PAC 3500

EN

OPERATING MANUAL
LOCAL AIR CONDITIONER

TROTEC
AT WORK.

TRT-BA-PAC3500-TC-003-EN

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Notes regarding the operating manual

Symbols

Danger!
Warns of a hazard which can lead to injuries.

Hazardous electric voltage!
Warns of a hazard resulting from electric voltage which can lead to injuries.

Caution!
Warns of a hazard which can lead to damage to property.

The current version of the operating manual can be found at: www.trotec.de

Legal notice

Information about the device

Description of the device

The primary purpose of the device is room cooling. It further filters and dehumidifies the air thus creating an agreeable room climate. In ventilation mode the device also provides the opportunity of air circulation without cooling effect. In dehumidification mode moisture is withdrawn from the air.

The device operates fully automatically and thanks to its microprocessor control features a multitude of further options, the device can, for instance, be switched on or off automatically with time delay via the timer function.

Handling the device can be conveniently accomplished via the control panel at the device or the supplied infrared remote control.

The device was designed for universal, flexible and uncomplicated application. Due to its compact dimensions it can be easily transported and used in all interior spaces.

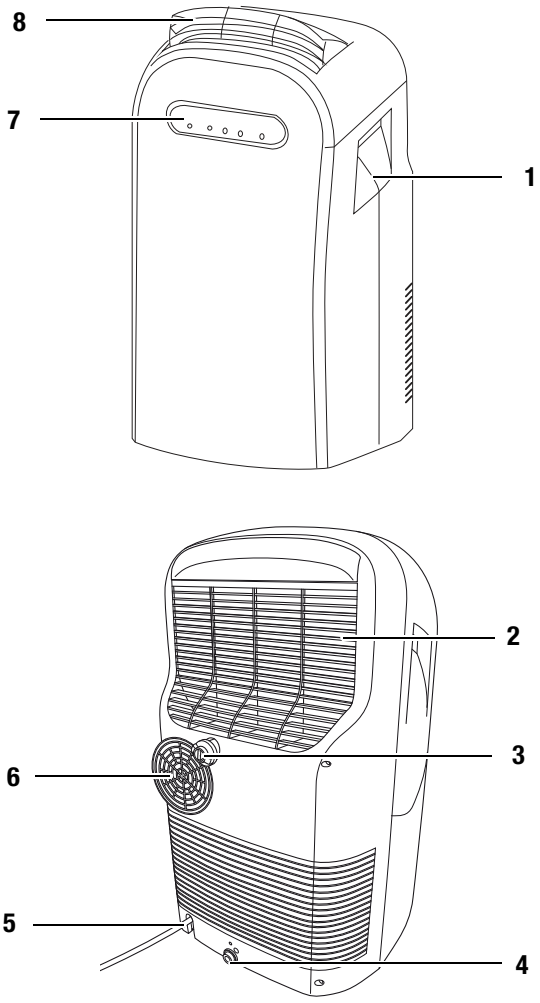
The air conditioner cools the room air by withdrawing warmth. The absorbed warmth is emitted to the outside via the exhaust air hose, cooled air is fed to the installation site by means of a fan.

Accumulating condensate trickles from the evaporator onto the hot condenser, there it evaporates and then is transported to the outside via the exhaust air hose.

Excess condensate is dripping from the condenser into a condensate trap and is there re-fed to the condenser by use of a paddle wheel, where it evaporates and is discharged along with the exhaust air flow.

A cooling agent sees to the transport of the absorbed warmth within the closed refrigerant circuit.

Device depiction

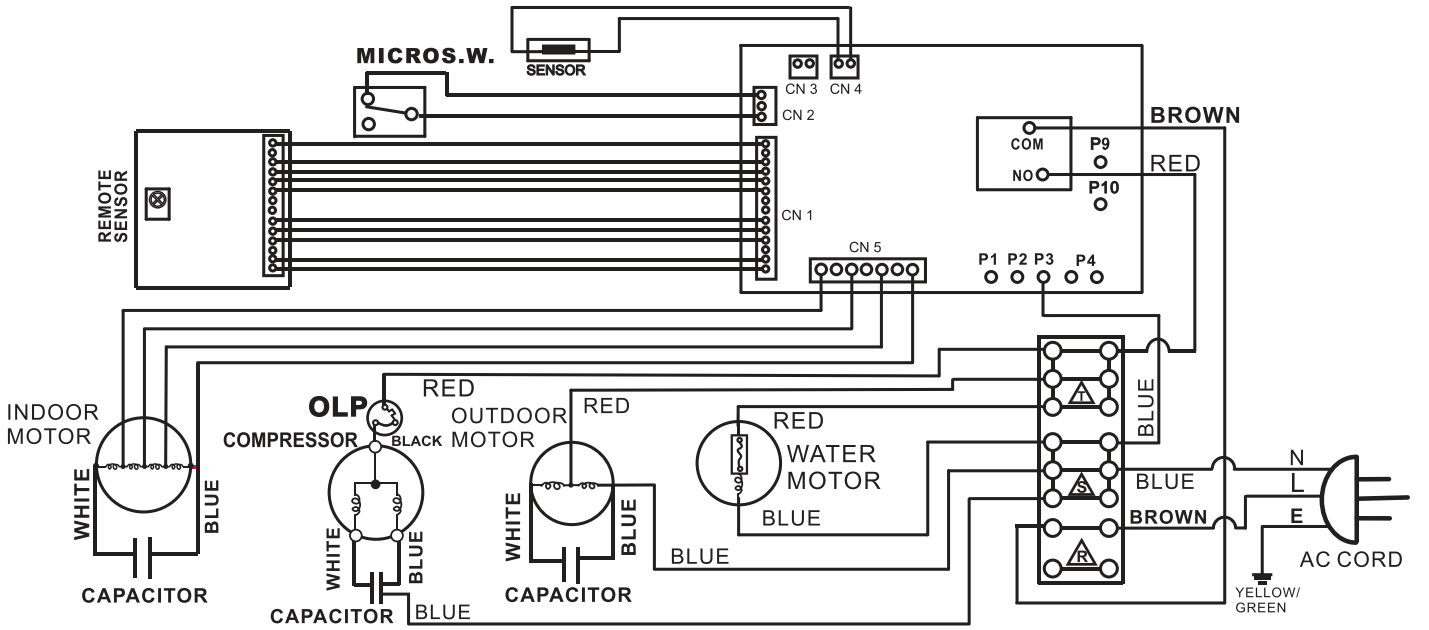


No.	Operating element
1	Recessed handle
2	Air inlet with air filter
3	Hose connector for condensate
4	Condensation drain
5	Mains power cable
6	Exhaust air connection
7	Control panel
8	Air flap

Technical data

Parameter	Value
Model	PAC 3500
Cooling capacity	3500 W
Dehumidifying capacity, max.	2.2 l/h
Operating temperature	16 to 35 °C
Air flow rate, max.	324 m^3/h
Electric connection	1/N/PE ~ 230 V, 50 Hz
Power consumption, max.	1.29 kW
Current consumption /fuse	5.76 A / 10 A
Refrigerant	R-410a
Amount of refrigerant	610 g
Weight	31.5 kg
Dimensions (height x depth x width)	770 mm x 388 mm x 435 mm
Minimum distance to walls or other objects	A: Top: 50 cm B: Rear: 50 cm C: Side: 50 cm D: Front: 50 cm
Sound pressure level at a distance of 3 m	max. 53 dB (A)

Wiring diagram



Safety

Carefully read the operating manual before using the device and keep it within reach!

- Do not use the device in potentially explosive rooms.
- Do not use the device in atmospheres containing oil, sulphur, chlorine or salt.
- Set the device up in an upright and stable position.
- Let the device dry out after a wet clean. Do not operate it when wet.
- Ensure that the air inlet and outlet are not obstructed.
- Ensure that the side of the device where the air inlet is found is kept free of dirt and loose objects.
- Never insert objects into the device.
- Do not cover or transport the device during operation.
- Ensure that all electric cables outside of the device are protected from damage (e.g. from animals).
- Only use extensions to the connecting cable which are appropriate to the device power consumption, the length of its cable and its use. Avoid electrical overload.
- Only transport the device in an upright position with an emptied condensation tank or condensation drain hose.
- Dispose of the collected condensation. Do not drink it. Health hazard!
- Observe the operating conditions (see chapter Technical data).

Intended use

Only use the device for cooling, ventilating and dehumidifying room air, while adhering to and following the technical data.

Improper use

Do not place the device on damp or flooded ground. Do not use the device outdoors. Do not place any objects, e.g. wet clothing, on the device for drying. Any unauthorised changes, modifications or alterations of the device are forbidden.

Personnel qualifications

People who use this device must:

- be aware of the dangers that occur when working with electric devices in damp areas.
- have read and understood the operating manual, especially the Safety chapter.

Residual risks

Hazardous electric voltage!
Work on the electrical components must only be carried out by an authorised specialist company!

Hazardous electric voltage!
Before any work on the device, remove the mains plug from the mains socket!

Danger!
Do not leave the packaging lying around. Children may use it as a dangerous toy.

Danger!
Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way. Observe the personnel qualifications.

Caution!
To avoid damages to the device, never operate the device without an air filter inserted!

Transport and storage

Transport

- To make the device easier to transport, it is fitted with wheels.
- The device must always be transported in an upright position.

Before transporting the device, proceed as follows:

1. Switch off the device.
2. Remove the mains plug from the mains socket. Do not use the power cable to drag the device!
3. Drain the remaining condensate from the device and the condensation drain hose (see chapter Maintenance).

Storage

Drain the remaining condensate from the device and the condensation drain hose (see chapter Maintenance).
When the device is not being used, observe the following storage conditions:

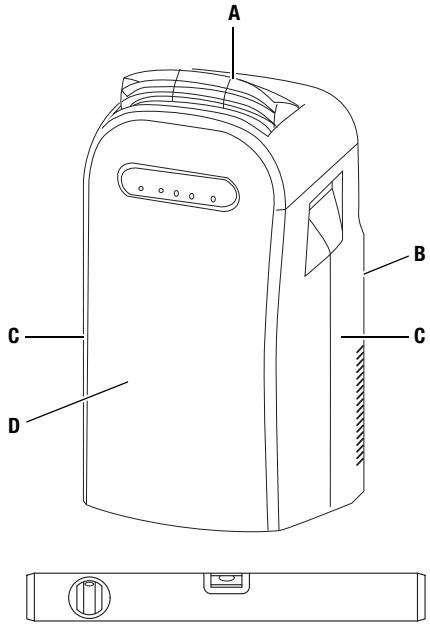
- dry,
- protected from dust and direct sunlight,
- with a plastic cover to protect it from invasive dust, if necessary.

Operation

- After being switched on, the device operates fully automatically until the float indicates that the condensation tank is full and the device switches itself off.
- Avoid open doors and windows.

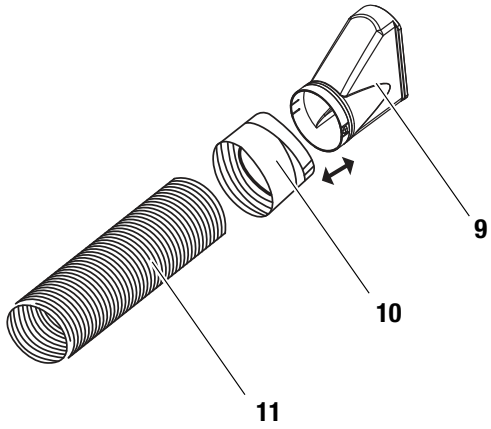
Installation of the device

When positioning the device, observe the minimum distance from walls or other objects as described in the chapter Technical data.

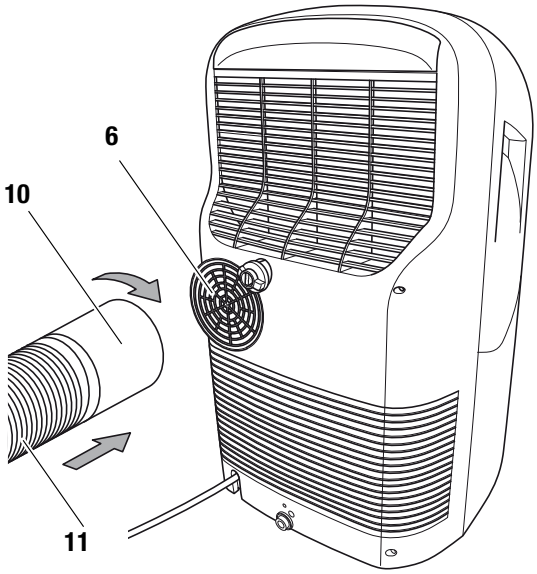


- Set the device up in a level, upright and stable position.
- Do not create tripping hazards when laying the power cable or other electric cables.
- Make sure that no curtains or other objects interfere with the air flow.
- Ensure that extension cords are completely unrolled.

Connecting the exhaust air hose

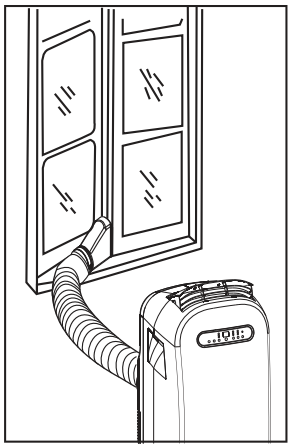


1. Connect the flat nozzle (9) to one of the two joints (10). To do so, carefully push the two notches of the connector into their flat nozzle counterparts until they snap into place.
2. Connect the joint's (10) threaded opening to the hose (11). To do so, screw the connection piece to the hose until it fits tightly.
3. Connect the second connection piece to the other end of the hose (11) as described in step 2.
4. Shove the free connector opening onto the exhaust air connection (6) at the device.
   – The exhaust air hose is assembled and connected to the device.

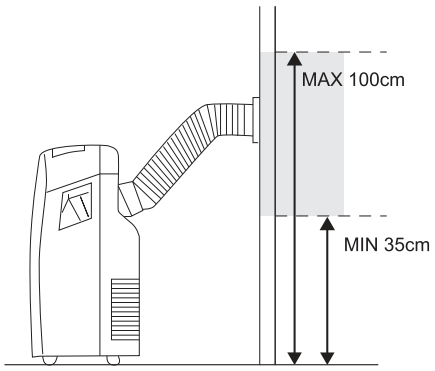


Discharge of exhaust air

- The exhaust air coming from the device contains waste heat from the room to be cooled. For this reason it is advisable to discharge the exhaust air outside into the open air.
- The flat nozzle can be fed through the open window. If required, secure the open window with the corresponding means, so that the flat nozzle stays put.
- The flat nozzle can also be hooked into a tilted bottom-hung window.
- Install the exhaust air hose inclined with the air direction.

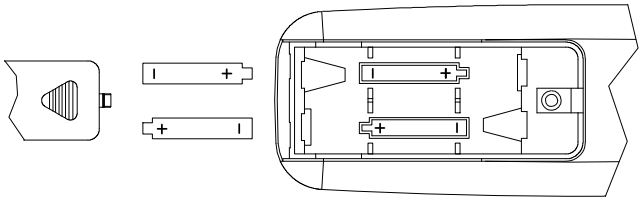


- Another available option is the discharge of exhaust air through a permanently installed exhaust air hose e.g. using a wall bushing.



Start-up

- Prior to initial start-up, the batteries (2 x type AAA) must be inserted in the remote control:



1. To do so, open the cover of the battery compartment at the back of the remote control.
2. Insert the batteries observing the correct polarity. Go by the marking inside the battery compartment.
3. Then close the battery compartment.

- Check air inlets and outlets (2, 6, 8) for foreign objects and remove these, if necessary.
- Check the air filter for dirt and clean it, if required. See Maintenance on page 11.

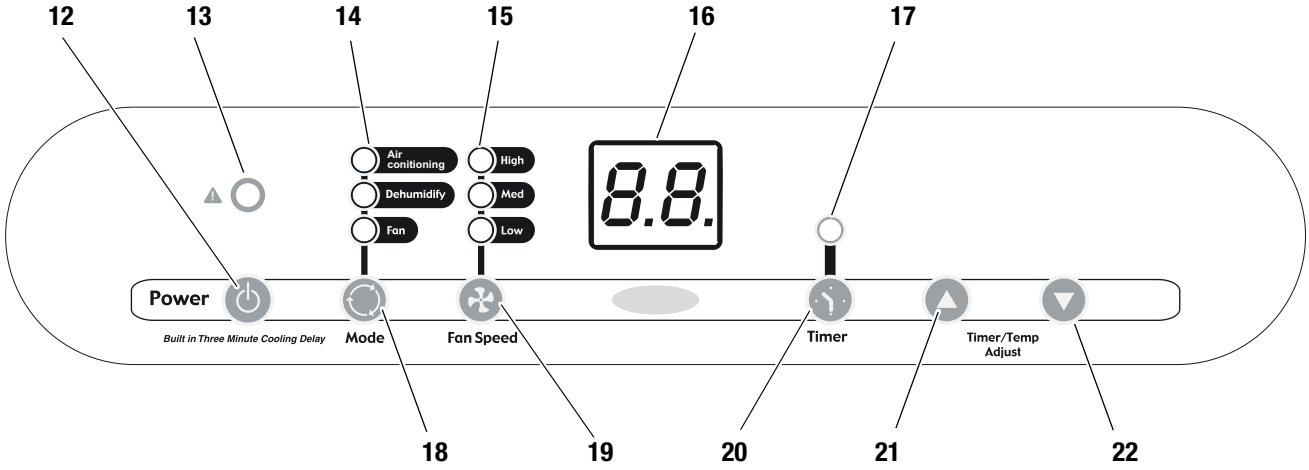
Switching the device on

1. Insert the mains plug into a properly secured mains power socket.
2. Open the air flap (8).
3. Use the *Power* button (12) to switch the device on.
4. Check whether the full condensation tank indicator light (13) is out.
   – If necessary, drain the condensate. See Condensate discharge on page 13.
5. Check whether the operating mode indicator *Mode* (14) and a fan stage (15) are displayed.
6. Select the desired operating mode by pressing the *Mode* key (18).
7. Select the desired fan speed by pressing the *Fan Speed* key (19).
8. If required, adjust the target temperature by use of the keys 21 and 22.

Note

After every switch-off or any maintenance or repair work wait for at least 3 minutes before switching the device on again.

Control panel



No.	Designation	Function
12	Power button	To switch the device on or off.
13	Condensation tank full indicator	Is illuminated when the internal condensation tank is full. The device will switch off until the condensate has been drained.
14	Operating mode indication	Is illuminated when the respective operating mode is activated.
		Air conditioning – cooling *Dehumidify* – dehumidification *Fan* – ventilation
15	Fan speed indication	Is illuminated when the fan speed is activated.
		High – high *Med* – medium *Low* – low
16	Display	Indicates the ambient temperature. Indicates the target temperature when either key 21 or 22 is pressed. The set number of hours (1 to 24) will be displayed when programming the timer function.
17	Timer indication	Is illuminated when automatic switch-on/-off has been activated. Is flashing when the timer can be set.
18	Operating mode key	To change the operating mode (cooling, dehumidification, ventilation).
19	Fan key	To set the fan's rotational speed. Only enabled in cooling and ventilation mode.
20	Timer button	To activate automatic switch-on/-off.
21	▲ Arrow key	To increase the target temperature or timer run-time.
22	▼ Arrow key	To decrease the target temperature or timer run-time.

Setting the operating mode

The following operating modes are available:

Cooling mode

1. Use the *Power* button (12) to switch the device on.
2. Use the *Mode* key (18) to select the operating mode *Air conditioning*.
   – The indicator light *Air conditioning* in the operating mode indication (14) will be lit.
3. Select the desired fan stage by use of the Fan Speed key (19).
4. Select the desired target temperature by use of the arrow keys (21 and 22).
   – The target temperature is indicated in the display and flashing.

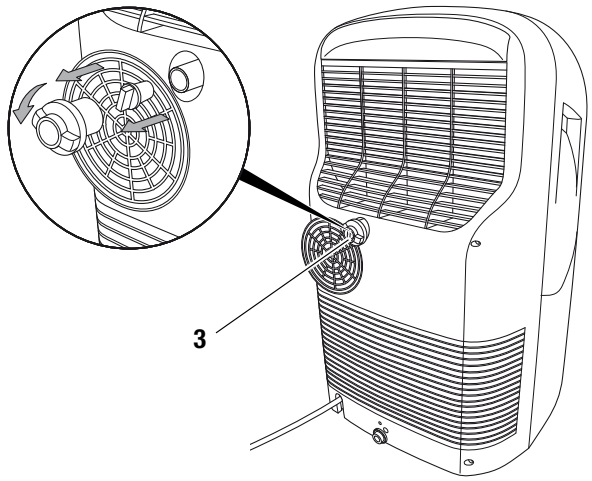
Dehumidification mode

In dehumidification mode the condensate is drained separately. For this purpose, both a suitable hose (0.5 in) and an appropriate collection container are required.
The exhaust air hose does not need to be installed.

Note

If the exhaust air hose is installed, the air must be fed into the room.

A.



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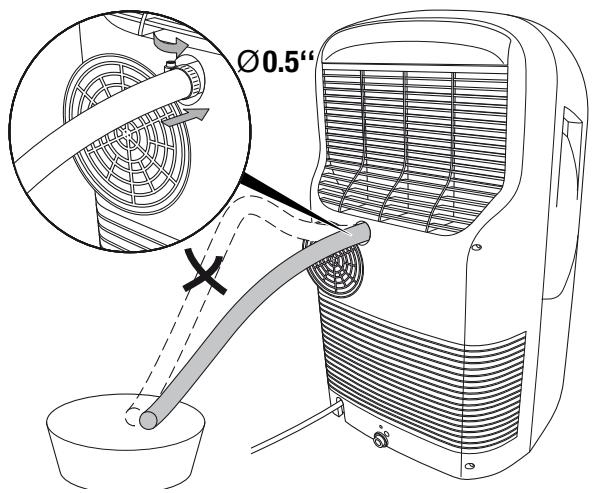


1. Unscrew the protective cap at the hose connector (3) and remove the stopper.
2. Connect a suitable hose (0.5 in) to the hose connector (3) and introduce the hose into an appropriate condensate collection container.
   – Make sure that the container is located at a lower level than the hose connector.
3. Use the *Power* button (12) to switch the device on.
4. Use the *Mode* key (18) to select the operating mode *Dehumidify*.
   – The indicator light *Dehumidify* in the operating mode indication (14) will be lit.
   – The temperature and the fan stage *Low* are preset in this operating mode and cannot be changed.
5. During operation, make sure that the condensate collection container does not overflow to avoid water damage.
6. Upon completing dehumidification detach the hose and recap the hose connector (3) with stopper and protective cap.
   – Ensure the firm seating of the stopper, for otherwise there might be uncontrolled water leakage.

Operating mode Fan

The exhaust air hose is not required for fan mode. The device circulates the room air, there will be no cooling.

1. Use the *Power* button (12) to switch the device on.
2. Use the *Mode* key (18) to select the operating mode *Fan*.
   – The indicator light *Fan* in the operating mode indication (14) will be lit.
3. Select the desired fan stage by use of Fan Speed key (19).

Setting the timer

The timer has two modes of operation:

– automatic switch-on upon expiry of a preset number of hours.

– automatic switch-off upon expiry of a preset number of hours.

The number of hours can be between 1 and 24.

Automatic switch-on

1. Use the *Power* button (12) to switch the device off.
2. Press the *Timer* key (20).
   – The *Timer* indication (17) flashes.
   – The operating mode indication (14) and the fan speed indication (15) both indicate the respective current setting which comes into effect upon automatic switch-on.
3. Adjust these settings as appropriate.
4. Select the desired number of hours by use of the arrow keys (21 and 22).
   – The display indicates the set number of hours.
5. Wait for approx. 15 seconds.
   – The *Timer* indication (17) is continually lit.
   – The display indicates the number of hours until automatic switch-on.

Notes regarding automatic switch-on:

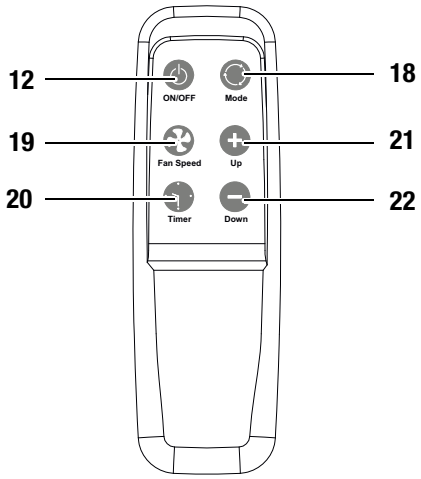
– If the device is disconnected from the power supply, all settings for automatic switch-on are deleted.
– Pressing the *Timer* button (20) once more deactivates the automatic switch-on function.
– Switching the device on by means of the *Power* button (12) also deactivates the automatic switch-on function.

Automatic switch-off

1. Select the desired operation mode by means of the *Mode* key (18).
2. Press the *Timer* key (20).
   – The *Timer* indication (17) flashes.
3. Select the desired number of hours by use of the arrow keys (21 and 22).
   – The display indicates the set number of hours.
4. Wait for approx. 15 seconds.
   – The *Timer* indication (17) is continually lit.
   – The display changes back to the normal indication.
   – Automatic switch-off is now set.

Remote control

All settings of the device can also be made using the remote control included in the scope of delivery. Please gather the button functions from the Control panel paragraph.



No.	Operating element
18	*Mode* key
21	+ key
22	- key
20	*Timer* key
19	*Fan Speed* key
12	*ON/OFF* key

Shutdown

1. Use the *Power* button (12) to switch the device off.
2. Remove the mains plug from the mains socket.
3. Clean the device, and especially the air filter, according to chapter Maintenance.
4. Store the device according to chapter Storage.

Errors and faults

The accurate functionality of the device was tested during production a number of times. However, if functionality faults do occur, then check the device according to the following list.

Note

After every switch-off, the compressor requires a waiting time of 3 minutes before it switches on again.

The device does not start:

- Check the power connection (230 V/1~/50 Hz).
- Check the mains plug for damages.
- Observe the operating temperature of 18 to 35 °C.
- Check whether the full condensation tank indicator light (13) is illuminated. If required, discharge the condensate (see chapter Maintenance).
- Have the electrics checked by a specialist company for cooling and air-conditioning or by Trotec.

The device works with reduced or no cooling capacity:

- Check whether the cooling operating mode is selected.
- Check the proper fit of the exhaust air hose. In case of kinks, bends or blockage in the hose, exhaust air cannot be discharged. Clear the way for the exhaust air.
- Check the positioning of the air flap (8). It should be opened to the maximum.
- Check the air filter for dirt. If required, clean the air filter (see chapter Maintenance).
- Check the minimum distance to walls or other objects. Position the device a little more in the room's centre, if required.
- Check whether there are opened windows and/or doors of the room. Close these, if any. The window for the exhaust air hose has to remain open nonetheless.
- Check the temperature setting at the device. Reduce the set temperature, if it is higher than the room temperature.
- Should your device be equipped with a wall connection, there might be a slight underpressure in the room. Briefly open a door or window to compensate this.

The device is loud or vibrates; condensate is leaking:

- Check whether the device is standing upright and on an even surface.
- Check the stopper of the condensate drain for proper fit or damage. Plug the stopper in correctly or replace it as appropriate.

The device gets very warm, is loud or is losing performance:

- Check the air inlets and air filter are not dirty. Remove external dirt.
- Check the inside of the device and especially the fan, the fan housing, the evaporator and the compressor for external dirt (see chapter Maintenance). If the inside of the device is dirty, have it cleaned by a specialist company for cooling and air-conditioning or by Trotec.

The device does not respond to the infrared remote control:

- Check whether the distance between remote control and device is too big and minimize it, if necessary.
- Make sure there are no obstacles between device and remote control. Ensure visual contact between device and remote control.
- Check the charging status of the batteries and change them, if required.
- If the batteries have only just been changed, check them for correct polarity.

Your device still does not operate correctly after these checks?

Bring the device to a specialist company for cooling and air-conditioning or to Trotec for repair.

Maintenance

Maintenance intervals

Maintenance and care interval	before every start-up	as needed	at least every 2 weeks	at least every 4 weeks	at least every 6 months	at least annually
Empty condensation tank		x				
Check air inlets and outlets for dirt and foreign objects and clean if necessary	x					
Clean the exterior		x				x
Visually check the inside of the device for dirt		x		x		
Check air inlet grid and air filter for dirt and foreign objects and clean or replace if necessary	x		x			
Replace air filter					x	
Check for damage	x					
Check attachment screws		x				x
Test run						x

Maintenance and care log

Device type: ..... Device number: .....

Maintenance and care interval	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Check air inlets and outlets for dirt and foreign objects and clean if necessary																
Clean the exterior																
Visually check the inside of the device for dirt																
Check the air inlet grid and air filter for dirt and foreign objects and clean or replace if necessary																
Replace air filter																
Check for damage																
Check attachment screws																
Test run																

1. Date: ..... Signature:.....	2. Date:..... Signature:	3. Date: ..... Signature:.....	4. Date:..... Signature: .....
5. Date: ..... Signature:.....	6. Date:..... Signature:	7. Date: ..... Signature:.....	8. Date:..... Signature: .....
9. Date: ..... Signature:.....	10. Date:..... Signature:	11. Date: ..... Signature:.....	12. Date:..... Signature: .....
13. Date: ..... Signature:.....	14. Date:..... Signature:	15. Date: ..... Signature:.....	16. Date:..... Signature: .....

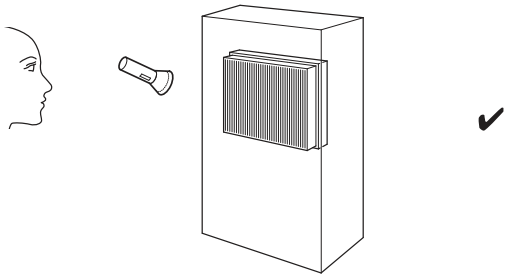
Activities required before starting maintenance

- Do not touch the mains plug with wet or damp hands.
- Before any work, detach the mains plug!

Maintenance tasks, which require the housing to be opened, must only be carried out by specialist companies for cooling and air-conditioning or by Trotec.

Visual check for dirt in the inside of the device

1. Remove the air filter.
2. Use a torch to illuminate the openings of the device.
3. If you see a thick layer of dust, have the inside of the device cleaned by a specialist company for cooling and air-conditioning or by Trotec.
4. Put the air filter back in.



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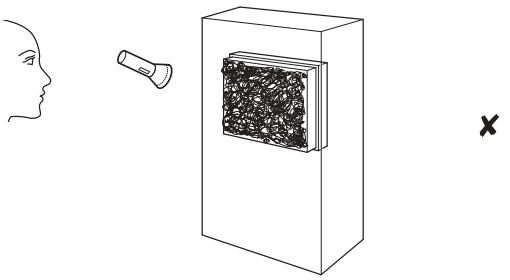

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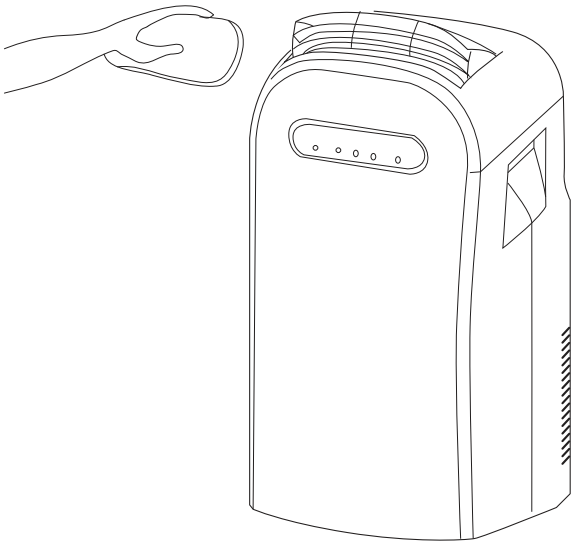
Cleaning the housing

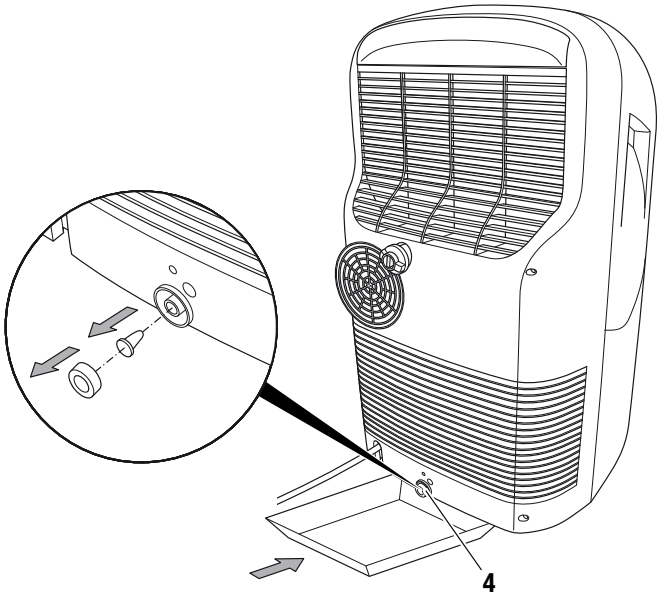
Clean the device with a soft, damp and lint-free cloth. Ensure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners. Only use clean water to moisten the cloth.



Refrigerant circuit

- The entire refrigerant circuit is a maintenance-free, hermetically sealed system and may only be maintained or repaired by specialist companies for cooling and air-conditioning or by Trotec.

Condensate discharge

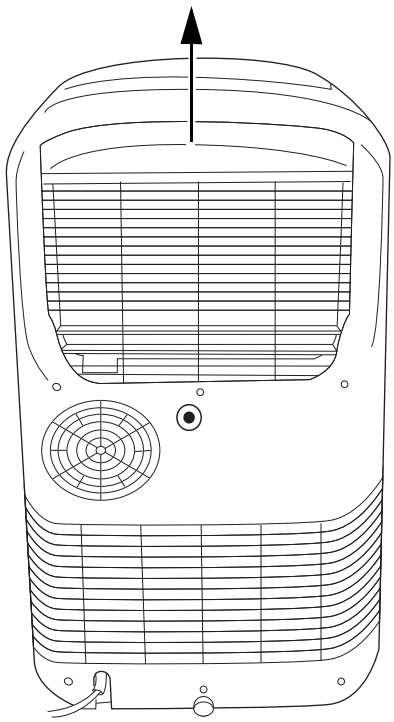


1. Provide for a suitable collection container.
2. Remove the screwing from the condensation drain (4).
3. Remove the rubber plug.
4. Drain the condensate into the collection container.
5. When the flow of condensate has come to an end, reattach the rubber plug to the condensation drain (4).
   – Ensure the firm seating of the stopper, for otherwise there might be uncontrolled leakage of condensate.
6. Reattach the screwing to the condensation drain (4).

Cleaning the air inlets and the air filter

Caution!
Ensure that the air filter is not worn or damaged. The corners and edges of the air filter must not be rounded or misshaped. Before reinserting the air filter, ensure that it is dry and is not damaged!
Read the chapter Maintenance intervals and replace the air filter in due time!

A.



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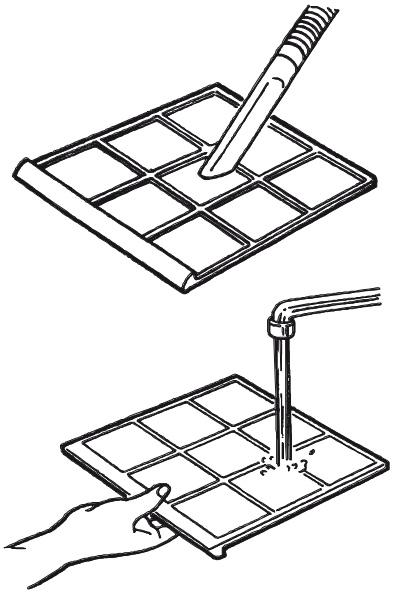
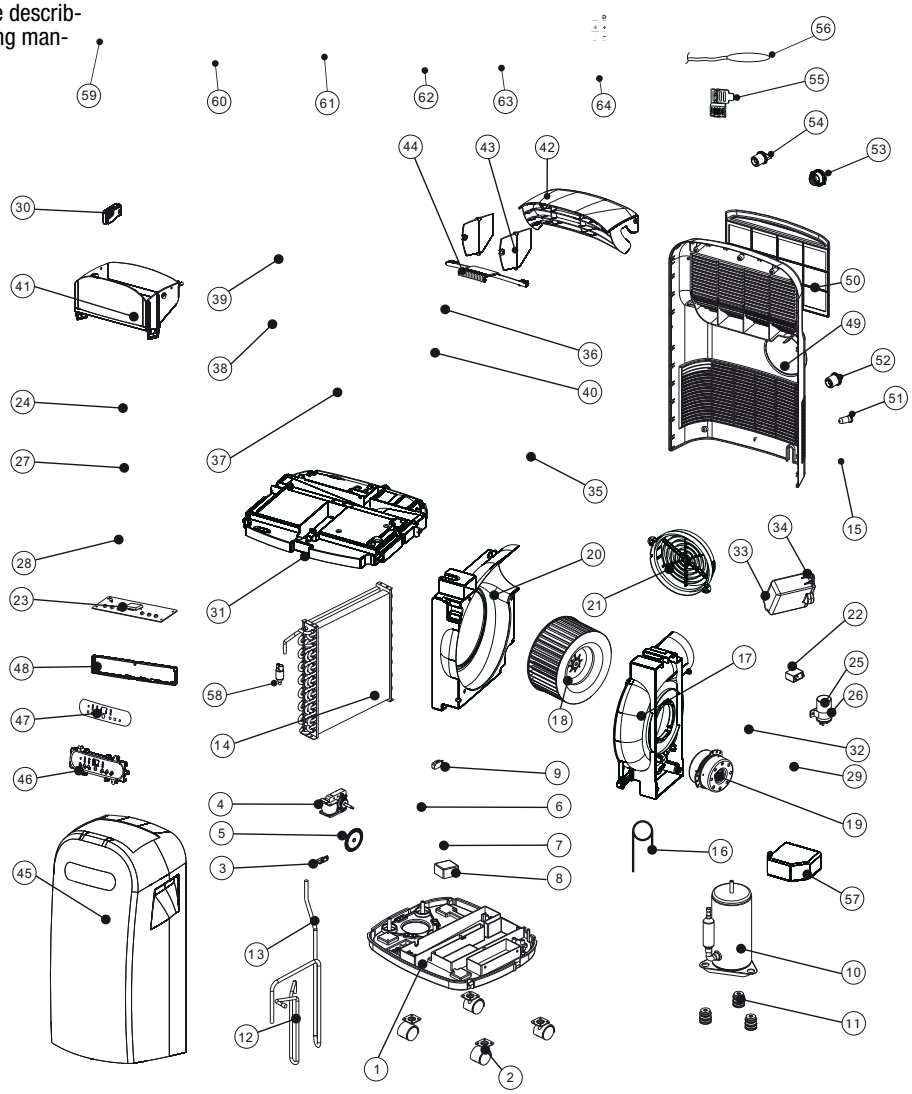


Overview and list of spare parts

Note!
The position numbers of the spare parts differ from those describing the positions of other parts mentioned in this operating manual.



No.	Spare part	No.	Spare part	No.	Spare part
1	base pan	23	pc board	45	front panel
2	caster	24	control board	46	control plate
3	strike	25	capacitor (25 µF/450 V)(for compressor(10))	47	control board
4	fan motor (WT-15D1-01)	26	strike	48	fixture
5	blade	27	fixture	49	rear panel
6	drain bucket cover	28	cover	50	air filter
7	float (a)	29	terminal block	51	soft cap (a)
8	float (b)	30	fixture	52	plug (a)
9	micro switch	31	plate	53	plug (b)
10	compressor ass'y (44N097-A1)	32	capacitor (2 µF/450 V)(for fan motor(36))	54	soft cap (b)
11	rubber	33	cover	55	fixture
12	discharge pipe	34	fixture	56	sensor (for indoor)
13	suction pipe	35	evaporator ass'y	57	cover
14	condenser ass'y	36	fan motor (LS-16D3-06)	58	y tube
15	power supply cord complete	37	fan casing	59	heat exhaust hose
16	capillary tube	38	cross flow fan	60	heat exhaust hose connector
17	fan casing	39	fan casing	61	discharge grille
18	blower wheel	40	bearing	62	fixture
19	fan motor (LS-53D1-4P)	41	discharge grille	63	cover
20	fan casing	42	fan-air deflector (a)	64	remote control ass'y
21	fixture	43	fan-air deflector (b)		
22	capacitor (2.5 µF/450 V)(for fan motor(19))	44	bar		

Disposal

In the European Union, electronic equipment must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2002/96/EC of the European Parliament and Council of 27th January 2003 concerning old electrical and electronic equipment. At the end of its life, please dispose of this instrument in a manner appropriate to the relevant legal requirements.

The device uses an environmentally and ozone-neutral cooling agent (see Technical data). Dispose of the refrigerant appropriately and according to the national regulations.

Declaration of conformity

in accordance with the EC Low Voltage Directive 2006/95/EC and the EC Directive 2004/108/EC about electromagnetic compatibility.
Herewith, we declare that the local air conditioner PAC 3500 was developed, constructed and produced in compliance with the named EC directives.

Applied technical standards:
EN 55014-1/A2:2011
EN 55014-2/A2:2008
EN 61000-3-2/A2:2009
EN 61000-3-3:2008
EN 60335-2-40/A13:2012
EN 60335-1/2012
EN 62233:2008
ZEK 01.4-08

The CE marking is found on the rear of the device.

Manufacturer:
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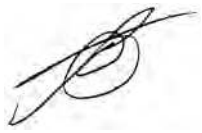
Heinsberg, 31/03/2014



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