

USE AND MAINTENANCE MANUAL

ROTOVALVE

RTC 200

RTC 01

Co.1708.10

0. GENERAL SAFETY RULES

0.1 SAFETY RULES FOR OPERATORS

Consult the person in charge for details of the applicable safety requirements and accident prevention devices.

Do not start the machine if it is faulty.

Before using the machine, make sure all hazards have been removed.

Inform the head of maintenance whenever a fault occurs.

Make sure all the guards and safety devices are present and intact, and check their efficiency.

0.2 SAFETY RULES FOR MAINTENANCE PERSONNEL

The area where maintenance is carried out must be kept clean and dry. Spilt oil or grease must be removed immediately. Maintenance must always be carried out with the machine stopped and disconnected from the electricity and the compressed air supply. Never allow unauthorised personnel to service the machine.

Do not perform any maintenance without prior authorisation.

Always follow the procedures detailed for maintenance and technical assistance.

Do not insert any part of the body, including limbs and fingers, in sharp-edge openings, that are not suitably protected.

Do not use petrol, solvents or other flammable liquids as cleaning agents. Only use authorised non-flammable and non-toxic solvents.

Compressed air should not normally be used for cleaning purposes, but if this cannot be avoided, wear safety goggles with side guards and do not exceed a pressure of 2 atm. (1.9bar).

When servicing or checking the machine, do not use a naked flame as a light.

Do not lubricate the machine while it is in operation.

In the case of electrocution, the victim is probably unconscious and need to be detached from the power source.

Caution: this operation is extremely dangerous because the victim also act as a conductor and touching him would result in electrocution. Before touching the victim, disconnect the power supply. If this is not possible, move the victim away using a non-conductor, such as a wooden stick or a PVC pole. Contact a doctor immediately and arrange for the person to be taken to hospital.

When servicing motors or carrying out any other interventions off the ground, the use of safety steps is mandatory.

1.1 FOREWORD

Some illustrations appearing in this handbook depict the machine, or parts of it, without the guard or safety devices. This does not mean the machine is to be used under these conditions. The only purpose is to allow the operator to understand the operating principle.

1.2 CONSERVATION AND USE OF THIS HANDBOOK.

The purpose of this handbook is to provide the users of the machine with clear texts and diagrams, rules and essential instructions for transporting, handling, using and servicing the machine.

Please read this handbook carefully before starting to use the machine. This handbook must be kept carefully in a place of easy access for future consultation. It is important to make sure it is readable at all times, which means protecting it from sunlight, and keeping it in a clean, dry place, preferably right next to the machine.

If the machine is sold, the manufacturer must be informed of the name and address of the new owner/user.

1.3 WARRANTY (IF PROVIDED)

For the warranty to remain valid, the machine must not be tampered with for any reason. Please contact the manufacturer directly if any defects are found on delivery or during the warranty period.

Any attempts by the user or an authorised person to dismantle, modify or in general tamper with the machine or any of its parts will invalidate the guarantee and relieve the manufacturer of all liability connected with damage or injury, resulting from such action.

The manufacturer is also relieved of liability in the following cases:

- incorrect installation
- improper use of the machine or use by unsuitably trained personnel
- use not in compliance with the laws applicable in the country of installation
- failure to service the machine as required or incorrect servicing
- use of non-original or non-specific spare parts
- partial or total failure to follow the instructions provided.

1.4 INTENDED USE

The machine must only be used for the specific purpose for which it was built.

Do not use the machine if:

- it has not been connected correctly to the main installation
- it has not been connected correctly to the electricity supply
- it has not been connected correctly to the compressed air supply.

Do not stand on the machine (unless this is permitted in specially designated areas) even when it is switched off, as this could cause serious damage or injury.

Do not touch the electrical components without first disconnecting the machine from the power supply. This is to avoid the risk of electrocution.

When washing the machine, avoid getting any of the electrical parts wet.

1.5 SAFETY DEVICES

The machine has been designed in compliance with the mandatory rules covering CE marking, as well as voluntary standards (UNI) that we have always adopted. This means the machine is equipped with all the safety devices required to prevent operating hazards. These devices are of the following type:

- mechanical, i.e. built to avoid the possibility of human error
- electrical, i.e. all control panels/power units comply with CEI standards

For further details on the safety devices and their operating principles, please refer to the section on the components involved.

1.6 EMERGENCY OPERATION

The machine does not require an operator to be present. In the event of an emergency, the operator must press the emergency stop button on the power unit (right next to the machine) or the one on the control panel.

1.7 HAZARD AND WARNING NOTICES

CAUTION!

The electrical equipment can cause death or injury. Never place your hands anywhere near the machine while it is in operation. This is because there are moving parts, live elements and components that can get very hot.

Follow the warning notices. Failure to do this may cause serious injury or even death.

Check that the warning notices are always present and legible. Apply any missing ones and replace any illegible ones.

1. "Direction of rotation of the rotor"
2. "Do not remove the safety devices"

1



2



GB

These instructions apply to Kongs-kilde's Rotary Valves types RV-20 and RV 40.

Mounting of gear motor

Mount the gear on the rotary valve as shown. Always orient the gear

as shown, as this will ensure optimal lubrication of the gear.

Applications

Rotary valves types RV 20 and RV 40 are suitable for feeding of granular materials, such as synthetic granulates and similar flaked materials in connection with pneumatic conveying systems, and for rough dosage purposes.

The temperature of material and conveying air must not exceed 70°C.

The rotary valves is not intended for corrosive gases and materials.

Safety

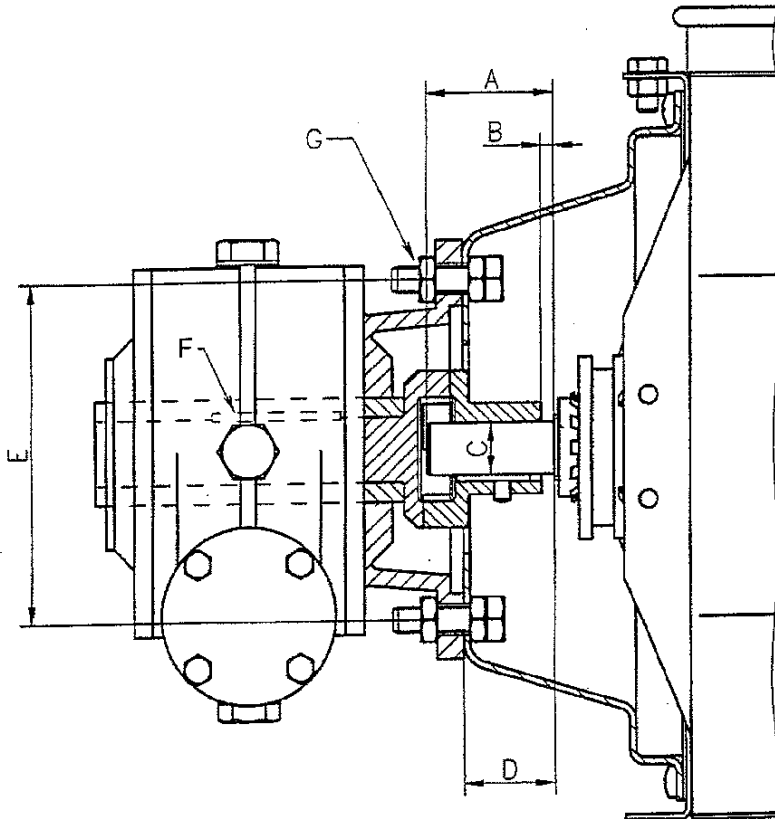
Make sure that all guards are intact and properly secured during operation.

Always stop the rotary valve prior to repair and maintenance and avoid unintentional start of operation.

Never put your hand into the valve during motor operation.

The rotary valve is designed for mounting in an enclosed pipe system. If this is not the case, suitable measures should be taken to prevent contact with the cell wheel during operation.

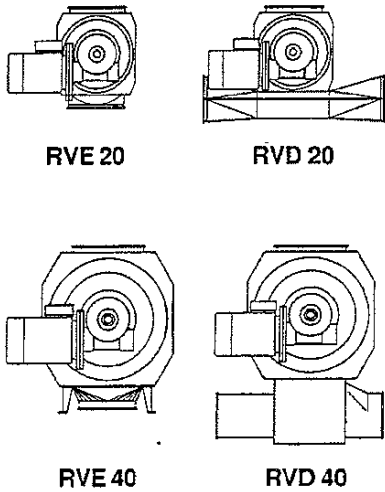
If the rotary valve is suspended in a pipe system it must be secured with a wire or the like to prevent it from loosening and falling down by accident.



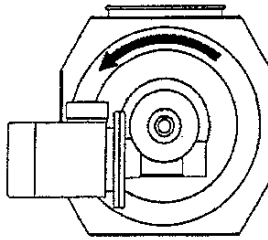
	A	B	C	D	E	F	G
RV 20	48	4.5	20	34.5	92	6X6X28	M10
RV 40	45	2	30	8	117	8X7X35	M12

Mounting of outlet

The rotary valve is available with outlets for vertical and horizontal connection.



The direction of rotation of the cell wheel is shown by an arrow on the valve. If the direction of rotation is wrong, the capacity will be reduced and the motor may become overloaded.



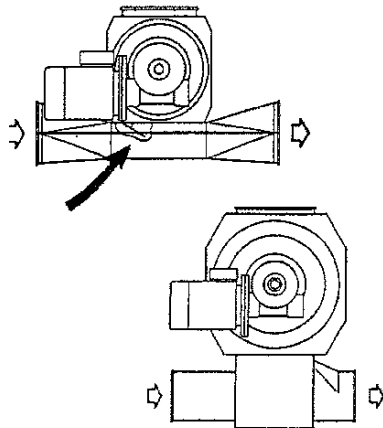
Oil quantities:

Gear STM RMI 63
for RV 20: 0.385 litre
Gear STM RMI 85
for RV 40: 0.85 litre

Note: Never mix synthetic oil and mineral oil. If you want to change oil type, it is necessary to clean the gear very carefully.

The gear used for the RV rotary valve is of STM manufacture. It is a reliable gear sold in many countries. If you have any queries as to servicing, please apply to Kongskilde or one of the gear distributors: (see page 44)

It is important that the outlet for horizontal connection is oriented as shown, failing which the valve capacity will be reduced.



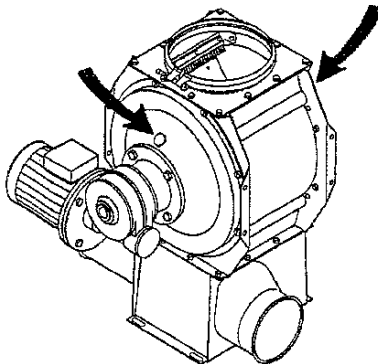
Maintenance

Lubrication

Bearings for cell wheel: RV 20 is greased for life from the factory. Grease RV 40 for every 1000 operating hours with a first-class ball-bearing grease.

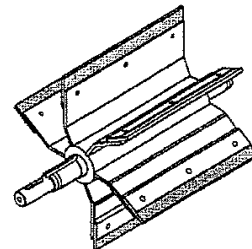
Cleaning

The gear motor must not be covered up. Keep it free from dirt which may reduce the cooling of the motor.



Rotor

The rotor blades are provided with replaceable air-tight paddles. As the paddles rotate very close to the valve housing they will gradually wear off.



Wiring

Check that the mains supply meets the motor specification.

The motor must be protected from being overloaded by a protective motor switch.

Gear: The gear is supplied from the factory incl. of synthetic oil. **It will normally not be necessary to change the oil.**

Oil type:
e.g. CASTROL ALPHA ES 320.

The life of the paddles will depend on the type of materials conveyed through the valve. As the paddles are subject to increasing wear,

more air will pass the rotor. This leakage will make it more difficult for the material to fall down into the valve and, accordingly, reduce the

capacity. When the capacity has decreased unacceptably, replace the paddles.

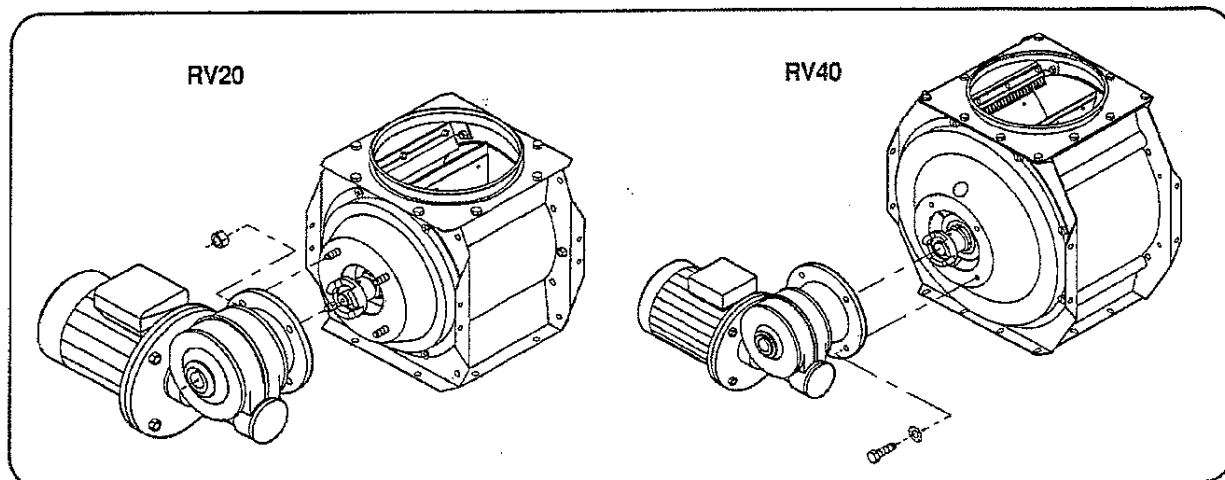
Replacement of paddles

Always stop the rotary valve prior to repair and avoid unintentional start of operation.

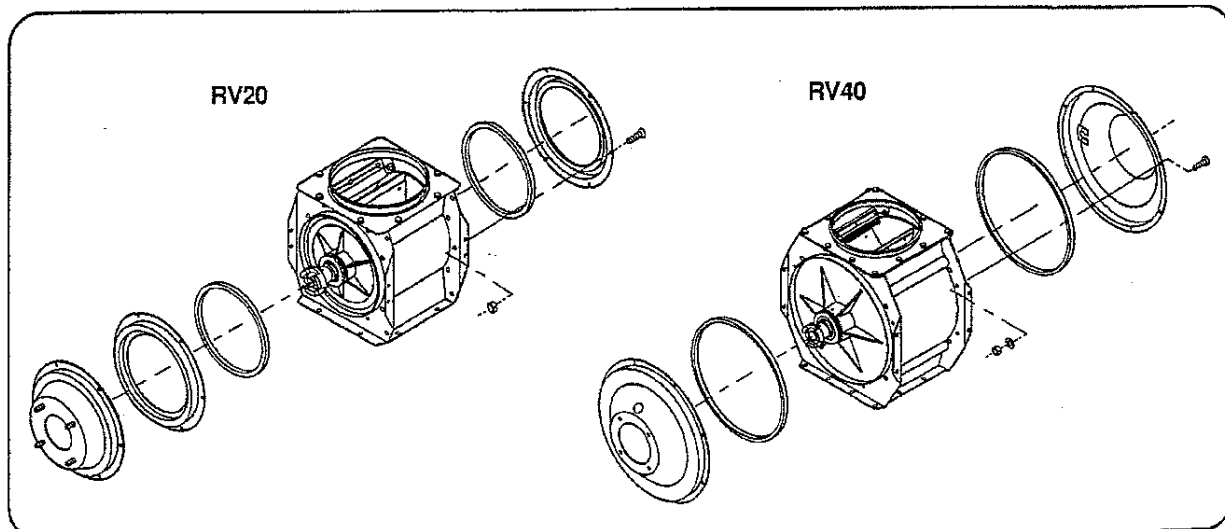
straight edge and a thickness gauge for mounting the paddles on the rotor (see item 4).

The paddles can be replaced without the use of special tools. However, it is recommended to use a

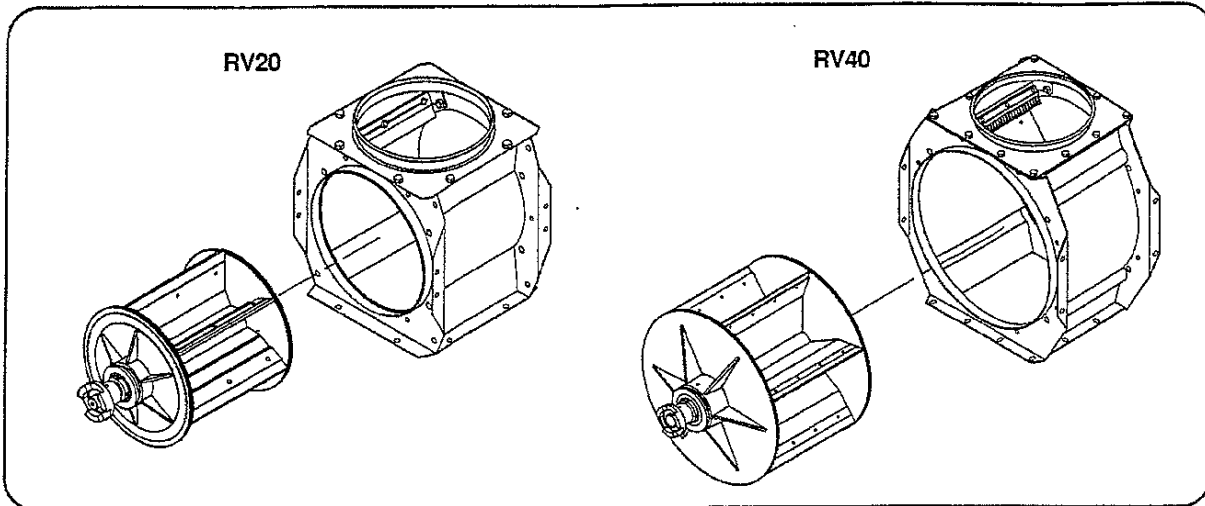
Only use original Kongskilde paddles.



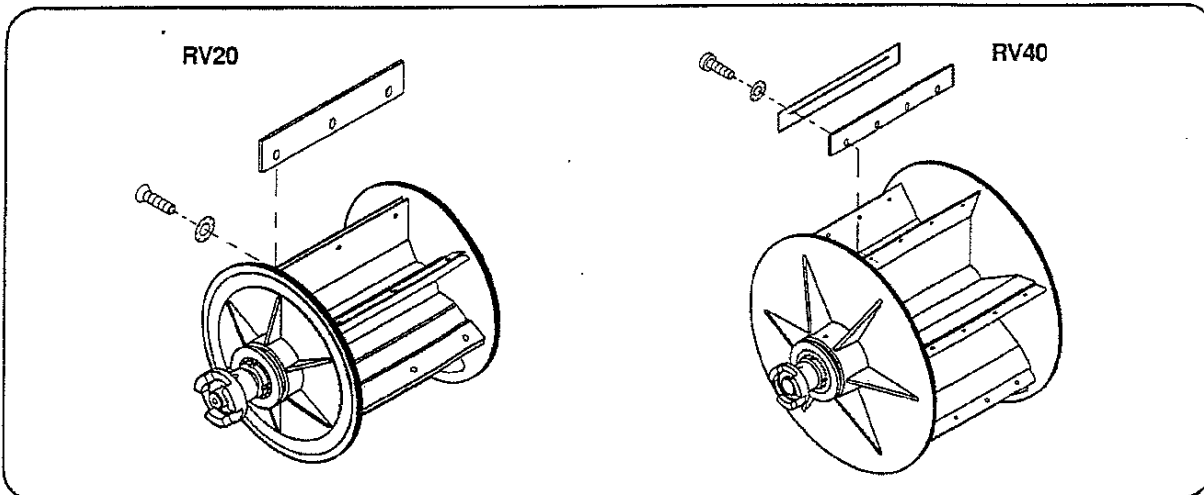
1. First dismount the gear motor.



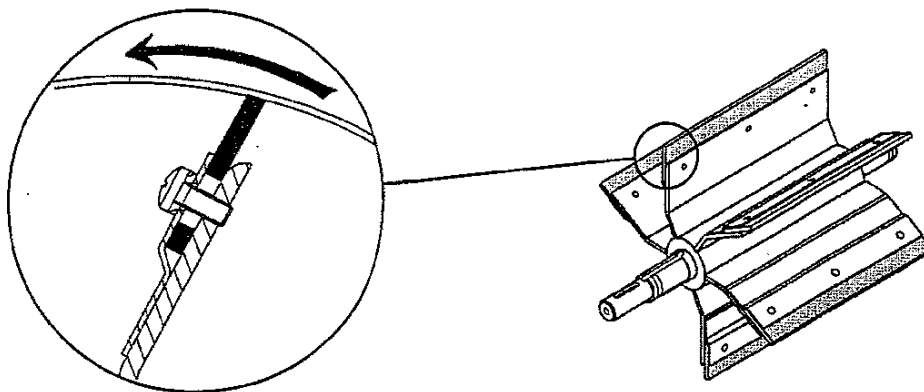
2. Now dismount the side covers and seals.



3. Withdraw rotor and end plates from the housing.

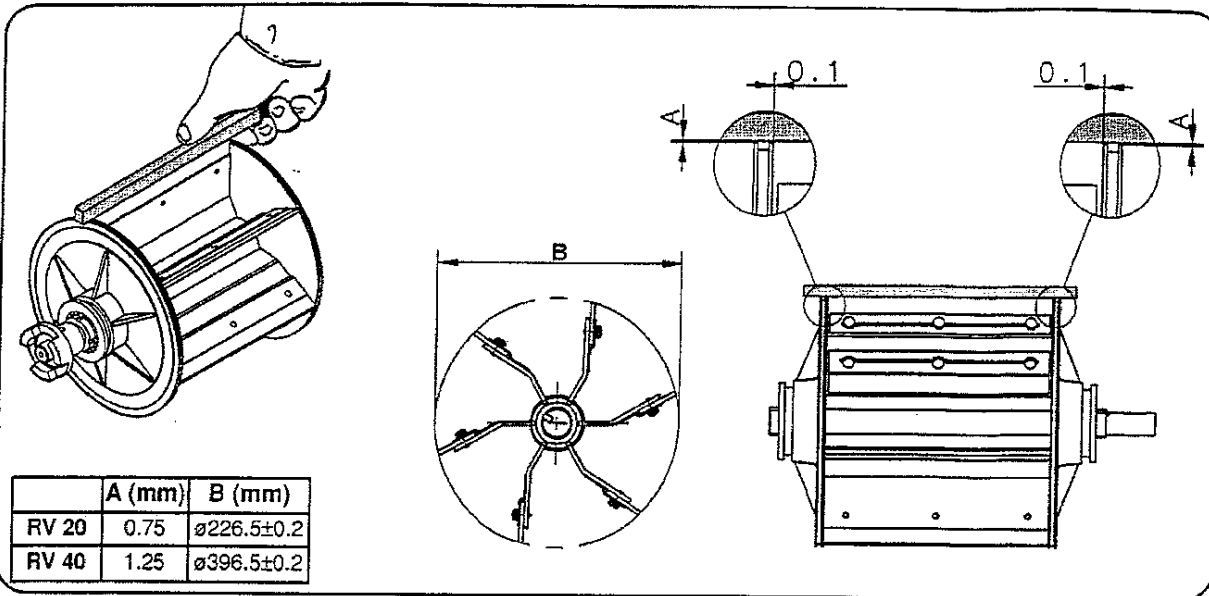


4. Dismount the worn-out paddles and replace by new ones.



See that the paddles are correctly oriented as related to the direction of rotation of the rotor.

Use and maintenance manual – RTC 200



Use and maintenance manual – RTC 200

Put a straightedge over the paddles and check that they are completely straight and the distance between straight edge and end plates is as shown (use the thickness gauge).

Note that the clearance between end plates and paddles must be at least 0.1 mm in both sides.

When the paddles are secured on the rotor they will expand a little at

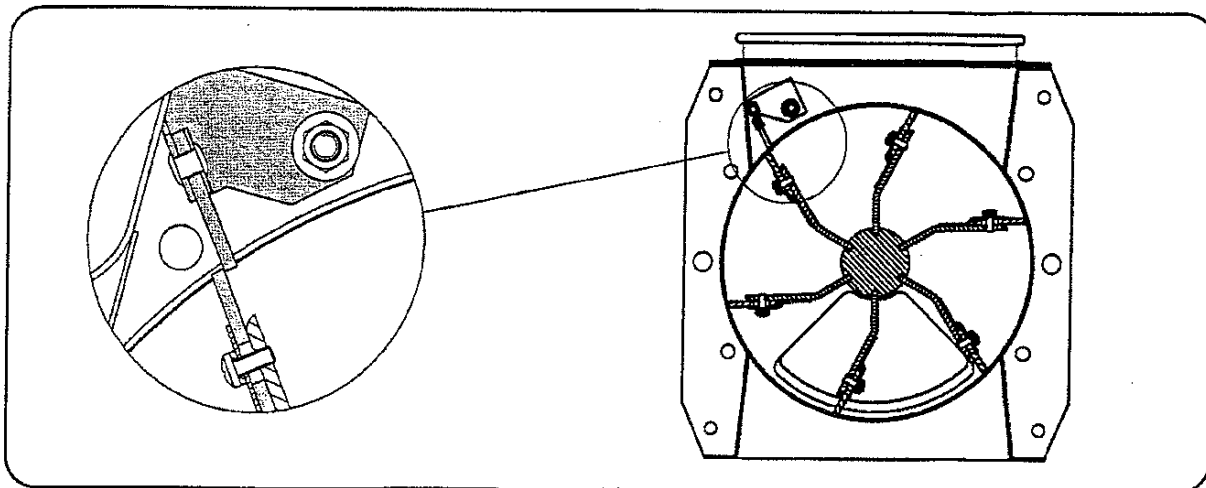
the ends. The clearance between end plates and paddles should therefore be checked after attachment. It may prove necessary to dismount the paddles and rub a little off the ends to achieve the necessary tolerance.

If the clearance between end plates and paddles is too small, the motor may become overloaded.

5. Reassemble the rotary valve in the opposite order.

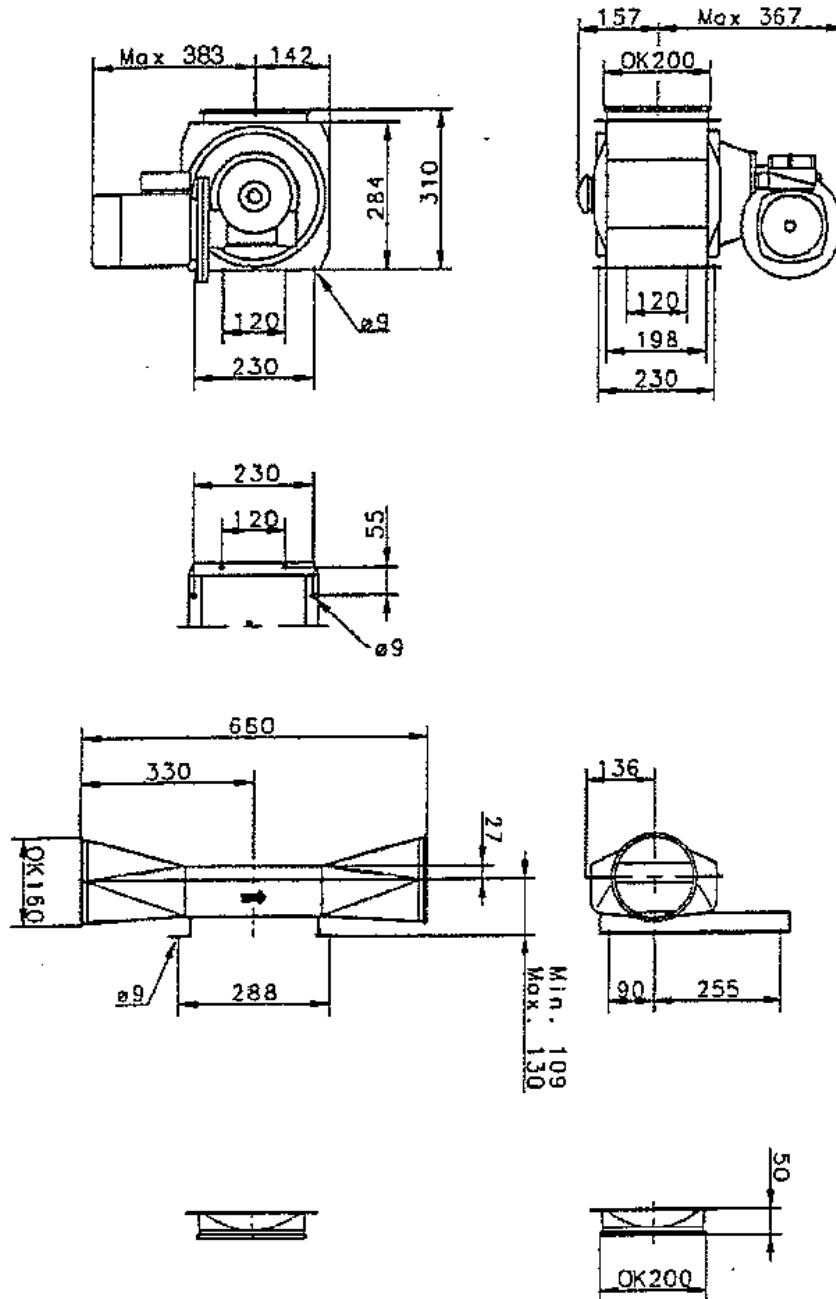
Make sure that there is a clearance of at least 0.1 mm between end plates and rotor blades.

Check with a feeler gauge that no obliquities have occurred during mounting, resulting in a too small tolerance.



Make sure that the scraper has been adjusted so as to only just reach the paddles.

Dimensions (mm)



Use and maintenance manual – RTC 200

TECHNICAL DATA	
volumetric capacity (l/revolution)	7
Rotation velocity (RPM)	25
Exercise temperature	Max 70 °C

SAFETY AND WARRANTY NORMS

- The proper and correct use of the machine requires the careful acknowledge of the above instructions and of all risks related to an incorrect behaviour using and maintaining the machine.
- Authorized maintenance and running staff must be properly trained and equipped according to the safety rules and norms of accident prevention measure. **SV impianti s.r.l** therefore refuses every responsibility on accidental events due or consequent to default or non-observance of safety norms or running training instructions.
- Use reliability is guaranteed only where the machine is used for the purposes and according to the material data stated on the contract and technical specification for which it has been designed and supplied. **SV impianti s.r.l** refuses every responsibility where the machine will be used for other not specified purposes or modified in whatever part or technical data.
- **SV impianti s.r.l** does not consider itself responsible regarding reliability, safety and performances in case where warnings and instructions quoted on the present manual are not been respected above all for activity regarding maintenance and correct use.
- User electrical plant must be in accordance with the norms CEI 64.8. **SV Impianti s.r.l** refuses every responsibility in case of the machine is not correctly earthed and protected by security electrical devices according to the a.m. regulations.
- For repair and original spare parts it is recommended to contact the supplier, therefore **SV Impianti s.r.l.** refuses every responsibility for repair and for replacing parts with not original ones where these activity are executed directly by the user or by a third part.

RECOMMENDATIONS

- Follow the above installation, use and maintenance instructions..
 - Do not introduce hand, arm or touch any part inside during machine running.
 - Do not walk or cross over the covers machine.
 - Do not remove with whatever tool clogging material inside the machine during working.
 - Do not make cleaning or maintenance during machine working.
 - Do not start the machine without installed protection on transmission belts or moving parts.
 - Let clean and free from any tool or any abandoned thing around the machine after repair or maintenance operation. Take care that charging and discharging hoppers are free.
- Check the machine is can not be started during maintenance operations.

WARRANTY

The machine has a warranty for a period after installation as per warranty terms stated on the contract. Validity of warranty depends on the application of the norms quoted on the present manual and expire when the following events are verified:

- Use of the machine for purposes or in technical conditions not in accordance to the contract .
- Repair or maintenance executed by not authorized part or without the writted authorisation of the supplier **SV impianti s.r.l**.
- Missing maintenance or not in accordance with the related instructions.
- Use of not original spare parts or not advised lubricants.

Warranty will not apply for the components liable to consumption and wear as scrapers strip, rubber boarders, belts and impact wear plates.