



## SITA UV

## 400 DS Series

S.I.T.A. UV system emit an UV-C irradiation with  $\lambda=254$  nm; this wave length causes an alteration of some chemical links present among nucleotids so that the information contained and conveyed by DNA of every organism present in the water change.

These alterations lead to the cellular death and so to the bacteriological elimination.

This disinfection system has a physical working principle and not chemical. Nothing is added to, not taken away from water; in this way there is no formation of undesired by-products even in case of overexposure, in the full respect of environment.

**The S.I.T.A. 400 DS series** UV systems are composed by:

- Stainless steel reactor that contains the special germicidal lamps
- Control panel, made in compliance with the *CE standard*

### **Main Application:**

Water Disinfection for:

- Municipal water
- Waste water
- Industrial process water
- Food & Beverage industry
- Horticulture

### **Technical description:**

Flow rates:	from 50 to 1.400 m <sup>3</sup> /h (depending on UV-C transmittance value)
UV-C dose after 14000 hr:	400 J/m <sup>2</sup>
Power:	from 0,44 kW to 6 kW
Connections:	Flange type
Lamps:	High efficiency low pressure amalgam lamps – 400W
Lamps lifespan:	14.000 hrs
Sensor:	UV-C selective sensor
Max Pressure:	10 bars (optional 16 or 25 bars)
Temperature range:	0 – 50 °C (ask for higher temperature)
UV reactor material:	Stainless steel 316L
Control Panel material:	Painted steel – RAL 7035

**Stainless steel reactor:**



The UV reactor is totally in stainless steel 316L internally/externally polished; the stainless steel of its chemical/physical characteristics is particularly suitable for the treatment of primary waters, and being polished also in the internal part it is completely without porosity that could favour the keeping of spores; moreover, being glass polished, the germicidal action of the lamps is increased.

To make the maintenance and inspection operations easier the chamber is openable at one side.

Configuration:	U shape
Mounting:	horizontal
Connections:	flanges PN 10 (UNI EN 1092 -1)
UV sensor holder :	Stainless steel 316L
UV sensor:	selective sensor (option: DWGV or Ö-Norm Sensor)
Seals:	Silicone and Viton
Automatic Cleaning system:	possible on all the models – optional (RA version)
Fixing supports	standard on all the models (not on UV 400/1 and UV400/2)
Flow direction:	both sides

## Control Panel:



The electrical control panel supplied is ready for the installation (complete of all the necessary cables)

- Steel painted control panel box (RAL 7035) with 2 doors, main switch, cooling fans and UV cube monitor
- Protection class: IP 54
- Status messages (5 languages: Italian, English, Spanish, Portuguese, German)
- Microprocessor control
- Total hour meter
- Resettable hour meter
- Control of each lamp
- Electrical panel temperature control
- ON/OFF timer
- Alarm 220 V NA/NC outlet
- Remote on/off
- Alarm Free contact outlet
- 4-20 mA outlet (optional)
- UV intensity:  $W/m^2$  or %
- Pre alarm UV intensity
- Shutdown for high temperature in the UV chamber and in the electrical panel
- Control of temperature & UV irradiation (pre set alarm threshold)
- Shut off for flooding
- Provision for connection with external flow: online flow visualisation, shutoff in case of no flow, possible shut off for low flow, possible shut off for high flow (optional)
- Datalog of the flow rate (optional)
- Datalog of UV irradiance and panel & UV chamber temperature (optional)
- GSM box for remote monitoring and control with mobile phone (optional)
- Lamp power regulation (optional)
- Temperature Range: 5-65°C



### **Automatic cleaning system: version RA (optional)**

SITA automatic cleaning system is available on all the models.

It consist in a rack with special teflon orings that cleans the quartz sleeves going up and down.

This movement is given by a programmable **SITA UV cube monitor** that moves a motor shaft placed on a side of the system. Time and days of the cleaning can be easily set on site.

### **Chemical cleaning system (optional)**

SITA chemical cleaning system is available on all the models and can be used together the automatic RA system. It consist in a special tank (depending from UV reactor volume) with pump motor on the top connect to the UV reactor. In this way the chemical product (depends from Pollution) will clean not only the quartzes but the whole reactor.

This cleaning system is recommended on all the UV of this Series and will integrate the automatic wiping (if present)

(See attachments for dimensional drawing and information about a specific model)