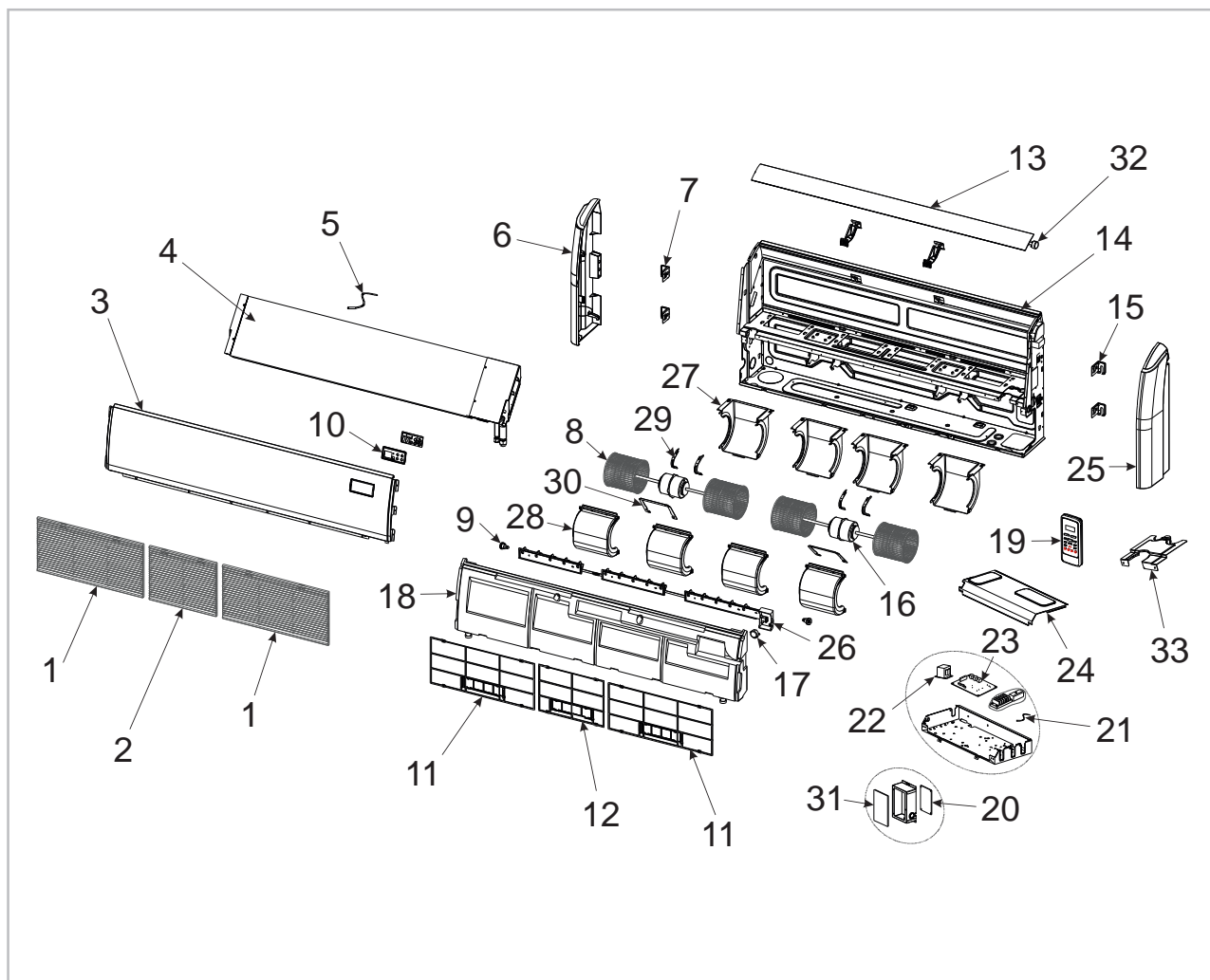


Fig. 58: Exploded view of the unit RXT 1055-1405 DC IT

We reserve the right to modify the dimensions and design as part of the ongoing technical development process.

#### 14.4 Spare parts list - Indoor unit RXT 1055-1405 DC

No.	Designation
1	Air inlet grill (large)
2	Air inlet grill (small)
3	Front panel
4	Evaporator
5	Temperature probe, evaporator
6	Side covering, left
7	Wall bracket, left
8	Fan wheel
9	Fastening protection
10	Display board
11	Air filter (large)
12	Air filter (small)
13	Air outlet fins
14	Housing
15	Wall bracket, right
16	Fan motor
17	Fin motor (vertical)
18	Condensate tray
19	Infrared remote control
20	Inverter module
21	Temperature probe, indoor air
22	Transformer
23	Control board
24	E-box cover
25	Side covering, right
26	Air outlet fin (vertical)
27	Fan casing (rear)
28	Fan casing (front)
29	Fan motor mount
30	Fan motor mounting plate
31	Cooling fin
32	Fin motor
33	Refrigerant connections cover

# REMKO RXT series

## 14.5 Exploded view - Outdoor unit RXT 525 DC

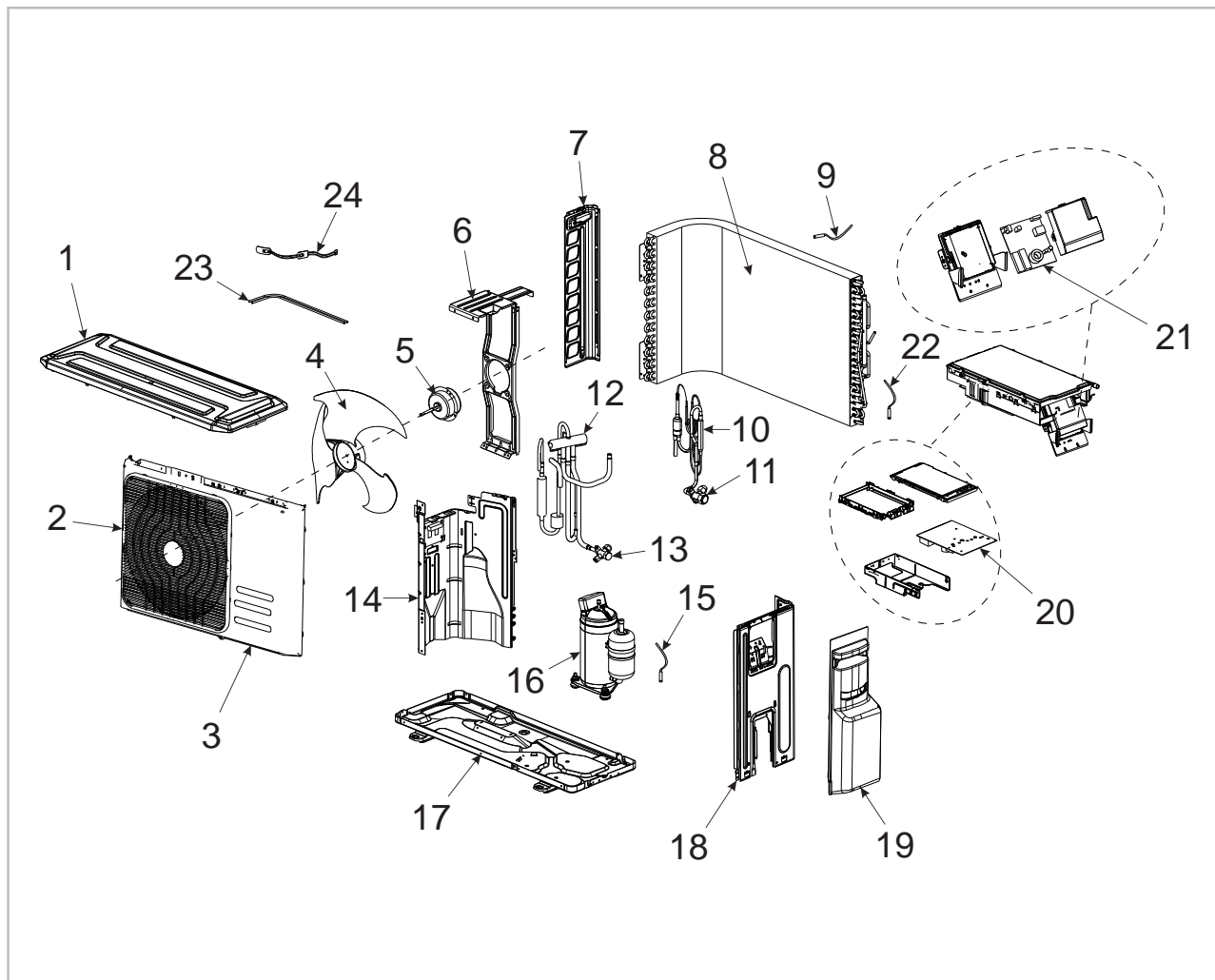


Fig. 59: Exploded view of the unit RXT 525 DC AT

We reserve the right to modify the dimensions and design as part of the ongoing technical development process.

## 14.6 Spare parts list - Outdoor unit RXT 525 DC



### **IMPORTANT!**

*To ensure the correct delivery of spare parts, please always the device type with the corresponding serial number (see type plate)*

No.	Designation
1	Cover panel
2	Protection grid, front wall
3	Front panel
4	Fan blade
5	Fan motor
6	Fan motor mounting plate
7	Corner panel, left
8	Condenser
9	Air inlet temperature probe
10	Electronic injection valve
11	Shut-off valve, injection pipe
12	4-way reversing valve
13	Shut-off valve, suction pipe
14	Partitioning panel
15	Temperature probe for heat gas line
16	Compressor
17	Floor panel
18	Side panel, right
19	Refrigerant connections cover
20	Control board
21	Auxiliary circuit board
22	Temperature probe for condenser outlet
23	Condensate tray heating
24	Crankcase heating



## 14.8 Spare parts list - Outdoor unit RXT 685 DC

No.	Designation
1	Cover panel
2	Protection grid, front wall
3	Front panel
4	Fan blade
5	Fan motor
6	Fan motor mounting plate
7	Corner panel, left
8	Condenser
9	Air inlet temperature probe
10	Electronic injection valve
11	Shut-off valve, injection pipe
12	4-way reversing valve
13	Shut-off valve, suction pipe
14	Partitioning panel
15	Temperature probe for heat gas line
16	Compressor
17	Floor panel
18	Side section, right
19	Refrigerant connections cover
20	Terminal block cover
21	Control board
22	Inverter board
23	Cooling fins
24	Temperature probe for condenser outlet
25	Mounting plate for refrigerant connections
26	Transformer
27	Condensate tray heating
28	Crankcase heating

# REMKO RXT series

## 14.9 Exploded view - Outdoor unit RXT 1055 DC

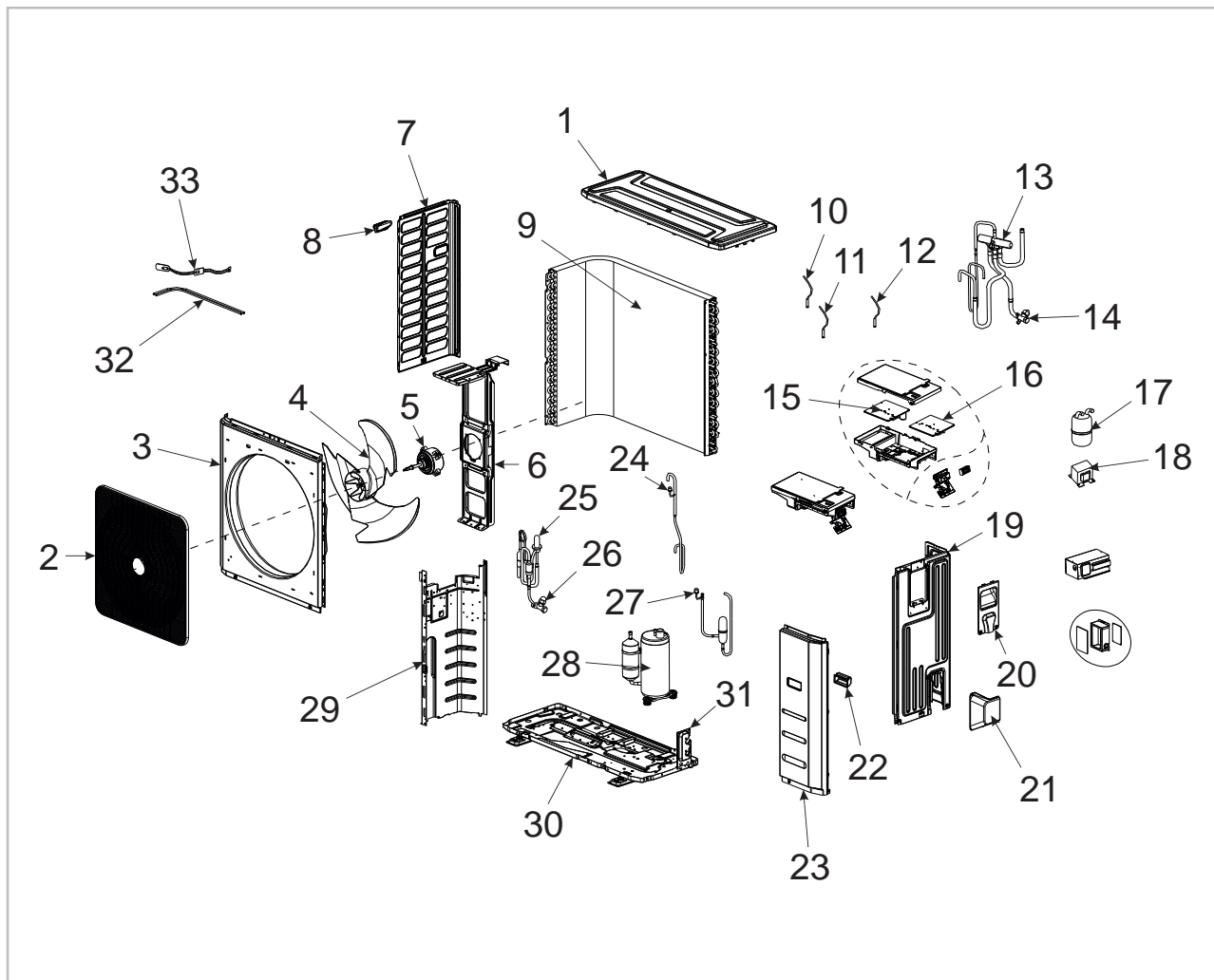


Fig. 61: Exploded view of the unit RXT 1055 DC AT

We reserve the right to modify the dimensions and design as part of the ongoing technical development process.

## 14.10 Spare parts list - Outdoor unit RXT 1055 DC

No.	Designation
1	Cover panel
2	Protection grid, front wall
3	Front panel
4	Fan blade
5	Fan motor
6	Fan motor mounting plate
7	Side panel, left
8	Recessed grip side panel, left
9	Temperature probe for condenser outlet
10	Temperature probe for condenser outlet
11	Temperature probe for heat gas line
12	Air inlet temperature probe
13	4-way reversing valve
14	Shut-off valve, suction pipe
15	Inverter board
16	Control board
17	Liquid separator
18	Transformer
19	Side panel, right
20	Terminal block cover
21	Shut-off valve cover
22	Recessed grip front panel, right
23	Front panel, right
24	Low pressure switch
25	Electronic injection valve
26	Shut-off valve, injection pipe
27	High pressure switch
28	Compressor
29	Partitioning panel
30	Floor panel
31	Shut-off valve mounting plate
32	Condensate tray heating
33	Crankcase heating

# REMKO RXT series

## 14.11 Exploded view - Outdoor unit RXT 1405 DC

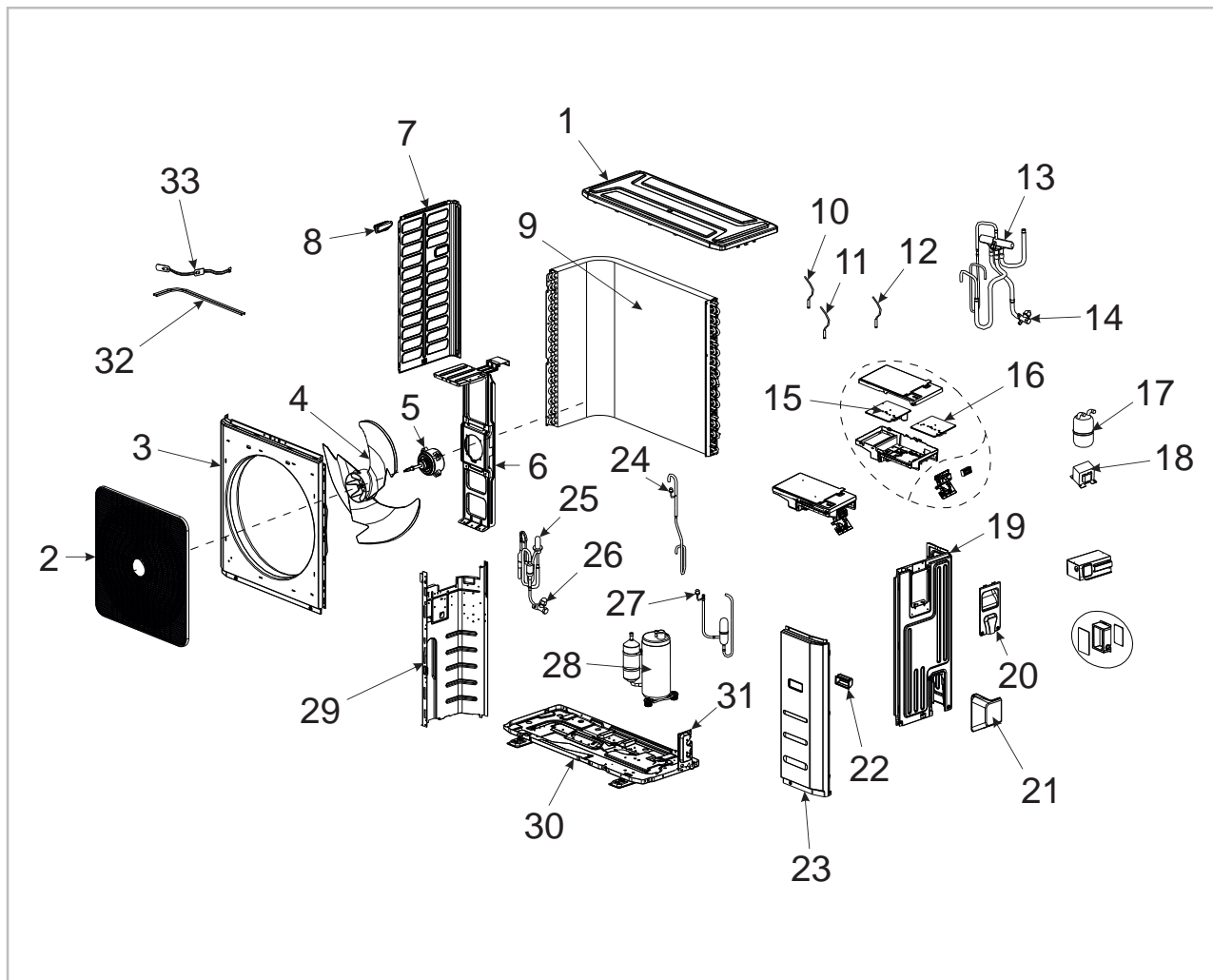


Fig. 62: Exploded view of the unit RXT 1405 DC AT

We reserve the right to modify the dimensions and design as part of the ongoing technical development process.

## 14.12 Spare parts list - Outdoor unit RXT 1405 DC

No.	Designation
1	Cover panel
2	Protection grid, front wall
3	Front panel
4	Fan blade
5	Fan motor
6	Fan motor mounting plate
7	Side panel, left
8	Condenser
9	4-way reversing valve
10	Shut-off valve, suction pipe
11	Partitioning panel
12	Shut-off valve, injection pipe
13	Air inlet temperature probe
14	Temperature probe for condenser outlet
15	Compressor
16	Control board
17	Floor panel
18	Shut-off valve mounting plate
19	Temperature probe for heat gas line
20	Auxiliary circuit board
21	High pressure switch
22	Inverter board
23	Transformer
24	Transformer
25	Front panel, right
26	Transformer
27	Low pressure switch
28	Liquid separator
29	Refrigerant connections cover
30	Condensate tray heating
31	Crankcase heating
32	Terminal block cover
33	Side panel, right

# REMKO RXT series

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# REMKO RXT series



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