

Operating instructions

REMKO RAV 35

High-performance fans

for the construction and renovation industry





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 operating instructions

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1 Safety and usage instructions

1.1 General safety notes

Carefully read the operating manual before commissioning the units for the first time. It contains useful tips and notes such as hazard warnings to prevent personal injury and material damage. Failure to follow the directions in this manual not only presents a danger to people, the environment and the system itself, but will void any claims for liability.

Keep this operating manual and the refrigerant data sheet near to the units.

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.

DANGER!

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.

DANGER!

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.

WARNING!

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

CAUTION!

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.

NOTICE!

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.

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.

This unit can be used by children above the age of 8, as well as by people with impaired physical, sensory or mental capabilities or a lack of experience and knowledge if they are supervised or have received instruction in the safe operation of the unit, and if they understand the associated potential hazards. Children must never play with the unit. Cleaning and user maintenance must not be carried out by unsupervised children.

- Persons who use the unit must be aware of the hazards involved with the use of such fans.
- The respective building code regulations or other regulations must be observed as a basic rule.
- The operator is responsible for the proper unit installation, the correct electrical supply and the safe operation of the units.
- Do not operate units or components with obvious defects or signs of damage.
- Safety components (e.g. protection grids) must not be removed or rendered inoperative.
- The units must always be installed and operated in a stable position
- The units may not be installed or operated in potentially flammable or explosive environments.
- The units must not be installed or operated in atmospheres containing oil, sulphur, chlorine or salt.
- Protect the surroundings and the unit itself from any objects that could be swirled up.
- The units and components must not be exposed to any mechanical load, extreme levels of humidity or extreme temperatures.
- Never allow water to enter the inside of the units.
- All housing parts and unit openings, e.g. air inlets and outlets, must be free from foreign objects. An unobstructed air inlet and air outlet must be guaranteed at all times.
- Never insert foreign objects into the units.
- The units may only be used as intended within the specified output limits.
- The units must not be covered during operation.
- The units must not be transported while they are running.
- All electrical cables on the outside of the units must be protected against damage (e.g. by animals etc.).

- Wear hearing protection if spending a longer period of time in the vicinity of the unit.
- 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.

DANGER!

Vor allen Arbeiten an den Geräten muss der Netzstecker aus der Netzsteckdose gezogen werden.

Reparaturen bzw. Änderungen an der Elektroinstallation sowie der Zuleitung dürfen aus sicherheitstechnischen Gründen ausschließlich durch autorisiertes Fachpersonal ausgeführt werden.

NOTICE!

Extensions to the connection cable must only be conducted by authorised specialist electricians, taking into consideration the unit power consumption, cable length and local use.

1.7 Safety notes for installation, maintenance and inspection work

- 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.
- If the mains power supply line of this unit is damaged, this must be replaced by the manufacturer or their customer services department or a similarly qualified person in order to avoid any hazard.
- The units and components must not be exposed to any mechanical load, extreme levels of humidity or extreme temperatures.
- Never allow water to enter the inside of the units.
- Never insert foreign objects into the units.
- 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.

1.8 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

The units are designed and equipped exclusively for the purposes of aeration, ventilation, circulating air or for extracting dust whilst complying with the technical data and the safety instructions. The design of the mobile units allows rapid change in location and may only be operated in the design delivered from the factory. The units may not be installed or operated on muddy or flooded surfaces.

Any different or additional use is a non-intended use. The manufacturer/supplier assumes no liability for damages arising from 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!

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

Unit type		RAV 35
Configuration		Axial fan
2-speed air flow rate	m ³ /h	1350/2900
Pressure, max.	Pa	500
Electrical wiring	V/~/Hz	230/1~/50
Max. power consumption	W	750
Customer-provided electrical protection	A	10
Max. current consumption	A	3.2
Sound pressure level 5 m *)	dB(A)	68
Max. temperature of conveyed medium	°C	40
Hose connection Ø	mm	300
Max. hose length	m	38
Dimensions H/W/D	mm	440/380/420
Weight	kg	17
EDP no.:		1610635

*) Calculated for solid ball. Measurement per DIN EN ISO 9614-2

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

2.2 Characteristic curves

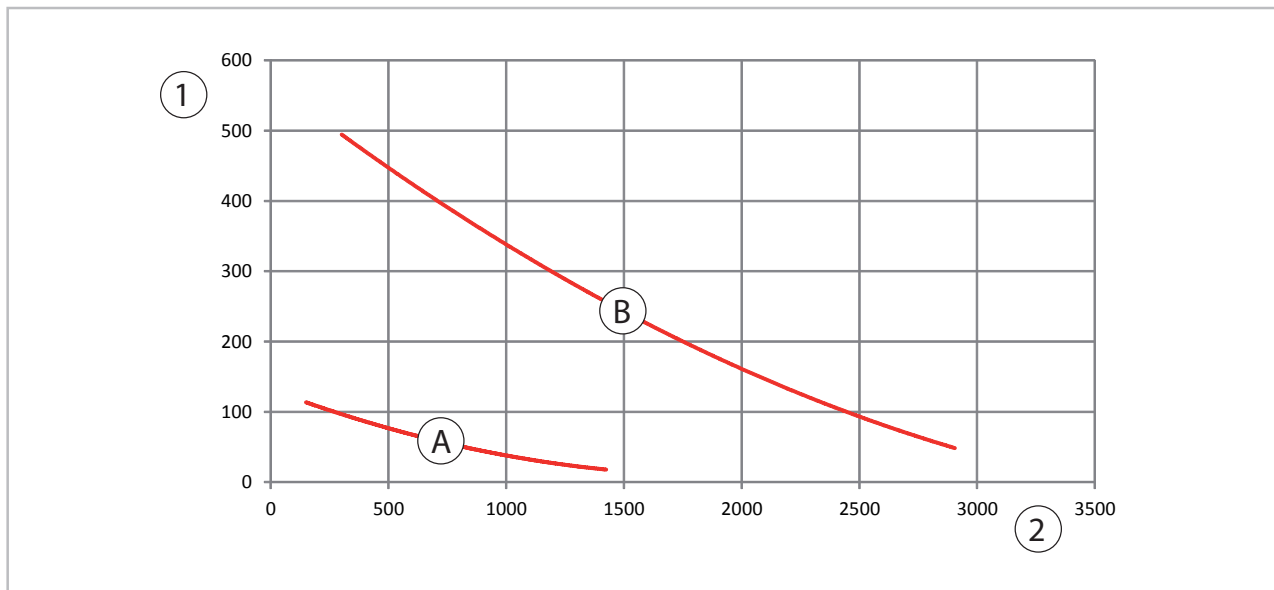


Fig. 1: Characteristic curves

1: Pressure build-up [Pa]

2: Medium flow rate [m³/h]

A: Characteristic curve for the smaller stage

B: Characteristic curve for the higher stage

Measurement carried out per DIN EN ISO 5801 – Test set-up category B.

3 Unit description

The combination of powerful axial fan and well thought out accessories for connecting air distribution hoses make the unit a particularly versatile solution for aeration and ventilation, air circulation and also for transporting warming air or cooling air over longer distances.

The unit is also ideally suited to provide effective support for dehumidifiers when drying buildings.

The rapid air movement breaks up the high humidity layer on the material and increases the evaporation rate. This results in walls, ceilings and floors drying faster! The higher the flow rate on the damp surface of the material, the faster the drying process. Thus, the drying time can be drastically shortened through the combination of dehumidifiers and this powerful fan, depending on the respective environment and temperature. The use of additional fans accelerates the evaporation whereby the drying process can be shortened by up to 50%.

The unit has hose connection ports on both sides allowing very versatile use.

The unit is equipped with a 2-speed high-performance axial fan, operating hours counter, motor overload protection switch and mains cable with 230 V CEE connector.

The unit conforms to the fundamental health and safety requirements of the appropriate EU stipulations and is simple to operate.

4 Electrical wiring

- The 230V electrical connection is made using a built-in mains cable with earthed safety plug.
- Connect the power plug to a properly installed and appropriately safeguarded mains socket.
- All cable extensions must only be used in fully un-reeled or reeled off condition.

WARNING!

The electrical connection for the units must be made at a separate feed point with a residual current device in accordance with VDE 0100, Section 55.

5 Commissioning

Before the initial commissioning

- Check that the unit and any accessories being used are installed correctly.



- A: Example 1 - Optional dust bag # 1009540
 B: Example 2 - Optional WL hose # 1009512

NOTICE!

Always fasten hoses and dust bag with suitable lashing straps or clamps.

Commissioning

Connect unit

- Switch unit to desired power stage using the 2-stage operating switch.



- If required, read off and record the operating hours on the operating hours counter.

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6 Motor overload protection switch

The unit is equipped with a motor overload protection switch (MS), which interrupts the power supply in the event of the electrical motor being overloaded and electrically interlocks the unit. The MS is unlocked (reset) manually. To do so, press in the button on the MS.

! NOTICE!

If the motor overload protection switch has been triggered, the cause of the malfunction must be identified and rectified before a reset is performed.

7 Shutdown

- Move the operating switch to the “0” position.
- Read off the operating hours counter if required.

With longer breaks in operation:

- Disconnect the unit from the power supply.
- Clean the unit if required and store in a location protected from dust and direct sunlight.

The units can be stacked to save space if required.



Fig. 2: Stacking with max. 2 units

! NOTICE!

The units must be protected against falling down and unauthorised access after stacking.

8 Care and maintenance

General notes



Regular care and maintenance is fundamental to a long service life and fault-free operation of the unit.

In normal operation, the units are almost maintenance-free. However, in order to guarantee continuous fault-free operation, they should be checked at regular intervals and cleaned or repaired when necessary and in accordance with the respective operating conditions.



DANGER!

Before undertaking any work on the units, the mains plug must be removed from the mains socket.

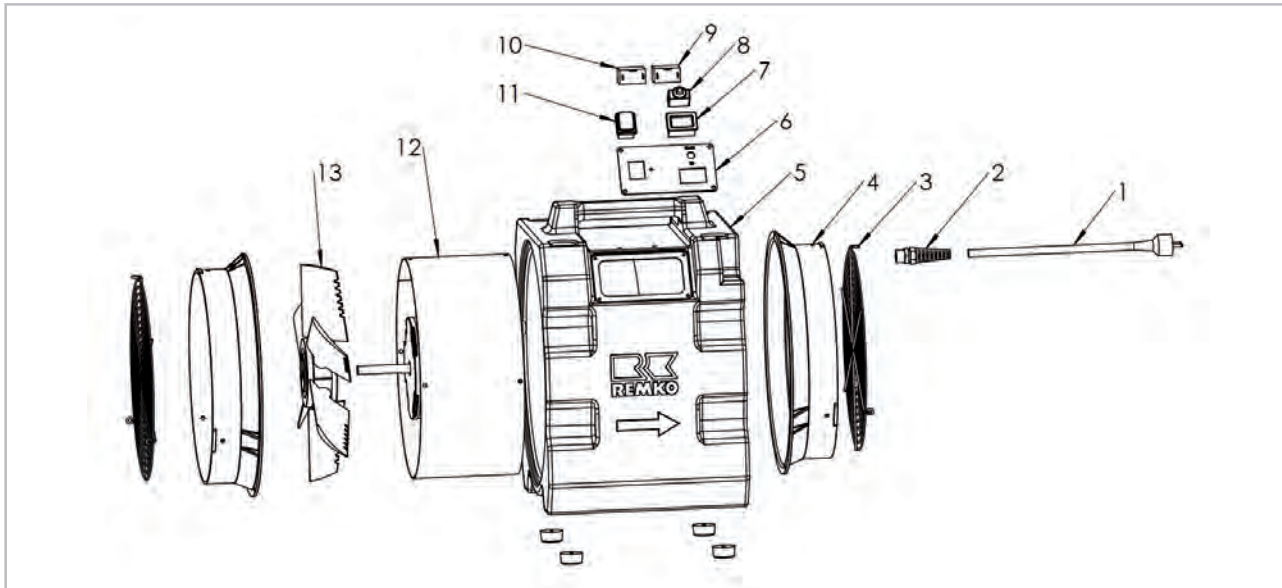
Cleaning the units

- The units should be disconnected from the electrical power supply and secured to prevent unauthorised reactivation.
- Clean the intake grill at regular intervals and replace it if damaged.
- Clean all intake openings and discharge fins.
- To clean the fan blades, it is necessary to remove the protection grid beforehand.
- Clean severe soiling on the fan and the fan housing with soap solution.
- Clean the units dry or with a moistened cloth and some soap solution if necessary.
- High pressure cleaners or steam cleaners shall not be used under any circumstances.
- Never use abrasive or solvent-based cleaners.
- Ensure that the unit is not damaged if using compressed air.

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9 General view of unit and spare parts

9.1 Exploded view of the unit



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

9.2 Spare parts list

No.	Designation	EDP no.
1	Mains cable with plug	1113049
2	Cable gland	1122990
3	Metal grill	1122991
4	Hose connection ports	1122992
5	Fan housing	1113039
6	Control panel	1122995
7	Operating hours counter	1113048
8	Reset button	1122997
9	12 µF capacitor	1122998
10	5 µF capacitor	1122999
11	Operating switch	1122996
12	Electric motor	1122993
13	Fan blade	1122994

To assure the correct delivery of spare parts, please always provide the unit type with its corresponding serial number (see name plate).

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REMKO INTERNATIONAL

*... and also right in your neighbourhood!
Make use of our experience and advice*



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Consulting

Thanks to intensive training, our consultants are always completely up-to-date in terms of technical knowledge. This has given us the reputation of being more than just an excellent, reliable supplier:

REMKO, a partner helping you find solutions to your problems.

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REMKO offers not just a well established sales network both nationally and internationally, but also has exceptionally highly-qualified sales specialists.

REMKO field staff are more than just sales representatives: above all, they must act as advisers to our customers in air conditioning and heating technology.

SFIbCustomer Service

Our equipment operates precisely and reliably. However, in the event of a fault, REMKO customer service is quickly at the scene. Our comprehensive network of experienced dealers always guarantees quick and reliable service.

