

# Nordic Filtration

Water  
Treatment



SABRE UV SYSTEM

[www.nordicfiltration.com](http://www.nordicfiltration.com)

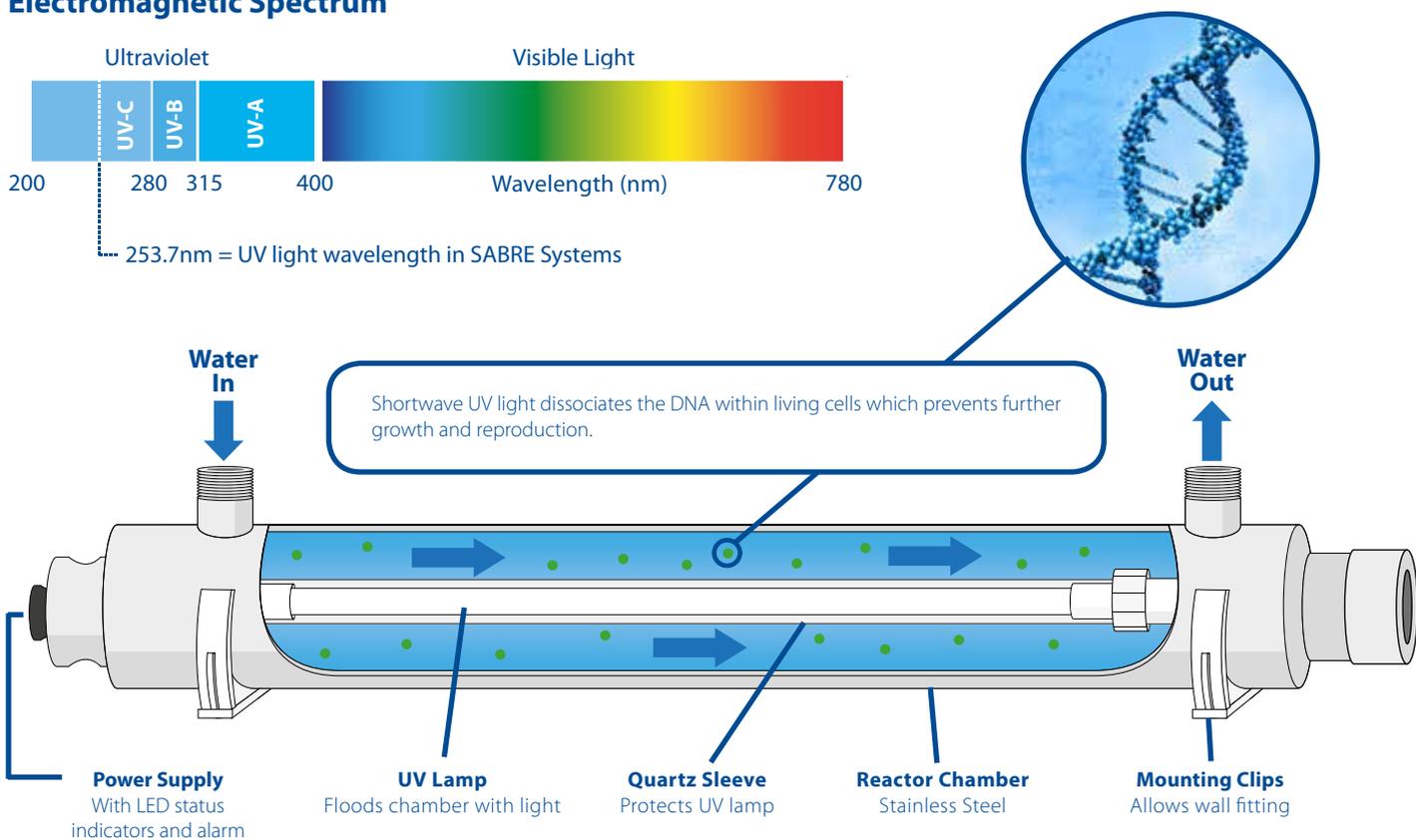
## A Closer Look - UV disinfection System

UV light is effective against contaminants such as bacteria, viruses, mould spores, algae and other micro-organisms as it prevents growth and reproduction. If left untreated, these organisms remain in the water and produce a bio-film coating throughout the water system which harbours more bacteria and makes the water less safe to use or drink.

### Electromagnetic Spectrum



253.7nm = UV light wavelength in SABRE Systems



Energy required to destroy micro-organisms			
Micro-organism	Type	Ailment caused	Energy mJ/cm <sup>2</sup> to destroy
Streptococcus	Bacteria	Strep Throat	3.8
Dysentery Bacilli	Bacteria	Diarrhoea	4.2
S. Paratyphi	Bacteria	Paratyphoid Fever	6.1
Influenza	Virus	Flu	6.6
Staphylococcus	Bacteria	Boils	6.6
Fecal Coliform	Bacteria	Diarrhoea	6.6
Polio Type 1	Virus	Polio	7.0
Salmonella	Bacteria	Food Poisoning	10.0
Pseudomonas Aeruginosa	Bacteria	Skin infection	10.5
Legionella	Bacteria	Legionnaire's Disease	12.3
S. Typhi	Bacteria	Typhoid Fever	15.2

## UV Systems Selection Guide

Product Range		Port Size ("BSP M)	Flow Rate / lpm (m <sup>3</sup> /hr)	Lamp Power (Watt)	Typical Applications
F-SUV-S-4-1/4		¼	4 (0.24)	10	Single Tap
F-SUV-S-8-1/2		½	8 (0.48)	14	Multiple Outlets
F-SUV-S-30-3/4		¾	30 (1.8)	29	Whole House
F-SUV-S-57-1		1	57 (3.4)	65	Farm or Multiple House
F-SUV-S-132-2		2	132 (8)	2 x 65	Commercial Supply
F-SUV-S-250-2		2	250 (15)	3 x 85	Industrial Supply

## Lamp Selection Guide

Product Range		Description	Connection	Power Output (Watts)
SUV-S-4LAMP		Replacement lamp for SUV-S-4-1/4	Single 4-pin	10
SUV-S-8LAMP		Replacement lamp for SUV-S-8-1/2	Single 4-pin	14
SUV-S-30LAMP		Replacement lamp for SUV-S-30-3/4	Single 4-pin	29
SUV-S-57LAMP		Replacement lamp for SUV-S-57-1 / SUV-S-132-2	Single 4-pin	65
SUV-S-250LAMP		Replacement lamp for SUV-S-250-2	Single 4-pin	85

## SABRE 132 / 250

For higher flow rate commercial and industrial applications, the SPECTRUM SABRE range includes high capacity units as standard.

These units treat higher flows of water due to their increased number and power output of the lamps. Effective against contaminants such as bacteria, viruses, mould spores, algae and other micro-organisms. Water sources from mains supply to borehole to well or river can all be treated with Ultraviolet light to prevent microbiological contamination.



SUV-S-250-2



**High quality stainless steel UV disinfection**



**2°C - 40°C**



**6.8 bar**



**2"**

### Key product features

- Control box with Alarm and LED indication systems
- Multiple high output lamps
- Industrial mounting brackets



Countdown Timer

**CT1**

The CT1 is a useful accessory to help remind users when to change out a lamp to keep the system running effectively.

Control box included with UV system, with LED lights, alarms and cooling fan to ensure the system is working correctly.

**Audible alarm and cooling fan**



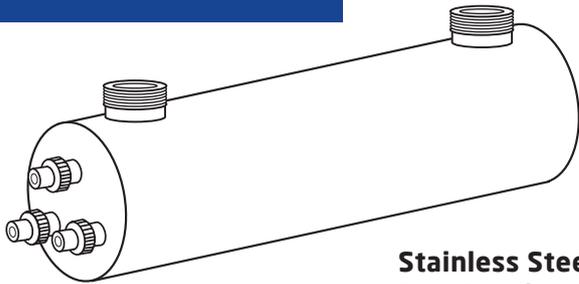
**Visual LED indicators**

### Product information

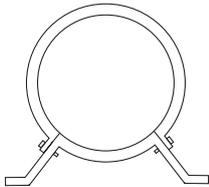
Product Code	Description	Flow rate in lpm (m <sup>3</sup> /hr)			Weight (kg)
		at 16 mJ/cm <sup>2</sup>	at 30 mJ/cm <sup>2</sup>	at 40 mJ/cm <sup>2</sup>	
SUV-S-132-2	UV System with 2" ports, 2 UV Lamps	232 (13.9)	132 (8)	100 (6)	12
SUV-S-250-2	UV System with 2" ports, 3 UV Lamps	441 (26.5)	250 (15)	191 (11.5)	24
SUV-S-57LAMP	65 Watt lamp replacement for; SUV-S-57-1, SUV-S-132-2	-	-	-	3
SUV-S-250LAMP	85 Watt lamp replacement for SUV-S-250-2	-	-	-	3
SUV-S-57SLEEVE	Quartz Sleeve replacement for; SUV-S-132-2, SUV-S-250-2	-	-	-	3
SUV-S-132BALLAST	Ballast with UK mains plug for; SUV-S-132-2, SUV-S-250-2	-	-	-	11
SUV-ORING-VITON	Viton replacement O-ring for; SUV-S-132-2, SUV-S-250-2 (2 required per quartz sleeve)	-	-	-	1

# What's Included

Your Sabre UV system will come as standard with the following components:



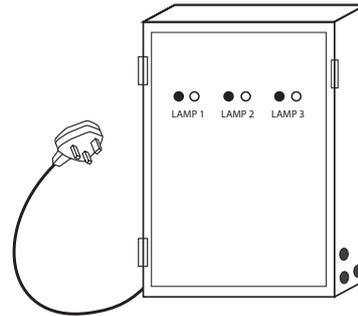
**Stainless Steel Reactor Chamber**



**2 x Mounting Brackets**  
with bolts



**O-ring seals**  
**x4** (for SUV-S-132-2)  
**x6** (for SUV-S-250-2)



## **Control Box**

with UK mains plug and mounting brackets with screws



## **UV Lamps**

**x2** (for SUV-S-132-2)  
**x3** (for SUV-S-250-2)



## **Quartz Sleeves**

**x2** (for SUV-S-132-2)  
**x3** (for SUV-S-250-2)

# Specification

## Standard Range Specifications

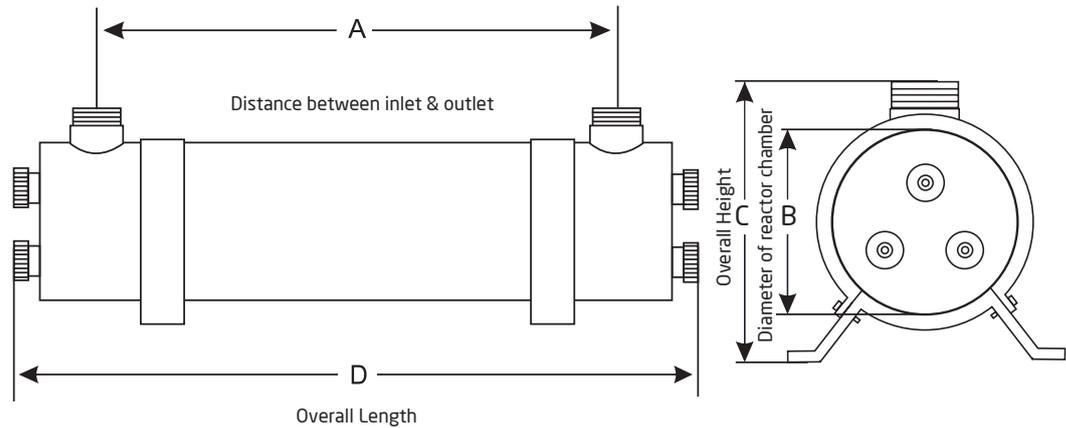
Ordering Code	F-SUV-S-4-1/4	F-SUV-S-8-1/2	F-SUV-S-30-3/4	F-SUV-S-57-1	F-SUV-S-132-2	F-SUV-S-250-2
Flow rate/lpm (m <sup>3</sup> /hr)	4 (0.24)	8 (0.48)	30 (1.8)	57 (3.4)	132 (8)	250 (15)
Voltage V/Hz	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60
Lamp Power/W	10	14	29	65	2 x 65	3 x 85
Port size/BSP M (")	¼	½	¾	1	2	2

## Parts List

System	SUV-S-4-1/4	SUV-S-8-1/2	SUV-S-30-3/4	SUV-S-57-1	SUV-S-132-2	SUV-S-250-2
Lamp	SUV-S-4LAMP	SUV-S-8LAMP	SUV-S-30LAMP	SUV-S-57LAMP	SUV-S-57LAMP	SUV-S-250LAMP
Quartz Sleeve	SUV-S-4SLEEVE	SUV-S-8SLEEVE	SUV-S-30SLEEVE	SUV-S-57SLEEVE	SUV-S-57SLEEVE	SUV-S-57SLEEVE
O-ring	SUV-ORING-SILICONE	SUV-ORING-SILICONE	SUV-ORING-SILICONE	SUV-ORING-VITON	SUV-ORING-VITON	SUV-ORING-VITON
Ballast	SUV-S-4BALLAST	SUV-S-4BALLAST	SUV-S-30BALLAST	SUV-S-57BALLAST	SUV-S-132BALLAST	SUV-S-132BALLAST

SABRE UV disinfection ranges for specialised applications and higher flows are available on request.

# System Dimensions



System	A (mm)	B (mm)	C (mm)	D (mm)	Connections (" BSP M)
<b>F-SUV-S-4-1-1/4</b>	168	51	83	264	1/4
<b>F-SUV-S-8-1/2</b>	238	64	112	350	1/2
<b>F-SUV-S-30-3/4</b>	588	64	112	704	3/4
<b>F-SUV-S-57-1</b>	800	88	170	962	1
<b>F-SUV-S-132-2</b>	762	90	174	962	2
<b>F-SUV-S-250-2</b>	750	158	244	970	2

<b>Control Box (mm) for systems F-SUV-S-132-2 and F-SUV-S-250-2</b>	293 x 302 x 174
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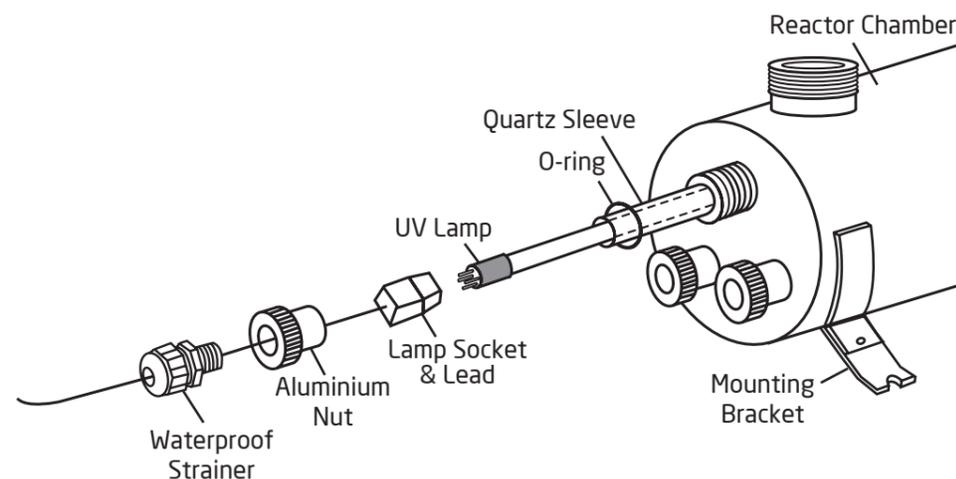
## SUV-S Range User Guide

For systems: - SUV-S-132-2  
- SUV-S-250-2



**WARNING** - Please read before installation. Retain these instructions for future reference. Install by a qualified person and in accordance with applicable local laws and plumbing codes of practise.

- Avoid direct exposure to germicidal ultraviolet rays as they are harmful to the eyes and skin.
- Lamps lose dosage levels after 1 year of continuous service. It is unsafe practise to use lamps beyond the stated lifetime.
- Unplug the equipment before any servicing of the assembly.
- To be effective, the UV units require the water to be clear, use pre-filtration.
- Ultraviolet lamp and quartz sleeve are easily damaged. Hold lamp by ends only. For safety, wear protective gloves when handling quartz sleeves.
- Maximum pressure 100 psi or 6.9 Bar, the use of a pressure regulator is sometimes advisable to avoid pressure surges.
- Temperature range 2°C - 40°C. The system must be protected from freezing and is for use with cold water systems.



### Installation

1. Ensure the location is well lit, accessible, close to where the water enters the property and adequate space is left for replacement of lamps and sleeves.
2. Attach mounting brackets to the wall.
3. Attach stainless steel reactor chamber to mounting brackets.
4. Connect plumbing to inlet and outlet ports.
5. Install quartz sleeves and lamps, as follows;
  - a) Remove aluminium nuts.
  - b) Slide the quartz sleeves through the reactor chamber.
  - c) Roll the O-rings on to the ends of the quartz sleeves.
  - d) Slide the lamps into the quartz sleeves. **CAUTION:** Do not to touch the lamp glass as any fingerprints or dirt will reduce the efficiency of the lamp and may cause it to fail.
  - e) Connect the lamps to the lamp sockets.
  - f) Screw the nuts on to the reactor chamber hand tight and screw the waterproof strainer to the nut
6. Turn on the water and inspect for leaks.
7. Plug the control box into the electrical socket. Protection by a Ground Fault Interrupt (GFI) circuit is recommended.
8. Run water through the unit for 5-10 minutes before first use.

**Maintenance** - To ensure the system remains effective, routine maintenance must be performed. Frequency of maintenance will depend on source water quality and system usage.

- Clean quartz sleeves with an alcohol wipe or similar every 3-6 months.
- It is recommended that UV lamps are replaced within 9000 hours or 12 months (365 days x 24 hours = 8760 hours) of use to ensure the system continues to operate as intended.
- After 24 months, quartz sleeves should be inspected for scratches or reduced visibility, replace if necessary.



Clean quartz sleeve



Replace UV lamp



Replace quartz sleeve if damaged



### Replacing UV lamp and servicing UV System

**Note: Avoid touching the sides of the quartz sleeve and lamp, handle by the ends only.**

1. Disconnect power.
2. Turn water off and open the downstream of the system to relieve pressure.
3. Remove the waterproof strainers and aluminium nuts.
4. Carefully withdraw lamps approximately 5 cm from the reactor chamber.
5. While holding lamp ends, carefully remove lamp sockets from the exposed ends.
6. Carefully withdraw the lamps fully from the reactor chamber.
7. Carefully remove O-rings from the ends of the quartz sleeves.
8. Carefully remove the quartz sleeves.
9. To reinstall follow instructions 8 through to 1 in reverse.

### Operation

- UV Disinfection systems are designed for continuous use. When in operation the GREEN lights will show for each lamp separately. This GREEN light is an indicator that the lamp is lit and not of its dosage rate, change lamps annually to maintain required ultraviolet dosage levels.
- If a RED light is shown and the alarm sounds, the lamp or lamp socket needs attention or replacing. In the event of power loss to the unit the RED lights will show briefly and the alarm will sound briefly, the cooling fan will stop, then no lights will show.
- Ballasts in the control box can be replaced individually in the event of malfunction.

# Nordic Filtration

At [www.nordicfiltration.com](http://www.nordicfiltration.com) you will find a wide selection of filtration products ready for you to order.

Nordic Filtration offers a wide selection of filtration products for water treatment. We have stock in Denmark from where we distribute all of our products to Scandinavia and the the rest of the world.

You can buy our products on local websites or by contacting us by phone or e-mail. Information about our products as well as brochures and manuals can be found on our website ([www.nordicfiltration.com](http://www.nordicfiltration.com)).

We can adapt all of our filtration products to your needs, and we offer visits from our consultants in order to find the right solution for you.

