

# Everybody needs good neighbors.

**ModuPlasma™**  
**Odor abatement**  
**system.**





**Manufacturers of**

» **Pet food**  
» **Fish feed**  
» **Animal feed**

» **Vegetable oil**  
» **Human food**  
» **Tobacco**

» **Metal**  
» **Wood chips**

Laundry should  
always smell  
clean and fresh!

Safe and quick  
reduction of  
manufacturing-related  
odors.

With ModuPlasma™.

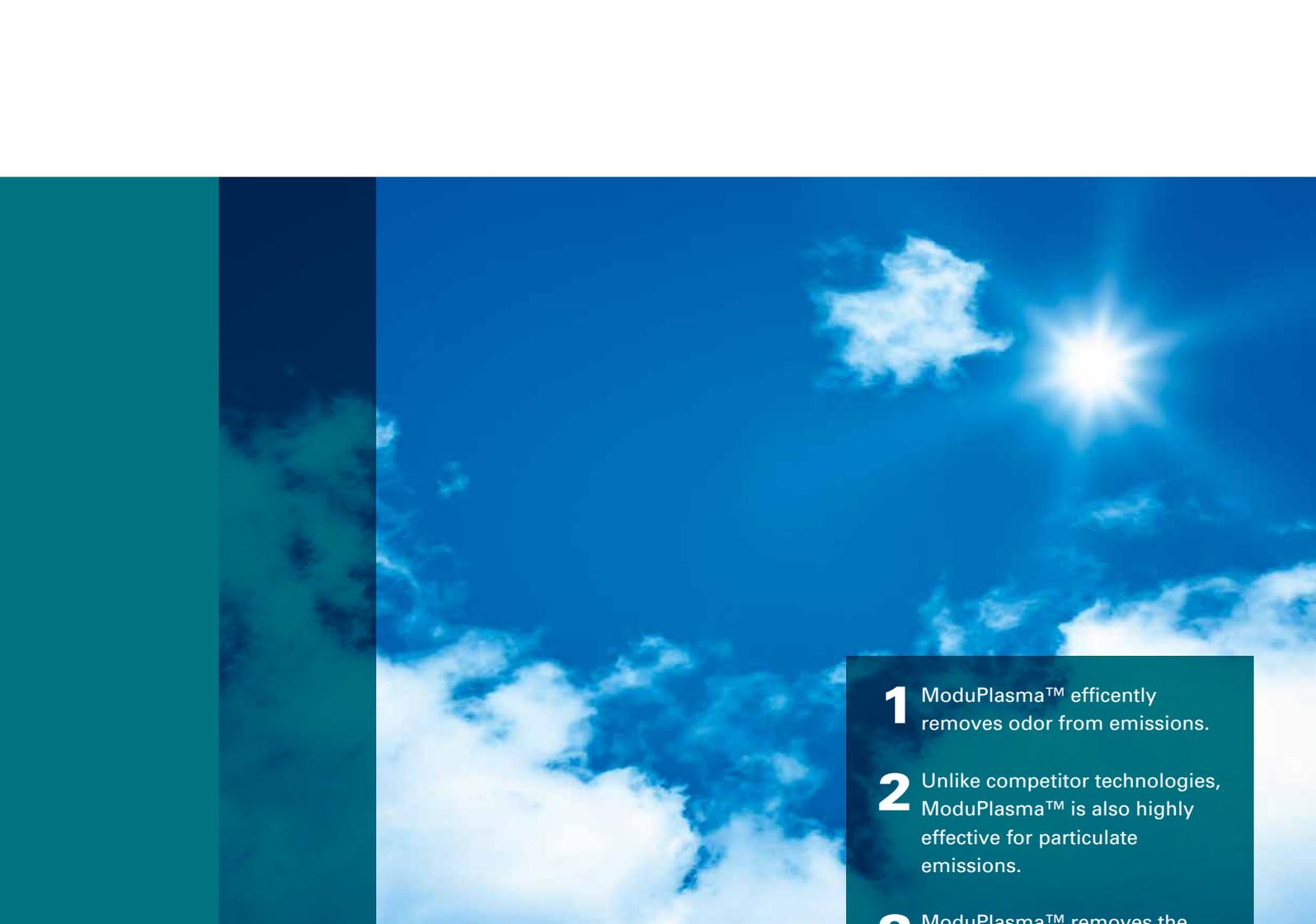


- » **High level of odor reduction – typically 75 % to 99 %.**
- » **Low energy consumption.**
- » **Low maintenance.**
- » **Environmentally safe.**
  
- » **Recognized as a best available technique (BAT) by the European Union’s Integrated Pollution Prevention and Control bureau (IPPC).**

**The problem is: how do you define what is an acceptable level of odor?** Some countries have regulations, others don’t. But whatever the law says is acceptable, your neighbors may have a different opinion. Schenck Process has unrivaled expertise in dealing with odor and can help you find a solution that will protect the environment and your reputation.

ModuPlasma™ is a direct treatment odor abatement system. The emission is led through an energy field, in contrast to other plasma solutions, where ozone is injected into the emission. This direct treatment results in oxidation 100,000 to one million times faster than in nature. ModuPlasma™ delivers fast results in an environmentally safe manner.

**In the long term, ModuPlasma™ is the most cost-efficient technology to solve your environmental challenges.**

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- 1** ModuPlasma™ efficiently removes odor from emissions.
  - 2** Unlike competitor technologies, ModuPlasma™ is also highly effective for particulate emissions.
  - 3** ModuPlasma™ removes the problem of odors carried by humidity.

# 3 for the price of one.

ModuPlasma™ removes not only odor but also dust & humidity from emissions. That means really blue skies ahead for our customers!

## **Dust & fine particles**

Dust is a major environmental nuisance that is not removed by most odor abatement technologies, such as ozone injection systems. By contrast, ModuPlasma™ is highly efficient especially on fine and ultra-fine particles.

## **Humidity**

Animal, fish feed and other manufacturing processes give off a lot of steam and humid air, which can condense and create droplets. During this process, even more odorous compounds can enter the water droplets formed. The ModuPlasma™ unit also collects the droplets containing odor and cleanses them.

### **Low environmental impact**

The environmental impact of producing ModuPlasma™ equipment is lower than that of other solutions and the associated technologies.

### **Low energy consumption**

The maximum electricity required in operation is typically 15kW per 20,000 m<sup>3</sup>/h. Because of the low pressure drop, the need for increased capacity is small.

### **Cleaning done by water**

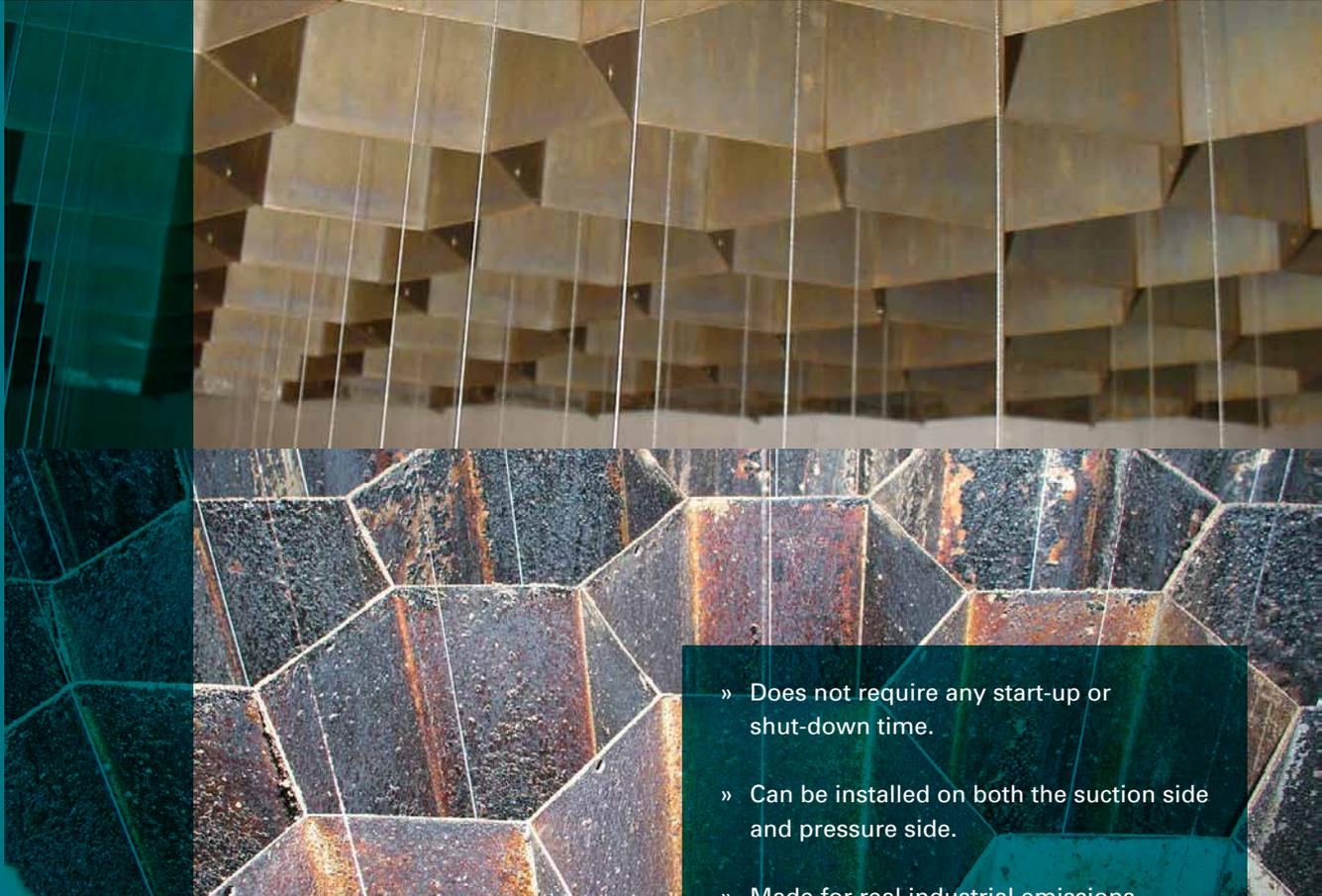
ModuPlasma™ creates no by-products other than what results from cleaning, which is normally just product and water.

# Small footprint.

**No biomass, no ozone, no chemicals.  
But a clear conscience.**

- » With ModuPlasma™ waste by-products and water consumption are reduced to a minimum.
- » Environmentally safe.
- » Schenck Process offers expertise in odor sampling and measurement to the prescribed standards.





- » Does not require any start-up or shut-down time.
- » Can be installed on both the suction side and pressure side.
- » Made for real industrial emissions containing dust and aerosols.
- » Combines odor reduction with removal of particles including ultra-fines (PM 2.5).
- » Very low maintenance and operating costs.

# Just switch off odor.

ModuPlasma™ is an odor abatement system that **uses direct cold plasma treatment**, which means that the emission is led through an energy field, in contrast to other plasma solutions, where ozone and radicals are injected into the emission. This direct treatment results in oxidation **100,000 to 1,000,000 times faster** than in nature. ModuPlasma™ delivers fast results in an **environmentally safe manner**.

The ModuPlasma™ unit is an electrostatic precipitator (ESP), which makes it highly effective for removing not just odor but also particles.

**Because there is no one-fit-all solution to odor,** Schenck Process customizes solutions to fit the customer's needs, if necessary alongside additional technologies.

**Customizing with additional technologies.** Ultraviolet light and carbon filters can be used to enhance performance in combination with ModuPlasma™. For example, we have installed ModuPlasma™ plus UV light solutions together in tobacco factories. This extends the oxidation process beyond what can be achieved using ModuPlasma™ or UV alone.

Combining the technologies provides a higher level of odor reduction. Typically it's needed where a factory is very close to residential areas, or if the odor is very hard to treat.

# Customized.

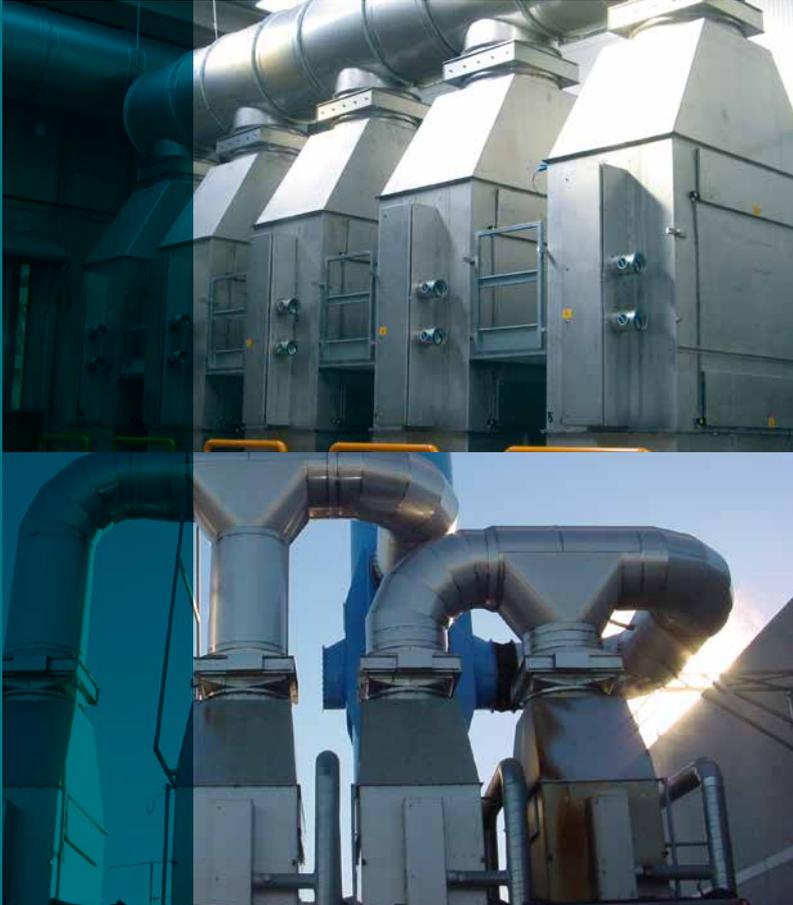
## **Modular.**

- » A single ModuPlasma™ module can comfortably deal with up to 20,000 m<sup>3</sup>/h of emissions.

## **Scalable.**

- » If you need more capacity, we just add another module.
- » There is no limit to how many modules can be installed together.





Schenck Process has successfully installed ModuPlasma™ at numerous factories and processing plants around the world. Key to this success is the company's deep understanding of issues related to odor and particulate emissions, combined with extensive knowledge of manufacturing processes.

Contact your Schenck Process representative for a free initial assessment of your requirements for odor abatement and particulate control. And find out about our many successful applications across a range of industries including fish and animal feed, food and beverages, tobacco and materials processing.

# Success. Story.

schenckprocess 

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we make processes work