

CP121: Cold Plasma Demonstrator

Get acquainted with Cold Plasma

with novel applications and advanced diagnostics



Introduction of the OMVE CP121 Cold Plasma Demonstrator

With the OMVE CP121 Cold Plasma Demonstrator you have a reliable and robust system that gives you maximum possibilities to learn and understand the great possibilities of Cold Plasma's. The demonstrator is capable to produce a jet of nitrogen plasma without the need of a vacuum at temperatures as low as 40°C. Plasma can be used to treat heat liable surfaces of polymer packaging materials as such PP, PE and PET without the risk of melting or deformation. By enhancing the surface energy using cold plasma surface properties can be altered and surfaces can be decontaminated. This versatile plasma unit can be operated by using nitrogen, helium or even air while the power and gas consumption are spectacular low!

Study the redox chemistry that occurs inside the cold flame using iodine starch paper. Change polymer surfaces from hydrophobic to hydrophilic. Challenge the laws of thermodynamics: learn all about the Overhauser effect and extent the plasma flame up to 3 meters in length.

The molecular content of the plasma can be identified and the electron temperature can be measured using the optional advanced Molecular Diagnostic kit **CP121-150**. Have a detailed look inside your plasma and measure electron temperatures as high as 20.000°K.

The system is designed to determine the inactivation kinetics of different micro-organisms at well defined conditions. Try to find the optimum plasma conditions for microbial inactivation at wet and dry conditions using the microbiology option **CP121-200**.

Features	Benefits
<ul style="list-style-type: none"> • Robust design • Suitable for several gasses • Didactic tool • Study decontamination in a dry environment 	<ul style="list-style-type: none"> • Reliable and durable system • Shortens your learning curve • No vacuum required • Low gas consumption

Easy in use

The Cold Plasma Demonstrator is designed to give the user maximum didactic assistance in learning about cold plasma. Because of the easy accessibility to the several tests and variables it is simple to learn within a minimum of time. Learn about the thermo dynamical properties of electrons and use this knowledge in practice. All you need is a gas supply of approx. 300L/hr of the carrier gas under investigation.

Easy to operate and maintain

Set your gas flow and turn on your plasma. A programmable timer is included to ensure that after the preset time of exposure, the plasma is automatically switched off. Because of the low power consumption of the plasma the electrode that is contained inside the unit ensures many hours of stable operation without the need of cleaning and cooling. In case that you still want to refresh your electrode: simply cut the tip of the wire electrode and shift it some more through.

Configuration

The basic unit consist of a plasma generator that is operated using a programmable timer. The plasma is available as a jet into open air.

Optional accessories

CP121-100 Gas Flow Controller

CP121-150 Molecular Diagnostics and electron temperature

CP121-200 Agar plate dish holder

Specifications

Service unit	
Plasma nozzle	6mm
Carrier gas	N2/Helium/Air
Gas temperature	Typ. 40°C
Electron temperature	10.000 - 30.000°K
Plasma power	1W
Materials	
Cabinet	SS316
Electrode	Cu
Dimensions	
W x D x H	300 x 200 x 150mm
Weight	Approx. 7kg
Utilities	
Electrical	240VAC/2A
Carrier gas	Typ. 300L/hr