

WINDOW CLEANING PURE WATER SYSTEM

Cleaning with Pure Water

WHAT IS PURE WATER ?

It's 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).

The water is considered 100 % demineralised (pure) when TDS is 0 ppm.

ADVANTAGES



EASY:

Easy to operate and simple resin change.



FAST:

Twice as fast as traditional glass cleaning - just one process.



COST-SAVING:

Half the labour costs. No rental for cherry picker.



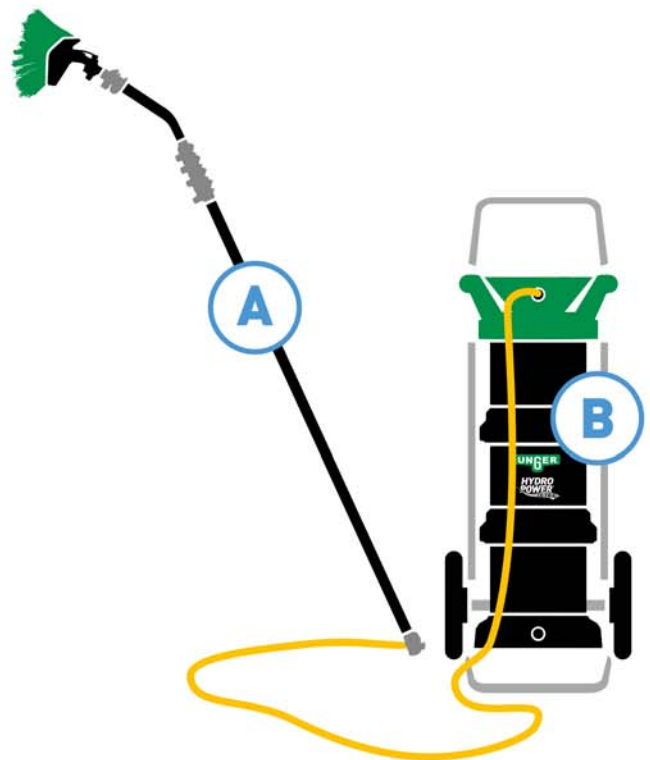
ENVIRONMENTALLY FRIENDLY:

Glass cleaning completely without chemical cleaning agents.



SAFE:

Safe working from the ground up to the 6th floor, with no cherry picker or ladder whatsoever.



WHY USE PURE WATER FOR CLEANING?

Pure water contains phenomenal cleaning power – without using any chemicals whatsoever. One-step cleaning with pure water means there is no need to wipe and polish the glass. The pane dries streak-free and without any deposits. It is twice as quick as with traditional glass cleaning and significantly improves the cost calculations*.

Applied with a water fed pole system, such as **UNGER nLITE®**, pure water is a fast, safe and effective method of cleaning, especially at height.

TYPICAL APPLICATIONS



WINDOW AND FACADE CLEANING:

- Fast and effective method – great results!
- Easy access to hard to reach areas



PV- AND SOLAR PANEL CLEANING:

- Regular cleaning prevents build up of dirt for greater energy output
- Solar yield can be increased significantly!
- Cleaning with 100 % pure water leaves no streaks or detergent residue

*Prof. Dr. rer.nat. Gerhard Winter, Albstadt-Sigmaringen University, seminar documents February/March 2011

The UNGER Pure Water System

A WATER-FED POLE SYSTEM

p. 6



A technological milestone: The new **nLITE**[®] system is the best and most advanced telescopic pole system that has ever existed. Ultra-light materials make work considerably easier. The innovative pole shape ensures noticeably more precision. And thanks to the easy handling of the poles and many intelligent product details, pure water cleaning is done faster than ever before.

With the high-quality material classes used, the **nLITE**[®] system is suitable for every application and every budget and proves to be perfect equipment for every working height - of course with **UNGER** quality "Made in Germany".

B PURE WATER FILTERS

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There are 2 recognised methods of pure water production in the window cleaning industry – Reverse Osmosis and Deionisation.

The **UNGER** range includes filters utilising either of these methods - turn to page 10 for more information.

PURE WATER SYSTEM

A WATER FED POLE SYSTEM

nLITE®

A milestone for pure water cleaning: The all new nLITE® waterfed pole system

NEW

It's high time to take cleaning with pure water to a new dimension and era.

It's time to invent a whole new form of telescopic waterfed pole technology.

It's time for a game changer:

**THE ALL NEW nLITE®
NOTHING STAYS THE SAME.**

UNGER UNGER is now setting aside the achievements of the past and is once again proving its unconditional will, innovative pioneering spirit, and courageous foresight.

Discover the best and most advanced telescopic waterfed pole system today:

LIGHTER, MORE PRECISE, FASTER.

TOP PERFORMANCE THROUGH PROGRESS

Innovation, high quality, and customer-oriented development have always been **UNGER**'s guiding principles. This applies once again to the new generation of the **nLITE®** telescopic pole system:

- German engineering in a timelessly stylish design
- Intelligent solution for faster, more flexible system setup
- Pioneering technologies for more effective cleaning results
- High Quality – Made in Germany

MORE STABLE, HIGHER, MORE PRECISE, WOW!

UNGER has developed its new **nLITE®** telescopic poles to take your performance to new heights.

Maximising refined details and precision while minimising time and effort spent getting organised for your work.

- No twisting: trouble-free work and less wear and tear
- Optimal stability-to-weight ratio
- Greater pole rigidity
- More precise control of the cleaning movement



HIGH-END CARBON MATERIALS

Ultra-lightweight. Extremely durable.

- CARBON COMPOSITE: High quality mix of carbon and glass fibres
- CARBON 24K: Premium carbon fibres in a unique weave of 24,000 fibres per bundle

THE ALL NEW

nLITE®



SMARTLOCK CLAMPS

- Easy and quick to close with just one finger
- Robust 2C material
- Clamp mechanism that protects the carbon material and ensures a long service life for the pole
- Extension stop prevents pulling out pole elements too far

INTEGRATED HOSE MANAGEMENT

- Internal routing of the new, highly flexible DuroFlex hose in the telescopic pole for trouble-free work on windows and facades
- Complete flexibility: external routing possible thanks to optional nLITE® clips

PRECISIONGRIP POLE FORM

- Innovative, unique pole shape, with contact surfaces optimally adapted to the shape of your hand.
- For ergonomic working and making best use of your strength
- More precise control of the cleaning movement and high force transmission
- Uninterrupted work due to non-twisting pole



PURE WATER SYSTEM

A WATER FED POLE SYSTEM



Unprecedented dimensions in window cleaning

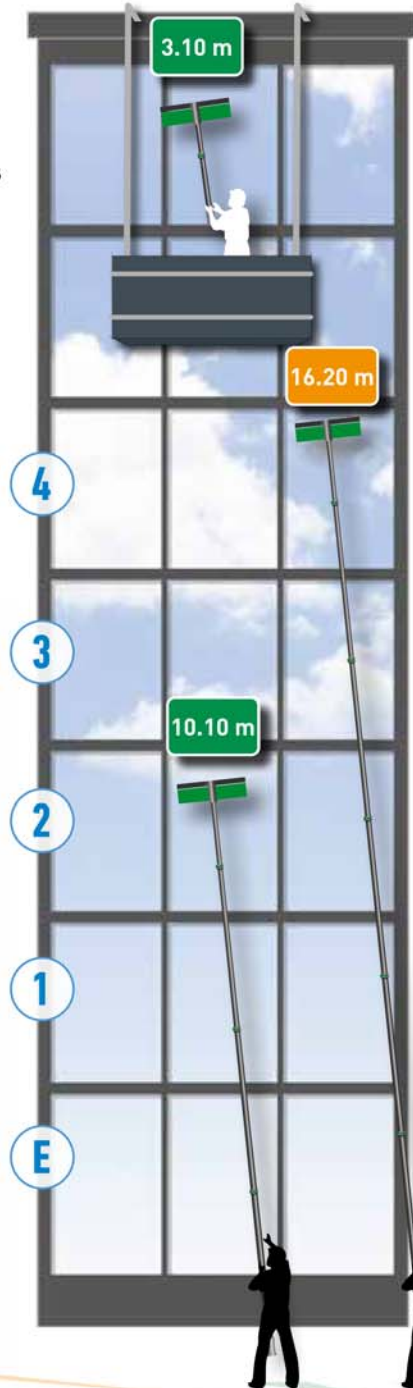
The pole lengths offered by the all new nLITE® system have been created and optimised for your everyday work.

From now on, you can easily think of how many floors' you can clean. The telescopic main pole now measures 8.60 m, so it extends to the 2nd floor. Each extension pole offers exactly the additional length to take you up another storey (3.05 m).

For use in less high buildings or with a boom lift, we have the right solution for you with telescopic poles ranging from 1.60 m to 6.00 m in length.

UNGER guarantees the best possible premium quality in each of the material classes used and thus the perfect solution for every working height.

4.70 m — Colour = material quality
— Metres shown = working height



POWER BRUSH AND ANGLE ADAPTER
Innovative modular system that makes a difference because it offers almost limitless application options.

TELESCOPIC MAIN POLE
6-sections main telescopic pole. Carbon 24K can be extended with up to 2 extension poles.

EXTENSION ADAPTER
Connects the first telescopic extension pole to the telescopic main pole with internal hose routing.

TELESCOPIC EXTENSION POLE
2-sections telescopic extension pole. With Carbon 24K, up to 2 extension poles can be used.



Part number	CC16T	CC32T	CC60T	CF60T	CC85T	CF86G + 2x CF33G
Pole elements	2	2	4	4	6	6 + 2 x 2
Total pole length	1.60 m	3.20 m	6.00 m	6.00 m	8,60 m	14,70 m
Recommended for	Boom lift	Ground floor	1st floor	1st floor	2nd floor	4th floor

CARBON COMPOSITE

RESILIENCE: 100 GPa
Recommended for working heights of up to **10 m**

CARBON 24k

RESILIENCE: 210 GPa
Recommended for working heights of up to **16 m**

A WATER FED POLE SYSTEM



NEW

CARBON 24k



nLITE® CARBON 24K TELESCOPIC POLE

Telescopic pole for medium heights.

- Recommended for working heights of up to **16 m** (approx. 4 floors)
- Telescopic main pole 2x extendable with telescopic extension pole
- Resilience: **210 GPa***

Part No.	Info	Extended	Collapsed	Sections	Weight	Pack
CF60T	Telescopic pole	6.00 m	1.70 m	4	1.16 kg	1
CF86G	Telescopic main pole	8.60 m	1.70 m	6	1.84 kg	1
CF33G	Telescopic extension pole	3.20 m	1.80 m	2	0.82 kg	1



nLITE® CARBON 24K COMPLETE POLE

Content:

- CF86G Telescopic main pole, 6 sections, 8.60 m
- CF33G Telescopic extension pole, 2 sections, 3.20 m
- NLHCC Extension adapter
- NGS30 Angle adapter kit M, 42 cm
- NFF28 Power brush simple, 28 cm

Part No.	Length	Pack
CF12C	11.90 m	1

CARBON COMPOSITE



nLITE® CARBON COMPOSITE TELESCOPIC POLE

Telescopic pole for small to medium heights.

- Recommended for working heights of up to **10 m** (approx. 2 floors)
- Resilience: **100 GPa***

Part No.	Info	Extended	Collapsed	Sections	Weight	Pack
CC16T	Telescopic pole	1.60 m	0.90 m	2	0.46 kg	1
CC32T	Telescopic pole	3.20 m	1.70 m	2	0.70 kg	1
CC60T	Telescopic pole	6.00 m	1.70 m	4	1.41 kg	1
CC85T	Telescopic pole	8.60 m	1.70 m	6	2.20 kg	1



nLITE® CARBON COMPOSITE COMPLETE POLE

Content:

- CC85T Telescopic pole, 6 sections, 8.60 m
- NGS15 Angle adapter kit S, 15 cm
- NFF28 Power brush simple, 28 cm

Part No.	Length	Pack
CC85C	8.60 m	1

*GPa (Gigapascal) is a unit of measure of material strength.

ANGLE ADAPTER

nLITE®

Modular angle adapter system: Clean hard-to-reach places



Another clever feature of the new nLITE® pole system is the modular angle system, in which you can combine four individual elements in any number of variants in order to easily reach places that are difficult to access. Whether conservatories or overhanging façade elements, this system gives you the perfect angle for every application.

NEW



FAST LOCK

With a single click: simple, fast, and stable connection for every work situation:

- Change brushes in seconds
- Adjust brush angle in 45° stages
- No twisting when cleaning!

A WATER FED POLE SYSTEM

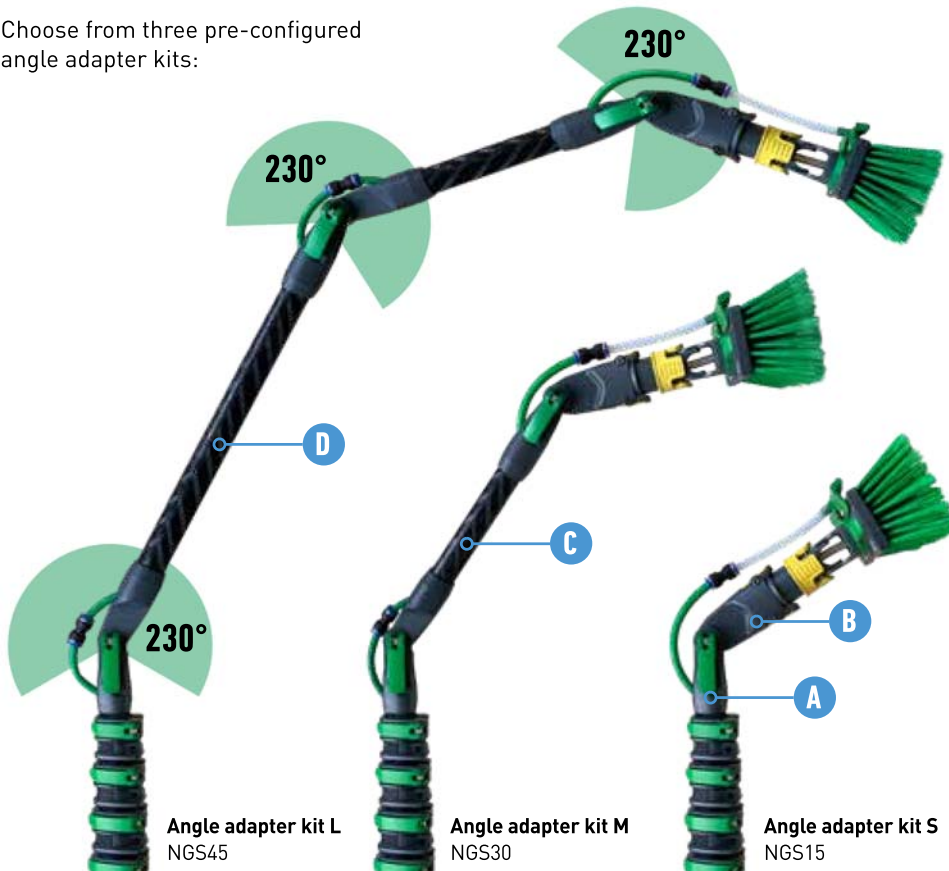
ANGLE ADAPTER KITS/ACCESSORIES



Quality Tools for Smart Cleaning

ANGLE ADAPTER KITS

Choose from three pre-configured angle adapter kits:



Simply adapt the modular angle adapter individually to your application

- A** Pole adapter
- B** Brush adapter
- C** Angle element short
- D** Angle element long



nLITE® ANGLE ADAPTER KITS

Part No.	Info	Length	Pack
NGS15	Angle adapter kit S	15 cm	1
NGS30	Angle adapter kit M	42 cm	1
NGS45	Angle adapter kit L	82 cm	1

NEW

nLITE® THREAD ADAPTER

Thread adapters for attaching brushes and tools on the new nLITE® telescopic poles

Part No.	Products	Pack
NLTHR	Euro thread adapter for brushes	1
NLCLA*	Adapter for classic cleaning tools	1

* Available from August 2021



nLITE® ACCESSORIES

Part No.	Info	Length / Ø	Pack
NLHCC	Extension adapter	40 cm	1
NLHKP	6 clips for outer hose routing		1 Set
DLS25	DuroFlex hose	25 m, Ø 5/8mm	1
DLH25	DuroFlex High Performance hose	25 m, Ø 7/10mm	1
NLWVI	Water flow regulator	Ø 5/8mm	1



A WATER FED POLE SYSTEM

POWER BRUSH

nLITE®

On Top: Swivel function and Power bristle technology

Outstanding down to the last detail: a fully optimized brush concept prepares you for almost any challenge.

- Clever water distribution system
- Innovative bristle technology
- Precision cleaning down to the last corner
- Ultimate cleaning performance for perfect results



POWER BRISTLE TECHNOLOGY

- A Inner bristles with extremely high cleaning performance, comparable to natural hair bristles
- B Longer outer bristles for easy gliding: no more annoying jumping of the brush



SOFT TOUCH BUMPER

The edge protection made of soft plastic:

- Safe protection against scratches and other damage to window frames
- Significant noise reduction when coming into contact with parts of the building

NEW

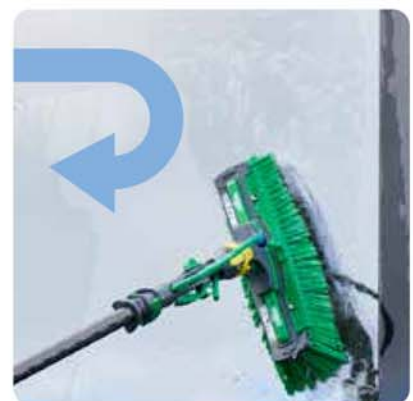
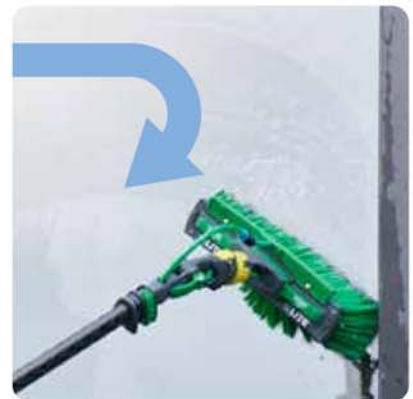
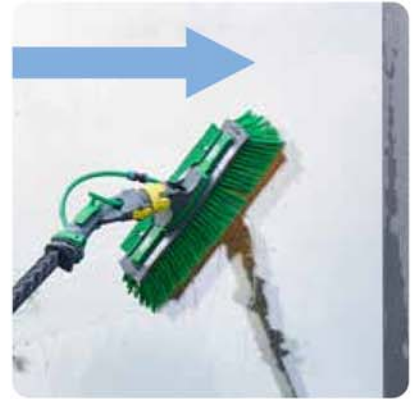




RINSE BAR

This special flushing nozzle bar is attached above the brush and delivers the right amount of pure water exactly where it is needed for powerful rinsing of the cleaned surface - surface - more effective than ever before!

- Ideal in connection with the swivel function
- Water jets from the nozzle block built into the middle of the brush ensure powerful dirt removal



SWIVEL LOCK

You've never cleaned faster and more precisely down to the last corner: the swivel function is a completely new way of cleaning with pure water up to the first floor (6 m). Open the SwivelLock and experience the advantages:

- The brush socked, which can be swivelled freely through 180°, enables the surface to be cleaned with an S movement with the brush touching down over the entire surface
- Enlarges the work area, ideal for cleaning from boom lifts or gondolas



A WATER FED POLE SYSTEM

POWER BRUSH

nLITE®

NEW

POWER BRUSHES for nLITE® CarbonComposite-, Carbon 24K- and nLite®Connect- telescopic pole systems



nLITE® POWER BRUSH COMPLETE

- Green spliced bristles for optimum cleaning results and perfect gliding properties
- With a special rinse nozzle strip above the brush for powerful rinsing
- Including hoses with quick connectors

Part No.	Size	Bristles	Pack
NFK28	28 cm	spliced (green)	1
NFK41	41 cm	spliced (green)	1



nLITE® POWER BRUSH COMPLETE

- Grey, unspliced bristles for maximum cleaning performance and optimised durability
- With a special rinse nozzle strip above the brush for powerful rinsing
- Including hoses with quick connectors

Part No.	Size	Bristles	Pack
NUK28	28 cm	unspliced (grey)	1
NUK41	41 cm	unspliced (grey)	1



nLITE® POWER BRUSH SIMPLE

- Green spliced bristles for optimum cleaning results and perfect gliding properties
- Nozzle block integrated in the middle of the brush for powerful dirt removal
- Including hoses with quick connectors

Part No.	Size	Bristles	Pack
NFF28	28 cm	spliced (green)	1
NFF41	41 cm	spliced (green)	1



nLITE® POWER BRUSH SIMPLE

- Grey, unspliced bristles for maximum cleaning performance and optimised durability
- Nozzle block integrated in the middle of the brush for powerful dirt removal
- Including hoses with quick connectors

Part No.	Size	Bristles	Pack
NUF28	28 cm	unspliced (grey)	1
NUF41	41 cm	unspliced (grey)	1



nLITE® POWER BRUSH COMPATIBILITY:

nLITE® Carbon Composite or Carbon 24K telescopic pole



Used Hose: DLS25
Required adapter: NGS15 / NGS30 / NGS 45 (nLITE® angle adapter)

nLite® Connect telescopic pole with MultiLink angle adapter



Used Hose: NL11G / NL20G / NL25G
Required adapter: FTTHR (thread adapter, included with every nLite® Connect pole)

A WATER FED POLE SYSTEM



The Master and Extension Pole System, combining telescopic and modular designs: **nLite® Connect**.

FULL FLEXIBILITY

Modular construction allows you to add on or remove Extension Poles to create telescopic poles in different lengths for cleaning at various heights.

35 MM DIAMETER

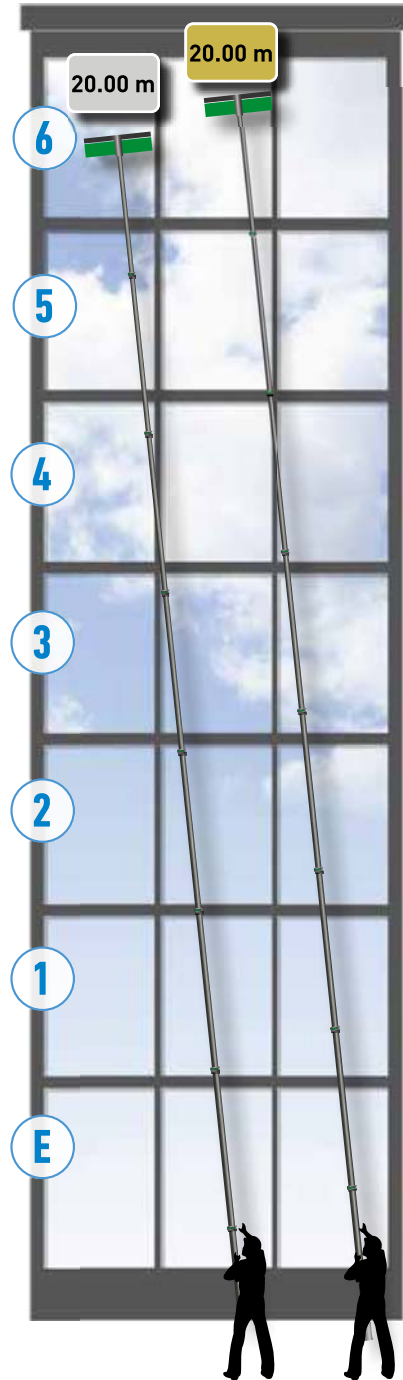
Diameter of the **nLite® Connect** pole you are holding will never exceed 35 mm, irrespective of the number of Extension Poles.

YELLOW VISUAL WARNING AREA

The top of the Extension Pole helps to avoid unintentional separation.

DURABLE PLASTIC ENDCAP

Prevents accidental damage to the end of the pole and features a side aperture for the hose exit when used inside the pole.



Part number	UC67G + 4x UC35G	UH67G + 4x UH35G
Pole elements	19.50 m	19.50 m
Total pole length	19,50 m	19,50 m
Recommended for	6th floor	6th floor

HiMod CARBON

RESILIENCE: 360 GPa
Recommended for working heights of up to **20 m**

Ultra HiMod CARBON

RESILIENCE: 760 GPa
Recommended for working heights of up to **20 m**

Ultra HiMod CARBON



nLite® Connect ULTRA HIMOD CARBON TELESCOPIC POLE

Telescopic Master Pole. The ultimate in rigidity, superlight pole.
Incl. Thread Adapter and Endcap. Ultimate material strength: 760 GPa*

Part No.	Info	Extended	Collapsed	Sections	Weight	Pack
UH67G	Telescopic main pole	6.63 m	1.87 m	4	1.5 kg	1
UH35G	Telescopic extension pole	3.41m	1.91 m	2	0.7 kg	1

HiMod CARBON



nLite® Connect HIMOD CARBON TELESCOPIC POLE

Telescopic Master Pole. The best in rigidity, superlight pole.
Incl. Thread Adapter and Endcap. Ultimate material strength: 360 GPa*

Part No.	Info	Extended	Collapsed	Sections	Weight	Pack
UC67G	Telescopic main pole	6.63 m	1.87 m	4	1.5 kg	1
UC35G	Telescopic extension pole	3.41m	1.91 m	2	0.7 kg	1

Aluminum



nLite® Connect ALUMINIUM TELESCOPIC POLE

Telescopic Master Pole. Excellent rigidity thanks to modern construction technology.
Incl. Thread Adapter and Endcap. Ultimate material strength: 30 GPa*

Part No.	Info	Extended	Collapsed	Sections	Weight	Pack
AN60G	Telescopic main pole	6.00 m	1.71 m	4	2.0 kg	1
AN45G	Telescopic main pole	4.50 m	1.34 m	4	1.6 kg	1
AN30G	Telescopic extension pole	3.00 m	1.69 m	2	1.1 kg	1

nLite® Connect GOOSENECKS

For attaching the brushes to **UNGER nLite® Connect** Water Fed Poles.



nLite® MULTILINK GOOSENECKS

Superlight carbon fibre goose-necks.
- Use individually or combine 2 or more to achieve any angle
- NLG20 and NLG30 include nLite® Thread Adapter for attaching the brush
- NLG15 includes adjustable plastic angle adapter

Part No.	Size	Weight	Material	Pack
NLG20	20 cm	130 g	Carbon	1
NLG30	30 cm	140 g	Carbon	1
NLG15	150 cm	390 g	Hybrid	1

HiFlo MultiLink ADAPTER

Plastic angle adapter with screw adjustment.
- Simple to adjust
- Robust
- Compatible with all nLite Connect & HiFlo Brushes

Part No.	Pack
FTG05	1

A WATER FED POLE SYSTEM

ACCESSORIES



nLite® HOSE

Durable hose for water supply from water filter to the Brush.

- Complete with standard hose connector for water supply
- NLH25 high performance hose for RO-filter including connector for connection kit NLHPA

Part No.	Length	Ø Inner/Outer	Pack
NL11G	11 m	5/8 mm	1
NL20G	20 m	5/8 mm	1
NL25G	25 m	5/8 mm	1
NLH25	25 m	8/10 mm	1



nLite® Connect HOSE EXTENSION KIT

Adapters for connection of 2 hoses into one.

- Includes 2 x Hose End Pieces, 1 x Quick Connector
- Insert the Hose End Pieces into each hose and connect using the Quick Connector

Part No.	Pack
NLQUI	1



nLite® Connect TOOL ADAPTER

Plastic adapter for attaching tools on nLite® Connect poles.

- Locking cone adapter for attaching traditional window cleaning tools

Part No.	Pack
HFNLC	1



nLite® Connect THREAD ADAPTER

Thread adapter for attaching brushes on the nLite® Connect pole

Part No.	Pack
FTTHR	1



Quality Tools for Smart Cleaning



Universal Hooks & Loops Straps for Ø 20-70 mm poles



nLite® Clips for Ø 35 mm poles

HiFlo Control

The On/Off Switch for instant water flow control at the pole.

- Fits onto the base sections of the pole
- Hose fits inside the switch, under the lever
- Adjust or shut off the water flow completely with one quick lever motion
- Fits any poles Ø 20-70mm
- Fits hoses external Ø 8 and 9mm

Part No.	Info	Pack
TMOOV	Complete with nLite® Clips + Hooks & Loops Straps	1



Example Content is not included.

nLite® Connect BAG

For storage, protection and transportation of a complete nLite® Kit.

- Made from solid nylon material
- Can be carried in hand or over shoulder
- Fits 5 or more poles, 2 brushes, 1 gooseneck, 1 hose
- Pocket for spare jets and small pieces

Part No.	Pack
NLBA1	1

A WATER FED POLE SYSTEM

BRUSHES



BRUSHES for nLite® Connect telescopic pole system

Image	Product Name	Part No.	Rating	WEIGHT		SIZE	BRUSH BODY		Jet Pos.	BRISTLES			JETS			
				Brush only	Incl. adapter/jets		Material	Format		Material	Soft/Hard	Length	Flexible	Material		Fan & Pencil
	nLite® BOAR BRISTLE BRUSH	NLE27	***	359 g*	403 g*	27 cm	Plastic porous core smooth solid skin		4	Natural boars bristle	Soft	8 cm*	✓	Plastic	Fan & Pencil	
		NLE40	***	466 g*	510 g*	40 cm	Plastic porous core smooth solid skin		8	Natural boars bristle	Soft	8 cm*	✓	Plastic	Fan & Pencil	
	nLite® RADIUS BRUSH	NLR27	***	364 g	408 g	27 cm	Plastic porous core smooth solid skin		4	Solvent resistant synthetic bristles	Medium	7.5 cm	✓	Plastic	Fan & Pencil	
		NLR40	***	535 g	579 g	40 cm	Plastic porous core smooth solid skin		8	Solvent resistant synthetic bristles	Medium	8.5 cm	✓	Plastic	Fan & Pencil	
	nLite® SOLAR RADIUS BRUSH	NL27Y	***	364 g	408 g	27 cm	Plastic porous core smooth solid skin		4	Solvent resistant synthetic bristles	Medium	7.5 cm	✓	Plastic	Fan & Pencil	
		NL40Y	***	535 g	579 g	40 cm	Plastic porous core smooth solid skin		8	Solvent resistant synthetic bristles	Medium	8.5 cm	✓	Plastic	Fan & Pencil	
	nLite® RECTANGULAR BRUSH ¹	NL27A	***	270 g	314 g	27 cm	Plastic porous core smooth solid skin		4	Solvent resistant synthetic bristles	Medium	7.5 cm	✓	Plastic	Fan & Pencil	
		NL40A	***	408 g	452 g	40 cm	Plastic porous core smooth solid skin		8	Solvent resistant synthetic bristles	Medium	8.5 cm	✓	Plastic	Fan & Pencil	
	HiFlo RECTANGULAR BRUSH ¹	FTS27	**	-	490 g	27 cm	Solid plastic		2	Synthetic bristles	Soft	5 cm	-	Brass	Pencil	
	HiFlo RADIUS BRUSH ¹	FTR27	**	-	560 g	27 cm	Solid plastic		2	Synthetic bristles	Soft hard	5 cm	-	Brass	Pencil	
		FBR27	**	-	560 g	27 cm	Solid plastic		2	Synthetic bristles	Soft hard	5 cm	-	Brass	Pencil	
	HiFlo OVAL BRUSH ¹	FT027	**	-	450 g / 690 g	27 cm / 40 cm	Solid plastic		2	Synthetic bristles	Soft	5 cm	-	Brass	Pencil	
	HiFlo CARBON TEC BRUSH ¹	CT27A	**	-	347 g	27 cm	Solid plastic		2	Synthetic bristles	Hard	5 cm	-	Brass	Pencil	
		CT40A	**	-	380 g	40 cm	Solid plastic		2	Synthetic bristles	Hard	5 cm	-	Brass	Pencil	

¹ While stocks last

* app. 10 % tolerance deviation possible with natural bristles

ATTENTION: Some surfaces are easily scratched. Always test brushes prior to use.



nLite® Connect BRUSH CONNECTION KIT

Connects two jets to the brush.

- NLHPC (5mm hose): 2 hose pieces (each app. 29 cm) + 1 T-piece
- T-piece spare part: Part No. 14954
- NLHPA (8mm hose): for use with NLH25 and R040C

Part No.	Product	Pack
NLHPC	Jets connection kit 5 mm	1
NLHPA	Jets connection kit 8 mm (high performance)	1
20478	Quick connector Y-piece 8 mm > 2x 6 mm	1
17176	Plug nipple 6 mm	1
20476	Plug nipple 8 mm	1



nLite® Connect JETS

Interchangeable, quick release Jets for nLite® Connect Brushes.

- Fan Jets for hydrophobic glass
- Pencil Jets for hydrophilic glass
- Mix and match depending on type of surface you clean

Part No.	Info	Pack
NLEJF	1 Set = 2 Jets	1 Set
NLBJP	1 Set = 2 Jets	1 Set



nLITE® THREAD ADAPTER

NEW

Thread adapter for attaching brushes with Euro thread (e.g. nLite® Connect and HiFlo brushes) on the new nLITE® telescopic poles.

Part No.	Pack
NLTHR	1

i

5 mm hose	8 mm high performance hose
2 JETS	
<p>Included with brush</p> <p>1 x NLBJP: 2 Pencil Jets 1 x NLHPC: Hose Kit</p>	<p>Included with brush</p> <p>1 x NLBJP: 2 Pencil Jets</p> <p>Extra parts required: 1 x NLHPA: Hose Kit</p>
4 JETS	
<p>Extra parts required:</p> <p>1 Set of jets 2 x NLHPC Hose Kit</p>	<p>Extra parts required:</p> <p>1 Set of jets 2 x Hose Kit: 1 x NLHPC 1 x NLHPA</p>
6 JETS	
<p>Extra parts required:</p> <p>2 Sets of jets 4 x NLHPC: Hose Kit</p>	<p>Extra parts required:</p> <p>2 Sets of jets 4 x Hose Kit 3x NLHPC 1x NLHPA</p>

Choosing Your Filter System

There are 2 recognised methods of pure water production in the window cleaning industry – **Reverse Osmosis** and **Deionisation**.

The **UNGER** range includes filters utilising either of these methods. This page will help you to decide which method suits your cleaning requirements best and will deliver the highest return on your investment.

HYDRO POWER® ULTRA DEIONISATION FILTER (DI)

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These filters utilise ion exchange resin which removes ionised salts and impurities from water, producing 100 % deionised pure water, with no waste water.

Though DI filters require a relatively low initial investment when compared to RO, frequent replacement of old resin with new is necessary for 100 % pure water production.

Mobile design and portability, with no need for power or pumps, our DI filters can be easily set up anywhere – all you need is a tap water supply.

RECOMMENDED FOR:

- Areas with soft or medium water hardness level
- Small size filters are ideal for cleaning small to moderate size areas, as well as an entry level solution for professional cleaning
- Large sizes – for frequent cleaning of large areas
- Use as final stage of water purification process, after RO membrane, to achieve 100 % pure water

HYDRO POWER® REVERSE OSMOSIS FILTER (RO)

p. 26



The **UNGER RO** utilizes 3 stage water purification system.

First, the combi-pre-filter captures chlorine and sediments from the incoming water, then the water is directed towards 2 RO membranes which remove up to 98 % of dissolved minerals and contaminants.

At this point, the water flow is split into waste water (concentrate) that requires drainage facility and pure water which is directed to DI Polisher where any remaining impurities are filtered by ion exchange resin to produce 100 % pure water.

RECOMMENDED FOR:

- Areas with hard or very hard water level
- Constant, high volume pure water production

HYDRO POWER® ULTRA FILTER

THE HYDRO POWER® ULTRA SYSTEM

The Most Efficient DI Pure Water System Ever! Performance at the highest level:

The **UNGER HydroPower®** Ultra is setting a new standard in deionising filter technology for pure water cleaning. A definite value-add for every professional glass and building cleaner.

OVER 30%* MORE PURE WATER PER RESIN FILLING

- Every Ultra resin pack contains a pre-portioned amount of **UNGER** premium ion-exchange resin with a **new formula, perfected for glass cleaning**
- The **FloWater technology 2.0** in every Ultra resin pack ensures an efficient flow of water through the whole tank which optimises the **resin saturation**

Ultra Resin Packs



Premium Ultra Resin
Perfected ion exchange resin, as required for cleaning glass



SIMPLE AND EFFECTIVE HANDLING



TDS-Meter

- Displays, at the push of a button, whether the Ultra Resin Packs need to be changed.
- At a TDS value >10ppm the Ultra Resin Packs have to be changed



FastLock quick-fit fastener

- Easy to open and close the tank
- Safe, self-locking mechanism with pressure-relief valve



Easily removable cover

- Quick and easy changeover
- Ultra resin packs can be changed as easily as a coffee pad in a coffee machine

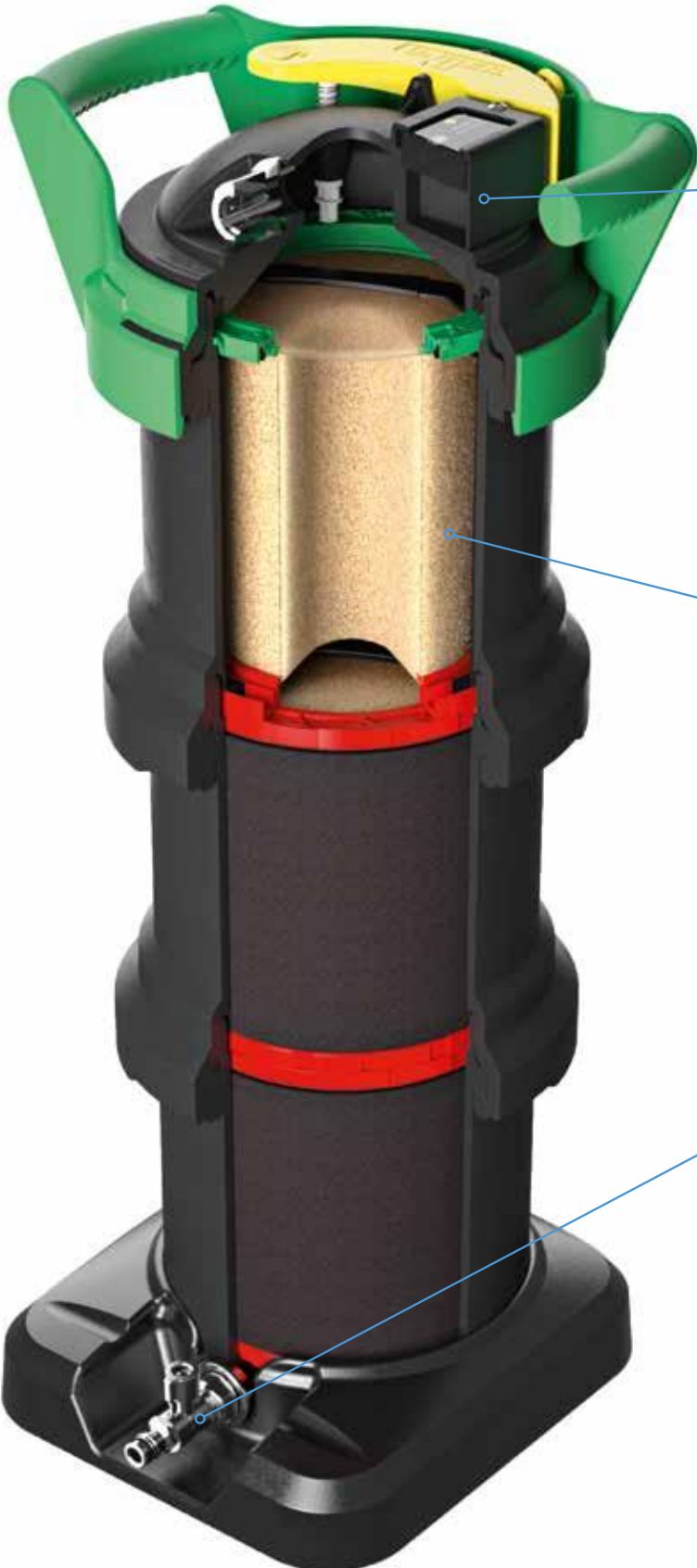


High-quality metal connections

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

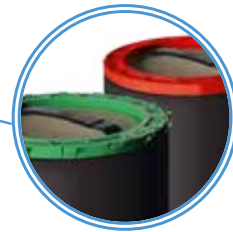
*In comparison with standard DI systems (e.g. **UNGER HydroPower®** DI filters). Source: test results from the independent testing laboratory Miontec GmbH, 2019.

The HydroPower® Ultra System



TDS-METER

- Integrated digital measuring device displays the water hardness of the pure water coming out



ULTRA RESIN PACKS

- Over 30% more pure water per resin filling
- Intuitive colour coded system
- KeyLock function eliminates risk of operating errors



WATER CONNECTIONS

- Stable quick-fit metal hose connector
- Practical shut-off valve prevents leakage during transport
- Pre-installed, dynamic control guarantees optimum water flow at all times

B PURE WATER FILTERS

HYDRO POWER® ULTRA FILTER

CUSTOMISED IN EVERY SIZE

Choose from 2 filter sizes depending on the volume of pure water required and frequency of use to maximise your return on investment.

All 3 versions are supplied complete with **Ultra Resin Packs** and integrated **TDS meter** to monitor the outgoing water hardness.



DIUH1 - HydroPower® Ultra S
contains 1 Ultra Resin Pack (6 l)



DIUH2 - HydroPower® Ultra L
contains 3 Ultra Resin Packs (18 l)



DIUH3 - HydroPower® Ultra LC
contains 3 Ultra Resin Packs (18 l)

HydroPower® Ultra FILTER

Part No.	Base	Height	Resin Packs	Cart
DIUH1	30 x 31 cm	35 cm	1 (6 l)	-
DIUH2	30 x 31 cm	77 cm	3 (18 l)	-
DIUH3	30 x 31 cm	107 cm	3 (18 l)	✓

FILTER OUTPUT

In particular the water hardness and the hydrogen carbonate content of the input water have a strong influence on the amount of pure water. The following values correspond to the output of **UNGER HydroPower® Ultra** with *average tap water*:

HydroPower Ultra S (DIUH1)



Factor	Value
Resin fill	1 x 6 l
Pure water quantity per resin filling	710 l
Working hours*	approx. 6 h
Coverage in m ² **	approx. 600 m ²

HydroPower Ultra L (DIUH2)



Factor	Value
Resin fill	3 x 6 l
Pure water quantity per resin filling	2,450 l
Working hours*	approx. 20 h
Coverage in m ² **	approx. 2,000 m ²

HydroPower Ultra LC (DIUH3)



Factor	Value
Resin fill	3 x 6 l
Pure water quantity per resin filling	2,450 l
Working hours*	approx. 20 h
Coverage in m ² **	approx. 2,000 m ²

The pure water quantities (TDS < 10 ppm) were determined by an independent test laboratory at a water flow rate of 180 l/h and under the following conditions for the input water:

TDS: 275 ppm

Sum of cations and anions: 5.5 meq/l

Hydrogen carbonate content of anions: 60%.

With *soft water* (<100 ppm) the pure water output can increase **more than 3 times**. With very hard water (>400 ppm), depending on the hydrogen carbonate content and ion concentration, the output can **decrease by more than half**.

* at a water flow rate of 120 l/h

** with an area output of 100 m²/h

