



Quality Tools for Smart Cleaning™

Operating Instructions



Scan for more information

R0 (R020S)



READ THE OPERATING INSTRUCTIONS BEFORE TURNING ON THE SYSTEM!

KEEP OPERATING INSTRUCTIONS WITH THE MACHINE AT ALL TIMES!



HydroPower® R0

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HydroPower® RO Introduction

Quality Tools for Smart Cleaning™

1 Introduction

1.1 General information

This manual allows you to use the HydroPower RO safely and efficiently.

The operating instructions are part of the HydroPower RO and must be kept with the HydroPower RO and accessible to operating personnel in the immediate vicinity of the HydroPower RO at all times.

Before starting work, operating personnel must have read and understood this manual. All safety instructions and instructions for use stated in this manual must be followed for safe operation.

Please refer to the Unger website (www.ungerglobal.com) for the Safety Data Sheet (SDS) information.

1.2 Product Lifetime Guarantee

We design and test Unger products to ensure they meet our high quality standards. We support this with the Unger Professional Product Lifetime Guarantee. We will replace your Unger HydroPower RO System if it does not meet our high quality standards for material, construction, or workmanship.

The guarantee does not cover:

- Failing to follow Unger's operating instructions.
- Operating and installation errors.
- Opening/disassembly of housing other than by Unger (except resin replacement as described in section 7.3).
- Replacing connections and components or performing unauthorized modifications other than by Unger.

If you believe that your Unger HydroPower RO System does not meet the guidelines as described for the Unger Professional Lifetime Guarantee, please contact us at 1-800-833-6100. Unger may, at its discretion, require return of the product for examination and testing. If a replacement product is no longer available, Unger will replace your product with one of equal or greater retail value at its sole discretion.

HydroPower® R0

Safety Information

2 Safety information

2.1 Safety alert symbols and signal words

Your safety and the safety of others are very important. We have provided important safety messages in this manual and on the HydroPower R0. Always read and obey all safety messages. These instructions are not meant to cover every possible condition and situation that may occur. Common sense and caution must be practiced when operating and maintaining the HydroPower R0.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential hazards that can cause serious injury or death. All safety messages will follow this safety alert symbol along with the word "DANGER" or "CAUTION." These words mean:



DANGER

Indicates a hazardous situation that can lead to serious injury or death.



CAUTION

Indicates a potentially hazardous situation. Which, if not avoided, can result in minor or moderate injuries.

ATTENTION

Indicates a situation which can lead to material damage.

NOTE



Here you can find operating tips and other useful information.

2.2 Warning signs



Warning of a hazard.



Warning of electrical voltage.



Warning of overpressure in containers.



Warning of hot surfaces.



Warning of suspended loads.



Warning of injury to the limbs.

Notes

HydroPower® R0

Safety Information

2.3 Mandatory signs



Application tips and other useful information.



Use protective gloves.



Use safety shoes.



Use protective goggles.

Notes



HydroPower® RO Safety Information

Quality Tools for Smart Cleaning™

2.4 General safety information

2.4.1 Basic principles

Special safety information may apply to certain activities. Safety instructions and warnings are given in the respective sections of the operating instructions.

Operate the HydroPower RO only:

- In accordance with the operating instructions
- If the HydroPower RO is in proper working order

This includes:

- The safety labels attached to the HydroPower RO must always be complete and legible condition. Replace damaged or illegible labels.
- Before cleaning or maintaining the HydroPower RO, turn off the main power switch and disconnect it from all electricity sources.
- Before performing maintenance on the filter vessels, make sure the vessels are depressurized.
- Clean the HydroPower RO of dirt and impurities after each use.

Use personal protective equipment to avoid personal injury:



▶ protective gloves



▶ safety shoes



▶ safety goggles

2.4.2 Unit protection

Overheat protection

If the pump overheats, the thermal protection circuit is triggered automatically and the HydroPower RO will shut off.

Safety Information

2.5 Mechanical hazards



Crushing due to incorrect operation and / or carelessness.

- ▶ Do not reach between the ground surface and the HydroPower R0.
- ▶ Do not place objects in the openings of the HydroPower R0.
- ▶ Place the HydroPower R0 on a level surface only.
- ▶ Ensure sufficient stability and secure the HydroPower R0 against tipping over or rolling away.
- ▶ In the case of a malfunction or emergency, immediately turn off the unit by turning the lower switch to "OFF".
- ▶ Wear safety shoes.



2.6 Electrical hazards



Electric shock and burns due to live parts.

- ▶ Before each use, perform a visual inspection of the power cable for damage. If you notice any damage, contact your distributor.
- ▶ Maintenance on the electrical components of the system may only be carried out by employees of Unger or its authorized distributors / technicians.

2.7 Thermal hazards



Burns due to hot surfaces.

- ▶ The housing of the pump motor as well as the coils of the valves can become hot during operation. Allow the system to cool down sufficiently before touching components marked with this symbol.
- ▶ Wear protective gloves.



2.8 Hazards due to pressure



Injuries from pressurized containers.

- ▶ The three (3) filter housings are pressurized during operation.
- ▶ Never open/remove a filter housing or any hose during operation.

2.9 Hazards from materials and substances

The safety data sheets for materials and substances can be found online at www.ungerglobal.com/service/downloads/safety-data-sheet.



Irritation to the eyes, skin and respiratory tract.

- ▶ Resin can cause irritation to the eyes, skin and respiratory tract. Avoid any contact with the resin when replacing the DI resin cartridge.
- ▶ In case of resin contact with eyes, remove contact lenses and rinse eyes immediately and thoroughly with clean water.
- ▶ Wash hands thoroughly after finishing work.
- ▶ Wear protective gloves and goggles.



Spilled resin is a slipping hazard.

- ▶ If resin is spilled, carefully clean it up immediately.
- ▶ Wear safety shoes.



Irritation to eyes, skin and respiratory tract through contact with liquid membrane care.

- ▶ Avoid any contact with and swallowing of the membrane care liquid (sold separately).
- ▶ In case of contact with eyes, remove contact lenses and rinse eyes immediately and thoroughly with clean water.
- ▶ Keep the membrane care liquid sealed and inaccessible to children.
- ▶ Wear protective gloves and goggles.



Safety Information

2.10 General hazards

Read and follow ANSI Standard IWCA 1-14.1 (Window Cleaning Safety).



Purified water is delivered to the waterfed pole by hoses from the HydroPower Ultra system. This introduces a risk of tripping to both the operator and the general public. Identify work area with appropriate signage.

Any surface that becomes wet must be identified with appropriate signage to direct pedestrians and workers away from work area. During wintertime, it is important to avoid water pooling, which could freeze, creating a dangerous slip hazard.

General hazards associated with the use of water fed poles and deionization equipment¹:

- ▶ Trip hazard to the general public when using hoses.
- ▶ Slip hazard presented from wet pathways.
- ▶ Slip hazard for operator when concentrating on work.
- ▶ Falls from height when working on flat roofs.
- ▶ Electrocution from poles coming into contact with overhead power source.
- ▶ Injuries to others from falling poles or fabric of the building that may be dislodged.
- ▶ Injury to others from falling poles caused by incorrect handling or failure of pole.
- ▶ Injury through incorrect manual handling of poles and other equipment.
- ▶ Hazards from carrying tanks, systems and equipment that are overloaded, unstable, unsecured or incorrectly installed within a vehicle.

2.10.1 Technical label

 <p>Quality Tools for Smart Cleaning</p> <p>RO (RO20S)</p> <p>Voltage • Voltaje • Tension: _____ 110V / 60Hz</p> <p>Pump performance • Rendimiento de la bomba • Performance de la pompe: _____ P1/P2: 0.50 HP</p> <p>Water Inlet/Outlet Connectors: _____ 3/4" Quick coupling</p> <p>Conectores de agua de entrada/salida: _____ Acoplamiento rápido de ¾ pulg</p> <p>Connecteurs d'entrée et de sortie d'eau: _____ Couplage rapide de ¾ po</p> <p>Max. Inlet Pressure • Presión máxima de entrada • Pression d'entrée maximale: _____ 6 Bar [87 PSI]</p> <p>Max. Outlet Pressure • Presión máxima de salida • Pression de sortie maximale: _____ 10 Bar [145 PSI]</p> <p>Max. Water Temperature • Temperatura máxima del agua • Température maximale de l'eau: _____ 30°C [85°F]</p> <p>Ambient Temperature • Temperatura ambiente • Température ambiante: _____ 5°C - 40°C [40°F - 105°F]</p> <p>Serial Number • Número de serie • Numéro de série: _____</p> <p style="font-size: small;"><i>For outdoor use only, store indoors • Sólo para uso exterior, almacenar al interior • À utiliser à l'extérieur uniquement, ranger à l'intérieur</i></p>	
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HydroPower® RO Safety Information

Quality Tools for Smart Cleaning™

2.11 Responsibilities of the operator

The HydroPower RO is for commercial use only.

- The operator must be familiar with and observe all applicable workplace rules and regulations, including all accident prevention procedures.
- The operator must be familiar with and strictly adhere to all applicable local, state/provincial and federal labor laws, safety codes and standards.
- The operator must have read and understood the HydroPower RO Operating Instructions and have been trained in its safe and proper operation before using the HydroPower RO.
- The operator must insure that all safety labels on the HydroPower RO are legible at all times.
- The HydroPower RO should not be used if the operator is under the influence of drugs, alcohol, or medications.

HydroPower® RO

Safety Information

2.12 Storing the Operating Instructions

This manual must be kept with the HydroPower RO and must be available to the entire staff at all times.

If the manual becomes illegible for any reason, the operator must obtain a replacement manual from the manufacturer.

These operating instructions can also be downloaded as a PDF at www.ungerglobal.com/downloads.

NOTE



When transferring or reselling the HydroPower RO to third parties, the following documents should be passed on to the new owner:

- ▶ this manual,
- ▶ the documentation of any repair work,
- ▶ proof of maintenance work.

2.13 Contact Address

Unger Enterprises LLC

425 Asylum Street
Bridgeport, CT 06610
United States

Tel.: (1) 800.431.2324

Fax: (1) 800.367.1988

unger@ungerglobal.com

www.ungerglobal.com



HydroPower® R0

General safety regulations

Quality Tools for Smart Cleaning™

3 About the HydroPower R0

3.1 Using the HydroPower R0

3.1.1 Intended use

The HydroPower R0 is used for the filtration of municipal water by demineralization for the purpose of glass and surface cleaning.

The HydroPower R0 is intended for commercial use only.

The HydroPower R0 may only be connected to municipal water lines.

The use of the HydroPower R0 in any way other than as described in this manual, including for bacteria removal, is prohibited.

This applies in particular to the use of the HydroPower R0 for bacteria removal.

3.2 Technical specifications

3.2.1 Operating conditions

Ambient temperature [°F/C]	40-105 / 5 ... 40
Water temperature [°F/C]	40-77 / 5 ... 25

ATTENTION

Material damage due to improper handling.

Ensure that the incoming water is of known drinking quality.

The drinking (tap) water must be free of iron, manganese and heavy metals (max. 0.2 mg / l iron, 0.05 mg / l manganese), the maximum silicate (SiO₂) content must not exceed 20 mg / l. It must also not contain barium and strontium.

3.2.2 Electrical specification

Primary electrical connection [V / Hz]	110V / 60 Hz
Power consumption	0.37 kW
Minimum Voltage Required	Class B: 104V / 60Hz

3.2.3 Protection types of electrical components

Electric motor	IP 44
Pump Control	IP 65

General safety regulations

3.2.4 Pressure ratings

Input pressure	1-6 Bar / 14-87 PSI
Max. operating pressure	10 Bar / 145 PSI

3.2.5 Dimensions quick overview

Height [in/mm]	37.8 / 960
Width [in/mm]	20.9 / 530
Depth [in/mm]	26.4 / 670
Empty weight [lb/kg]	99 lb / 45 kg

3.2.6 Media connections

Standard feedwater connection thread ["]	3/4
Standard concentrate connection thread ["]	3/4
Standard permeate connection thread ["]	3/4

3.2.7 Water quality

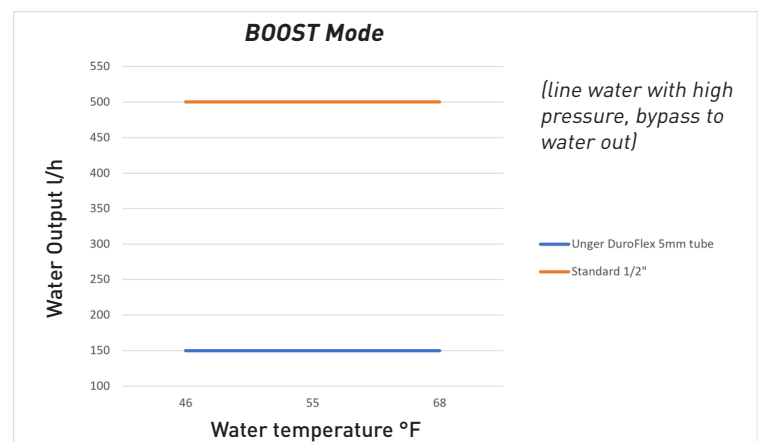
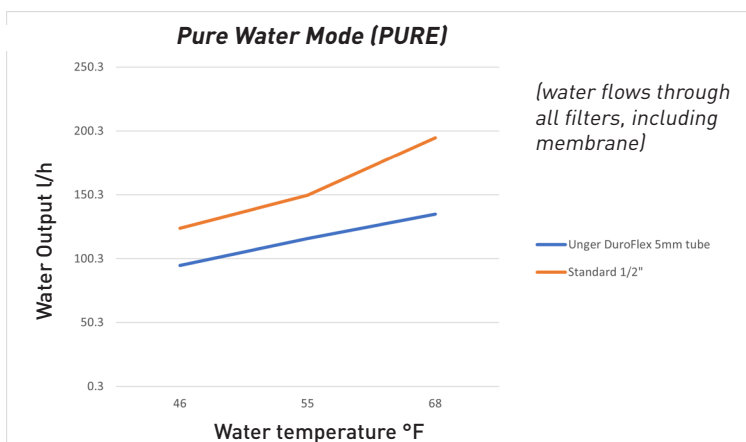
Max. salt content in incoming water [ppm]	1000
SiO ₂ content in incoming water [mg/l]	20

3.3 Water output quantity

The water flow depends on factors such as water temperature, hose length and hose diameter.

Measuring Setup:

- Hose length: each 25m / 82'
- 2 different hose diameters: 5mm (0.20") / 12.5mm (0.5")
- 2 different water temperatures: 46 / 55 / 68°F (8 / 13 / 20°C)
- Line pressure: 4 bar / 58 PSI



3.4 System products & accessories

The following is included in each delivery:

- HydroPower R0
- Filter key / Strap Wrench
- Concentrate hose
- Suction pipe for membrane care
- Instruction manual

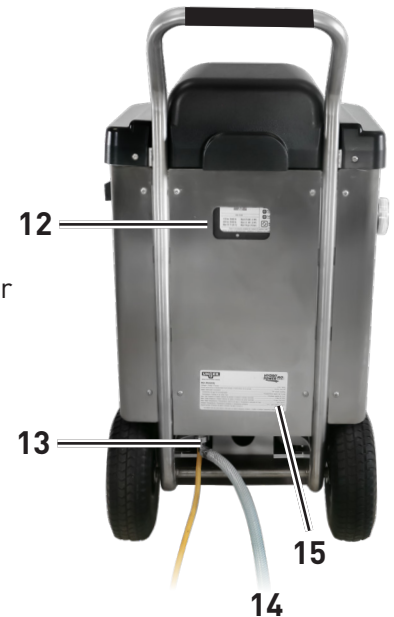
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4 Preparing for use

4.1 Construction of the HydroPower RO



- 1 Manometer
- 2 TDS-Meter
- 3 Switch WORK/RO FLUSH
- 4 Switch TAP BOOST / OFF / PURE
- 5 Water inlet
- 6 Water outlet
- 7 Water meter
- 8 Carbon/sediment combi pre-filter
- 9 RO Membrane
- 10 DI resin filter
- 11 Pump ventilation slots



4.2 Interfaces



The **TDS meter** shows the water quality at water outlet for the Pure and the Boost Mode.

PURE: TDS meter shows the value of the filtered water after RO Membrane and DI resin. It should ideally show a value of 0. If the value is 10 or greater, the resin should be replaced. **TAP BOOST:** TDS meter shows the value of the tap water.



The **water meter** measures the water flow at the inlet. This is particularly important for the combi pre-filter, as it must be replaced after approximately 30,000l / 8,000 gal.



The **manometer** shows the water pressure behind the pump. Ensure that the water inlet pressure is at least 1 bar. The optimum is 4 bar, maximum should not exceed 6 bar. The pump increases the pressure by approximately 4 bar. Accordingly, the pressure during operation should not exceed 10 bar.



On the front of the unit is one connection for attaching the hose for the water fed pole and one connection for the water supply. These are standard quick connections.



The water outlet for the concentrate is located at the back of the unit. Pour the concentrate down the drain using the enclosed concentrate hose.

Transport and storage

4.3 Transport and storage

4.3.1 Transport

The HydroPower RO is delivered on a pallet.

Check the completeness of the delivery, see section "3.4 System products & accessories".

The HydroPower RO is carefully tested and packaged before shipment. However, damage during transport cannot be ruled out. Therefore, immediately check the HydroPower RO upon delivery for any damage.

If the HydroPower RO has been damaged during transport, show the damage to the company delivering the HydroPower RO on behalf of your distributor.

Complaints of damage during transport cannot be accepted without written confirmation by the distributor.

In the case of transport of the HydroPower RO by a delivery vehicle:



DANGER



Severe injuries and property damage due to the HydroPower RO falling are possible.



- ▶ Do not walk or grab under the suspended load.
- ▶ Use only the fixing points provided for fixing the hoist.
- ▶ Only use a suitable hoist.
- ▶ Secure the HydroPower RO to the transport.
- ▶ Observe the weight and maximum dimensions of the HydroPower RO.
- ▶ Wear protective gloves and safety shoes.



When transporting, ensure that the HydroPower RO is properly secured and cannot move during transport. Protect the HydroPower RO from external damage.

Use the fixing points of the frame during transport, or if the HydroPower RO is being lifted with a crane, in order to avoid damage.



HydroPower® R0

Operating the HydroPower R0

Quality Tools for Smart Cleaning™

4.3.2 Operating the HydroPower R0



- 1 Water inlet
- 2 Carbon/sediment combi pre-filter
- 3 RO membrane
- 4 DI resin filter
- 5 Water outlet

What is Pure Water?

Pure Water is water in its purest form, physically processed to remove the minerals that would otherwise lead to limescale spots and streaks. Such impurities are referred to as TDS (Total Dissolved Solids) and are measured in ppm (parts per million). Water is considered 100 % demineralized (pure) when its TDS is measured at 0 ppm. TDS of 180 ppm is considered as average water hardness.

Flow of water purification

The water enters the HydroPower R0 via the water inlet (1).

The carbon/sediment combi pre-filter (2), which filters out the largest impurities and chlorine from the water and thus protects the membranes, sits before the membrane.

The membrane filter (3) removes up to 98% of the minerals from the water in the HydroPower R0.

The resin filter (4) sits after the membrane, which removes the last 2% of the minerals from the water in the HydroPower R0.

Pure water is discharged from the water outlet (5) into a hose connected to a water fed pole for cleaning glass surfaces without chemicals.

The three (3) filter cartridges (2-4) can be easily removed and replaced (see section 7.3.1).

HydroPower® RO Startup

4.4 Startup



CAUTION



Minor or moderate injuries due to pressurized containers possible.

- ▶ The three (3) filter housings are pressurized during operation.
- ▶ Never open a housing or remove a hose during operation.
- ▶ Check if the hoses and tubes are water-tight and fit properly before starting up the system.
- ▶ Wear protective gloves.

ATTENTION: For new or used units, the resin filter is removed from the unit and must be inserted! See section 4.4.1.

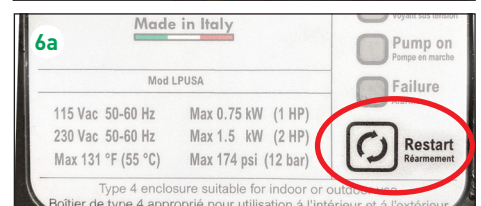
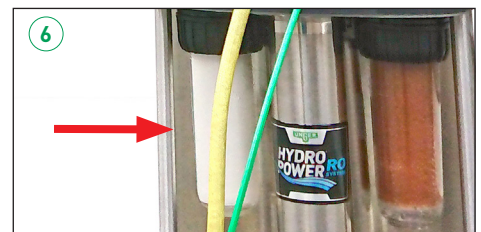
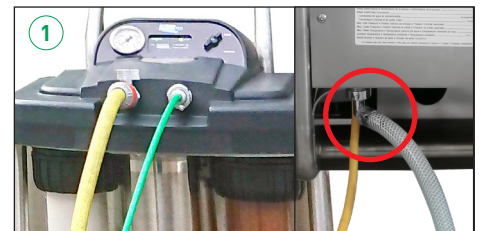
To start the HydroPower RO, proceed as follows:

1. Connect the water inlet and water outlet hoses. Connect the concentrate hose to the back of the unit. (see image 1)
 2. Connect the power cord to the power supply and press green reset button on power cord. (see image 2)
 3. Turn on the water supply.
 4. Turn the upper switch to the "WORK" position. (see image 4)
 5. Turn the lower switch from "OFF" to "PURE" to work with pure water. (see image 5)
 6. The pre-filter housing must fill completely with water before 100% efficiency can be achieved. (see image 6)
- ▶ If pump does not start due to low pressure, press the **RESTART** button located on the back of the unit.
The excess air escapes through the water and concentrate outlets. (see image 6a)

✓ The HydroPower RO is now ready for use.



When you select "TAP BOOST", unfiltered tap water with increased pressure comes out to flush surfaces and remove stubborn dirt.





HydroPower® RO Startup

Quality Tools for Smart Cleaning™

4.4.1 Starting up a HydroPower RO

The pre-filter and the resin filter are not inserted in new or used units, as they must not come into contact with the membrane care liquid.

Before using the resin filter, the membrane care liquid must be completely rinsed out. If Membrane is not installed, follow section 7.3.1 Replacing Filter Cartridges. Then proceed to step 13 below.

1. Connect the water inlet and water outlet hoses. Connect the concentrate hose to the back of the unit. (see image 1)
2. Connect the power cord to the power supply and press green reset button on power cord. (see image 2)
3. Turn on the water supply.
4. Open the water line and start the HydroPower RO by setting the upper switch to "RO FLUSH". (see image 4)
5. Turn the lower switch to "PURE". (see image 5)
6. Rinse out the membrane care liquid for about 15 minutes.
7. Turn off the HydroPower RO: turn the lower switch to "OFF". (see image 7)
8. Disconnect the water supply.
9. Unscrew the resin housing and insert the resin filter cartridge. Make sure that the orientation is correct, the blue filter inlet must be on top! (see image 9)
10. Screw the housing back on using the filter key/strap wrench. (see image 10)
11. Unscrew the pre-filter housing and insert the filter cartridge.
12. Screw the housing back on with help of the included filter key/strap wrench.
13. Turn the upper switch to the "WORK" position. (see image 13)
14. Turn the lower switch to "PURE" to work with pure water. (see image 5)
15. The pre-filter housing must fill completely with water before 100% efficiency can be achieved.

✓ The HydroPower RO is now ready for use.

4.5 Storage

If the unit is not used for more than 7 days, the membranes must be protected in accordance with the storage instructions, (see section "7.2.3 Membrane protection"). The HydroPower RO must be stored indoors.



HydroPower® R0

Operation

5 Operation of the HydroPower R0

5.1 General information

The operating instructions must be read and understood before operating the HydroPower R0.



DANGER



Severe injuries or death and property damage due to the HydroPower R0 falling are possible.

- ▶ Place the unit on a level surface only.
- ▶ Make sure the unit is standing securely. If necessary, secure the wheels with a wedge before operating the system.
- ▶ Wear safety shoes.



CAUTION



Minor or moderate injuries due to pressurized containers possible.

- ▶ The three (3) filter housings are pressurized during operation.
- ▶ Never open a housing or remove a hose during operation.
- ▶ Check to be sure if the system is watertight before starting the HydroPower R0.
- ▶ Wear protective gloves.



HydroPower® R0 Operation

Quality Tools for Smart Cleaning™

5.2 Cleaning surfaces with the HydroPower R0

The HydroPower R0 has two water out modes: PURE and TAP BOOST.

PURE: This mode is used for spotless cleaning of windows and facades and gives out up to 150l/h (39 gal./h) of pure water with 58 PSI (4 bar) (at 18°C [64°F] water temperature with a 12.5mm [1/2"] hose).

TAP BOOST: The boost function allows a strong tap water-jet on demand for prewashing of heavy soiled or horizontal surfaces. It will also remove cobwebs and dirt from corners that cannot be reached with a brush. It delivers up to 500l/h (132 gal./h) of tap water with 8-10 bar (116-145 PSI).



NOTE

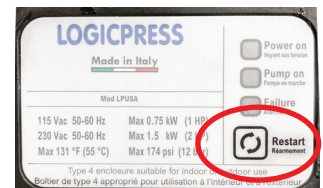


The longer the hose from the water outlet to the water fed pole, the larger the diameter of the hose should be.

5.3 Interruption of work

If you need to interrupt your work while using the HydroPower R0, you can turn off the device by setting the lower switch to OFF. You can also control the unit by the water pressure:

- The pump control switches off automatically after several seconds in case of negative pressure. To start it again, press the "RESTART" button at the pump control for at least 5 seconds.
- Example 1: You turn off the tap water line:**
The pump stops after approximately 30 seconds.
When you turn the tap water line on again, you must press "RESTART" button on the pump control located on the back of the unit for approximately five (5) seconds.
If the pump does not continue running, repeat pressing the button again for five (5) seconds as long as enough water is in the system and the pump runs continuously.
- Example 2: You interrupt the water consumption at the water fed pole.**
In this case the pump will stop after approximately 10 seconds. After opening the water line again, the pump starts to work again immediately.



NOTE



As long as the HydroPower R0 is connected to water but not switched on, no water runs through the system because the "TAP BOOST" and "PURE" valves are closed.

HydroPower® R0

Operation/Troubleshooting

5.4 Turning off the HydroPower R0

To switch off the HydroPower R0 after finishing the work, proceed as follows:

1. For a longer service life, the membrane should be flushed for approximately five (5) minutes after work. To do this, set the upper switch to "RO FLUSH" and the lower switch to "PURE". (see image 1)

! During this process, pure water continues to be dispensed to the bar in a slightly reduced quantity. Therefore you can continue to work while flushing the membrane.

2. Turn off the unit with the lower switch. (see image 2)
 3. Disconnect the power supply and the water supply.
 4. Remove the hoses from the front connections.
- ✓ The HydroPower R0 is now turned off and can be transported.



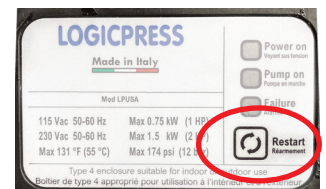
6 Troubleshooting

6.1 Procedures for troubleshooting

During operation, the following may occur:

6.1.1 Water pressure too low

- ▶ The water pressure from the inlet is too low to provide the desired filter performance and the pump turns off.
- ▶ Check whether the inlet hose is kinked or if there is too little pressure at the water inlet.
- ▶ To start the pump, press "RESTART" button on the backside of the unit for approximately five (5) seconds.



6.1.2 Overpressure

Overpressure can occur if the water pressure from the inlet is more than 87 PSI (6 bar).

To check the water pressure at the inlet, proceed as follows:

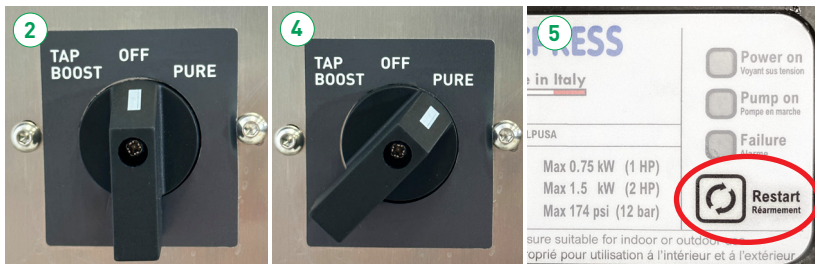
- ▶ The pressure gauge indicates the line pressure.
- ▶ As soon as the pump is turned on, the pressure increases by 58 PSI (4 bar). If the inlet pressure is too high, connect a pressure reducer to the water inlet and regulate the pressure down.



6.1.3 Overheating

Always ensure that the HydroPower RO is well ventilated and is not too close to objects or walls which could prevent proper air circulation.

1. If the pump motor overheats, the HydroPower RO will automatically stop.
 2. Turn "OFF" the system at the lower switch. (see image 2)
 3. Let the HydroPower RO cool down.
 4. Start the HydroPower RO with the lower switch (e.g. "PURE") (see image 4)
 5. If the pump does not start, press "RESTART" button on the back of the unit for approximately five (5) seconds (see image 5)
- ▶ The HydroPower RO should start again.
 - ▶ If the system does not start, let the HydroPower RO cool down even further.
 - ▶ If the HydroPower RO still does not start, check the outlet the unit is plugged into.



Maintenance and servicing

7 Maintenance and servicing

7.1 General information



DANGER



Electric shock possible through live parts.

- ▶ Maintenance of the electrical components of the system should only be carried out by employees of Unger or authorized distributors / technicians.



CAUTION



Burns due to hot surfaces possible.

- ▶ The housing of the pump motor can become hot during operation. Allow the system to cool down sufficiently before touching components marked with this symbol.
- ▶ Wear protective gloves.



ATTENTION

Damage caused by improper cleaning of the HydroPower R0 is possible.

- ▶ Do not use aggressive cleaning agents and / or solvents.
- ▶ Read and follow the use and safety instructions for each cleaning agent/solvent.

ATTENTION

Material damage to the unit due to insufficient maintenance is possible.

- ▶ Before each use, perform a visual inspection of the unit, including the power cord, for damage. If you notice any damage, do not use the HydroPower R0 and contact your distributor.

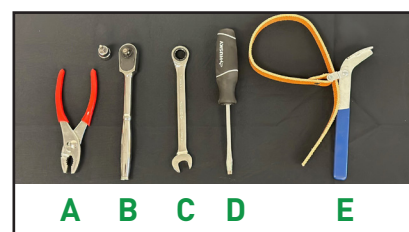


TOOLS REQUIRED



- A. Pliers
- B. Allen Key Socket 4mm
- C. Combination Wrench 14 mm
- D. Flathead Screwdriver
- E. Strap Wrench

Tools A-D (not included) for changing R0 membrane
Tool E (Strap Wrench included) for changing Combi Pre-Filter and DI Resin





HydroPower® RO

Maintenance and servicing

Quality Tools for Smart Cleaning™

Membrane protection during storage

If the unit will not be in use for more than 7 days, the membrane must be protected according to the storage instructions, see section "7.2.3 Membrane protection."

If the membrane is not regularly flushed or protected with the UNGER membrane care liquid, there is a risk of blockage and thus a strong reduction in the unit's performance or damage to the unit.

Frost protection

Never store the HydroPower RO below 5°C (40°F).

7.2 Maintenance and maintenance plan

Check the condition of the HydroPower RO filter regularly to ensure long life.

7.2.1 Daily inspection

Check the performance of the **resin filter**:

Observe the indication on the TDS-display. It provides information about the filter performance or the filtered water quality. Press the yellow "ON" button located on the TDS meter.

- It shows the TDS value behind the resin filter (running in "PURE" mode).
- ▶ If this value is at or above 10, the resin filter must be replaced.

7.2.2 Monthly inspection

- Check the performance of the **membrane**:
- Turn to TAP BOOST mode and observe the value on the TDS display
- The value of the tap water will be displayed
- To determine the current measured value of the membrane, remove the resin filter (right) and screw the empty filter cup back on. Start the water supply in "PURE" mode and turn on the TDS meter. Note the value.
- ▶ If the values of the measurement in "TAP BOOST" mode and the membrane measurement in PURE differ by less than 90%, this is an indication that the membrane should be replaced.
- Replace the **combi pre-filter** regularly. It protects the membranes from chlorine. From a water flow of approximately 30,000l / 8,000 gal., with a chlorine content of 2ppm, the carbon filter is used up and can no longer guarantee this protection.
- ▶ Observe the water meter at the side of the housing.
- ▶ By way of example, water flow of 30,000l / 8,000 gal. is reached after about 4 weeks if you work with the RO-filter 5 days a week, 6 hours a day.

7.2.3 Membrane protection

Membrane protection



CAUTION



Irritation to eyes, skin and respiratory tract through use of membrane care liquid possible.

- ▶ Avoid any contact or swallowing of the membrane care fluid.
- ▶ In case of contact with eyes, remove contact lenses and rinse eyes immediately and thoroughly with clean water.
- ▶ Keep the membrane care fluid sealed and inaccessible to children.
- ▶ Wear protective gloves and goggles.

The membrane achieves its optimal life with regular water flow or flushing.

If the HydroPower RO is not in use for an extended period of time (longer than 7 days), the membrane must be protected against mineral deposits.

For this purpose, there is the UNGER Membrane Care Fluid. You need one bottle (1l) to treat the membrane. This preserves the current state of the membrane and prevents reduced performance and/or damage after non-use. Alternatively, you can run the unit once a week for approximately 30 minutes to rinse the membrane.

To protect the membrane, proceed as follows:

1. Turn OFF the HydroPower RO.
 2. Ensure the concentrate line is connected. The membrane care fluid will flush out through the concentrate line. (Reference the SDS for proper disposal)
 3. Use the filter key/strap wrench to loosen the housings. Remove the two filter cartridges (left and right) and discard the water. Keep the pre-filter and resin filter protected from dust and dirt.
 4. Insert the grey suction pipe into the left blue housing of the pre-filter. The holes must be on the bottom of the tube.
 5. Fill the pre-filter housing with membrane care fluid and secure the housing on the unit using the filter key/strap wrench.
 6. Secure the empty resin housing on the unit using the filter key/strap wrench.
 7. Turn the upper switch to "WORK" and the lower to "PURE". Turn on tap water supply. Wait until the pre-filter housing is no longer green and filled with clear water. This takes approximately 5-10 seconds.
 8. Stop the unit immediately by turning it to OFF.
- ✓ The membrane is protected and the HydroPower RO can be stored.



Re-starting

1. Connect only the water input hose. Do not connect the water output hose.
 2. Ensure the concentrate line is connected. The membrane care fluid will flush out through the concentrate line. (Reference SDS for proper disposal)
 3. Turn the upper switch to "RO FLUSH" and the lower switch to "PURE".
 4. Allow the system to flush for approximately 15 minutes until the outcoming water is clear.
 5. Turn the system "OFF" again at the lower switch.
 6. Unscrew the two housings using the filter key/strap wrench and empty the water.
 7. Remove the suction pipe from the pre-filter housing and insert the pre-filter and resin filter cartridges and back into the housings and secure them using the filter key/strap wrench. Be sure the filters are positioned correctly.
 8. Connect the water output hose.
- ✓ The HydroPower RO is ready to work.





HydroPower® RO Replacing filter cartridges

Quality Tools for Smart Cleaning™

7.3 Repair and replacement of parts

Additional information on replacement parts can be found on the Unger website (www.ungerglobal.com).
For all other repairs, please contact your distributor.

7.3.1 Replacing filter cartridges



CAUTION



Irritation to the eyes, skin and respiratory tract possible.



- ▶ In the right filter cartridge there is resin for the final demineralization of the water.
- ▶ Avoid any contact with the resin when working on the filter cartridges.
- ▶ Wear protective gloves and goggles.
- ▶ In case of resin contact with eyes, remove contact lenses and rinse eyes immediately and thoroughly with clean water.
- ▶ Wash hands thoroughly after finishing work.

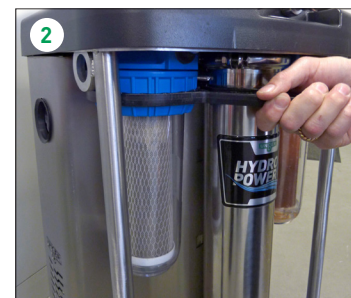
If the display shows a value of 10 ppm or more, the resin filter must be replaced (see section 7.2.1). In addition, the performance of the membrane should be monitored monthly (see section 7.2.2). The combi pre-filter should also be changed regularly (approximately every 30,00l / 8,000 gal.) to ensure membrane protection, especially against chlorine (see section 7.2.2).

Changing all three (3) filter cartridges is quick and easy:

Changing the combi pre-filter



1. Turn OFF the HydroPower RO and disconnect the power supply.
 2. Unscrew the left filter housing with the filter key/strap wrench and discard the water.
 3. Remove and replace the filter cartridge. The orientation doesn't matter.
 4. Screw the housing into the unit and secure it with the filter key/strap wrench.
- ✓ The filter cartridge is now replaced.

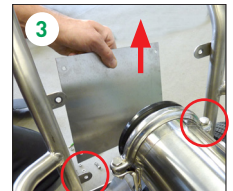
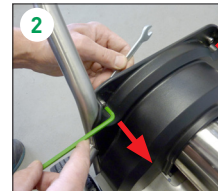
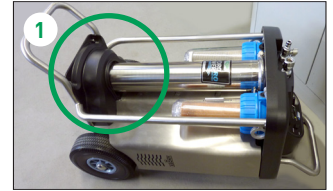


Replacing filter cartridges

Changing the R0 Membrane



1. Place the unit on its back
2. Unscrew the two screws on front and remove the bottom black plastic cover.
3. Remove the remaining two screws on the bottom plate and remove the plate.
4. Unscrew the clamp fixing on the bottom of the membrane housing.
5. Remove the black plastic cap.
 - ▶ Use a big screwdriver for support.
6. Pull the membrane out and replace with a new membrane.
 - ▶ The R0-membrane has an imprint indicating the flow direction, the **arrow must point upward**.
 - ▶ The **rubber seal** must always be at the **bottom**.
7. Reassembly is the reverse.



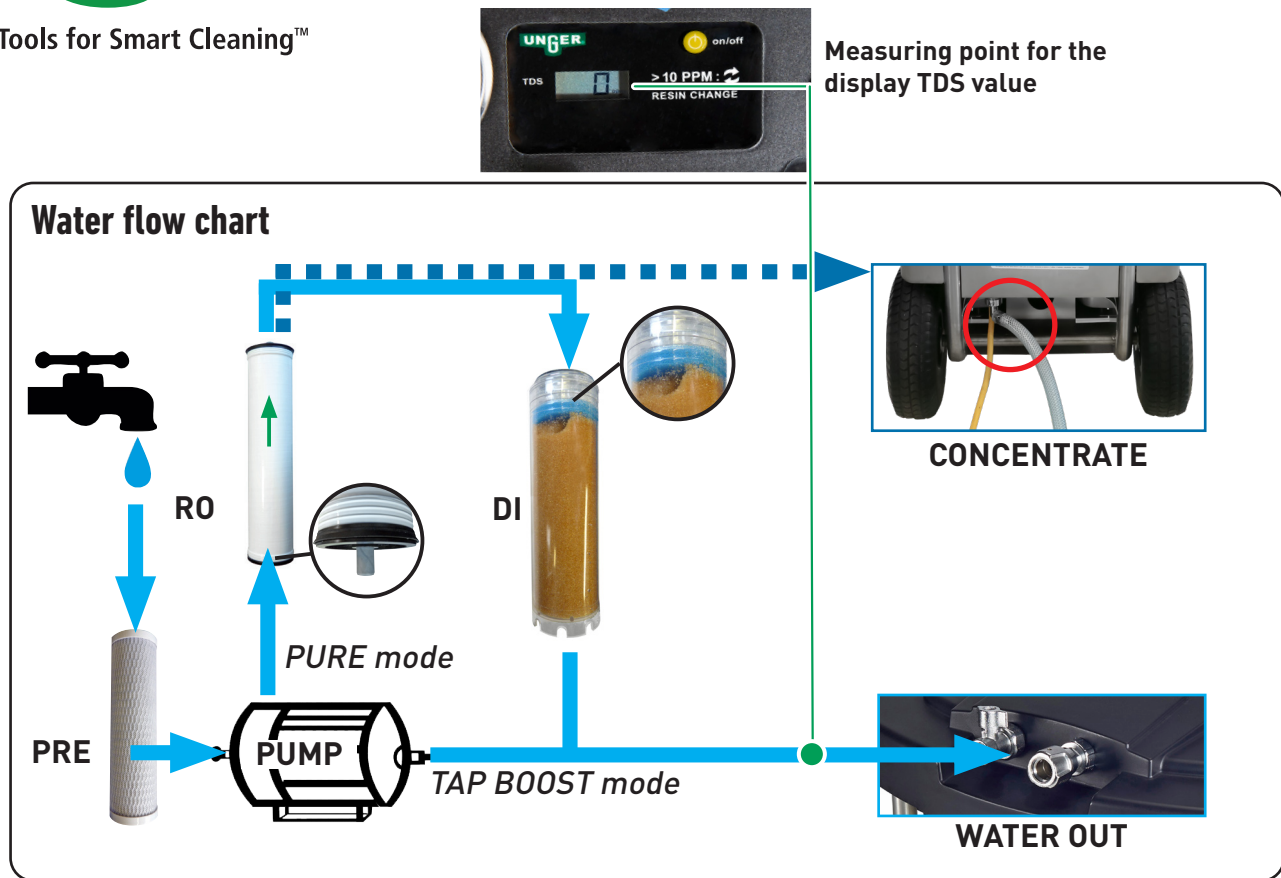
Changing the DI resin filter.



1. Unscrew the right filter housing with the filter key/strap wrench and discard the water.
 2. Remove the resin filter cartridge.
 3. Insert the new filter cartridge the right way around (**blue insert up**). If it is connected incorrectly, water cannot flow through the filter and backwater will occur.
 4. Screw the housing into the unit and secure it with the filter key/strap wrench.
- ✓ The filter cartridge is now replaced.



HydroPower® R0 Water Flow Chart (Visual)



8 Turning off the system

8.1 Disassembly and storage



DANGER



Electric shock and burns due to live parts possible.

- Maintenance the electrical components of the system may only be carried out by employees of Unger or authorized distributors / technicians.



CAUTION



Burns due to hot surfaces possible.

- The housing of the pump motor can become hot during operation. Allow the system to cool down sufficiently before touching components marked with this symbol.
- Wear protective gloves.



Recycling and disposal

ATTENTION

Material damage to the unit due to improper storage.

- ▶ Keep the system clean from dirt buildup.
- ▶ Use only membrane care products from Unger.
- ▶ Never store the HydroPower RO below 5°C (40°F).

NOTE



To prepare the HydroPower RO for storage, proceed as described in section 7.2.3.

8.2 Recycling

Properly recycle all recyclable materials to help protect our environment.

The packaging material is to be separated. It consists of foam, wood, plastic and corrugate cardboard and is to be recycled individually according to local recycling ordinances.

8.3 Disposal of waste

Dispose of in accordance with applicable federal, state/provincial, and local regulations.



Quality Tools for Smart Cleaning™

HydroPower® RO



100%

CUSTOMER SATISFACTION GUARANTEE

At Unger, we aim to stand apart from the rest thanks to our special “Yes We Can!” service spirit. We love what we do and as proof of that, we promise to deliver a 100% Customer Satisfaction Guarantee on every product and service we offer.

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