



UV Compact Ultraviolet Disinfection Range

GRUNDFOS UV COMPACT RANGE

Ultraviolet water disinfection is a well known technology. Its germicidal properties are unique, as it breaks down the bonds in the DNA of micro organisms, preventing them from reproducing. The main benefit of UV water disinfection is that no chemicals are used, however, the effectiveness of this technology is very much dependent on the UV wavelength, lamp skin temperature, water depth, light wave penetration and UV contact time. These factors can be optimised effectively and safely with an *ideal system selection, installation correctness and, reliable monitoring and control*. Hence, Grundfos has developed the UV Compact range, offering a 'plug-in-and-play' solution to UV water disinfection.

Ideal system selection

An ideal system selection allows the right amount of UV ray exposure to the water. This means the velocity of water flowing over the UV lamp enclosure is optimised to ensure adequate UV dosage is given to the micro organisms.

Furthermore, the water has to be reasonably clean to allow the UV ray to penetrate. Hence, a correctly selected pump and filter system plays an important role in the process.

Grundfos UV Compact offers the right mix of UV exposure, filtering requirement and pump capacity - ensuring optimum water disinfection.

Installation correctness

A UV lamp has limited life and hence has to be replaced, usually every year. Also, over time, the lamp enclosure that is exposed to water flow will accumulate foreign particles depending on water quality. This enclosure requires periodic cleaning.

Grundfos UV Compact is carefully configured to be compact and at the same time provides easy maintenance and servicing access.

Reliable monitoring and control

Grundfos understands each application is different and flexibility is necessary to optimise each package to suit individual needs. Even the simplest option such as delaying the pump start when the lamp is turned on is offered. This is because the lamp requires a short time interval to reach its peak efficiency when first turned on. This option prevents water to flow before it is adequately treated.

Other convenient options are various alarm methods, hour run counter, UV intensity monitor, flow limit control, and water temperature control.

Grundfos UV Compact

Grundfos UV Compact comprises 3 versions that range up to 17 m³/hr in capacity. Its Eco Line version is basic and economical. It can be mounted onto a wall in an indoor environment. The Low Line and High Line versions are rugged free standing packages providing a multitude of control and monitoring options.

The Grundfos UV Compact is specially matched to the Grundfos CH, CHIE, MQ, CR and CRE pumps. Peace of mind is assured, knowing every component in UV Compact is synchronised to operate in harmony.

Pump options

Self-Priming

The MQ booster pump is a self-priming compact unit designed for the distribution and boosting of clean domestic water. Built for long trouble-free life, this pump is suitable for a wide variety of water supply and transfer duties in home, garden and hobby applications.

Pressure Systems

This range of CH/CR pressure systems are designed for any pumping application involving clean and non-aggressive water in household applications. These pumps are designed to start and stop on demand, thus saving energy cost and reducing pump wear and tear.

Variable Speed Drive Systems

The CHIE/CRE systems come with integrated variable speed drive control. This means the pumps automatically adjust their capacities smoothly on water demand. This gives added comfort to users, savings in energy and a longer pump life.

Eco Line

The Eco Line is built to suit flow rates up to 4 m³/hr. It is assembled on a composite panel that is ready for wall mounting.

The Eco Line is the ideal solution for small applications where it can be installed indoor and where installation space is limited.

Key features

Convenience - system built and tested in factory, and matched to a pump to provide safe and effective disinfection.

Space savings - wall mounting allows more flexibility in space restricted sites.

Applications

- Disinfection of water from rainwater tank and boreholes used in domestic homes.
- Control of algae growth in small ponds and fountains.



Low Line

The flexible Low Line is a free standing system that handles flow rates up to 7 m³/hr. It is assembled on a rugged galvanised steel baseplate.

The Low Line provides flexibility with its options, including various alarm configurations, hour run meter, pump start delay and UV intensity monitor.

This is a package for rugged installation.

Key features

Convenience - a truly 'plug-in-and-play' unit. All components are matched to suit the required demand.

Space savings - compact design.

Tough - heavy duty design to ensure the unit can withstand the test of time.

Applications

- Simultaneously boosting and disinfecting water for large homes and small buildings.
- Disinfection of rainwater, surface water and ground water.



High Line

The High Line is a free standing system developed to handle flow rates up to 17 m³/hr, with electronic intelligence (PLC) that integrates the control and monitoring features of the package.

The package comes highly recommended for applications requiring more detailed control and monitoring.

Key features

Peace of mind - provides integrated control and monitoring features.

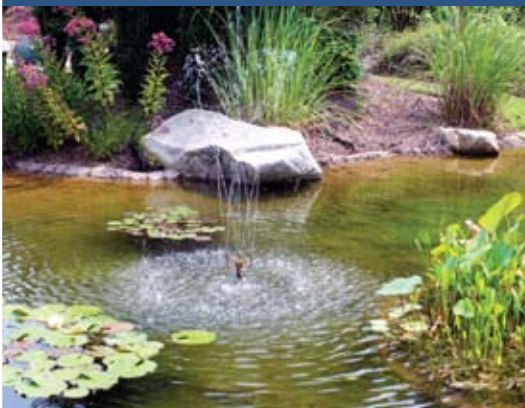
Convenience - all components are matched to suit the demand.

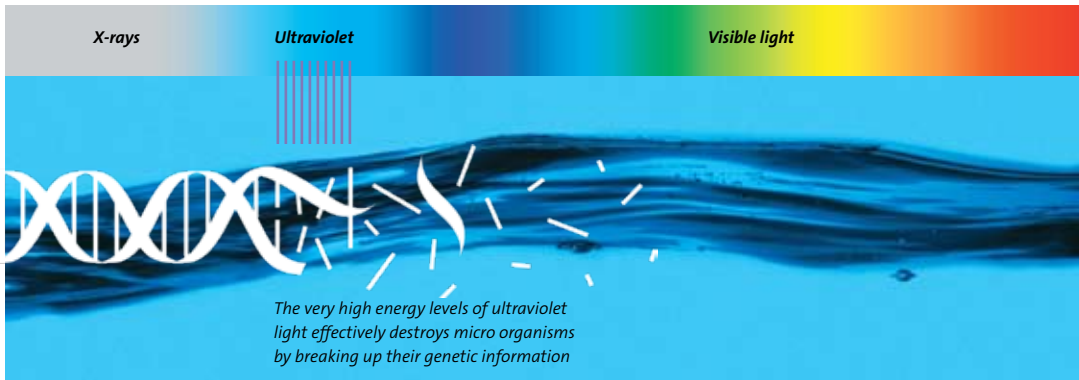
Space savings - compact design.

Tough - heavy duty design to withstand the test of time.

Applications

- Light industry water treatment processes.
- Simultaneously boosting and disinfecting water used in large homes and small buildings.





Pump options

	Eco Line	Low Line	High Line
Self-priming			
Pressure system			
Variable speed drive system			

Technical specifications

S = Standard
O = Optional

	Pump version	Eco Line			Low Line			High Line				
		PC	PT	Solo E	LVE2	LVE4	LVL2	LVL4	LVL7	LWH4	LWH7	LWH17
Pump	Eco Line: CH2-30 to 2-60 CH4-40 to 4-60 MQ3 CHIE4-60	O O	O O		O O	O						
	Low Line: CH2-30 to 2-60 CH4-40 to 4-60 MQ3 CHIE4-60 CHIE8-20	O O	O O				O O	O O				
	High Line: CR/I/N 3-05 to 3-10 CR/I/N 5-04 to 5-10 CR/I/N 10-04 to 10-06 CR/I/N 15-02		O O O O	O O O O						O	O	O O
Temperature rating	40°C maximum ambient temperature 60°C maximum water temperature 52°C maximum water temperature if 10" PP filter fitted 40°C maximum water temperature if 20" PP filter fitted			S S O O	S S O O	S S O O	S S O O	S S O O	S S O O	S S O O	S S O O	
UV reactor	SS 316 material Outlet connection size ("F) Inlet connection size ("F) Maximum flow rate (m3/hr) Maximum pressure drop (m)			S 1 1 2 4	S 1½ 1 4 2	S 1 2 4	S 1½ 4 2	S 2 7 2	S 1½ 4 2	S 2 7 2	S 2 17 6	
UV lamp	One unit (lamp and quartz thimble to be installed on site) Power (W) 1 years continuous operation			S 40 S	S 40 S	S 40 S	S 40 S	S 80 S	S 40 S	S 80 S	S 160 S	
Filter (see pressure drop in table below)	10" PP housing material (8.75 bar maximum pressure) 20" PP housing material (6.9 bar maximum pressure) 30" SS housing material (10 bar maximum pressure) 5 microm PP spiral wound cartridge 25 microm PP spiral wound cartridge 5 microm PP thermal bonded cartridge 25 microm PP thermal bonded cartridge			O O O O O	O O O O O	O O O O O	O O O O O	O O O O O	O O O O O	O O O O O	O O O O O	
Controller	IP55 metal enclosure 1-phase 240 V 50 Hz with electronic ballast, audible alarm and cable and plug IP21 iron core ballast with cable and plug Visual alarm Hour run meter 2 minutes pump delay UV intensity monitor UV intelligence (integrated alarm, hour run meter, mute and pump delay)			S	S	O O O O	O O O O	O O O O	O O O O	O O O O	O O O O	
Auxilliary devices	PVC flow restrictor Thermal solenoid valve Non-return valve Service valves Free standing baseplate Wall mounted			O O S S	O O S S	O S S S	O S S S	O S S S	O S S S	O S S S	O S S S	
Warranty	2 years - UV reactor 1 year - Ballast and UV lamp			S S	S S	S S	S S	S S	S S	S S	S S	

Filter description	Maximum flowrate (m ³ /hr)	Maximum pressure drop when new (m)
5 µm cartridge in 10" PP housing	2	6
25 µm cartridge in 10" PP housing	4	1
5 µm cartridge in 20" PP housing	7	5
25 µm cartridge in 20" PP housing	7	4
5 µm cartridge in 30" SS housing	17	Minimum
25 µm cartridge in 30" SS housing	17	Minimum

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