

Equipment on the plasma activation of surfaces

PLASMA MET AIR

What it is

Surface Activation with cold atmospheric plasma technology is used to activate the surfaces before bonding, painting, coating, printing or other technology, where it is necessary to increase the surface tension of the treated material. The most common materials are plastic, rubber or other materials of organic origin.

How does this work

It is so that the equipment on the activation surface of the plasma produces a plasma " by decomposition" air molecules into positive and negative ions. Air is supplied to the burner, which creates an arc discharge, which is blown out through the nozzle. Such plasma is called atmospheric plasma (formed at atmospheric pressure). The plasma is output from the burner nozzle visually manifested as visible flame heat effect.

The effect of plasma on the surface of the material can be simply described as the plasma particles bind to the activated closed chain of the organic material and form the open ends of which are joined with an adhesive, paint, varnish, ... The main visible effect of plasma activation is an increase in surface tension, and thereby improving the surface wettability. Another effect of the plasma is the removal of contaminants from the activated surface.

General advantages of plasma activation of surface

- Inexpensive operation (no need of technical gases)
- Environmentally friendly operation (no need any chemicals)
- Activation allows the use of ecological water-based adhesives, paints, varnishes
- Possible activation of complex shaped surfaces using robots
- The possibility of of process automation (the need to comply with the speed of the burner and the distance from the activated surface)
- Simple integration to automatic lines (no need to clean rooms, vacuum chambers, ...)

The offer of company METESS

- The modification of the nozzle of the burner so as to ensure access to the activated surface
- Adjusting the size and shape of the projecting plasma by modification of the internal shape of the nozzle
- Standardly controllable performance of plasma in the wide range directly by user

Kit

Size of equipment: 700 x 400 x 1000 mm (width x depth x height)
Weight: 65 kg
Supply net: 1 NPE ~ 50 Hz 230 V / TN-S (single Phase)
Wattage: max. 1300 VA
Pressure air: Tlak 5-10 bar, max. consumption 70 l/min.
Generator of voltage: creates el. voltage which is supplied via cable to a stainless steel burner
Cable length Burner-Generator: 6 m (on the agreement can be changed)

Controls

Local steering by a plastic control box with built-in PLC with touch screen. The control box can be mounted on the upper surface of the generator or can be, using the connection cable, put at a distance of 6 m from the generator. Built-in connector on the upper surface generator is use to the remote control..

