



Quality Tools for Smart Cleaning™

nLITE **HYDRO POWER™**

Installation & Operating Instructions



HP24 Series



HP12 Series



HP06 Series



Table of Contents

Introduction	3
Safety Information	4
General Information	4-5
Getting to Know your nLite HydroPower™ System	6
System Overview	7-8
New Machine Setup	9
System Start Up	10
System Maintenance – Replacing DI Resin	11
Operation	12
System Specifications	12
Spare Parts	13

DANGER

Contents under pressure. Can cause severe injury or death from tank rupture.

When starting system:

- When starting system, water output must be open when filling.
- Do not exceed pressure of 115 psi (8Bar).
- Check system for cracks.
- Be sure cover is in locked position.
- Keep water output open and hold yellow lever down to remove trapped air from system.
- For use only with drinking water.

Before servicing system:

- Shut off drinking water supply and open water output.
- Disconnect water supply and allow tank to drain.

Spilled resin is a slipping hazard.
Clean up spilled resin immediately.

Resin can cause skin irritation.

Avoid skin contact.

Wash hands thoroughly after use.

Can cause eye irritation.

Avoid eye contact.

Wear safety goggles.

In case of eye contact, immediately flush

eyes thoroughly with clean water.

Consult doctor if symptoms persist.

**READ MANUAL BEFORE
USING PRODUCT**

STORAGE: Do not store resin in open or unlabeled containers. Store in a cool (15°F to 100°F), dry place.

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

All HydroPower models require the use of mixed bed ion exchange resin (commonly referred to as de-ionizing resin).

This resin will require replacement and handling.



Installation & Operating Instructions

Introduction

Thank you for choosing nLite HydroPower™ for your pure water needs. You have chosen a high quality product backed by Unger's 100% customer satisfaction guarantee. When used as intended, the nLite HydroPower unit will produce zero TDS pure water for site glass cleaning.

The production of pure water, through deionization, is based on the principal of ion exchange. In this process, the minerals responsible for producing spotting are removed from the water.

The use of nLite HydroPower has the following advantages:

- With a waterfed wash pole and brush will effectively clean glass and other surfaces without the need for chemicals.
- Run-off does not have to be remediated, and is safe for plants and animals.
- No electricity or external power supply needed – system works with plumbing line pressure.
- QuickChange™ resin bags are factory filled with the precise amount of mixed bed DI Resin for optimum system performance.

As with any commercial equipment, care must be taken when operating and servicing the unit. There is a risk of damage to the system due to:

- Operating and installation errors.
- Use of loose resin (overfill and expansion of resin will damage unit).
- Vessel is opened incorrectly.
- Using non-Unger spare parts.
- Performing unauthorized modification to unit.
- Insufficient maintenance.

Use only original spare parts by Unger (according to spare parts list, pg. 14). For all inquiries and spare parts orders, it is important to provide detailed information located on the device (serial and/or part number).



Installation & Operating Instructions

Safety Information

General:

Please observe applicable rules and regulations, including all accident prevention procedures. Unger is not liable for damage to application areas, plumbing system components or persons.

The window cleaning contractor should strictly adhere to all applicable local, state/provincial and federal labor laws and safety codes and standards.

Ensure work area has sufficient water drainage.

Turn off feed water supply when not in use.

Transportation:

Ensure unit is properly secured to car, trailer, van or truck bed during transportation.

Intended Use:

This device may be dangerous if it is improperly installed, not regularly maintained or not used as intended. Use this device only for water treatment to reach an optimal water quality for glass and facade cleaning. Any other use, especially water treatment for food production (e.g., beverages) or drinking water consumption is prohibited.



Installation & Operating Instructions

General hazards associated with the use of waterfed wash pole and deionization equipment¹:

- Read and follow ANSI Standard IWCA 1-14.1 (Window Cleaning Safety).
- Trip hazard to the general public when using trailing 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.

Purified water is delivered to the waterfed wash pole by flexible hose. This introduces a risk of tripping by both worker and 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.

1. British Window Cleaning Academy (BWCA): Safety in window cleaning using waterfed pole systems.



Installation & Operating Instructions

System Overview





Installation & Operating Instructions

System Overview

- Unger nLite HydroPower systems contain mixed bed ion exchange resin to remove impurities out of ordinary drinking water, commonly referred to as pure water. Such impurities are referred to as total dissolved solids (TDS) and are measured in parts per million (ppm). Water is considered 100% demineralized or pure when its TDS is measured at 0 ppm. The average TDS of drinking water is 180 ppm. Pure water attracts dirt and impurities from the surface being cleaned, holding it in solution. Pure water left on the surface will dry to a clean and spot-free appearance.
- No power is required other than drinking water line pressure, which typically ranges from 40 to 60 psi. This enables the system to produce pure water at up to 1.5 gallons per minute. The production of pure water is not sensitive to water temperatures. Unger recommends testing the water supply (TDS) before working (see page 12 for more information).
- Mixed bed ion exchange resin eventually becomes exhausted and no longer able to remove impurities. The nLite HydroPower systems incorporate an on-board TDS (total dissolved solids) meter. TDS is a measure of how pure the water is. Water that contains zero TDS is considered pure water and ideal for cleaning.
- When TDS levels reach over 10 ppm, the resin should be replaced. Changing the QuickChange™ Resin Bags is quick and easy (see page 11).





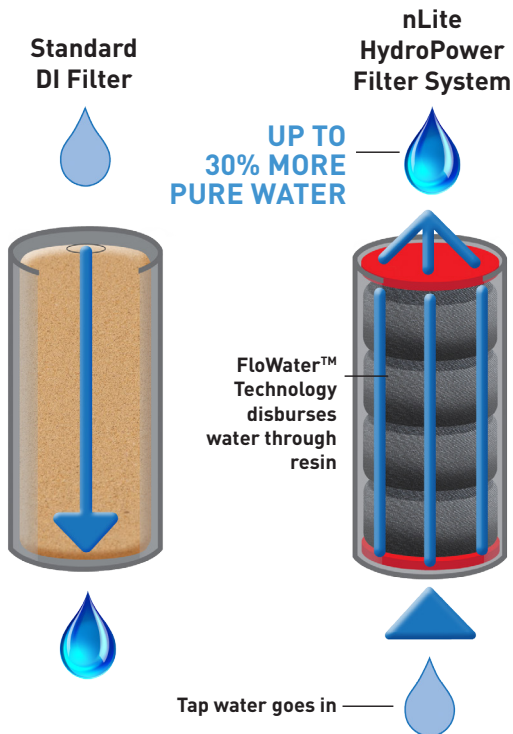
Installation & Operating Instructions

System Overview (continued)

- Larger size models, HP12T/HP12C and HP24T/HP24C, are available with a cart. However, each system can be removed and installed upright in a van or truck. All nLite HydroPower systems must be upright during operation.
- nLite HydroPower systems are factory equipped with standard Quick Connect fittings. Conversion kits are commonly available so that feed water and waterfed wash pole tubing can be connected.

FloWater™ Technology

The revolutionary Unger FloWater™ Technology distributes the water uniformly through the filter system so that the resin is most effectively used.





Installation & Operating Instructions



1. Water IN connection
2. Water OUT connection
3. FastLock™ opening lever to release pressure from the vessel and to open the vessel
4. Handles to carry and open the vessel.
5. TDS-Meter to check the water quality
6. Vessel
7. QuickChange™ Resin Bag(s)
8. On/Off Valve
9. Cart (optional)
10. Set of wheels (optional for non-cart versions)

New Machine Setup

1. **Unpack Unit:** Inspect the nLite HydroPower system and all components. Read warnings and operating manual.
2. **Inspection & Scope of Delivery:** Refer to above illustration; perform visual inspection and take inventory of the following items that should be shipped with the system, then test system for functionality:
 - a. TDS Meter (powers on/off).
 - b. FastLock™ Opening Lever (yellow) – Depress lever, rotate in a counterclockwise direction and remove top cap assembly (see page 11 for more details).
 - c. Resin Bag(s) installed in unit.
 - i. HP06T series – One Bag
 - ii. HP12C,T series – Two Bags
 - iii. HP24C,T series – Four Bags
 - d. Quick Connect fittings installed on unit.
 - e. Cart, wheels and tank clamp system (if purchased with a cart).



Installation & Operating Instructions

System Startup

1 LOCATE JOBSITE WATER SUPPLY

Unger recommends testing the on-site water supply for TDS (total dissolved solids) prior to working. Higher TDS levels reduce the DI system's capacity.

- Inspect system – ensure DI resin bag(s) are installed.
- Set up system in upright position.
- Choose a stable on-site location.

2 CONNECT WATERFED WASH POLE TUBING

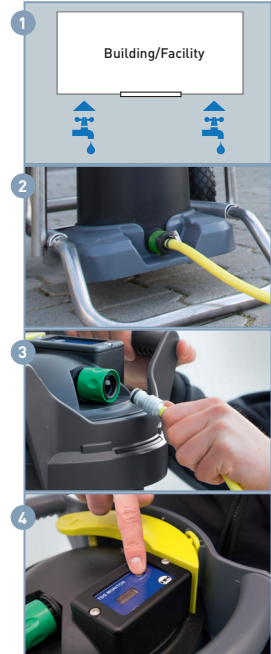
- Install Quick Connect adapter to waterfed wash pole hose.
- Ensure all on/off valves are in "OPEN" position when filling system.

3 CONNECT WATER SUPPLY (GARDEN HOSE) TO INLET CONNECTION

- Thread On/Off Valve to garden hose prior to connecting water supply.
- Attach On/Off Valve directly onto inlet connection at base of unit.

4 TURN ON FEED WATER SUPPLY

- When water begins to flow out of the unit, turn on TDS meter and inspect pure water quality. A reading of '0' is best and indicates the system is running properly. When the TDS meter reaches 10ppm or higher the resin should be replaced.
- Adjust flow at waterfed wash pole brush head by:
 - On/Off Valve
 - Waterfed wash pole control (on/off) valve (if applicable).





Installation & Operating Instructions

System Maintenance - Replacing DI Resin

NOTE: Unger does not recommend the use of bulk resin with nLite HydroPower systems. The use of bulk resin, with its widely varying properties, may cause damage to the system due to excessive expansion when water is introduced. Overfilling the system will also cause damage.

Unger's pre-measured QuickChange™ Replacement Resin Bags are designed to allow controlled resin expansion within a designed safety limit.

1 SHUT OFF FEED WATER SUPPLY

- Depress yellow lever on system head assembly.
- Turn On/Off Valve to "OFF" position.
- Disconnect waterfed wash pole hose.

2 RELEASE SYSTEM HEAD ASSEMBLY

- While continuing to depress the yellow lever, use a counterclockwise quarter-turn to release system head assembly; remove and set aside.
- Reach into housing and remove exhausted resin by hand; discard according to local regulations.

3 REPLACE RESIN

- Drop in new resin bag(s) by hand – be sure to seat bags with zip-tie facing up. Pat down bag by hand to ensure seated properly.
- Inspect system head assembly: O-ring and FloWater™ distribution filter are in good condition.

4 RE-INSTALL DI SYSTEM HEAD ASSEMBLY

- Push down firmly, then quarter-turn clockwise.

5 RECONNECT WATERFED WASH POLE TUBING

- Open any valves in the output. Ensure all valves in the output are open.
- Turn on water supply valve

6 TEST SYSTEM TDS





Installation & Operating Instructions

Operation

1. Periodically inspect the HydroPower system during use. Ensure hoses are properly attached. Inspect system for leaks and proper fit of top cap assembly.
2. Take care when working to ensure there is enough slack in waterfed wash pole hose. This hose is connected to the top of the unit and excessive tugging may cause the system to tip over.
3. Drinking water flows into the system's lower connection port via tap pressure and flows upwards through the HydroPower tank. Pure water exits through the top connection. When plumbing line pressures fall below 40psi, a reduction in flow rates will be noticeable.
4. The on/off valve can be used to adjust water flow rates coming out of the waterfed wash pole brush jets. Excessive flow from the brush head jets can cause water splattering from uncleaned glass back onto previously cleaned areas, resulting in spotting.

System Specifications

Model	HP06T	HP12T/HP12C	HP24T/HP24C
DI Resin Capacity	1 bag - 6.0l/0.21 cu. ft.	2 bags - 12.0l/0.42 cu. ft.	3 bags - 24l/0.84 cu. ft.
Power	Tap Pressure	Tap Pressure	Tap Pressure
Pump	NA	NA	NA
Working Hose Length	100 ft./30m plus	100 ft./30m plus	100 ft./30m plus

Pure Water Production*

		OUTPUT		
Water	TDS Reading	HP06	HP12	HP24
Soft	< 100 ppm	> 414 gal / 1,570l	> 830 gal / 3,140l	> 1,680 gal / 6,360l
Medium	100 – 250 ppm	124 gal - 414 gal / 470l - 1,570l	299 gal - 830 gal / 1,130l - 3,140l	647 gal - 1,680 gal / 2,450l - 6,360l
Hard	250 – 400 ppm	69 gal - 124 gal / 260l - 470l	177 gal - 299 gal / 670l - 1,130l	394 gal - 647 gal / 1,490l - 2,450l
Very Hard	> 400 ppm	< 69 gal / 260l	< 177 gal / 670l	< 394 gal / 1,490l

*All values based on 10 ppm as maximum for pure water quality.



Spare Parts

NOTE: Due to safety concerns, unauthorized modifications are not allowed. Original parts and accessories are specifically designed for this device. Any liability by the manufacturer for damages resulting from modifications to the device or from using parts other than original parts is denied.

PRODUCT	INFO	PART #
QuickChange™ Resin Bag	1 bag in small air-tight bucket	HPB06
QuickChange™ Resin Bags	4 bags in big air-tight bucket	HPB24
On/Off Valve	Outlet Quick Connect	18482
Hose Quick Connect	Outlet Quick Connect adapter; garden hose	18481
Inlet Quick Connect	Inlet 3/4" BSPT male Quick Connect	19034
Outlet with O-Ring	Outlet female Quick Connect	18641
Top Cap Assembly	Complete w/ all accessories	DITCP
FloWater™ Unit	Red distribution plate	DIPRE
Casters for Tank	4 wheels for direct fix to unit's base	DILW2
HydroPower Cart	Transportation Cart	DICRT
TDS Upgrade Kit	TDS-meter, TDS cover, connections or units that are not equipped with TDS	DITDS
Sealing Kit	5 O-rings, care solution	DISKT



HPB06

HPB24



18482



18481



19034



18641



DITCP



DIPRE



DILW2



DICRT



DITDS



DISKT

All product images in this manual are for illustration purposes only. Actual product may vary.



Notes

14



Notes

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nLITE HYDRO POWER™



Quality Tools for Smart Cleaning™

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