



Quality Tools for Smart Cleaning



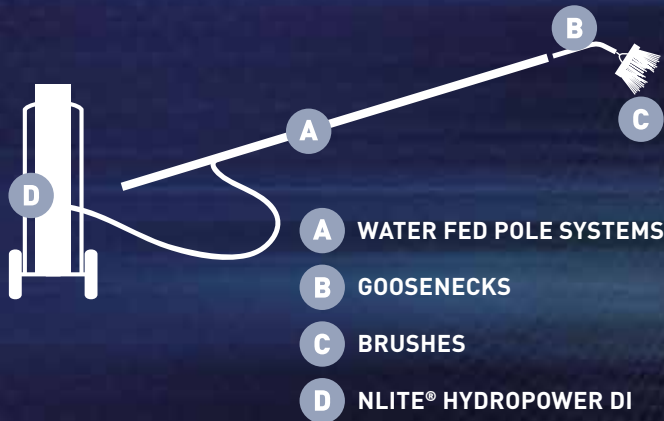
nLITE[®] HYDRO POWER

The Most Efficient Pure
Water System Ever!



nLite® Water Fed Pole System

The perfect 4-Step-System



nLite® is a modular professional cleaning system. The individual components can be selected and put together to create a unique system to suit personal requirements.

- **nLite®** meets the highest standards in terms of comfort, value and cleaning results
- **nLite®** is the ultimate system for professional and No. 1 in Europe

Light, modular and easy to use. Our **nLite®** System sets a new benchmark in professional cleaning technology. The use of modern materials delivers perfect balance between weight and rigidity.



BRUSHES

Superlight **UNGER** Brushes are designed to get into the smallest corners and lift dirt from surfaces with a highly effective scrubbing action. The **nLite®** Brush stock features cutting edge engineering and design, with a porous core and smooth solid exterior skin it offers enhanced structural stability and lighter weight than solid brush block manufacturing.



GOOSENECKS

Strong carbon angle adapters enable you to achieve any working angle, keeping weight to a minimum.

WATER FED POLE SYSTEMS

With 6 grades of material materials, the **nLite®** range is the perfect choice for every cleaning challenge and budget. It provides the perfect balance between weight and rigidity. "Made in Germany", of course.

nLITE® HYDRO POWER

As perfect as you can be: the nLite® HydroPower DI Filter

Inspired by our customers and packed with the latest design innovations, **nLite® HydroPower DI** Filters offer a wealth of benefits for professional window cleaners (and everyone who works or cleans with pure water).

nLite® HydroPower DI

nLite® HydroPower DI Filters offer you a bundle of great benefits, delivered through innovative design features:

- **FloWater™ Technology**
 - **QuickChange™ Resin Bags**
 - **FastLock™ Opening**
-
- **nLite® HydroPower DI** Filters exceed the highest requirements to efficiency, workflow organisation and comfort.
 - They are part of the **nLite® Cleaning System** that offers practical solutions to professionals.

THE UNGER QUICK CHANGE™ RESIN BAGS

Replace the resin in seconds with our latest innovation - pre-packed, ready to use resin bags, designed to enhance filter productivity. See overleaf for details.



nLITE® HYDRO POWER



Video:



Cleaning with
Pure Water

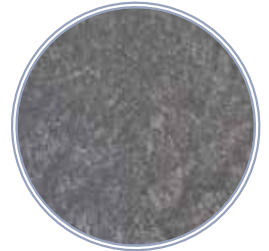
The nLite® HydroPower DI System!

Advanced design of **nLite® HydroPower DI** Filters will help you to reduce operational costs and increase the profitability of your business.

Simple to operate and offering a hassle-free way of changing the resin, **nLite® HydroPower DI** Filters set a new benchmark in user-friendly DI filter design.



FastLock™ Opening
Easy & quick opening of the vessel. Features pressure release valve



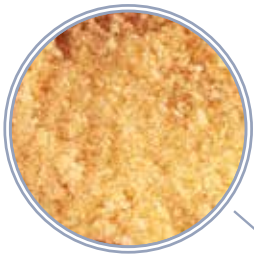
PP NXT Material
Enhanced material by 50% glass fibre. Stronger, lighter and safer.



QuickChange™ Resin Bags
Change the resin in seconds - anytime and anywhere! No more wasted resin.



FloWater™ Technology
Ensures more efficient water flow through the entire vessel, improving resin efficiency and increasing its lifetime.



Unrivalled Performance: Designed for Efficiency

Time is money. The innovative ideas that underpin the design the **nLite® HydroPower DI Filters** are inspired by this old business rule. Here's a rundown on how **nLite® HydroPower DI Filters** can help you and your team to achieve more in less time and at lower cost.

EXCEPTIONAL VALUE FOR YOUR MONEY

Innovative flow distribution design with the **FloWater™ Technology** means that you can produce more pure water from a single resin refill compared to previous generation of DI filters.

- Reduced operational cost through less frequent resin replacement.
- Less waste, less time spent on changing resin.

SAVING TIME

Time efficiency is another great benefit, offered by **nLite® HydroPower DI Filters**.

- The new **QuickChange™ Resin Bags** speed up the filter refill process by **up to 10 times*** in comparison to standard DI systems.
- **FastLock™ Opening** enables you to open and close the filter quickly, with minimum effort.

*Compared to standard DI systems (as UNGER DI400, DI140, etc.),
Source: UNGER R&D

COMPLETE FLEXIBILITY

- Monitor resin performance, using integrated TDS meter, and replace the resin only when it fully expires. No more wasted resin!
- Easy transportation of new and used resin.

The new **QuickChange™ Resin Bags** are an example how effective simple ideas can be. Pre-packed resin bags save time and simplify resin change process - no more time-consuming, inconvenient filling up of narrow vessels and no more spilled, wasted resin. Put simply, we have set a new benchmark for user-friendly design of DI filters.

QUICK CHANGE™ RESIN BAGS



The new **QuickChange™ Resin Bags** facilitate fast and easy the resin on the spot - anytime and anywhere!

- Resin change process as simple as coffee pad change in a coffee machine - simply removed the used bag and insert a new one!
- Each bag is made from a water-permeable material and contains a pre-proportioned amount of Unger High Capacity Premium Grade Virgin Mixed Bed resin.

nLite® HydroPower DI:

A multitude of innovative features

SIMPLE AND EFFECTIVE



FastLock™ Opening

- Easy and quick opening and locking of the filter.
- Safe, self locking mechanism.
- Features pressure release valve.



Removable cover

- Including resin mechanism to prevent loose resin from leaking with outgoing water flow.



TDS (Total Dissolved Solids)

- For instant measuring of the outgoing water hardness.



Standard hose fittings

- Reliable quick release connectors, suitable for most hoseslock type fittings commonly used on most water fed poles.

COMPATIBLE WITH EXCHANGE RESIN

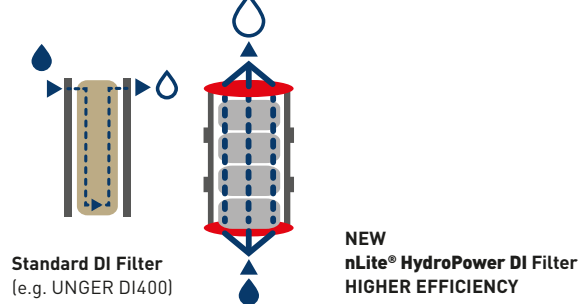
The performance of **nLite® HydroPower DI** is optimized for the usage with **QuickChange™ Resin Bags**, but it can also be filled with loose resin.

Whilst fully compatible with most ion exchange resins available on the market, for maximum efficiency we recommend **UNGER** High Capacity Premium Grade Virgin Mixed Bed resin due to its optimal density and moisture content.

Please refer to user manual for further details and instruction.

FLOWATER™ TECHNOLOGY

The innovative water distribution system ensures more efficient flow through the entire vessel improving resin efficiency and increasing its lifetime.



Standard DI Filter
(e.g. UNGER DI400)

NEW
nLite® HydroPower DI Filter
HIGHER EFFICIENCY

HYDRO POWER ECOFLO – THE WATER FLOW OPTIMIZER

NEW

Exclusively for nLite® HydroPower

Pressure Bar	with EcoFlo*
6	180 l/hour
5	150 l/hour
4	120 l/hour
3	Do not use

*with 25 m nLite Hose to pole

Depending on the incoming water pressure, using the **HydroPower EcoFlo** insert enables you to restrict the water flow to ideal for regular glass cleaning 120 - 150 L per hour.

Optimising the water flow allows you to use less pure water and extends the lifetime of a single resin refill in the **nLite® HydroPower DI Filter** by at least **20%** without compromising the quality of your work.

- Can be fitted, removed or replaced inside the water flow valves in seconds.
- EcoFlo fits any industry standard valves.
- Compatible with all **nLite® HydroPower DI Filters**, regardless of size.

Customized in every size: The nLite® HydroPower DI Range

Choose from 3 filter sizes depending on the volume of pure water required and frequency of use to maximise your return on investment.

All filters are supplied complete with **QuickChange™ Resin Bags** and integrated **TDS metre** to monitor the incoming and outgoing water hardness.

CUSTOMISED IN EVERY SIZE



DI12x
Contains 1 **QuickChange™ ResinBag** (6l)



DI24x
Contains 2 **QuickChange™ ResinBags** (12l)



DI48x
Contains 4 **QuickChange™ ResinBags** (24l)

FILTER PERFORMANCE

Water Hardness

Filter productivity depends on several factors, such as filter size, water pressure, temperature and most importantly the level of water hardness. Water hardness is measured in ppm (parts per million) and varies by geographical area. The table below provides guidance on the expected nLite® HydroPower DI Filter performance, before the resin is spent and has to be replaced.

Small (nLite® HydroPower DI12...)



Water Hardness*	Output in l	Working hours**
Soft	> 1.570	> 10
Medium	470 – 1.570	4 – 10
Hard	260 – 470	2 – 4
Very Hard	< 260	< 2

Medium (nLite® HydroPower DI24...)



Water Hardness*	Output in l	Working hours**
Soft	> 3.140	> 20
Medium	1.130 – 3.140	8 – 20
Hard	670 – 1.130	5 – 8
Very Hard	< 670	< 5

Large (nLite® HydroPower DI48...)



Water Hardness*	Output in l	Working hours**
Soft	> 6.360	> 42
Medium	2.450 – 6.360	18 – 42
Hard	1.490 – 2.450	10 – 18
Very Hard	< 1.490	< 10

* **Water Hardness:** Soft (< 100 ppm), Medium (100 – 250 ppm), Hard (250 – 400 ppm), Very Hard (< 400 ppm)

** **Working hours:** based on 5 bar and usage of ECOFlo. All values based on 10 ppm as maximum for Pure Water quality.



Regional variances in water composition and mineral content may affect resin performance and pure water output. All values provided in the table above are for guidance only.

nLite®

The Evolutionary Pole Technology for Professionals

THE POLE SYSTEM

The highest professional cleaning standards are even easier to achieve with an **nLite®** Pole System thanks to its perfect balance between weight and rigidity.

Depending on the type of material, the four section **nLite®** Master Pole has an extended length of up to 6.63 m (22 ft)*, but greater heights can be easily reached and cleaned by adding two-section Extension Poles to the base of the Master Pole.

Each extension adds a further 3.41 m (11 ft) of extended length or 3 m (10 ft) on selected materials and you can add up to 4 Extension Poles to a Master Pole to reach the required height.

The number of Extension Poles that can be added depends on the pole material - pole sets on the opposite page are recommended for comfortable and efficient work at specific maximum heights, based on the ultimate pole material strength, rigidity and weight.

CLAMPS

Easy and fast handed operation. Convenient Unger Logo shaped screw for adjusting the tension of the clamp without tools. Yellow clamps identify the next modular component to prevent unintentional separation. Every clamp features removable Hose Clips for securing the Hose along the length of the Pole to avoid tangling and improve safety.



MASTER POLE – 4 SECTION TELESCOPIC POLE. (DIAMETER: 26 MM/29 MM/32 MM/35 MM)



The diameter of the Pole section you are holding will never exceed 35 mm, irrespective of the number of Extension Poles you add. The diameter of the first section of the Master Pole (holding the Gooseneck and Brush) is 26 mm. Wider than

industry average, it increases the rigidity of the Master Pole overall, reducing flex usually associated with smaller diameter, thinner tubes. This results in greater stability and control of the Brush, facilitating more efficient cleaning with less effort.

EXTENSION POLE – 2 SECTION TELESCOPIC POLE. (DIAMETER: 32 MM/35 MM)



Greater heights can be easily reached and cleaned by adding two-section telescopic Extension Poles to the base of the Master Pole. Crucially, the Extension Poles don't add anything to the width, grip and feel of the Pole which always measures

35 mm in diameter – an optimum size that fits easily into the hands of the professional for quick and comfortable cleaning. Yellow visual warning area at the top of the extension pole helps to avoid unintentional separation from the master pole.

WATER FED POLE SYSTEM

MASTER POLE

Length	4 sections (Ø 26 / 29 / 32 / 35 mm) 6,63 m/22 ft – or 6,00 m/20 ft or 4,50 m/15 ft.
Clamps	Easy one handed operation to change pole length. Yellow clamps identify the next modular component to prevent unintentional separation.
Hose	The water hose can be fitted inside or outside the pole, using Hose Clips.
Endcap	Made of durable plastic with rubber insert. Prevents accidental damage to the end of the pole. Features side aperture for hose.
Print	Complete specifications, including Length Deflection Ratio for measuring Pole rigidity.

EXTENSION POLE

Length	2 sections (Ø 32 / 35 mm) 3,41 m/11 ft – or 3,00 m/10 ft.
Application	Add on up to 4 Extension Poles to Master Pole to reach the required height Number of Extension Poles depends on pole material.
Clamps	Easy one handed operation to change pole length. Yellow clamps identify the next modular component to prevent unintentional separation.
Colour	Yellow visual warning area at the top of Extension Pole helps to avoid unintentional separation from the Master Pole.
Print	Complete specifications, including Length Deflection Ratio for measuring Pole rigidity.

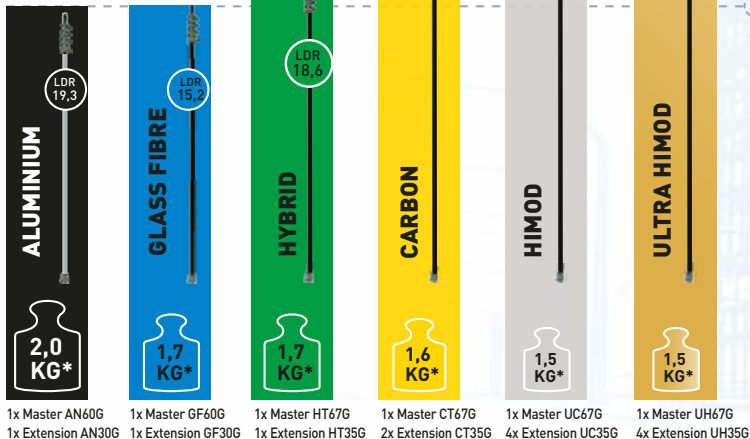
POLE SELECTION GUIDE

MAX. 20 m / 6th floor

MAX. 13,50 m / 5th floor

MAX. 10 m / 4th floor

MAX. 9 m / 3rd floor



i Pole sets below provide the perfect balance between weight and rigidity for working at specific heights. All heights shown in this guide are maximum working heights for specific pole material.

INFO:

- Please consider local safety regulations on maximum working height permitted, as well as any restrictions on working at height due to adverse weather conditions.
- Your Approved **UNGER** Dealer can provide further advice on selecting the poles with optimal rigidity for your chosen length.

i PURCHASING GUIDE

When selecting the pole, the following points have to be considered:

- required pole height – greater heights require poles with greater rigidity
- duration of the job – the longer you work, the lighter pole you need to reduce fatigue

GREATER LDR VALUE = GREATER RIGIDITY!

$$\text{LDR} = \frac{\text{overall length}^3}{\text{deflection} \times 7^2}$$

The LDR (Length Deflection Ratio) has been developed to provide a quantifiable way of measuring the perfect balance between length and rigidity of water fed poles.

The nLite® Brushes and Goosenecks – Perfection in Every Detail

Simply professional: The nLite® Brushes and Goosenecks allow you to tackle any cleaning challenge with confidence. Choose between various sizes and models, depending on

the size, type and angle of the surfaces you're working on. There is also an innovative Solar Brush for efficient yet gentle cleaning of solar panels.

BRUSHES

nLite® brushes are available in different shapes (rectangular, radius), with different bristles (nylon or boars hair) and in three sizes (27 cm, 40 cm, 60 cm). Plastic porous core with smooth solid skin on the outside – cutting edge engineering ensures structural stability and lighter weight than solid block manufacturing.

Lightweight, solvent resistant synthetic bristles are hard wearing and effective in removing even the most stubborn dirt.



Brush Rotation

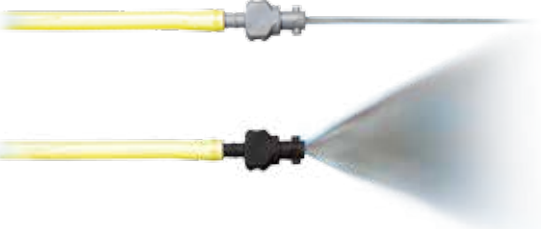
The brush can be rotated by 180°, using the built-in adapter. Changing the position provides greater flexibility and control over cleaning and rinsing different surfaces, angles and structures.



Pencil and Fan Jets

Adding more jets allows you to clean larger areas quicker and better. The number of jets you can use depends on the level of water pressure – the higher the water pressure, the higher number of jets you can use at one time.

Use pencil jets for hydrophilic glass and fan jets for hydrophobic glass.



Pencil Jet

Fan Jet

GOOSENECKS

NEW

The new nLite® Carbon Goosenecks made from one strong carbon tube: **25% less weight, 5 times stronger!**

Strong carbon fibre gooseneck attachments enable you to achieve any working angle, keeping weight to a minimum. Modern carbon material ensures long life and high rigidity. The angle adapters are available in sizes of 20 cm, 30 cm and 150 cm. Choose between the different versions depending on the size, type and angle of the surface on which you want to work.



The nLite® HydroPower DI Kits



These three kits provide a complete, ready-to-go equipment for your professional cleaning job. Take a choice depending on the frequency of cleaning jobs, the size of glass area or

the working height. Each kit contains a **nLite®** Telescopic pole (different lengths and materials), a gooseneck, a brush, a hose and a **HydroPower DI** Filter with different capacity.



STARTER KIT

nLite® HydroPower DI STARTER KIT

Content:
 DI12T **nLite® HydroPower DI** 6 l (incl. TDS Meter + Resin)
 AN60G **nLite®** Alu Master Pole 6 m
 FTG0S **HiFlo™ MultiLink** Angle Adapter
 NLR27* **nLite®** Radius Brush 27 cm
 NL20G **nLite®** Hose 20 m

Part No.
 DIK12

*Colour might be subject to change



ADVANCED KIT

nLite® HydroPower DI ADVANCED KIT

Content:
 DI24W **nLite® HydroPower DI** 12l (incl. TDS Meter + Resin + Wheels)
 GF60G **nLite®** Glass Fibre Master Pole 6 m
 FTG0S **HiFlo™ MultiLink** Angle Adapter
 NLR27* **nLite®** Radius Brush 27 cm
 NL20G **nLite®** Hose 20 m

Part No.
 DIK24

*Colour might be subject to change



PROFESSIONAL KIT

nLite® HydroPower DI PROFESSIONAL KIT

Content:
 DI48C **nLite® HydroPower DI** 24l (incl. TDS Meter + Resin + Cart)
 CT67G **nLite®** Carbon Fibre Master Pole 6.63 m
 CT35G **nLite®** Carbon Fibre Extension Pole 3.41 m
 NLG20 **nLite® MultiLink** Angle Adapter 20 cm
 NLR27* **nLite®** Radius Brush 27 cm
 NL25G **nLite®** Hose 25 m

Part No.
 DIK48

*Colour might be subject to change

Product Overview



nLITE® HYDRO POWER DI FILTER					
Part No.	Base	Height	Resin Bags	Wheels	Cart
DI48T	30×31 cm	116 cm	4 (24l)	-	-
DI48C				-	✓
DI24T	30×31 cm	59 cm	2 (12l)	-	-
DI24W				✓	-
DI24C				-	✓
DI12T	30×31 cm	35 cm	1 (6l)	-	-
DI12W				✓	-

QUICK CHANGE™ RESIN BAGS	
Part No.	Info
DIB61	1 bag (6l) in air tight bucket
DIB64	4 bags (24l) in air tight bucket



nLITE® BRUSHES					
Part No.	Shape/Colour	Length	Weight Brush	Weight cpl.	Jets
NLR27	angeled	27 cm	364 g	408 g	4
NLR40	angeled	40 cm	535 g	579 g	8
NL27Y	angeled	27 cm	364 g	408 g	4
NL40Y	angeled	40 cm	535 g	579 g	8
NL60Y	angelednkel	60 cm	872 g	916 g	12
NL27A	rectangular	27 cm	270 g	314 g	4
NL40A	rectangular	40 cm	408 g	452 g	8
NL60A	rectangular	60 cm	806 g	850 g	12



nLITE® MASTER POLES					
Part No.	Material	Size ext.	Size short	Elements	Weight
UH67G	Ultra HiMod	6,63 m	1,87 m	4	1,5 kg
UC67G	Hi Mod	6,63 m	1,87 m	4	1,5 kg
CT67G	Carbon	6,63 m	1,87 m	4	1,6 kg
HT67G	Hybrid	6,63 m	1,87 m	4	1,7 kg
GF60G	Glass Fibre	6,00 m	1,71 m	4	1,7 kg
GF45G	Glass Fibre	4,50 m	1,34 m	4	1,4 kg
AN60G	Aluminium	6,00 m	1,71 m	4	2,0 kg
AN45G	Aluminium	4,50 m	1,34 m	4	1,6 kg



nLITE® EXTENSION POLES					
Part No.	Material	Size ext.	Size short	Elements	Weight
UH35G	Ultra HiMod	3,41 m	1,91 m	2	0,7 kg
UC35G	Hi Mod	3,41 m	1,91 m	2	0,7 kg
CT35G	Carbon	3,41 m	1,91 m	2	0,8 kg
HT35G	Hybrid	3,41 m	1,91 m	2	0,9 kg
AK081	Hybrid	1,10 m	0,81 m	2	0,5 kg
GF30G	Glass Fibre	3,00 m	1,69 m	2	0,9 kg
AN30G	Aluminium	3,00 m	1,69 m	2	1,1 kg



nLITE® GOOSENECKS			
Part No.	Length	Weight	Material
NLG20	20 cm	96 g	Carbon Fibre
NLG30	30 cm	102 g	Carbon Fibre
NLG15	150 cm	390 g	Hybrid

nLite® ONLINE CONFIGURATOR

Build your personal nLite® System at www.ungerglobal.com!



VIRENA

For more information about pure water:
www.ungerglobal.com/...

Se mere på virena.dk

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