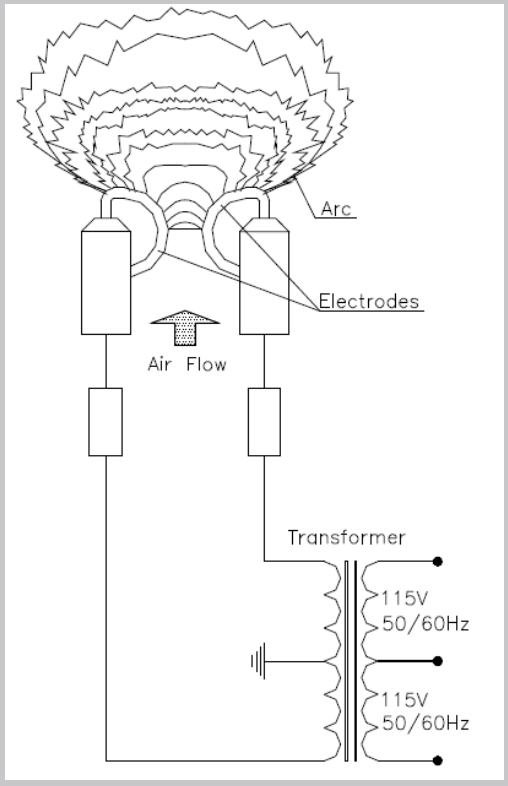
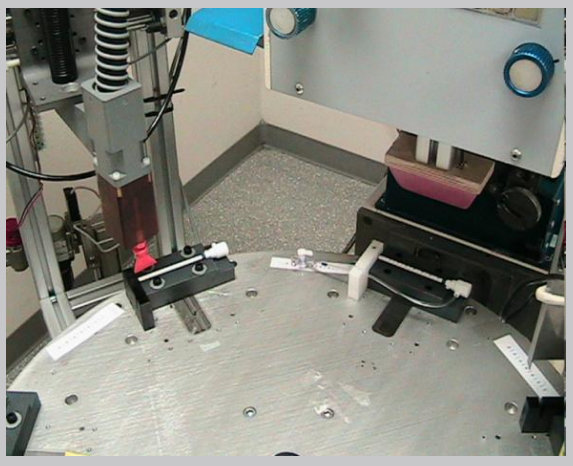
Surface Treatment Process

As power is supplied to the electrodes, the electric arc only occurs between the points of the electrodes that are closest to each other. A constant flow of air supplied by a blower deflects the arc, causing it to spread and follow the hook formed curvature of the electrodes. A constant supply of arcs is produced at a rate of 50 to 60 cycles per second.

The ability of the arc to spread depends on the secondary voltage of the transformer, the air velocity generated by the blower, and the geometry (shape) of the electrodes. The higher the voltage and air velocity, the further the arc can be spread. Too much air velocity can break up the arc prematurely, reducing the useful treatment width.

The continuous arc produces a Corona discharge loaded with highly energized ions. This energy field is capable of increasing the wet-ability of the surfaces exposed, providing the necessary cross-linking between polymer surfaces and inks, coatings or adhesives.





Plasma Pre-treat and pad print

AMTEC - Applied Manufacturing Technologies, Inc.
1464 N. Hundley Street, Anaheim, CA 92806
Website: www.amtecinc.com E-mail: sales@amtecinc.com

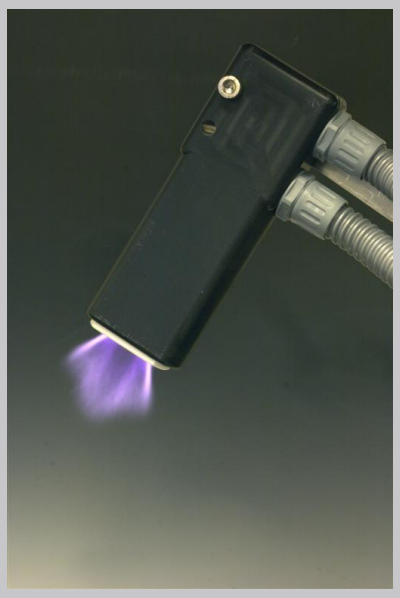
Plasma Treatment

Blown-arc air plasma is formed by blowing atmospheric air past two high-voltage powered electrodes and is sometimes referred to as corona treatment.

The electrical discharge positively charges the ion particles surrounding it. Through direct contact, these particles positively charge the treated area of the object's surface. This makes the surface more receptive to any applied substance such as inks.

Air plasma is a popular surface-treatment technology because it is effective, easy to use and inexpensive to operate.

Film/sheet treatment System



Corona treatment for small parts

AMTEC - Applied Manufacturing Technologies, Inc.
1464 N. Hundley Street, Anaheim, CA 92806
Website: www.amtecinc.com E-mail: sales@amtecinc.com

Plasma Treatment

Effectively Treats

PE, PP, PET, Nylon, Vinyl, Polystyrene, Polycarbonate, PVC, and all other type of thermoformed and thermoset plastics.

System Features

- **Small, Solid-State Construction -** Highly reliable solid-state circuitry for long operating life.
- **Rugged, High-Voltage Power -** Internally mounted high voltage transformer is rated for long-term reliability under continuous duty.
- **Heavy-Duty, Powerful Blower -** Internally mounted blower is rated for industrial duty to provide a continuous high-volume air-stream for maximum treatment level and coverage.
- **Easy Operation -** All operator controls and indicators are easily accessible. Simple power ON/OFF and treatment STOP/START push-buttons require no training.
- **Remote STOP/START -** Terminals available for customer supplied stop and start push-buttons to control treater power from remote location.
- **Remote Cycling -** Terminals are provided for intermittent treatment (cycling) by means of customer supplied switching device(s).
- **Self-Protective -** All internal circuits contain protective elements to prevent serious damage as a result of line transients or overloads.
- **Loss of Treatment Indicator -** Contacts provided for customer to connect indicator device for loss of treatment.

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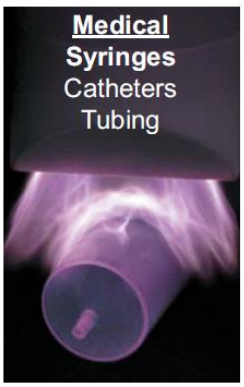
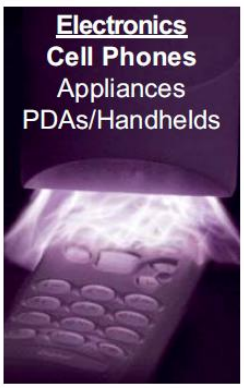
Surface Treatment Applications

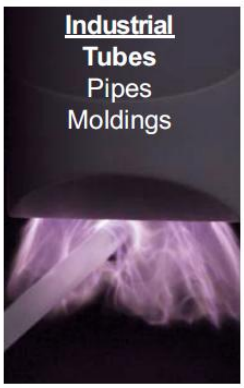
Printing- Surface treating parts prior to printing enhances ink adhesion. It makes printing easier, and for others it makes printing possible.

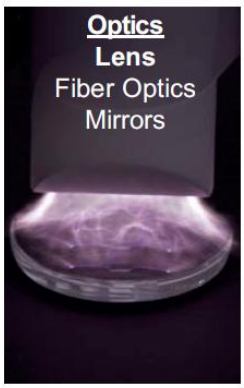
Painting- Injection molded or thermoformed parts are often treated prior to painting. Surface treatment allows the paint to adhere and also increases the life and durability of the paint on the object's surface.

Coating- Products are coated to protect their surfaces from harsh environments or as decoration. Doors, frames, and extrusions/profiles are often coated. The medical industry uses surface treating to improve adhesion of antimicrobial/antibiotic coatings.









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