

MARINE



ADVANTAGES

WATER WASH - UV-C

Reduces maintenance costs

High grease removal rate ensures high level of hygiene

Jet Stream Technology reduces spillage of exhaust fumes into the galley area

Destroys grease particles in the extract air stream

Prevents grease entering the ductwork

Reduces the risk of fire

Reduces cooking odours

System efficiency does not depend on reliance of cleaning staff

Comfortable working climate, reduces draught in the galley

FECON®UV filters - UL and NSF certified

FECON®UV filters - TNO tested and approved flame retardant

**WATER WASH - UV-C
GALLEY HOODS**

GB



DESCRIPTION WATER WASH UV-C SYSTEM

The Vianen Water Wash UV-C system is suitable for use with all types of cooking equipment, especially where cooking activity is high and a great deal of grease is produced in the process.

The water wash UV-C systems are an excellent choice for areas where stringent environmental regulations are in force due to the automated internal wash-down system and protection against fire hazards. The system is designed to remove grease and contaminants from the hoods interior keeping maintenance to a minimum.

In place of traditional filters the grease particles in the hood are separated by a specially designed labyrinth. The air passes around this labyrinth at a high speed and the grease particles are thrown out of the air stream by the centrifugal force. The grease is collected in an integrated trough. The wash cycle is activated each time the ventilator shuts down or at pre-programmed times. Hot water and detergent is sprayed into the plenum to clean the system. A high standard of hygiene is maintained and the installation is protected against the build-up of grease deposits which can constitute a fire hazard.

The additional benefit of the UV-C system in the galley hood is that exposure to UV-C light and ozone oxidation destroys most contaminants in the air and also helps to prevent the build-up of grease in the ductwork. The UV-C system also reduces cooking odours. Please note that the UV-C system is not a deodoriser.

A high standard of hygiene is maintained and the installation is better protected against the build-up of grease deposits which constitute a fire hazard. To further reduce fire hazards we recommend a fire protection system (optional) to be integrated into the system.

N.B. UV-C light is harmful to the eyes.

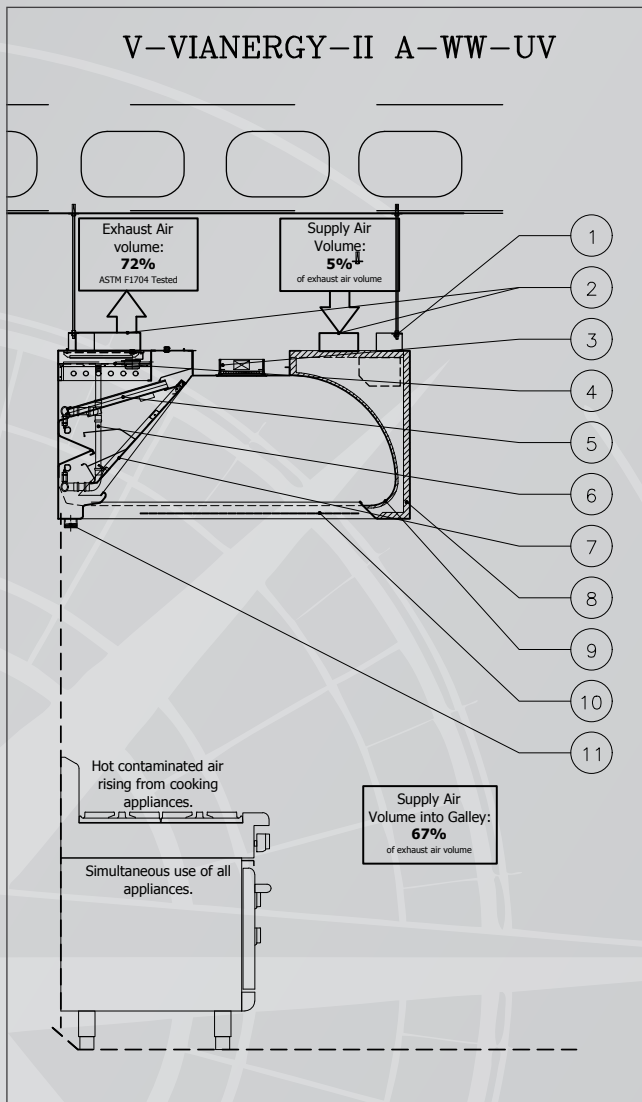
Ozone harmful to the respiratory system.



UV-C



WATER WASH



- ① Hanging bracket
- ② Duct spigots- exhaust and supply
- ③ V-LEL integrated light fitting
- ④ UV-C filtration system
- ⑤ FECON-UV® filter
- ⑥ Hot water inlet
- ⑦ Maintenance door (gas spring operated)
- ⑧ Insulation
- ⑨ Vianergy II ® energy saving curve
- ⑩ Jet Stream Technology
- ⑪ Water wash + grease drain

CONSTRUCTION WATER WASH UV-C SYSTEM

The Vianen Water Wash UV-C hoods are fully welded 1.0 – 1.2mm thick type 304 stainless steel assemblies. (Optional 316L). Grease collection channels run the full length of the hood. Full length Vianen soft close service doors and locked with captive quick release fastenings allows for easy access to the plenum interior, the water pipework and spray nozzles for inspection purposes.

The Vianen UV-C system uses special UV-C light tubes for grease destruction, the breakdown of bacteria and reduction of odours. The tubes are mounted in a stainless steel patented enclosure with a hinged access door. This UV-C module is located behind the FECON®UV grease filters within the extract plenum. The safety design features ensure the safety of the galley staff and operatives are not exposed to UV-C light.

THE VIANEN WATER WASH - UV-C GALLEY HOOD IS AVAILABLE IN THE FOLLOWING CONFIGURATIONS:

VIANEN VIANERGY II WATER WASH-UV	WALL HOODS	Width 1400mm	Height 600mm
VIANEN VIANERGY II WATER WASH-UV	SINGLE SIDED ISLAND	Width 1400mm	Height 600mm
VIANEN VIANERGY II WATER WASH-UV	ISLAND HOODS	Width 2600mm	Height 600mm

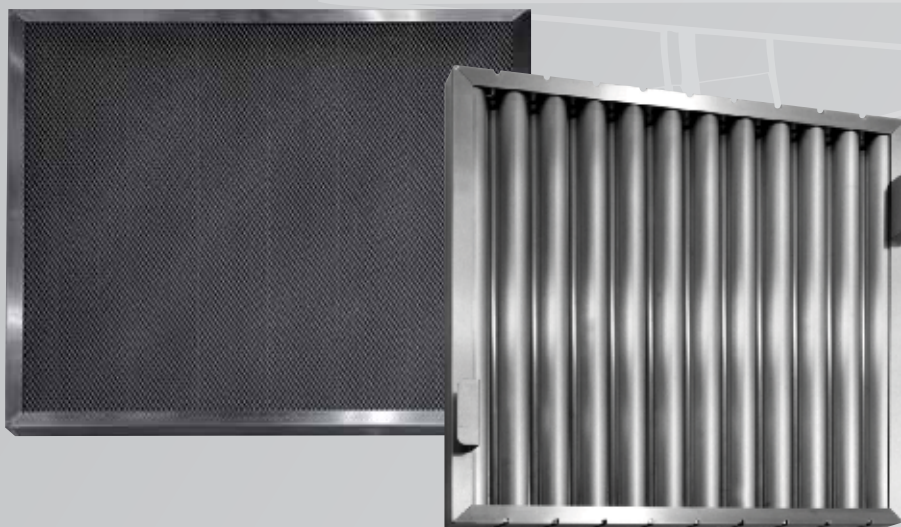
Deviations to these standards can be adapted to meet customer requirements.

THE SAFETY FEATURES

The UV-C lamps generates ozone (O₃) and UV-C light which prevents the grease from depositing in the exhaust hood and ductwork, kills bacteria and reduces the fire risk significantly. Vianen has the most advanced safety systems incorporated to ensure health and safety on board.

A few of our safety features;

- All Water Wash UV-C hoods are fitted with Vianen FECON ® UV-C filters to prevent indirect UV-C light escaping from the plenum providing safety for the cooking staff.
- It is only possible to remove the FECON®UV filters from one set position in the filter housing. The position is clearly marked with an arrow. At this position a Vianen filter sensor is mounted to register whether the filter is properly installed. Should the filter be disturbed or removed from this position the Vianen Control Cabinet will immediately shut down the system.
- If any other filter is missing or has been in any way incorrectly installed a separate Vianen pressure sensor mounted within the hood extract plenum will detect a fall in pressure differential and shut down the system.
- The Vianen Control Cabinet will in all cases be linked to the ventilation extract fan to ensure the system only operates when the extract fan is running. Should the extract fan fail or stop the safety system will immediately shut down the UV-C system.



DESIGN CONSIDERATIONS

- The size and number of UV-C modules is dictated by the extract airflow rate (m³/h) through the hood and the overall size of the hood.
- The maximum temperature of the air passing over the modules is typically 45°C.
- To ensure complete oxidation a minimum reaction time of 2 seconds is required between the duct connection to the UV-C module and the extract system discharge point.
- Power requirement is 230/240 V 1 phase for a typical module with 6 UV-C tubes.
- The exhaust airstream pressure drop over a Vianen hood incorporating WW-UV/C modules and FECON®UV filters is 320 Pa.

Energy efficiency awareness is a high priority in the maritime industry and operators are confronted with a growing concern of the CO2 footprint. The development of new technologies has made it possible for operators to login and view the operational status of devices connected to a common data base. Monitoring and maintenance of the system becomes simple.

VIANEN CONTROL CABINET

- The Vianen Control Cabinet is fabricated in type 304 stainless steel and measures 800x800x250mm (Optional 316L) and is secured by a lock. A tank containing detergent is housed within the panel which also features a Maestro – Galley Management System to adjust and monitor the Water Wash and UV-C system.
- A main hot water feed is required (to be provided by others) to a ¾" water connection. The recommended minimum water supply temperature is 65°C and maximum of 4°dH water hardness. Water usage for wall and island hoods is approximately 1.75 L/min/m. Multiple hood connections to one control cabinet are possible according to the galley layout
- A Maestro digital touchscreen provides information relating to the status of the system and any alarm condition.

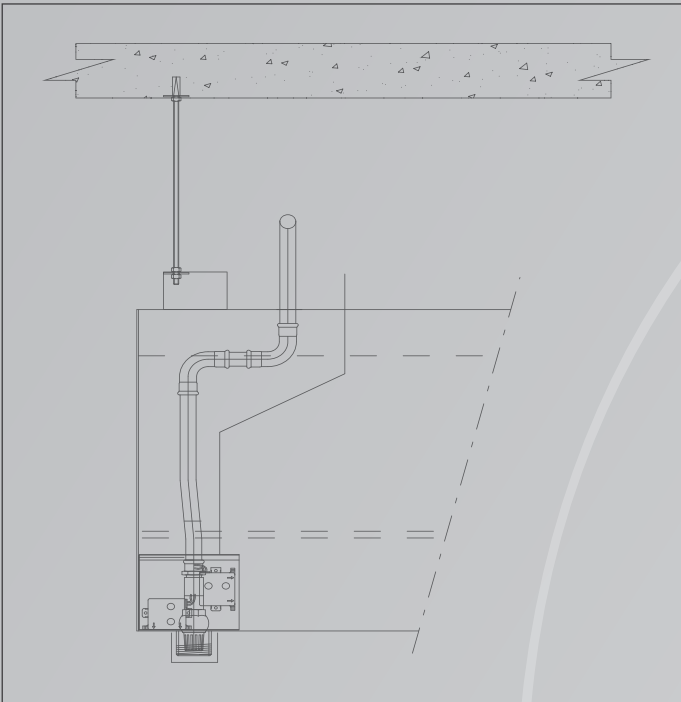


MAINTENANCE

The system requires very little maintenance or service. The UV-C lamps should be checked on a weekly basis and cleaned with a soft cloth and white spirit. The UV-C lamps have good efficiency for minimal 8,000 operating hours and the Control Cabinet features a lamp life countdown readout. Any lamp failure will be indicated at the Maestro – Galley Management System.

OPTIONAL –DPS Drainage Pump System

The drainage pump system can be fitted on top of the hood when a direct sewer connection isn't possible. The water is pumped to a sewer connection located up to 5 meters from the hood.



OPTIONAL – Water Misty System

The Vianen Water Misty system reduces the risk of fire caused by sparks during the cooking process, especially from charcoal grills. The Vianen Water Misty system can be applied to the Water Wash UV-C system. A separate piping system for the required cold water is integrated into the hood.

The nozzles of the Water Misty system release a continuous fine mist spray of water during the cooking process. This highly efficient method of filtration also changes the grease from its gaseous state to condensed grease particles in the cold water mist.

The contaminated water containing the effluent is collected in the same dedicated channels and runs off to the drainage system.

The Vianen Water Misty system operates on a constant cold water feed to generate the water mist. To safeguard the operation of the system the first 3 – 4 m of the extract ductwork is watertight and a moisture eliminator is mounted on top of the hood. The controls of the Water Misty system is integrated into the hoods. The Water Misty system can be also equipped with a Water Recycling System reducing the water usage of the system.

FECON ® UV GREASE EXTRACTION FILTER

The FECON ® UV filters are specially designed for Vianen UV-C hoods to remove grease particles from the extract air in combination with the UV-C system. Vianen FECON ® UV filters are fitted with to prevent any UV-C light escaping from the plenum to the cooking staff.

The interlocking semi-circular blades of the filter create multiple centrifugal forces as the air passes through the filter which ensure efficiency rates of 98% by 8 micron are achieved. The non-clogging nature of the baffle filters allow the grease to run off the filters into integral drainage channels within the hood. Each filter features two integral handles to make removal and refitting of the filters an easy operation.

The filters are slotted into place in the filter bank to prevent them falling out during high seas.

The FECON®UV filter has been tested and is certified as an effective flame barrier i.e. no flame penetration through the filter in the event of a galley fire.

- Proven and certified fire barrier (DIN 4102 & TNO)
- Excellent levels of hygiene – NSF approved
- Solid and durable construction – stainless steel
- High efficiency rates of 98% by 8 micron
- Locked in to for the most demanding environments
- Easy maintenance in any commercial dish wash machine

Vianen FECON ® UV filters are constructed from stainless steel type 304 (DIN 1.4031 grit 320) 1.2 mm thick. The 40 mm thick filter is constructed without rivets and is provided with two integrated handles for ease of handling.

The top and bottom of the filter frame features slots providing a 10% free area which allows moisture and grease to drain away. The FECON®UV filters are designed to fit in any commercial dishwashing for cleaning.

INSTALLATION

Hanging brackets are fitted on top of the corners of the hood for easy installation.

V-LEL INTEGRATED LIGHT FITTINGS IP65

The hoods are fitted with V-LEL, which are specially designed for VIANEN hoods. The standard type is 220/230V – 50Hz.

Standard sizes : 1229 mm - 40 W

: 629 mm - 20 W

On request Vianen can deliver alternative light fittings to suit customer requirements. Inbuilt emergency lights can also be delivered upon request.



VIANEN WATER WASH UV-C GALLEY HOOD SPECIFICATIONS

Standard	Optional
Material: AISI 304; Thickness 1.0 - 1.2mm	Material: AISI 316L
V-LEL integrated IP65 LED lights	V-ITL lights or LED spots
FECON®UV UL, NSF, TNO grease extraction filters	
Crush folded edges	
UL, CE and SOLAS design requirements	USPH-S, NORSOK, DNV-GL or NFPA 96
Duct connection: spigots	Duct connection: flanges ISO 15138
Mounting brackets	
	MISTY – Water Misty System
	Water Drainage Pump System
	MUAP – Make-up Supply Air
	VéTEC - Efficiency Technology
	Maestro - Galley Management System
	Victoria – Intelligent Monitoring System
	Powder coated in any RAL colour.
	Fire suppression system

Vianen Marine B.V.
 Finse Golf 18, 3446 CK Woerden
 P.O Box 163, 3440 AD Woerden, Holland

info@vianenkvs.nl
 www.vianenkvs.com
 Tel.: (+31) 348 41 63 00

