

Ultra-violet disinfection of low clarity liquids

Contamination Control have responded to the requirement to UV disinfect relatively opaque liquids in the food industry in a practical manner. Typically these liquids will be food ingredients like sugar syrup or cheese salting brine, both of which have a low transmission of UV light compared to water. This means that conventional UV system designs are not effective as the UV does not penetrate far into the liquid.

Following trial work and full scale operation the Steriflo LS range is now available in one, three and seven lamp versions, designed to maximise the effectiveness of UV in the treatment of low clarity liquids by minimising the path through which the UV has to travel. Treatment flow rates are up to fourteen thousand litres per hour with multiple units available for larger flows.

LS series disinfection schemes are essentially custom designed for a given application but in general, treatment can either be single pass, where the liquid goes straight from the UV unit into use, or multipass, in which case the liquid is recirculated through the UV unit from a storage tank, thereby receiving multiple doses and achieving a reduction in microbial activity in the tank contents. This will often allow the use of a smaller, cheaper UV system than the single pass arrangement.

Results are dependent on the level of UV dose employed and the characteristics of the liquid, eg. suspended solids levels, storage

time, UV transmission and temperature, but the LS series has been demonstrated to be highly effective against yeasts, moulds and bacteria in full scale operation as well as pilot work in several applications.

STANDARD FEATURES

- CIP compatible
- 900 kPa pressure rating
- Chemical cleaning connections
- 316L s/steel treatment chamber
- Sanitary or flange connections
- Lamp on/fail indication
- Viewport
- IP65 electrical enclosure
- Earth leakage protection
- UV metering
- Suitable for food ingredients

Steriflo LS - specifications

Model	Lamps	Power input	Inlet/outlet connections	Typical flow* (m ³ /hr)
LS1	1	85W	25mm RJT male	1-2
LS3	3	250W	50mm RJT male	3-6
LS7	7	600W	75mm RJT male	7-14

*Dependent on liquid characteristics and UV transmission.

Constructed from 316L stainless steel the Steriflo LS range is suitable for food ingredient use, and is compatible with a wide range of Clean-in-Place (CIP) regimes.

UV has many advantages for the food industry user. Unlike pasteurisation or chemical disinfection it does not change the taste, composition or other characteristics of the liquid being treated and is a simple in-line process requiring no analysis or operator intervention.

In addition overdosing with UV has no effect.

Control panel dimensions

LS1 360(H) x 270(W) x 180(D)

LS3 750(H) x 500(W) x 300(D)

LS7 750(H) x 750(W) x 300(D)

Material: 304L stainless steel, 316L stainless steel or GRP, all with clear front panel insert.

IP Rating: IP65

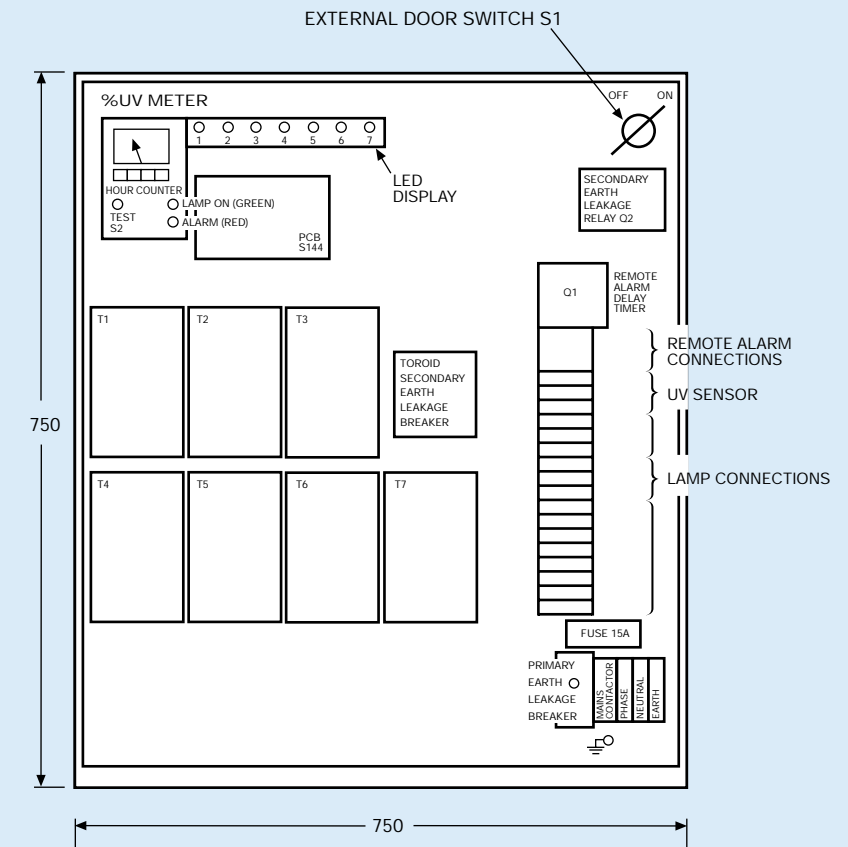
Treatment Chamber

Wetted parts: 316L stainless steel, quartz, silicone rubber.

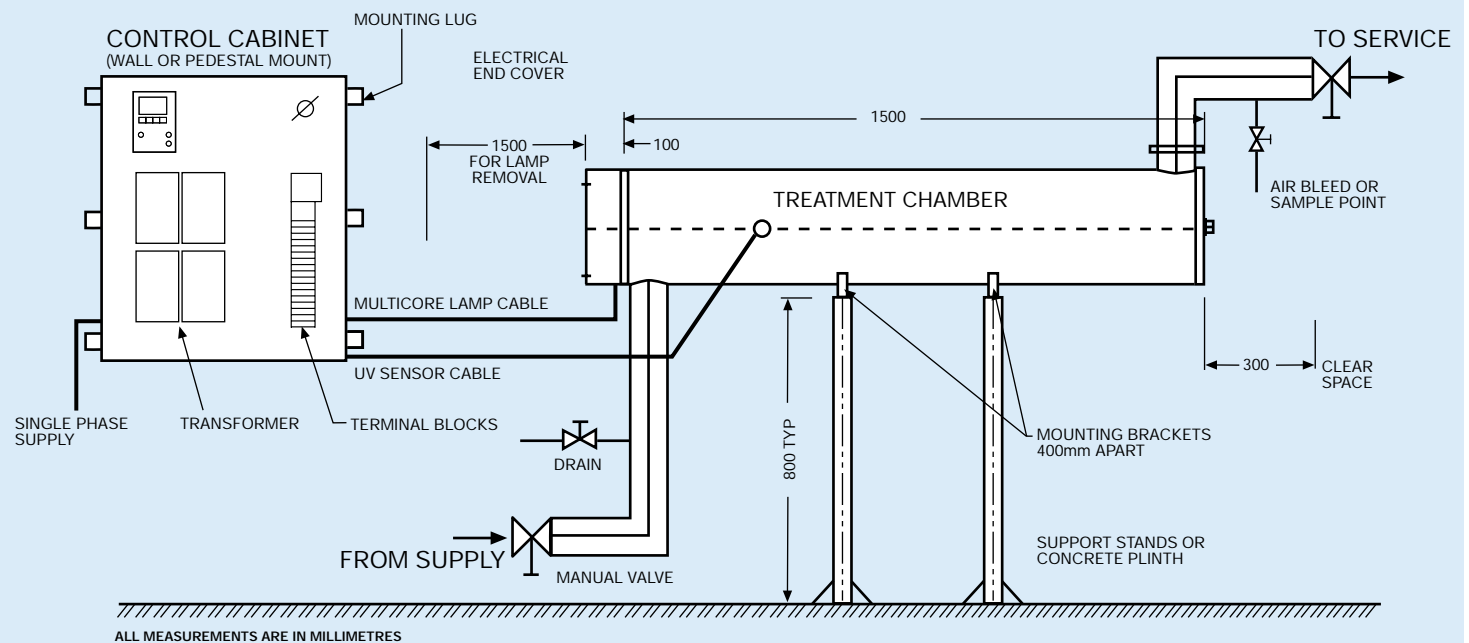
IP Rating: IP54

Pressure rating: 900 kPa at 90°C

Steriflo LS7 Control Panel



Typical Installation



Manufactured in New Zealand by:



**CONTAMINATION
CONTROL
LIMITED**

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