

PAC 2000 X

EN

OPERATING MANUAL
AIR CONDITIONER



 **TROTEC**
AT WORK.

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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:



PAC 2000 X



<http://download.trotec.com/?sku=1210002003&id=1>

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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. Additionally, the device can be used as heater.

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 In dehumidification mode moisture is withdrawn from the air.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.

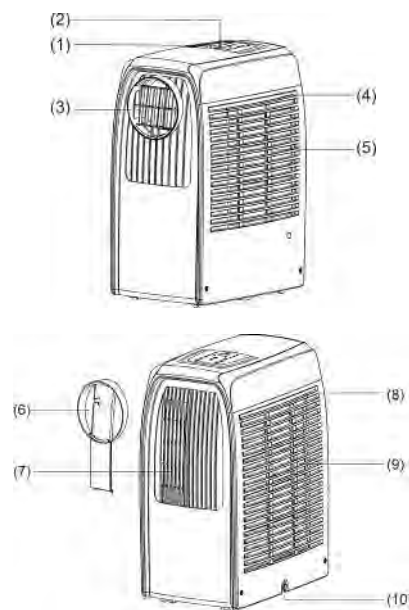
The air handling unit cools the room air by withdrawing warmth. The absorbed warmth is emitted to the outside via the exhaust air hose, cooled air is fed to the installation site by means of a fan.

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)	control panel
(2)	remote control receiver
(3)	warm air outlet
(4)	evaporator filter
(5)	cooling air inlet
(6)	exhaust air hose connector
(7)	cooling air outlet
(8)	condenser filter
(9)	ambient air inlet
(10)	drain hole

Technical data

Parameter	Value
Model	PAC 2000 X
Dehumidification performance	30 l per day
Cooling capacity	2000 W
Electric connection	220 V AC, 50 Hz
Nominal cooling capacity	900 W
Cooling agent	R410A
Dimensions (WxDxH)	288 mm x 428 mm x 625 mm
Minimum distance from walls or other objects	A: Top: 50 cm B: Rear: 50 cm C: Side: 50 cm D: Front: 50 cm

Scope of delivery

- 1 x air handling unit PAC 2000
- 1 x exhaust air hose
- 1 x remote control
- 1 x 3 V lithium battery CR002

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 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. There is a risk of infection!
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Observe the storage and operating conditions (see chapter Technical data).

Intended use

Only use the device for cooling, ventilating and dehumidifying room air in closed rooms, 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 wheel.

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. Empty the water tank.

Storage

Empty the condensation tank (see chapter Maintenance).

When the device is not being used, observe the following storage conditions:

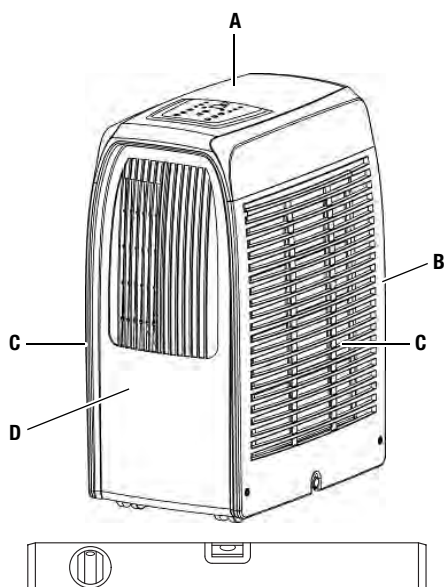
- dry,
- protected from dust and direct sunlight,
- with a plastic cover to protect it from invasive dust, if necessary.

Operation

- Avoid open doors and windows.
- Do not exceed the recommended room size.
- Keep curtains and venetian blinds closed during the sunniest time of the day.
- Keep the filter clean.
- Reduce the temperature and ventilation settings as soon as the room has reached the desired ambient conditions.
- During cooling operation there is no need for a drain pipe being installed. Make sure that the rubber cap is positioned on the drain hole while the device is running.

Installation of the device

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

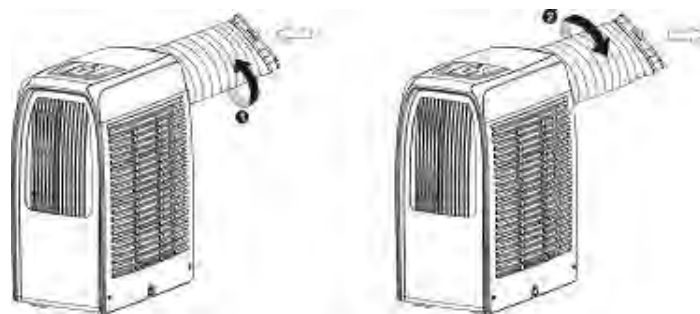


- Set the device up in a level, upright and stable position.
- Do not create tripping hazards when laying the power cable or other electric cables.
- Make sure that no curtains or other objects interfere with the air flow.

Connecting the exhaust air hose

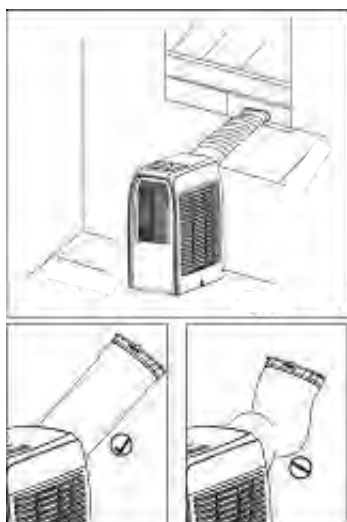


1. Slightly tilt the device in order to extract the exhaust air hose from the bottom of the device as depicted.



1. The exhaust air hose can be connected to the device by turning it in the direction of the arrow.
2. Rotate the exhaust air hose again in the direction of the arrow, this time to disconnect it.

Discharge of exhaust air



- The length of the exhaust air hose should not exceed 4 m. The exhaust air hose must not be bent up or down.
- A minimum distance of 500 mm is to be observed between the filter side of the device and the wall or other obstacles.

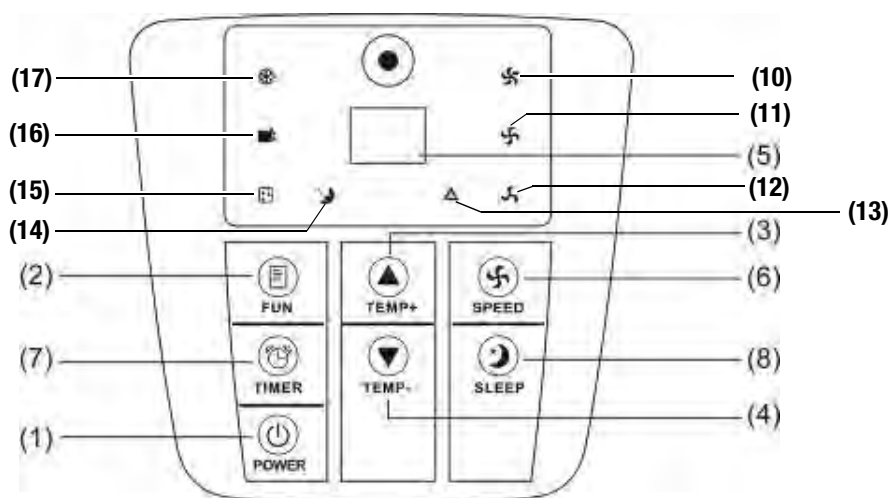
Start-up

- Prior to initial start-up, the battery included in the scope of delivery must be inserted in the remote control.
 - To do so, open the cover of the battery compartment at the back of the remote control.
 - Insert the battery observing the correct polarity. Go by the marking inside the battery compartment.
 - Then close the battery compartment.
- Check air inlets and outlets for foreign objects and remove these, if necessary.
- Check the air filter for dirt and clean it, if required. Also see chapter Maintenance.

Switch-on of the device

1. Insert the mains plug into a properly secured mains power socket.
2. Use the power button (1) to switch the device on.
 - To prolong the compressor lifetime, wait for at least 3.5 minutes after switch-off before switching the device back on.

Control panel



No.	Designation	Function
1	Power	Press this button to turn the device on or off.
2	Functions	Use this button to set cooling, heating or dehumidification operating mode.
3	Temperature control (+)	Pressing this button during cooling operation increases the preset temperature by 1 °C each time it is actuated; the maximum limit is 30 °C. Pressing this button during heating operation increases the preset temperature by 1 °C each time it is actuated; the maximum limit is 25 °C.
4	Temperature control (-)	Pressing this button during cooling operation reduces the preset temperature by 1 °C each time it is actuated; the minimum limit is 17 °C. Pressing this button during heating operation reduces the preset temperature by 1 °C each time it is actuated; the minimum limit is 15 °C.
5	LED display	The display indicates the current temperature or timer settings. If the set temperature or timer value is to be adjusted, the new setting will be indicated, then the display returns to the currently set temperature. The display also serves to indicate error messages in case of a fault, see ERROR CODES.
6	Speed	Press this button to adjust the fan speed. During heating and dehumidification operation this button is disabled.
7	Programmable Timer	
8	Sleep	
9	Alarm	Once the maximum filling level of the water tank is reached, E4 or the ALARM warning light appears on the display.
10	LED speed high	high fan speed indicator
11	LED speed medium	medium fan speed indicator
12	LED speed low	low fan speed indicator
13	LED auto mode	AUTO mode indicator
14	LED sleep mode	SLEEP mode indicator
15	LED dehumidifying	dehumidification operating mode indicator
16	LED heating	heating operating mode indicator
17	LED cooling	cooling operating mode indicator

Setting the operating mode

- To set the operating mode, press the Functions button (2):
 - cooling,
 - heating,
 - dehumidifying (drying).

Setting the temperature

- Use the temperature control buttons (+ (3) or - (4)) to set the desired temperature.

Setting the fan speed

- Choose from the available speed levels by pressing the button Speed (6).
 - Low
 - Medium
 - High
 - Auto

Note:

During dehumidification operation this button is disabled, since in dehumidification mode the device can only be operated at low fan speed.

If AUTO is selected during cooling operation, the device automatically switches between the other three speed levels – depending on the temperature difference between the set and the actual ambient temperature.

Setting the timer

Timer on

Timer on is used to turn the device on automatically after the set time has passed.

- Press the Timer button (7) in stand-by to set the desired time.
- Once the set number of hours has lapsed, the device will switch on automatically.
- If you press the Power button (1) before the time has expired, the device will switch on and the set time will be deleted.
- You can also determine the function and fan speed while setting the timer.

Timer off

Timer off is used to turn the device off automatically after the set time has passed.

- Press the Timer button (7) during operation to set the desired time.
- Once the set number of hours has lapsed, the device will switch off automatically.
- If you press the Power button (1) before the time has expired, the device will switch off and the set time will be deleted.

Sleep control function

Note:

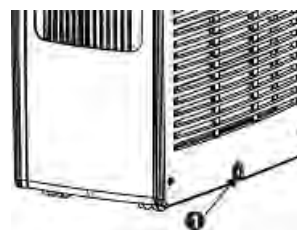
The sleep control function is only available in cooling mode.

- Press the Sleep button (8) during cooling operation to set the temperature. After one hour the temperature increases by 1 °C and maximally by 2 °C after 2 hours.
- Actuating the Sleep button (8) again deactivates this setting.

Dehumidification operation (drying)

- The temperature cannot be regulated during dehumidification operation, the fan speed is low.
- In dehumidification (drying) mode humidity is extracted from the air and collected in an internal tank.
- Once the maximum filling level of the water tank is reached, E4 or the Alarm warning light appears on the display.
- Drain the water tank, when it is full. See Emptying the condensation tank on page 11.

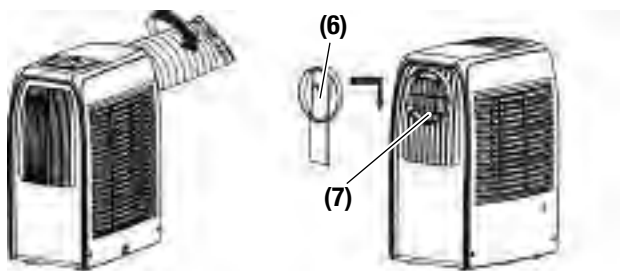
Discharging the condensate



- In dehumidification mode the rubber cap on the drain hole (1) is to be removed and replaced by a proper drain pipe.
- Remove the exhaust air hose, connect a drain pipe to the drain hole (1) and drain the water to enhance the dehumidification capacity.

Heating

- If you want to utilize the heating function, the following modification is required:



- Detach the exhaust air hose.
- Mount the connection piece for the exhaust air hose (6) to the cooling air outlet (7).



- Fit the exhaust air hose to the connection piece (6).
- Align the pivotable nozzle.

Start heating function

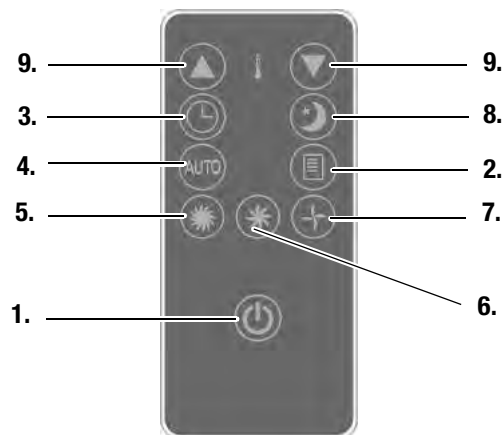
- Press the functions button (2) until the LED for heating (16) lights up.
 - The device will start after a few seconds.

Note:

Heating is possible up to a max. ambient temperature of 25 °C. At an ambient temperature of more than 25 °C the heating function will not start.

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	Function
1.	Power	Power button
2.	Func	Operating mode selector
3.	Timer	Timer switch
4.	Auto	Automatic fan speed
5.	Hi	High fan speed
6.	Mid	Medium fan speed
7.	Low	Low fan speed
8.	Sleep	Sleep control function
9.	Temp	Temperature control

Shutdown

- Use the power button (1) to switch the device off.
- Remove the mains plug from the mains socket.
- Clean the device, and especially the air filter, according to chapter Maintenance.
- 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.

Display indication	Cause	Troubleshooting
E1	Short circuit on both temperature sensor and PCB.	Contact an electrician for repair.
E2	Short circuit on temperature sensor copper tube and PCB wiring.	Contact an electrician for repair.
ALARM / E4	Indicates full water tank or poor contact of the signal plug.	Drain water. See Emptying the condensation tank on page 11.

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 repairs.

Maintenance

Maintenance intervals

Maintenance and care interval	before every start	when necessary	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 housing		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 damages	x					
check attachment screws		x				x
carry out a 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 housing																
visually check the inside of the device for dirt																
check air inlet grid and air filter for dirt and foreign objects and clean or replace if necessary																
replace air filter																
check for damages																
check attachment screws																
carry out a 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:
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13. Date: Signature:	14. Date: Signature:	15. Date: Signature:	16. Date: Signature:

Activities required before starting maintenance

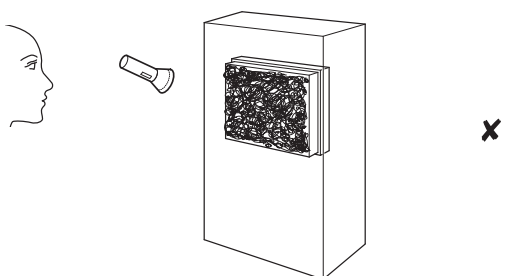
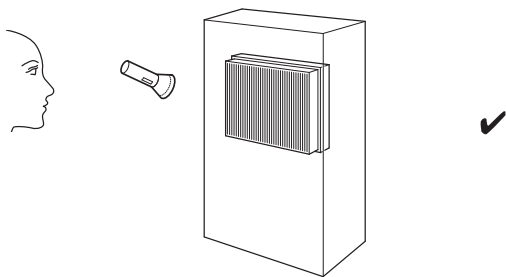
- Do not touch the mains plug with wet or damp hands.
- Before any work, detach the mains plug!



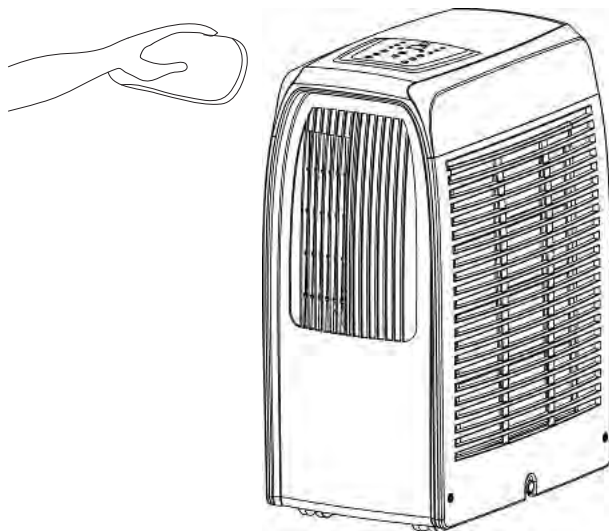
Maintenance tasks which require the housing to be opened must only be carried out by specialist companies for cooling and air-conditioning or by Trotec.

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.

**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.

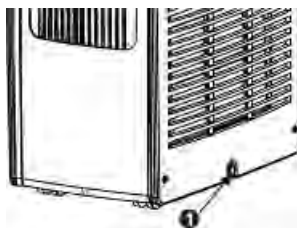
**Refrigerant circuit**

- 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.

Condenser/evaporator

- Use a vacuum cleaner with brush attachment.

Emptying the condensation tank



1. First remove the rubber cap from the drain hole to drain the water.
2. After draining is completed, restart the device, then the unit can operate normally.

Cleaning the air inlets and the air filter



Caution!

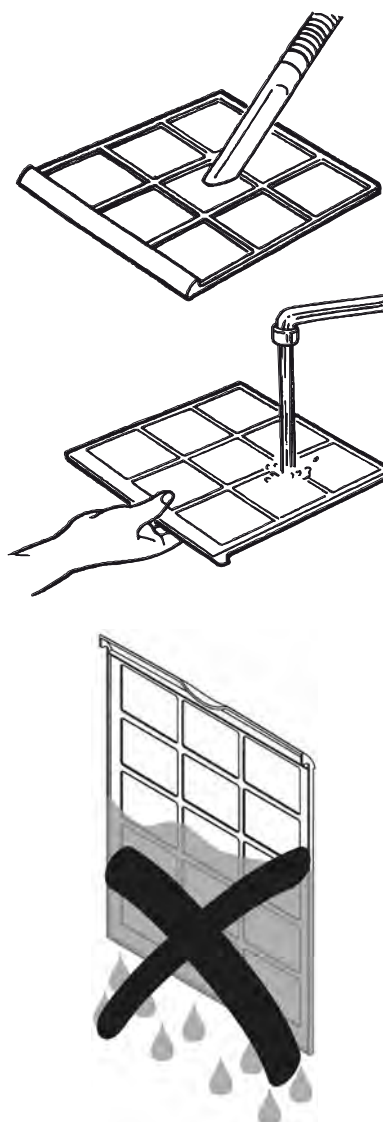
Ensure that the air filter is not worn or damaged. The corners and edges of the air filter must not be rounded or misshaped. Before reinserting the air filter, ensure that it is dry and is not damaged!

Read the chapter Maintenance intervals and replace the air filter in due time!

A.



B.



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 PAC 2000 X was developed, constructed and produced in compliance with the named EC directives.

Applied technical standards:

EN 60335-2-40:2003+A11:2004+A12:2015+A1:2006+A2:2009+A13:2012

EN 60335-1:2012

EN 62233:2008

ZEK 01.4-08

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

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