cintropur®

WATERFILTRATION & TREATMENT

Installation, use and maintenance instructions

TRIO UV 2100 / 4100

Watch our maintenance videos on our YOUTUBE channel

https://www.youtube.com/channel/UCWqxml54Aqfsu9M7imBx1YA

1. Possible applications

The CINTROPUR® TRIO-UV 2100 and TRIO-UV 4100 range of water filters is designed to filter clear water with little suspended solids, such as mains water, rainwater, borehole water and spring water.
Other types of non-aggressive liquid can also be filtered. It can be used in domestic, industrial, collective and agricultural environments.

To ensure that the water is drinkable, it must be chemically potable before UV treatment.

CINTROPUR UV is a 100% physical water treatment process that uses ultraviolet light as a bactericide.

Feed water can contain large quantities of both harmless and pathogenic micro-organisms (faecal streptococci, faecal coliforms, sulphite-reducing bacteria, etc.). These micro-organisms need to be removed if the water is to be drinkable.
The UV lamp emits light rays with a maximum intensity at 253.7 nanometres. At this very precise wavelength, pathogenic micro-organisms are completely eliminated, guaranteeing bacteriological drinking water.

The materials used to manufacture the filter are compatible with the filtration of food liquids.

2. Technical description

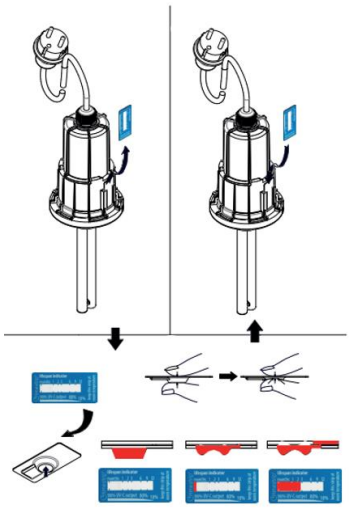
The installation and use of TRIO-UV 2100/4100 are subject to compliance with the technical specifications described below:

	TRIO UV 2100	TRIO UV 4100
Connection diameter	3/4'' + 1 ''	3/4'' + 1 ''
Average flow rate (M^3/h) at 25mJ/cm^2.	2	2.6
Average flow rate (M^3/h) at 40mJ/cm^2 (m3/h)	1.3	1.6
Operating pressure (bar)	16	10
Maximum operating pressure (bar)	16	16
Maximum operating temperature	50°C	50°C
Weight (Kg)	4.3	4.3
Screen filtration fineness	25µ	25µ
Water transmission (min. %)	90	90
Lamp power (W)	25	40

3. Installation and handling

a) The filters must be installed in accordance with good practice by qualified personnel: they must be free from mechanical stress, with the upstream and downstream pipes aligned. The length between connections must be respected so as not to cause any traction or compression on them.
b) The ideal location for the CINTROPUR® TRIO UV water filter is directly at the inlet to the installation (after the meter or pump). Make sure that the water flow is in the direction indicated by the arrow on the filter head. If there are several water treatment devices in your installation, the UV unit is always placed last. Installation of a filter upstream of the appliance is strongly recommended to remove any suspended particles that may mask the UV radiation.
c) The pressure reducer will effectively reduce the network pressure if it exceeds the operating pressure. The water hammer arrester is essential if water hammer is known to occur in the installation.

d) The filter is supplied complete and ready to install. Equipment includes a set of 4 threaded connectors (2 x ¾" + 2 x 1"), a 25µ filter screen, an activated carbon cartridge, a dismantling key and 3 wall fixings.
e) The only options are pressure gauges and a drain valve.
f) The dry pressure gauges (0 - 10 bar) supplied as an option have a standard 1/8" thread; they are fitted using a spanner (the dial is not a handle for screwing) after drilling the pressure gauge sockets completely into the head and tapping. In this case, the wall mounting can no longer be installed. Under no circumstances should the pressure gauges be used to fix the wall bracket!
g) The wall brackets should be fixed to the filter head using the screws (M8 Len head) provided for this purpose. A slight tightening of the screws is all that is required for a good hold.
h) If you need to remove the filter from the installation at a later date, use the removable fittings.
i) An O-ring seal is used to ensure a watertight seal between the connector and the filter head; tightening with bare hands is sufficient. The seal between the head and the bell is provided by an O-ring; the spanner is used for disassembly.
j) Only CINTROPUR grease may be used to lubricate the filter o-ring or thread. Grease sprays should not be used as they may interact negatively with the synthetic components of CINTROPUR. Any type of conventional commercial grease should also be avoided for the same reasons. Failure to observe this rule can lead to brittleness and cracks in some filter components.
k) If you choose to fit the bleed valve (1/4"), it comes with an M10 thread and an o-ring to ensure watertightness. It must be fitted with bare hands. The seal between the male thread of the valve and the filter bowl is ensured by an o-ring. The o-ring should be tightened a maximum of ¼ turn against the bowl.
l) The cylindrical support for the filter screen is fitted at both ends with a centrifugal impeller and a sealing cover. The purpose of the latter is to ensure a seal between the unfiltered water and the filtered water.
m) It is advisable to fit isolation valves upstream and downstream of the filter to make filter maintenance easier.
n) The bowl containing the activated carbon cartridge should be easily filled in accordance with the instructions on page 5.
o) On first use, press the pad on the back of the blue UV label to release the red liquid, which after one year will fill the entire white strip.
p) Optimum operation of this label on the head is closely linked to a constant ambient temperature of less than 22°C.



To ensure that the ultraviolet treatment is as effective as possible, we recommend that you carry out a shock disinfection of your pipes.
During this operation, the CINTROPUR UV must be switched off (for the TRIO-UV, the filter cartridge + activated carbon cartridge must be removed).

- Disinfection of pipes if filter upstream of the CINTROPUR UV

- Remove the filter element from your filter.
- Fill the UV bowl 2 or 3 times with a half-diluted bleach solution.
- Circulate this water through all the pipes in your home.

- Leave for ½ hour, then drain the water until the taste and smell of bleach have completely disappeared.
- For the TRIO-UV, refit the filter cartridge and replace the activated carbon cartridge.
- Switch on the CINTROPUR UV.

We recommend that you repeat the shock disinfection of the pipes about once a year.

ELECTRICAL CONNECTION

Electrical connection is via a 3-pin earthed plug. Before connecting the appliance, make sure that the current corresponds to the voltage of the appliance, 230 volts, 50 Hz.

For your safety: the appliance power supply must be fitted with a differential circuit breaker with a sensitivity of 30mA.

OPERATION

Before starting up the appliance, check that there are no water leaks.

Circulate the water inside the appliance.
Plug in the appliance.
The UV lamp can be seen operating in the bleed screw below the black bell (blue light).

The steriliser should always be left switched on, even if no water is being used. However, if there is no water consumption for a prolonged period (holiday, absence of more than a week, etc.), the CINTROPUR UV must be switched off to prevent the UV steriliser from overheating.
When you switch it back on, let the water run for 1 minute (steriliser on) before drinking it.
Frequent "On/Off" or operation without water inside the bowl is prohibited as it reduces the life of the UV lamp.
The CINTROPUR UV must operate with water temperatures of between 5°C and max 50°C. Above this temperature there is a risk of damage to the equipment.

SAFETY INSTRUCTIONS

The bayonet connection of the UV lamp to the steriliser head means that it can be switched off (when dismantling) or on automatically (when assembling) by a simple 5° rotation. A click will confirm that the lamp has been securely fitted.
The UV lamp will only work when it is connected to the steriliser head (user safety).

The CINTROPUR UV must only be used for its intended purpose. It must not be used to treat flows in excess of the maximum flow rates recommended. Safety and correct operation are only guaranteed if the steriliser is installed in accordance with the attached recommendations.
Before carrying out any work on the steriliser, please disconnect it from the mains supply. UVC rays are dangerous for the eyes and skin. Do not operate the UVc lamp outside the unit.
The treated water must not be coloured, nor loaded with suspended matter, iron, limestone or nitrate.

4. Maintenance

Filter with sleeve

Before dismantling the bowl, close the upstream/downstream valves and release the pressure.
The drinking water filter screen should be serviced and replaced at least twice a year. The 5, 10, 25, 50 & 100µ sieves are designed for single use only. Cleaning them would alter the structure of the fibre, degrading the selected filtration fineness and weakening the screen, which could lead to tears.
The 150 & 300µ nylon sieves are designed to be cleaned and reused.

The bowl thread should be kept clean and greased for easy assembly and disassembly of the bowl over time. The O-ring between the head and bowl should also be kept clean and greased to ensure a good seal. It should be replaced every 5 years. All O-ring grooves and seats must be kept clean and free of burrs. Refer to point 3, paragraph "j" for the only grease to be used.

Any component of the filter, even if partially damaged, must be replaced immediately to ensure that the filter as a whole remains pressure tight and watertight.

Activated carbon filter

Your filter is fitted with a container cartridge (CTN) designed to receive a charge of activated carbon (or other treatment products). This CTN cartridge is identical for all models. It has an internal volume of 0.57 litres. The lower openings in the cartridge are 0.6 mm; in the upper sieve, the openings are 0.3 mm.

a) Remove the filter bowl
b) Remove the NTC cartridge by pulling downwards (do not use circular movements [screwing or unscrewing] to remove the cartridge).
c) Unscrew the black cartridge cover
d) Fill the container with activated carbon (or other product) to the "max" level indicated. With the CINTROPUR barrel you have 6 loads of activated carbon.
e) Screw the lid back onto the container
f) Insert the filled cartridge into the filter head. As in point b), make sure you replace the cartridge by pushing vertically upwards but without making a circular movement [screwing or unscrewing].
g) Screw the bowl into the head with your bare hands. The spanner is used for dismantling.

UV steriliser

It is IMPERATIVE to change the UV lamp after 1 year of operation (or 8760 hours).
After this time, sterilisation efficiency will no longer be guaranteed.

Maintenance is limited to changing the UV lamp and cleaning the quartz sheath if necessary. After 5 years, because of the solarisation effect, it is advisable to replace the quartz.

When you put your lamp into service, press the button on the back of the blue label for optimum monitoring of lamp operating time (see "Installation" section). The original white rectangle will gradually turn red over time (after 12 months, it will be completely red). Repeat this procedure on the new label each time you change the lamp.

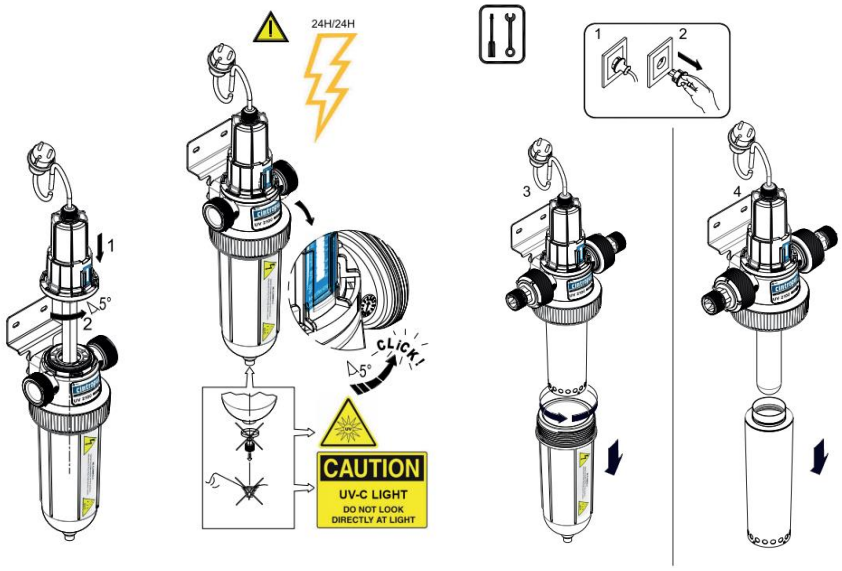
Removing the black steriliser bowl gives direct access to the stainless steel cylinder. This is the UV treatment chamber. It must be kept clean for optimum UV radiation.

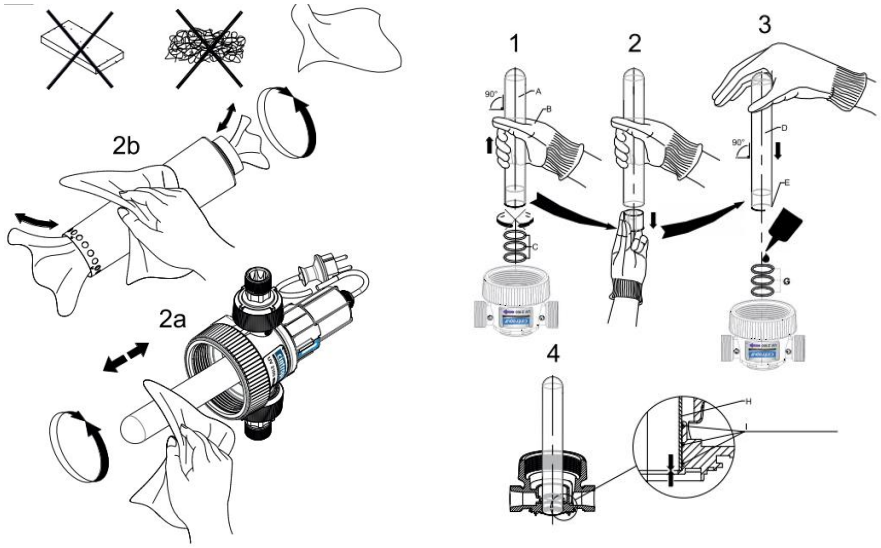
INSTALLING THE NEW LAMP

The new UV lamp must be completely dry before it is positioned in the quartz sheath.
Take care not to touch the lamp glass with your fingers. Cleaning the lamp with alcohol will remove any fingerprints.

Cintropur makes your life easier by supplying the lamp connected to the ballast (built into the black handle). A 5° rotary movement will fix the lamp to the steriliser using a bayonet system. This rotary movement will automatically activate a micro-switch to switch on your lamp.

Note: Like fluorescent tubes, a faulty UV lamp must be disposed of in accordance with national regulations or at a waste disposal centre, as the lamp contains mercury particles.





QUARTZ SHEATH

The quartz sheath may become clogged or show scale deposits. If this happens, dismantle it and clean it with dilute acid (hydrochloric acid, vinegar, anti-scale solution). The product used must not be abrasive.