

## 1.1 General safety rules



**ATTENTION!** When using electric tools, the following fundamental safety measures must be taken to prevent electric shock, injury or fire.

**Read all of these instructions before you use the electric tool, and store the safety instructions properly.**

### Service and maintenance:

- 1 **Regular cleaning, maintenance and lubrication.** Always pull the electrical plug before any adjustment, maintenance or repair.
- 2 **Have your device repaired only by qualified experts and only with original replacement parts.** This ensures the continued safety of the device.

### Working safely:

- 1 **Keep your work area orderly.** A messy work area can cause accidents.
- 2 **Consider environmental influences.** Do not expose electric tools to rain. Do not use electric tools in damp or wet environments. Keep the work area well lit. Do not use electric tools where there is a risk of fire or explosion.
- 3 **Protect yourself from electric shock.** Avoid physical contact with earthed parts (such as pipes, radiators, electric stoves or cooling devices).
- 4 **Keep other people away.** Do not let other people — especially children — touch the electric tool or its cable. Keep them clear of the work area.
- 5 **Store electric tools safely when they are not in use.** Unused electric tools should be kept in a dry, high or closed area, out of reach of children.
- 6 **Do not overload your electric tool.** Work is better and safer within the performance range indicated.
- 7 **Use the right electric tool.** Don't use low-performance machines for heavy-duty jobs. Do not use the electric tool for purposes for which it was not intended. For example, do not use a portable circular saw for cutting tree branches or logs.
- 8 **Wear proper clothing.** Do not wear loose clothing or jewellery, as they can get caught in moving parts. When working outdoors, wear slip-resistant shoes. Wear a hairnet over long hair.
- 9 **Use protective gear.** Wear safety glasses. Wear a breathing mask during work that creates dust.
- 10 **Connect the dust extraction equipment.** If there are connections to dust extraction and collection equipment, make sure that they are connected and properly used.
- 11 **Do not use the cable for purposes for which it was not intended.** Never use the cable to pull the plug from the socket. Protect the cable from heat, oil and sharp edges.
- 12 **Secure the work piece.** Use clamps or a vice to hold the work piece firmly. They will hold it more securely than your hand can.
- 13 **Avoid abnormal postures.** Make sure to stand securely and always keep your balance.
- 14 **Maintain your tools with care.** For better and safer work, keep cutting tools sharp and clean. Follow the instructions for lubrication and changing tools. Regularly inspect the electric tool's connection cable, and if it is damaged, have it replaced by an authorized expert. Regularly check extension cords, and replace them if they are damaged. Keep the handles dry,

clean and free of oil and grease.

- 15 **Pull the plug from the socket.** When not using the electric tool, before maintenance or when changing tools, such as saw blades, drills and cutting bits.
- 16 **Do not leave any tool keys inserted.** Before switching on, check to see that keys and adjustment tools have been removed.
- 17 **Avoid unintentional activation.** When plugging the tool in, make sure that the switch is turned off.
- 18 **Use outdoor extension cords.** When outdoors, use only extension cords that are approved and appropriately marked.
- 19 **Be alert.** Pay attention to what you do. Approach your work sensibly. Do not use the electric tool when you are distracted.
- 20 **Check the electric tool for damage.** Before using the electric tool, you must inspect safety equipment or slightly damaged parts carefully to ensure that they work properly and as intended. Check to see that the moving parts operate freely and don't stick, and to make sure no parts are damaged. All parts must be mounted properly and meet all the conditions for ensuring trouble-free operation of the electric tool.

Damaged safety equipment and parts must be properly repaired or replaced by a professional facility, unless otherwise indicated in the user manual. Damaged switches must be replaced by a customer service facility.

Never use an electric tool whose switch cannot be turned on and off.
- 21 **Caution.** Using other insertion tools and accessories may cause injury.
- 22 Have your tool repaired by an electrical expert. This electric tool meets applicable safety requirements. Repairs must be made only by an electrical expert using original replacement parts. Otherwise accidents many occur.

## 1.2 Special safety instructions

- Only guide the spirals using a suitable riveting glove (model no. 72120 on the left; model no. 72121 on the right). Do not continue to use a damaged rivet glove. (A rivet glove is not personal safety equipment according to 89/686/EWG - see also 6.6)
- When using the rivet glove, make absolutely sure also to wear a disposable latex glove under the rivet glove for hygienic reasons. (Do not continue using a damaged latex glove.)
- Wear rubber boots (for insulation) when performing cleaning work.
- The spirals must be removed completely from the holding cage before machine is turned on.
- Before inserting the plug into the electrical socket, make absolutely sure that the pipe cleaning machine is switched to 0 or **OFF**.
- Whenever using electrical devices, always observe the specified voltage and generally work with a protective tube and safety gloves.
- Choose the right tool for the clog and for the pipe diameter to be cleaned, in order to prevent the tool from hooking into the clog and the spiral from ejecting from the pipe.
- To prevent damage, use this machine and its accessories only to clean waste water pipes — never chimneys, wells, etc.
- To prevent damage to the pipes or pipe bends, do not modify tools by whetting them, etc.
- Use a camera system to spot the cause of the pipe clog.

## 1.3 Residual risks

Even when observing all of the safety instructions there are still some residual risks remaining, for example: spirals can overturn (create a loop if the operating arc is too large) thereby creating the risk of clamping. Spirals under tension can spring out of the pipe ~ a risk of injury.

## 1.4 Proper usage

The pipe cleaning machines may only be used to clean pipes of the following diameters:

**R550:** 20-100mm, **R600-650:** 20-150mm, **R750:** 50-200mm

The pipe cleaning machines are only designed for short term operation and may therefore only be operated without interruption for a maximum of 15 minutes! Do not use this product in any other way as stated for normal use.

## 2 Technical data/ Applications

Voltage .....230 - 240 V, 50 Hz / 110 - 115 V, 50 - 60 Hz

	<u>R550</u>	<u>R600</u>	<u>R650</u>	<u>R750</u>
Rated power consumption (P1) .....	440 W	690 W	1350 W	1400 W

Operating speed .....	575 rpm	460 rpm	620 rpm	460 rpm
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Weight.....	15 kg	20,9 kg	22,8 kg	29,5 kg
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Spiral size.....	ø16 mm	ø16/22 mm	ø16/22 mm	ø22/32 mm
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Spiral size with accessories .....	ø8/10 mm	ø8/10 mm	ø8/10 mm	ø8/10/16 mm
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Max. working length .....	40 m	60 m	65 m	80 m
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Pipe diameter working range .....	ø20-100mm	ø20-150mm	ø20-150mm	ø20-200 mm
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Protection rating .....	I	I	I	I
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Protection class .....	IP X4	IP X4	IP X4	IP X4
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Typical weighted acceleration in the

hand-arm area .....	< 2,5 m/s <sup>2</sup>	< 2,5 m/s <sup>2</sup>	< 2,5 m/s <sup>2</sup>	< 2,5 m/s <sup>2</sup>
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**!** The vibration emission value has been measured according to standardized testing procedures and can be used to compare one electric tool with another.

**•** The vibration emission value can be used to assess the (vibration) load.

**!** During actual use of the electric tool, the vibration emission value may vary from the indicated value, depending on the type of clog and the tool used.

Typical A-weighted sound levels: R550      R600      R650      R750

Sound pressure level (L <sub>PA</sub> ) .....	75 dB (A)	75 dB (A)	80 dB (A)	80 dB (A)	K <sub>PA</sub> 3 dB (A)
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Sound power level (L <sub>WA</sub> ) .....	86 dB (A)	86 dB (A)	91 dB (A)	91 dB (A)	K <sub>WA</sub> 3 dB (A)
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The noise level when working can exceed 85 dB (A). Wear ear protectors!

Measured values determined according to EN 61029-1:2010.

## 3 Scope of delivery

- Pipe cleaning machine      - Guide tube      - Operating manual

## 4 Model plate description

**Model No.** → Typ : R 550

**Item No.** → Item No. : 7.2655

**Series No.** → Serial No. :

**Production year** → YYYY : XXXX

**Rated voltage** → 230 V ~

**Power consumption** → P1 440W

**Rated frequency** → 50 Hz

**Protection class** → S2 15 min. | IP X4

**Short-term operation 15 min**

www.rothenberger.com      Made in Germany

## 5 Power connection

Connect only to the single-phase alternating current indicated on the rating plate. Connect only to sockets with protective contacts. The machine must be operated only through a ground fault circuit with max. 30 mA rated leakage current.

Connection: Insert the device into an electrical socket and press the green "RESET" button.

Once the red function display has lit up, the device is ready to operate. Whenever it is unplugged, or the power fails, the device automatically shuts off.

Operational test: Press the blue "TEST" button: The device shuts off. Press the "RESET" button: Once the red operation display has lit up, the device is ready to operate.

Always perform the operational test before starting up the device. If there is a repeated failure, have the connected device inspected.

Please keep in mind that this device cannot replace fundamental safety precautions. To prevent life-threatening hazards, be sure to use electrical devices only as intended.

Reliable personal protection against electric shock. Fault currents are recognized in a fraction of a second, and the current supply is immediately interrupted. The risk to humans and animals is drastically reduced.

- Never use the electric tool without a PRCD.
- The plug or electrical cord should be replaced only by the manufacturer of the electric tool or by its repair service.
- Keep water away from electrical parts of the electric tool and from people in the work area.

### 5.1 Putting the PRCD switch into operation



Only suitable for AC current! Note the mains network voltage!

Perform the following test procedure on the PRCD switch before every putting into operation of the device:

1. Connect the PRCD plug connector with the socket.
2. Press on RESET. The indicator switches to RED (ON).
3. Pull the plug connector out of the socket. The display switches itself off.
4. Repeat 1. and 2.
5. Press on TEST. The red indicator switches itself off.
6. Press on RESET to switch the device on (RED).



These protective device protect against faults in the attached device, not against such faults in the preceding plant.

## 6 Function of the unit

### 6.1 Use standard spirals

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The possible spiral diameters and spiral lengths that may be used are set out in the section entitled Technical data.

The spirals can be connected together at the coupling and subdivided again afterwards into segments using a separating pin; to do this insert the release wrench into the bore hole in the coupling and remove the coupling to the side.



Only use spiral sections for as long as is actually necessary!  
Do not use deformed spirals!

- 1 Remove the spirals from the interior of the holding cage.
- 2 Push the spiral through the machine.
- 3 Attach the protective hose from the rear onto the machine and check the lock of the locking bolt.

- ! Always use the protective hose. The protective hose acts as a vibration-damping guide for the spirals, as a dirt holder and guard, also as a safety element for the operating personnel and prevents uncontrolled banging.

## 6.2 Fit 8 mm / 10 mm spirals

B

For small bore pipes and pipe bend used 8 mm or 10 mm spirals (optional accessories).

- 1 Pull the spirals approx. 30 cm out of the adapter magazine.
- 2 Push the adapter magazine into the machine from the rear and secure it.  
To brake the adapter magazine pull the lever as far upwards as possible.

## 6.3 Fit tools

C

For first use to unfasten the plugging only use the drill with the smallest diameter and drill out the plugging hole for the first time. If the plugging hose has been bored or is opened and liquid begins to flow out, complete drilling out of the plugging hose with the largest possible adapted drill. If the plugging is now released, flush out and where possible, clean the pipe wall using a chain centrifuge drilling tool (where possible with water flowing through).

Depending on the type of blockage various tools may be secured to the standard spirals:



**Straight drill:** to establish the type of blockage.



**Club drill:** can be used for minor textile and cellulose blockages as a result of its flexibility. The club shape enables it to get into tight pipe bends.



**Funnel drill:** this is specifically used for textile and cellulose blockages. Its funnel-shape design gives this tool a large action range and allows it to be used as a tool to return spirals that have been trapped in the pipe.



**Fork cutting head:** to remove grease deposits or shred lumps and similar materials.



**Shovel head drill:** special bent tool for sludge or sand deposits.

**To secure:** push the tool into the coupling until it engages.

**To remove:** push the release wrench into the hole and slide the tool sideways out of the coupling.

## 6.4 To adjust handle

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### R650

The handle can be fitted either at the top or at the side.

Move to the side position: Push the sleeve downwards, pull out the lever and insert it into the side opening.

Move to the top position: Pull out the lever, pull the sleeve downwards, insert the lever and lock the sleeve again.

### R750

The handle can be turned forwards to allow the machine to be pulled more easily.

Push the sleeve downwards, pull out the lever, turn it through 180° and insert it again.



Turn the knurled bushing for securing or blocking and check that the clamping lever cannot be pulled!

## 6.5 Carry position

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The handle can be locked for carrying.

To do this push the handle and pull the lock.

To release the lock, press the handle briefly.

**Information brochure on safety gloves according to EC guideline 89/686/EWG.****Appendix II, Section 1.4 for minimal hazards only.**

This pair of gloves is exempted under Chapter II, Article 8, Paragraph 3 of the prototype test and is assigned to Category 1. From this it is assumed that their effectiveness against minor hazard-free risks has been perceived.

The protection class is determined by the requirements, which may be of a mechanical, chemical or thermal nature or due to similar influences that do not call for a Category 2 protection class. A risk analysis must be carried out through a wearer trial if the required size is to be specified so that the glove fits. When using accessory parts, such as undergloves, it should be noted that function may be negatively affected.

The gloves must be properly stored, i.e. in boxes in dry spaces. Influences such as humidity, temperature, light and natural changes in materials over time may lead to changes in the characteristics. A shelf life cannot be specified, because that will depend on the the degree of wear, and the amount and location of use.

Care with commercially available cleaning utensils (e.g. brushes, polishing cloths, etc.) is recommended. Washing or chemical cleaning requires prior consultation with an authorized technical workshop.

The manufacturer can accept no liability for changes in the characteristics. Before each time the gloves are used, check to make sure they are intact.

## 6.7 Start / Stop

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Switch the motor on and off at the switch:



Motor off.



Turn clockwise; remove blockages.



Turn anti-clockwise, return jammed spirals.

Start the spirals turning by pressing the handle.

## 6.8 Operation

G



Please ensure that the protective hose is attached to the machine.

Insert a suitable spiral, secure the protective hose and secure a suitable tool.

- 1 Position the machine max. 50 cm in front of the opening of the pipe you wish to clean.

Set the machine to turn clockwise at the On/Off switch.

- 2 Insert the spiral approx. 50 cm into the pipe. Press the handle. The spiral will start to turn.



Guide the spiral only with the supplied special safety glove.

Release the handle and push the spiral further into the pipe.

Repeat this process until you feel resistance; this means you have reached the blockage.

- 3 Pull the spiral out of the machine until the spiral is prestressed into a bend (working bend).



Do not create an operating arc which is too big – a risk of injury!

Press the handle and press the spiral against the blockage using the working bend.

When the spiral has moved into the pipe so far that the working bend is relieved, pull the spiral out of the machine and form a new working bend.

- 4 Repeat the process by pulling forward and backwards until the blockage has been removed, then release the handle and pull out the spiral.

If it does not move easily, press the handle and allow the spiral to turn briefly.

If the movement is very stiff, please ensure through clockwise and anticlockwise rotation that the spirals do not jam during locking (clockwise rotation) and releasing (anticlockwise rotation).

**!** If the tool becomes fastened to the blockage, release the handle and switch the machine to turn anti-clockwise.

Using a back and forth type motion and clockwise and anticlockwise rotation of the spirals, release the tool from the plugging while the hand lever is depressed.

## 7 Care and Maintenance

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Pull the mains plug before carrying out any work on the machine!

Grease the machine with universal grease at the two lubrication points:

Lubrication point 1: daily or after every use.

Lubrication point 2: every 100 hours of service. Unscrew the left cover to access this point.

Clean the machine at regular intervals. Clean and preserve the spirals and tools each time after you have used the machine. We recommend our special "ROWONAL" care product for this purpose.

All other servicing, maintenance and repair work may only be carried out by an authorised ROTHENBERGER workshop.

## 8 Replace the calmp jaws

If the spirals no longer turn during operation and slip the clamping jaws are fouled with grease and must be cleaned or replaced if worn:

### 8.1 R550 - R650

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- 1 Unscrew the right cover
- 2 Remove the sealing stopper. Undo the lock nut and undo the adjusting screw until the clamp jaw springs are no longer stressed.
- 3 Pull the handle upwards and hold it in this position. Remove the clamp jaws. Press the clamp jaws together to release them.
- 4 Fit new clamp jaws.
- 5 Tighten the adjusting screws until the max. spiral diameter can still be inserted. Tighten the lock nut and insert the sealing stopper.
- 6 Secure the cover.

### 8.2 R750

K

- 1 Remove the cap with the two front screws.
- 2 Individually take out the clamps from the front. Then clean the housing and insert new clamping jaws one by one.
- 3 Screw on the cover and tighten the cover screws.

## 9 Accessories

The relevant accessories can be found from Page 171 onwards.

## 10 Disposal

Components of the unit are recyclable material and should be put to recycling. For this purpose registered and certified recycling companies are available. For an environmentalfriendly disposal of the non-recyclable parts (e.g. electronic waste) please contact your local waste disposal authority.

### **For EU countries only:**



Do not dispose of electric tools with domestic waste. In accordance with European Directive 2012/19/EC on waste electrical and electronic equipment and its implementation as national law, electric tools that are no longer serviceable must be collected separately and utilised for environmentally compatible recycling.

## 11 Customer service

The ROTHENBERGER service locations are available to help you (see listing in catalog or on-line) and replacement parts and service are also available through these same service locations. Order your accessories and spare parts from your specialist retailer or using our after-sales hotline:

**Phone: + 49 (0) 61 95 / 800 - 0**

**Fax: + 49 (0) 6195 / 800 - 3500**

**[www.rothenberger.com](http://www.rothenberger.com)**