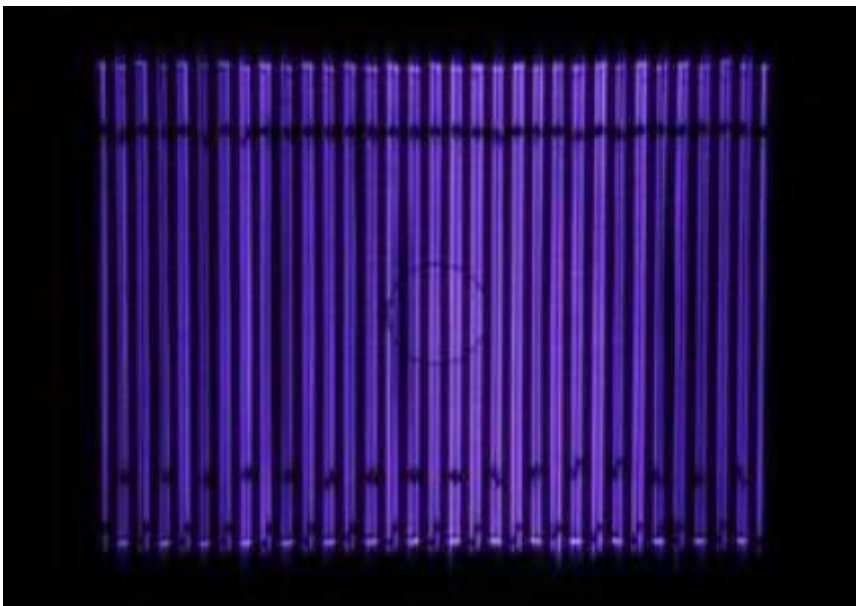




# **Non-thermal Plasma and its applications**



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# Non-thermal plasma and its applications

## What sets us apart

The PlasmaAir AG has been producing arc-heated plasma torch systems for some of the most demanding applications in the world for almost 20 years.

In addition to multigas plasma sources, PlasmaAir has also developed a non-thermal plasma system.

In various research projects, this system has been and is constantly being developed further.

## Advantages

PlasmaAir delivers more than just the plasma sources. Our customers receive turnkey systems that provide all the elements needed for safe and reliable operation and handling of the plasma system.

User friendliness, versatility in use with plasma gases, as well as high safety, reliability and lifetime of wear components characterises the NTP plasma. Customer satisfaction is important to us, therefore we offer solutions specific to the particular application.



Fig. 1: existing NTP unit

## We provide

- Turnkey solutions adapted to customer needs and requirements
- Automated systems, with easy handling
- Commissioning and maintenance service from a single source
- Complete integration with process control software according to customer specifications
- Intrinsically safe construction
- After Sales Service available, including remote monitoring
- 1 year warranty on all delivered components, with the exception of wearing parts



Fig. 2: Non-thermal plasma – real, as a thermal image and as a spectrum

### Technical Data

El. power	0.5 - 2 kW
power supply module	250 AC, two-phase
discharge frequency	300 - 800 Hz
power supply complete system	12 kW

### Advantages of non-thermal plasma

1. Due to the modular and compact design, the system can be easily adapted to the respective requirements.
2. Compared with traditional systems such as *Assisted Firing*, non-thermal plasma consumes less energy for the same cleaning performance.
3. Ideal for VOCs and odours - but even more complex pollutants can thus be pretreated and can for instance be treated subsequently in a downstream bioscrubber or biotricklingfilter.

### Research projects:

**PIASTiC:** *Exhaust air treatment by a combination of non-thermal plasma, mineral adsorber and scrubber, 2012-2015, BMBF funded (01LY1203)*

**STRING:** *Process for the treatment and material / thermal recycling of industrial waste air streams, 2013-2016, AIF/ZIM funded (2533402RH3)*

**MiCoPIAST:** *Functionalized mineral composites as a dielectric barrier in the process combination of a dielectrically impeded gas discharge, Mineral adsorber and bioscrubber for the treatment of exhaust air streams, Beginning: 2018, AIF/ZIM funded*

