

Water is one of the most precious resources for the agricultural industry, its shortage caused by continuous climate changes, forces farmers to use poor quality and drainage water coming from soilless cultivation.

These kinds of waters are a potential vector of bacteria, fungi and viruses that can easily contaminate cultivation. For this reason, an accurate water disinfection is fundamental to avoid the spread of harmful pathogens to crops.

Ultra Pro has been created specifically for the disinfection of contaminated surface water (river, lake, lagoon) as well as drainage water of soilless cultivation.

Disinfection unit for contaminated water and soilless cultivation drainage.

SPAGNOL Ultra Pro

DESIGNED&PRODUCED BY SPAGNOL



*{.....we take care of growing things,
we are designers by nature.....}*



UltraPro

The water disinfection is obtained through the exposure to UVC radiation emitted by low-pressure amalgam lamps. The 254 nm wavelength UVC radiation of lamps destroys the molecular bonds of DNA of microorganisms, making them harmless and preventing their growth and reproduction.

The level of disinfection depends on the quantity of radiation received from the pathogenic microorganisms. Studies have shown that it is necessary a dosage of 100mJ/ cm² to inhibit the 99,9% of bacteria, algae and fungi, we need instead 250mJ/ cm² to inhibit the 99,9% of viruses. With Ultra Pro, the desired dosage level can be set by the user according to his needs.

The dosage of the UVC radiation occurs in a stainless-steel pipe **1** where there is a lamp **2** protected by a quartz sleeve **3** where the contaminated water flows around it. **4** The disinfection chamber has been designed to guarantee a good UVC dosage even with low transmittance water like the drainage one.

To ensure that the desired level of disinfection is achieved, Ultra Pro is equipped with a UVC sensor **5** that continuously monitors the amount of radiation passing through the irradiation chamber. A specific alarm advises the operator if any disinfection anomaly is occurring.

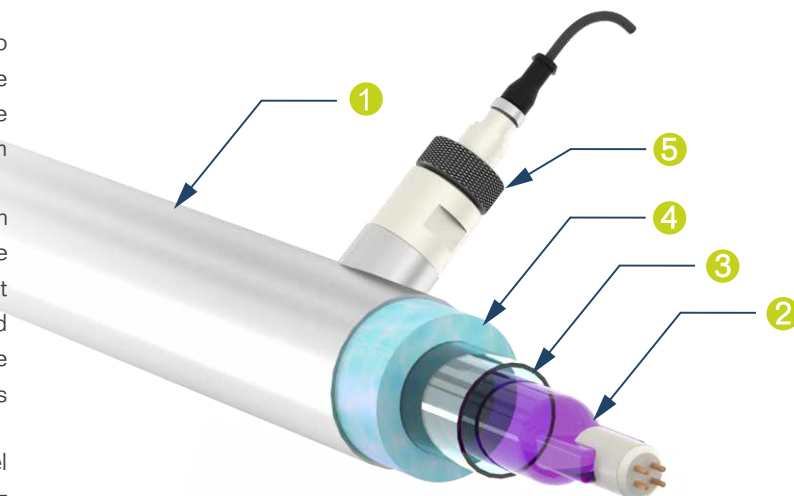
Some organic and mineral water residuals can be deposited on the quartz limiting the efficacy of the lamp UVC radiation, for this reason Ultra Pro is equipped with a pump that continuously doses a concentrated acid solution that is able to maintain the quartz clean optimizing the performance of the lamp.

Ultra Pro has up to 8 disinfection chambers, the number of the chamber depends on the quantity of water that daily has to be disinfected, on the water transmittance (T10) and on the UVC dosage level required.

Solid particles can obstruct the UVC radiation and can host some pathogens, for this reason before flowing on the disinfection chambers, water is filtered by a 30micron net filter included in the machine.

The combined action of hydrogen peroxide with UVC radiation makes Ultra Pro more effective against pathogens, for this reason the machine has, as standard equipment, a dosing pump for hydrogen peroxide.

In order to make the UVC radiation effective even in the worst operating conditions, like in case of turbid water with a low UVC transmittance, Ultra Pro can be provided with an automatic valve to mix the murky water with the high transmittance fresh one.



Main technical data:

UVC lamp power:	800W.
Lamp lifespan:	12.000 ore.
Max lamps quantity:	8.
Trasmittance range T10:	From 15% to100%.
Flow rate:	From 0.5 to 35 m ³ /h*
Recipes-Tanks:	Up to 4.
pH control:	Yes standard.
H2O2 dosage:	Yes optional.
Inlet mixing valve:	Yes standard.
User interface:	Industrial keyboard + Touch screen.
Comunication:	Vision Cloud, Vision On Premises.
Power supply. 50 Hz:	3 x 400V with neutral.
Power supply. 60 Hz:	3 x 440V with neutral.



VIDOR - TV - ITALY



+39 0423 986083



info@spagnol.com



www.spagnol.com

