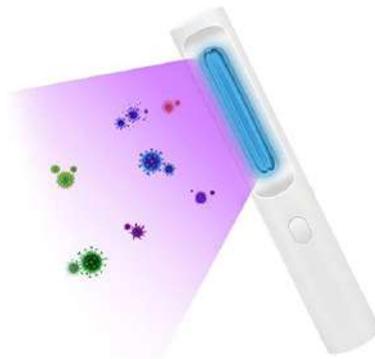




## VFUSION HAND DRYER + UV-C ULTRAVIOLET LIGHT + TITANIUM CATALYST + HEPA FILTER H13

### 100 % STERILIZATION

VELTIA presents its most hygienic model of VFUSION hand dryer incorporating UV-C ultraviolet light technology that, together with a titanium catalyst, and a HEPA H13 air filter, acts effectively against fungi, bacteria and viruses.



In addition to this technology integrated into the VFUSION hand dryer, it incorporates a HEPA H13 air filter that retains 99.97% of the particles in the air guaranteeing extra hygienic protection.

### UV-C ULTRAVIOLET LIGHT AND ITS GERMICIDAL EFFECT

UV-C ultraviolet technology is a very useful non-chemical method to kill viruses and destroy harmful microorganisms by deactivating and making them harmless or non-existent.

The germicidal range of UV ultraviolet light is within the wavelength of 100-280 nanometers, known as UV-C, with a maximum wavelength for germicidal activity of 260 nanometers.

This range of ultraviolet UV light is absorbed by the DNA and RNA of the microorganisms, causing changes in the structure of the DNA and RNA, making the microorganisms unable to replicate. A cell that cannot reproduce is considered dead as it cannot multiply to infectious numbers within the host.

This is the reason why UV disinfection is sometimes called ultraviolet germicidal irradiation (UVGI).

## USE OF ULTRAVIOLET LAMPS AS GERMICIDES

The bulb of an ultraviolet light (UV-C) lamp produces short-wave radiation between 100 and 280 nanometers in the electromagnetic spectrum. These wavelengths are lethal to viruses, bacteria, fungi and spores.



### LAMP SPECIFICATIONS:

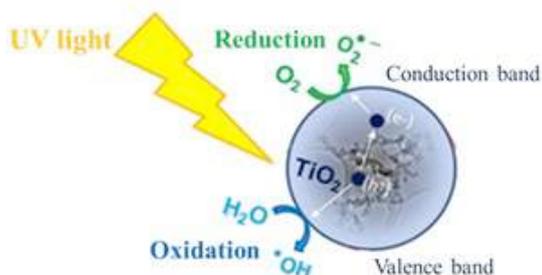
Lamp Description	Material	Dimension (mm)		Wattage (W)	Lamp Voltage (V)	Lamp Current (mA)	Peak wave length (nm)	Intensity (1m) W/cm <sup>2</sup>	life (hrs)
		D	L						
PL-513W	quartz	12	155	13	56	290	253.7	30	8000

## TITANIUM CATALYST

### Titanium Dioxide (TiO<sub>2</sub>) effects:

It is a catalytic reaction. The process used commercially is called advanced oxidation process (AOP). There are several ways that AOP can be carried out, in this case involving TiO<sub>2</sub> and UV ultraviolet light. In general, the defining factor is the production and use of the hydroxyl radical.

During the photocatalytic process, as explained below, it occurs both as oxidation and reduction reactions, so that not only can photocatalysis be applied to the oxidation of organic compounds, but also to the reduction of inorganic ions and the reduction of other organic compounds.



Both light and catalyst are needed to achieve or accelerate a chemical reaction. Therefore, photocatalysis can be defined as the acceleration of a photo-reaction by a catalyst.

Catalyst image:

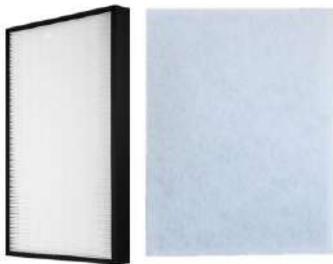


Result of the application: *Oxidation of organic pollutants by magnetic particles coated with nanoparticles of titanium dioxide and stirred by a magnetic field when exposed to ultraviolet light.*

### HEPA H13 AIR FILTER

One of our most effective bacteria control methods is using high-efficiency HEPA air filters that retains 99.97% of airborne particles and bacteria.

HEPA is the acronym for High Efficiency Particle Arresting. It is a large capacity filter that can trap a large quantity of micro particles such as pollen, bacteria, dust, and that is positioned as one of the best and most effective air purifiers on the market thanks to its high efficiency and effectiveness. In VELTIA our model is the H13.



### SPECIFICATIONS:

TEST	UNITS	MIN	STD	MAX	NOTES
Basis Weight	g/m <sup>2</sup>	68	72	76	TAPPI T410
	lbs/3000 ft <sup>2</sup>	41,8	44,2	46,6	
Thickness	mm	0,32		0,36	TAPPI T411
	inches *	0,013		0,014	
Tensile MD	N/m	900	1150		TAPPI T404
	gr/inch.	2300	2940		
Stiffness MD	mg	900	1100		TAPPI T543
LOI	%			8	30' @ 520 °C
Pressure Drop	Pa		280	310	@ 5,33 cm/s
DOP Penetration	%		0,01	0,03	@ 0,3μ 5,33 cm/s
Efficiency	%	99,97	99,99		@ 0,3μ 5,33 cm/s
Efficiency MPPS @ 3,2 cm/s	%	99,95			EN 1822
Water Repellency	Inch. W.G. *	16			Mil. Std 282 (Q-101)
	mm H <sub>2</sub> O	400			
	Kpa *	3,92			