

ROTHENBERGER

ROCAL 20 ROMATIC 20

ROCAL 20
ROMATIC 20



DE Bedienungsanleitung
EN Instructions for use
FR Instruction d'utilisation
ES Instrucciones de uso
IT Istruzioni d'uso
NL Gebruiksaanwijzing
PT Instruções de serviço
PL Instrukcja obsługi

CZ Návod k používání
TR Kullanım kılavuzu
HU Kezelési útmutató
RO Manualul de utilizare
ET Kasutusjuhend läbi
LT Naudojimo instrukcija
LV Lietošanas pamācība
RU Инструкция по использованию



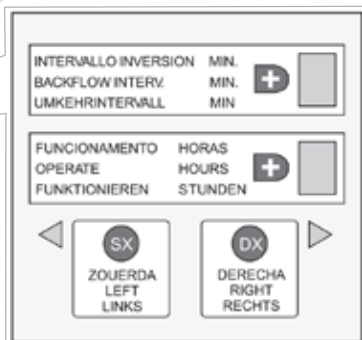
www.rothenberger.com

A Overview

no. 61100 ROCAL 20, Typ C
no. 100000283 ROCAL 20, Typ J



no. 61190 ROMATIC 20, Typ C
no. 061190Z ROMATIC 20, Typ J



Intro

DEUTSCH - Originalbetriebsanleitung! Bedienungsanleitung bitte lesen und aufbewahren! Nicht wegwerfen! Bei Schäden durch Bedienungsfehler erlischt die Garantie! Technische Änderungen vorbehalten!	Seite 2
ENGLISH Please read and retain these directions for use. Do not throw them away! The warranty does not cover damage caused by incorrect use of the equipment! Subject to technical modifications!	Page 10
FRANÇAIS Lire attentivement le mode d'emploi et le ranger à un endroit sûr! Ne pas le jeter! La garantie est annulée lors de dommages dus à une manipulation erronée! Sous réserve de modifications techniques!	Page 17
ESPAÑOL ¡Por favor, lea y conserve el manual de instrucciones! ¡No lo tire! ¡En caso de daños por errores de manejo, la garantía queda sin validez! Modificaciones técnicas reservadas!	Página 25
ITALIANO Per favore leggere e conservare le istruzioni per l'uso! Non gettarle via! In caso di danni dovuti ad errori nell'uso, la garanzia si estingue! Ci si riservano modifiche tecniche!	Pagina 33
NETERLANDS Lees de handleiding zorgvuldig door en bewaar haar goed! Niet weggooien! Bij schade door bedieningsfouten komt de garantieverlening te vervallen! Technische wijzigingen voorbehouden!	Bladzijde 41 
PORTUGUES Queiram ler e guardar o manual de instruções! Não deitar fora! Em caso de avarias por utilização incorrecta, extingue-se a garantia! Reservado o direito de alterações técnicas!	Página 49
POLSKI Instrukcję obsługi prosze przeczytać i przechować! Nie wyrzucac! Przy uszkodzeniach wynikających z błędów obsługi wygasa gwarancja! Zmiany techniczne zastrzeżone!	Strony 57
CESKY Navod k obsluze si prosim přečtete a uschovejte je! Nevyhazujte je! V pripade poškozeni způsobenem chybnou obsluhou zanika zaručka! Technické změny jsou vyhrazeny!	Stránky 65
TÜRKÇE Kullanım açıklamarını lütfen dikkatlice okuyunuz ve bir yerde muhafaza ediniz! Çöpe atmayınız! Kullanımında yapılan hatalar, garantinin silinmesine neden olur! Teknik deđişiklikler yapma hakkımız saklıdır!	Sayfa 73
MAGYAR Kérjük, olvassa el és őrizze meg a kezelési utasítást! Ne dobja el! A helytelen kezelésből származó károsodások esetén megszűnik a jótállás! Műszaki változtatások fenntartva!	Oldaltól 81
ROMÂNESC Vă rugăm să citiți și să păstrați manualul de utilizare! Nu îl aruncați! În cazul deteriorărilor cauzate de erori de operare, garanția se pierde! Ne rezervăm dreptul de a efectua modificări tehnice!	Pagina 89
ESTU Palun lugege kasutusjuhend läbi ja hoidke alles! Ärge visake ära! Käsitsemisvigadest tingitud kahjustuste korral kaotab garantii kehtivuse! Õigus tehnilisteks muudatusteks reserveeritud!	Lehekülğ 97
LIETUVOS Perskaitykite naudojimo instrukciją ir pasilikite ją! Neišmeskite! Garan-tija nebus taikoma gedimams, atsiradusiems dėl netinkamo naudojimo! Pasilieka ma teisė daryti techninius pakeitimus!	Pusla-pis 105
LATVIEŠU Lūdzu, izlasiet un uzglabājiet lietošanas instrukciju! Nemest prom! Ja ir bojājumi ekspluatācijas kļūdas dēļ, garantija zaudē spēku! Paturēt tehniskas izmaiņas!	Lappuse 113
РУССКИИ Прочтите инструкцию по эксплуатации и сохраняйте её для дальнейшего использования! В случае поломки инструмента из-за несоблюдения инструкции клиент теряет право на обслуживание по гарантии! Возможны технические изменения!	Страница 121

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Markings in this document:



Danger!

This sign warns against the danger of personal injuries.



Caution!

This sign warns against the danger of property damage and damage to the environment.



Call for action



1 Safety Notes

1.1 Intended use

Hot water cylinders, boilers, heat exchangers, etc..

1.2 General safety instructions



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 **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 away from 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 jewelry, 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 **Caution.** Pump can only be used on pipes where fittings can be connected properly
- 23 **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 may occur.
- 24 **Caution.** The pump is suitable to carry out cold washings, it can work at a temperature above 35°C for a maximum period of 60 minutes. In any case the washing solution must not exceed the temperature of 50°C.

1.3 Special safety instructions

To move the pump only use the carrier handle!

Do not pull the electric cable or the water hoses in order to get any moving of the electric pump!

Never allow incapable (children, teenagers, etc.) or not trained people to use the electric pump!



Attention: Always use gloves, protective eyeglasses, security face-mask and antacid clothes!

If the power supply cable is damaged, it must be replaced by the manufacturer or its technical assistance service or a similarly qualified person in order to avoid any hazard.

To guarantee proper operation of the pump, use only ROTHENBERGER chemicals (ROCAL Acid Multi-/Plus).

Non compliance with safety instructions and warnings in this manual and on the labels can cause a danger to persons and the environment.

ROTHENBERGER may not be held liable for any damage caused by improper use of the descaling pump and associated chemicals.

Do not use the pump if the supply cable and hoses are faulty.

When using an extension, the power plug and socket must be waterproof.

Read carefully the Safety Data Sheet of the scale solvent, apply any safety measures specified, and wear the individual protection devices planned.

Using a scale solvent incompatible with the materials in the unit may damage it.

Place the pumps in a safe place, on a flat surface, possibly at heights not exceeding 1 meter.

Ensure correct closure of the fittings.

The product should be used in well-lit environments.

This device can be used by children aged 8 and above and by persons who have physical, sensory or mental limita-

tions or a lack of experience or knowledge if a person responsible for their safety supervises them or has instructed them in the safe operation of the device and they understand the associated dangers.

Supervise children during use, cleaning and maintenance.
This will ensure that children do not play with the device.

2 Technical Data

Voltage 230 V, 50 Hz
 Output 150 W
 Power Consumption 300 W
 Pump flow 40 l/min
 Working pressure 1,3 bar
 Delivery height 10 m
 Tank capacity 15 l
 Weight 6 kg
 Protection class I
 Protection type IP X4

3 Function of the Unit

3.1 Overview (A)

- | | | | |
|---|----------|---|----------------------|
| 1 | Tank cap | 4 | Switch (ROCAL 20) |
| 2 | Tank | 5 | Flexible hose |
| 3 | Motor | 6 | Display (ROMATIC 20) |

3.2 Operating

- Cut water pressure. Disconnect water supply.
- Prepare the proper and suitable chemical product.
- Choose the appropriate ROTHENBERGER descaler and dilute it in water as indicated on the descaler bottle.
- Fill the tank with sufficient descaling solution to ensure that the pump rotor housing is submerged during use.



Attention! The pump is suitable to carry out cold washings, it can work at a temperature above 35°C for a maximum period of 60 minutes. In any case the washing solution must not exceed the temperature of 50°C!

- Separate the water inlet and outlet of the installation.
- Connect one pump hose to hot water outlet, and one to the inlet.
- Connect the power cable to a suitable 230 Volt single phase supply.
- Open the Tank cap.
- During use, the tank cap must be taken off, to allow the passage and elimination of the gas evolved during descaling. Check that the foam level does not exceed the maximum filling level.



During descaling, check that the height of the foam forming inside the tank does not exceed the maximum filling level!

- Switch on the pump.

- ➔ **Only ROCAL 20:** By using the pump equipped with FLOW REVERSER it is possible to attack scale from both entries of the circuit. Actuate the flow reverser several times to attack the cap in both directions. By attacking scale from both sides it is possible to clean piping which is almost totally obstructed and descaling time is considerably reduced.
- ➔ **Only ROMATIC 20:** By using the automatic pump equipped with FLOW REVERSER it is possible to attack scale from both entries of the circuit, with the possibility to programme the duration of descaling and the flow reversion time. By attacking scale from both sides it is possible to clean piping which is almost totally obstructed and descaling time is considerably reduced.
- ➔ Scale removal can be considered complete when bubbles no longer form in the return pipe and the solution is still acid.



Attention! Once descaling is ended, do not leave the descaling liquid in the tank!

- ➔ To eliminate the acid solution, lose hold inlet and outlet nuts and wait to the liquid leaves. Beware with the residual acidity, in order not to damage the pavement or other surfaces.
- ➔ Once the antiscaling treatment is finished, a neutralizing washing for the residual acidity is required with the ROTHENBERGER Neutralizing powder. To neutralise the descaling solution, pour the appropriate neutraliser into the tank, and dilute according to the indications mentioned on the neutraliser bottle
- ➔ Empty the tank.

Rinsing the unit:

- ➔ In the descaler pump tank which is now empty, dilute the neutraliser with water (according to the indications mentioned on the neutraliser bottle).
- ➔ Connect the hoses as previously
- ➔ Start the pump and run this solution for a few minutes.
- ➔ Prime the unit and rinse with clean water (20 to 30 litres water) to eliminate any product residue



Important! Colour change from red into yellow-orange will indicate that the descaling capability is exhausted.

If the pump is not used for a period of time, wash out the pump after use by circulating clean water through it.



Attention! The tank must be empty at all times and cleaned to prevent damaging the motor!

Our equipments are constructed with high quality acid resistant materials and submitted to severe operating tests. Follow the above instructions to avoid any operating or servicing problems.

3.3 ROMATIC 20: Programming

The pump is turned on through the switch placed on the box. When turning on, the led of „**OPERATE HOURS**“ will start flashing and will be on **0**; press the keys **DX** or **SX** to carry out the manual starting of the pump; the value **1** will be seen on the display.

To carry out automatic programming, follow the instructions below:

- 1) By pressing the key + **“BACKFLOW INTERV. MIN”** the value **1** will be fixed on the display; this means that flow reversion will be carried out every minute.
- 2) To change the value press once the key +, the value will start flashing; only during this time, by pressing the key + again, this value can be increased (up to 9). After 3 seconds the value is confirmed.
- 3) The value on the display decreases as minutes go by. To know the real value set at the beginning press the key + for 1 minute and the real value will start flashing.
- 4) To change the value of **“OPERATE HOURS”** follow the above mentioned instructions of sections 2 and 3.
- 5) During automatic functioning, press the keys **SX** or **DX** twice in succession to proceed to manual mode.

- 6) Once the time set on the display “**OPERATE HOURS**” is ended, the pump will stop working and the display will start flashing and show the value **0**.
- 7) To restart the pump press **DX** or **SX**; the pump will start working in manual mode and the value **1** will be seen on the display “**OPERATE HOURS**”.

4 Care and Maintenance

If the mains connection cable of this tool is damaged, in order to prevent endangering personnel and property it must be replaced by the manufacturer, or the Customer Service of the manufacturer, or a similarly qualified person.

5 Accessories

Accessory Name	ROTHENBERGER Part Number
ROCAL Acid Multi 5kg	1500000115
ROCAL Acid Multi 10kg	1500000116
ROCAL Acid Multi 30kg	1500000117
ROCAL Acid Plus Cu & FE, 5kg	61105
ROCAL Acid Plus Cu & FE, 10kg	61106
ROCAL Acid Plus Cu & FE, 25kg	1500000914
Neutralizing powder, 1kg	61115
Neutralizing powder, 10kg	61120

6 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 service-after-sales hotline:

Phone: + 49 (0) 61 95 / 800 – 8200

Fax: + 49 (0) 61 95 / 800 – 7491

Email: service@rothenberger.com

www.rothenberger.com

7 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 environmental friendly disposal of the non-recyclable parts (e.g. electronic waste) please contact your local waste disposal authority.

For EU countries only:



Do not dispose electric tools with domestic waste. In accordance with the European Directive 2012/19/EC the disposal of 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.