



# 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
Start Up .....	10
System Maintenance – Change Resin .....	11
Operation .....	12
System Specifications .....	12
Spare Parts .....	13

Parish-Supply.com  
Syracuse, NY 315-433-9031  
www.parish-supply.com



## **⚠ DANGER**

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

When starting system:

- Check system for cracks.
- Be sure cover is in locked position.
- Do not exceed pressure of 115 psi (8Bar).
- Keep discharge line 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 waterfed wash pole tubing discharge line.
- Disconnect water supply and allow tank to drain.

## **⚠ WARNING**

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

## **⚠ CAUTION**

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.

**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 purewater 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 commercial grade zero TDS purewater for site glass cleaning and other applications that utilize deionized water.

The production of purewater, or deionization, is based on the principal of ion exchange. In this process, the minerals responsible for producing hardness and conductivity (TDS values) are removed from the water.

The use of nLite HydroPower has the following advantages:

- 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.
- nLite HydroPower units are made with high strength plastic and can withstand excessive water hammer pressure spikes.
- QuickChange™ resin bags are factory filled with the precise amount of premium grade 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 (overflow 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. 13). For all inquiries and spare parts orders, it is important to provide detailed information located on the device.



# 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 nor persons.

Ensure application area has sufficient water drainage.

If unit will be idle for a prolonged period of time, ensure feed water supply is shut-off.

### Transportation:

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

The window cleaning contractor shall meet all applicable licensing requirements and strictly adhere to all laws regarding labor and safety regulations.

### Intended Use:

This device may cause danger 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 (ex. beverages) or drinking water consumption is prohibited.

Drinking water supply connections may require a back-check valve, preventing back flow into plumbing supply line.

When operating with water other than from a drinking water supply (ex. well), a water analysis must be performed prior to start-up to determine if water source is suitable. Excess impurities may have an adverse effect on the system performance and cleaning result.

## General Information

The window cleaning contractor should meet all applicable local, state/provincial and federal licensing and registration requirements.

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



# Installation & Operating Instructions

Purified water is delivered to the waterfed wash pole by flexible hose from the nLite HydroPower system. 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.

General hazards associated with the use of waterfed wash pole and deionization equipment<sup>1</sup>:

- 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.
- Spread of Legionnaires disease through poor maintenance of system.
- Hazards from carrying tanks, systems and equipment that are overloaded, unstable, unsecured or incorrectly installed within a vehicle.

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



# Installation & Operating Instructions

## Getting to Know Your nLite HydroPower™ System

FastLock™ Lever

TDS Meter

Quick Connect Adapter

Output Valve



Housing with Rugged Outside Appearance

FloWater™ Distribution Filter

QuickChange™ Resin Bag  
(Packed inside unit)



System Inlet Connection for On/Off Valve



UNGER



# Installation & Operating Instructions

## System Overview

- Unger nLite HydroPower systems contain mixed bed ion exchange resin to “filter” impurities out of ordinary drinking water, converting it into a powerful cleaning agent commonly referred to as PureWater. 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 0.00 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. This solution of captured dirt is then carried away, leaving only Pure Water on the surface where it 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.
- 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:
  1. Remove top cap assembly by 1/4 turn, pull off cap.
  2. Lift out resin bag(s) and replace with new bag(s).
  3. Re-install top cap.





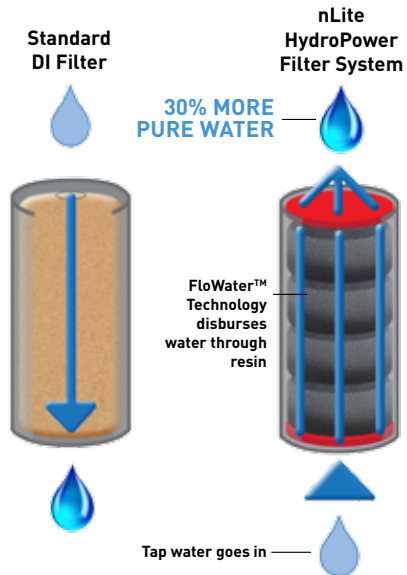
# Installation & Operating Instructions

## System Overview (continued)

- nLite HydroPower systems are 30% more efficient than ordinary de-ionizing tank systems. HydroPower's FloWater™ Technology delivers a uniform distribution of water through the filtering resin eliminating water channels (these channels allow untreated water to bypass through the system). The nLite HydroPower reduces the consumption of resin and decreases the cost of Pure Water production...so that you buy and replace resin less often.
- 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 to maximize system efficiency and avoid "bypass." Bypass is when water finds a path through the system without being processed.
- nLite HydroPower systems are factory equipped with standard 3/4" Quick-Connect fittings. Conversion kits are commonly available so that feed water and waterfed wash pole tubing can be connected. Fittings are also commonly called Gardena fittings<sup>2</sup>.

### 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 Set-Up

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 counter-clockwise direction and remove top cap assembly.
  - 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 equipped).



# Installation & Operating Instructions

## Start-Up

1. Locate jobsite drinking water supply.
2. Before window cleaning can begin, the system must be connected to a drinking water supply. If well water system is the source, it is recommended that a water quality analysis be performed prior to application.
3. Unger recommends testing the water supply for TDS (total dissolved solids) prior to working. Higher TDS levels reduce the DI system's capacity. Conversely, lower TDS levels will increase the amount of water the system is able to produce.
4. Inspect system – ensure Unger's QuickChange™ Resin Bag(s) are properly installed, with zip-tie facing up.
  - a. 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 systems with too much resin will also cause damage.
  - b. Unger's pre-measured QuickChange Resin Bags are designed to allow a controlled resin expansion within a designed safety limit.
5. Set up system in upright position. Choose a stable onsite location; best to locate near work area.
6. Connect hoses to system (drinking water and waterfed wash pole tubing). Bottom connection is for drinking water supply, top connection is for waterfed wash pole tubing.
7. Quick connect fittings are supplied with the HydroPower system. Install quick connect fitting adapter (shipped with unit) to waterfed wash pole tubing if necessary.
8. Ensure all waterfed wash pole on/off valves are in "OPEN" position.
9. Turn feed water supply "ON" slowly.
10. Inspect system as it pressurizes and begins producing "PureWater." Keep discharge line open and hold down yellow FastLock™ opening lever to remove trapped air from system. Use only with drinking water.
11. Turn on TDS meter and inspect "PureWater" quality. A reading of '0.00' is best and indicates the system is running properly (product water contains zero parts per million total dissolved solids). Unger recommends changing resin bags when TDS levels reach 10 ppm.
12. Adjust flow at waterfed wash pole brush head by:
  - a. On/off valve at base of unit or
  - b. Waterfed wash pole control (on/off) valve.
13. You are ready to start cleaning.



# Installation & Operating Instructions

## System Maintenance - Change 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 systems will also cause damage.

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

### 1. SHUT OFF DRINKING WATER SUPPLY VALVE

- Shut off drinking water supply and open wash pole tubing discharge line.
- Disconnect feed drinking water line and allow system to drain.

### 2. REMOVE TOP CAP ASSEMBLY

- Depress yellow FastLock™ Opening lever to release system pressure.
- Fix the base of the unit with your feet, then press the top cap down and with a counter-clockwise 1/4 turn to release top cap assembly. Remove and set aside. Tip: Disconnect incoming water hose and open the on/off valve to allow easy removal of QuickChange Resin Bags.
- Reach into housing and remove exhausted resin bag(s) by hand; discard according to local regulations.

### 3. REPLACE RESIN

- Install new resin bag(s) by hand – be sure to place bags with zip-tie facing up and sewing parallel to vessel top edge. Pat down the top of bags by hand to ensure seated properly.
- Inspect system head assembly: O-ring and FloWater™ distribution filter are in good condition. Re-coat o-ring with silicone lubricant only.
- Re-install DI System head assembly. Secure unit with your feet, then press down with a 1/4 turn clockwise.
- System is ready to be operated.

### 4. RECONNECT WATERFED WASH POLE TUBING

- Turn "ON" water supply at spigot.
- Inspect system as it pressurizes.
- Keep discharge line open and hold down yellow lever to remove trapped air from system.

### 5. 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 tubing. This tubing 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	6.0l/0.21 cu. ft.	12.0l/0.42 cu. ft.	24l/0.84 cu. ft.
Qty. of HPB Resin Bags per system	1	2	4
Pure Water Production (100 TDS Incoming; 0 TDS output)	300 gal./1125l	600 gal./2250l	1200 gal./4500l
No. of Poles Rated for Use	1 pole	1-2 poles	1-2 poles
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
Working Height	3 to 5	5 to 6	5 to 6
Building Stories	tap: 60 psi/4 bar	tap: 60 psi/4 bar	tap: 60 psi/4 bar
Pure Water Flow	1.5 gpm/6 lpm	1.5 gpm/6 lpm	1.5 gpm/6 lpm
Gallons Per Day	1200 gal./4500l	1200 gal./4500l	1200 gal./4500l
System Capacity Before Service	300 gal./1125l	600 gal./2250l	1200 gal./4500l
System Components	DI Resin	DI Resin	DI Resin



# Spare Parts

**NOTE:** Due to safety reasons, 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 excluded.

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		18482
Adapter	Outlet quick connect adapter; garden hose	18481
Inlet	Inlet 3/4" BSPT male quick connect	19034
Outlet	Outlet female quick connect	19022
Top Cap	Complete w/ all accessories	DITCP
FloWater™ Unit	Red distribution plate	DIPRE
Casters Set	4 wheels for direct fix to unit's base	DILW2
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



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

nLITE

**HYDRO  
POWER™**

# Notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



nLITE  
**HYDRO  
POWER™**



Parish-Supply.com  
Syracuse, NY 315-433-9031  
www.parish-supply.com

