

## DaRo UV Systems Saphir UV water disinfection system

The Saphir system is a compact, economical UV system that is designed with the consumer in mind. The Saphir system utilises commonplace single ended low pressure UV lamp technology, thus making the system not only economical for energy running costs, but also for replacement UV lamps. The single ended UV lamp also makes servicing the equipment very simple.

DaRo UV Systems are specialists in ultraviolet disinfection and have been manufacturing systems for over 25 years.



### STANDARD FEATURES

- Water Resistant power control module (IP55)
- Long life / High Reliability UV Lamp
- Maximum 10 Bar Working Pressure
- Simple To Install
- Lamp On Indicator
- Simple To Service
- Electropolished Chamber
- Commonplace UV Lamps

### OPTIONS

- Lamp / Electrical Failure Indicator
  - UV Lamp Status Indicator
  - Volt free contacts
- Please see Saphir+ data sheet for further details

### PERFORMANCE

- All systems comply with international UV dose standards.
- All units are designed to meet standards even at end of lamp life.
- All systems are WRAS (Water Regulations Advisory Scheme) approved and certified

### ECONOMICAL

- Very low running costs – less than 5p per 24-hour period.
- Utilising commonplace UV Lamps.
- Designed for ease of installation and maintenance.

**DaRo**  
UV SYSTEMS LTD

### EXPERTISE

- Decades of experience in design and manufacture of UV disinfection systems
- Wealth of water treatment knowledge
- We are happy to help choose the correct systems to meet your requirements

### QUALITY

- Products are designed, manufactured and tested in our modern manufacturing facilities in the UK
- Products are manufactured and tested in accordance with BSEN: ISO9001

### APPROVED

- Our technology is a proven method of disinfection, approved by health specialists

**WRAS**  
APPROVED PRODUCT



**SAPHIR**

# ULTRA VIOLET WATER DISINFECTION SYSTEMS

## CHOOSING YOUR SYSTEM

The following table gives performance details on the Saphir range. To choose the correct unit simply match the application against the unit required. If in doubt, please contact your local stockist or our head office

| Type      | Flow rate*<br>30mJ/cm <sup>2</sup> | Flow rate*<br>40mJ/cm <sup>2</sup> | Connection           | UV lamp   | Typical Application               | Lamp life                  | Construction | Power supply           | Chamber length |
|-----------|------------------------------------|------------------------------------|----------------------|-----------|-----------------------------------|----------------------------|--------------|------------------------|----------------|
| Saphir 1  | 18 L/min                           | 13.5 L/min                         | 3/4" male bsp thread | GER15SE   | Small dwelling                    | 8760 hours (Approx 1 year) | 316 SS       | 240v 50hz single phase | 405mm          |
| Saphir 2  | 30 L/min                           | 22.5 L/min                         | 3/4" male bsp thread | GER25SE   | Whole house (Family home)         | 8760 hours (Approx 1 year) | 316 SS       | 240v 50hz single phase | 554mm          |
| Saphir 3  | 53 L/min                           | 40 L/min                           | 3/4" male bsp thread | GER25SEXO | Large dwelling (Family home)      | 8760 hours (Approx 1 year) | 316 SS       | 240v 50hz single phase | 554mm          |
| Saphir 4  | 60 L/min                           | 45 L/min                           | 1" male bsp thread   | GER36SE   | Large dwelling                    | 8760 hours (Approx 1 year) | 316 SS       | 240v 50hz single phase | 962mm          |
| Saphir 7  | 118 L/min                          | 90 L/min                           | 1" male bsp thread   | GER36SEXO | Multiple properties (Guest house) | 8760 hours (Approx 1 year) | 316 SS       | 240v 50hz single phase | 962mm          |
| Saphir 10 | 160 L/min                          | 120 L/min                          | 1.5" male bsp thread | GER36SEXO | Multiple properties (Hotel)       | 8760 hours (Approx 1 year) | 316 SS       | 240v 50hz single phase | 962mm          |

\* Transmission = 98% per 1cm at end of lamp life

## STAINLESS STEEL

Our stainless steel chambers have over 25 years of proven reliability. Our extensive range of 316 stainless steel chambers are designed to meet the stringent requirements of industry.

All units use high efficiency lamps, requiring only annual replacement.

## FILTRATION

It is important that sediment in the water does not obstruct the UV light. We strongly advise that a 5-micron sediment pre filter is fitted before the chamber to remove contamination. DaRo UV systems have an extensive range of compatible filter units in stock to match the UV chambers capacity. We will be pleased to advise when choosing a unit and propose corrective measures for other water problems

## LARGER UNITS

DaRo UV Systems can offer a range of larger standard units. Our expertise in design and manufacture enables us to tailor systems to specific site situations. The systems that we have manufactured are in regular use in a wide range of applications, from vending machines to municipal drinking water treatment.

## DATA SHEETS

DaRo UV Systems strive to keep abreast of new developments in disinfection. Further datasheet information on specific applications is available, please contact us for further details.



## STOCKIST



**WRAS**  
APPROVED PRODUCT

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## DaRo UV Systems Saphir+ System

In addition to the standard Saphir system, we would like to introduce the new Saphir+ system. The Saphir+ system offers additional telemetry.

The Saphir+ has additional lamp status information, an hour counter and a volt free contact facility for remote monitoring of lamp status, via a plug and socket (which is sealed and capped when not in use. Both capped and plugged configurations are rated to >IP65).

### The Saphir+ Range has the following features:

- UV Lamp running Indicator
- UV Lamp status - three way indicator display showing the status of the system
- Switch to reset the internal hour counter
- Volt Free Contact output for remote display of lamp on indicator
- **Audible Lamp Fail Alarm**



### UV Lamp Running Indicator

The control box has a blue "lamp running" indicator on the front panel display, which is on if and only if lamp is running correctly.

### System status indicators

The table below shows the details of the system status indicators.

| System Status   | Power On | Lamp On | Lamp Status             |
|---|----------|---------|-------------------------|
| System operating correctly, lamp less than 11 months old      | Green    | Blue    | Green                   |
| System operating correctly, lamp between 11 and 12 months old | Green    | Blue    | Alternating Green & Red |
| Lamp still operating, but more than 12 months old             | Green    | Blue    | Red                     |
| Lamp failed   | Green    | Off     | Red + Audible alarm     |

### UV Lamp status Indicator

Lamp status indicator, Remote lamp on indicator via internal volt free contacts. The display gives a hidden indication of the age of the lamp. The "Lamp On" and "Lamp Status" indicators will blink off for a half second period once every minute. The number of blinks show how many year quarters (three months) have passed, before the "Lamp Status" indicator alternates from green to red in the twelfth month:

| Age of Lamp                           | Number of blinks |
|---------------------------------------|------------------|
| One to three months (first quarter)   | 1                |
| Four to six months (second quarter)   | 2                |
| Seven to nine months (third quarter)  | 3                |
| Ten to eleven months (fourth quarter) | 4                |
| Twelve months and above               | Continuous Red   |

