

## CORONA DISCHARGE TREATMENT



**Eltech** Engineers an ISO certified Indian company, is the leading manufacturers, exporters and suppliers of Corona Treater in India Mumbai. Established in the year 1992. Eltech designs and manufactures corona discharge surface treatment equipment for Narrow web, wide web, sheet and 3d application for films, Foil, Woven sack, Paper, Textile and three dimensional plastic parts etc..

We manufacture Corona treatment equipment for various application. We have developed Sheet corona treater for sheets before printing in offset industries. we have supplied many Woven Sacks Corona treater all over India for Woven Sacks industries on Flexographic online printing machine .We manufacture Label corona treater for label ,self adhesive label.

We are capable of providing solutions for any kind of treating problem for plastic films, different varieties of complex laminates corona treaters in the range of 1 kw to 10 kw for web widths of 3000 mm. Our Corona treatment are successfully running in India and all over world mainly in Saudia Arabia, Labenon, Vietnam, UAE, Igypt, China, Srilanka, Bangladesh, Nigeria, Kenya and Many more countries.

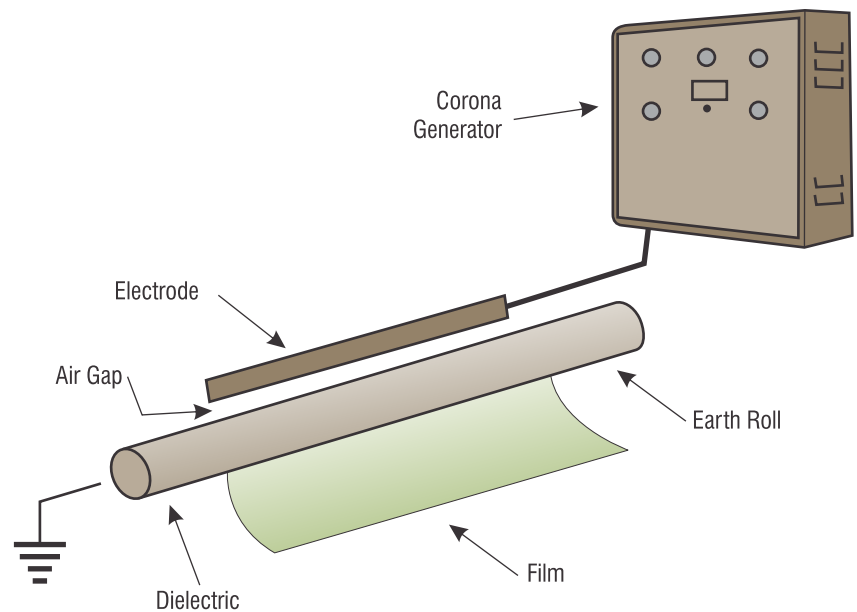
## Necessity Of Surface Treatment

Generally, plastics have chemically inert and nonporous surfaces with low surface tensions causing them to be nonreceptive to bonding with Corona treatment is the method most widely used to ensure adhesion on Surface treatment is required for plastic films/fabrics whose normal surface tension is not sufficiently high to permit good wetting by flexo graphic inks. Corona treatment increases the surface tension of the fabrics receptive to inks by inducing molecular changes in the surface of the films. The equipment consists of mainly transformer, Electrodes, Silicon rollers and free rollers which are enclosed in a properly made casing Corona is generated by applying a high frequency, high voltage signal to an electrode The fabric is passed from free roller through the airgap between multisegmented electrode and the silicon roller which generates continuous shower of ionised air called as .The electerde and dielectric cover on the roller serves as the electric connection to the stream of ionized air in the airgap.

## Corona Treatment : Where It is useful

- ☑ Blown film extrusion single layer / multi layer plastic film plants.
- ☑ Woven sack roll on- line flexo printing machine
- ☑ Extrusion/lamination coating plant for paper
- ☑ Lamination plant for aluminum foil/plastic film
- ☑ PvdC coating on pvc film for pharmaceutical applications
- ☑ Sheet line plant
- ☑ Gum coating on ptfe coated fibre glass cloth
- ☑ Plastic molded articles
- ☑ Laboratory corona treatment
- ☑ Inside treatment of container (Insulated box)

## Basic Configuration



## Our Products

- ✦ Laboratory Corona Treater
- ✦ sheet corona treater
- ✦ woven sacks printing corona treater
- ✦ Wire corona treater
- ✦ Monolayer film plant corona treater
- ✦ Multilayer film plant corona treater
- ✦ Extrusion film plant corona treater
- ✦ Bottle corona treater
- ✦ Molded parts corona treater
- ✦ Corex board corona treater
- ✦ Label Flexo corona treater
- ✦ Ceramic Electrode
- ✦ Silicone sleeve for corona treater
- ✦ Dynes Pens and Solutions
- ✦ Ozone Extraction Blower

## Corona Treater for Monolayer film plant

### Benifits

- ✓ Easy to install
- ✓ Accurate output power
- ✓ Small, compact and economical design
- ✓ Low maintenance
- ✓ User friendly
- ✓ Maximum operator saftey
- ✓ Full range of sizes from .5 Kw to 10 Kw

### Features

- ✓ ADVANCED MOSFET / IGBT Technology
- ✓ Aluminum plate station assembly for light weight and low corrosion
- ✓ Digital indication of corona current
- ✓ Force cooled convertor for longer life
- ✓ Treatment Rolls with pure Silicon Sleeves
- ✓ Smooth To & Fro micro metric air gap adjustment facility
- ✓ Short circuit protection
- ✓ Fully enclosed treater station
- ✓ Dynamically Balance Roller
- ✓ Key type electrode for selective treatment



**Corona Treater  
Generator**



**HV Transformer**

## Corona Treater For Multilayer Film Plant



**Corona Treater Generator**



**Treatment Assembly For  
Multi layer Extrusion Film Plant**



### Woven Fabric Corona Treater



Corona treater for woven fabrics-Corona treatment system is a very effective way to increase the surface tension of virtually any material. Surface treatment is required for plastic films/fabrics whose normal surface tension is not sufficiently high to permit good wetting by flexographic inks.

Corona treatment for woven sacks, PP / HDPE Woven sacks fabrics has to be corona treated before printing on flexographic printing machine.



### Lamination/Conductive Film Corona Treater



Sheet lamination corona treater is used to increase bonding prior to lamination, Metallised polyester and Bopp film has to be treated before lamination or printing

In offset printing industries metallised polyester film is to be treated before printing for better bonding of inks.

### Narrow Web Corona Treater For Label Flexo Printing Machine

These treaters are an extension of suitable to treat conductive as well as non conductive substrates such as aluminum foils, metallised films, multi layer films, paper, labels of various types etc, having smaller widths up to about 100-500 mm.



#### Optional value added features :

- ▲ Pneumatic operated treater station
- ▲ Zero speed switch to protect silicon sleeve
- ▲ Ozone extraction system efficiently remove ozone and to cool the electrode
- ▲ Aluminum frame featuring stainless steel enclosure
- ▲ Stainless steel segmented electrode
- ▲ Bare roller system

## Wire & Cable Corona Treater

**Eltech** manufactures Wire and Cable Corona Treater to solve printing problem. Corona treatment of cable is essential otherwise printing will not remain on cable.

The purpose of surface treatment of polymer-based materials is to increase surface wettability through electrical discharge. The low surface energy of polymer based substrates often leads to poor adhesion of inks, glues and coatings. To obtain optimum adhesion, it is necessary to increase the surface energy of the substrate to just above that of the material to be applied. Surface treatment with Corona results in improved surface adhesion properties.



## Laboratory Corona Treater



Laboratory type corona treatment to treat labels for testing purpose in laboratory.

Suitable to treat A/4 size label like PVC, PE, Metallised polyester board

## Surface Treatment of Round Bottles



**Eltech** pre-treating systems set new standards for Corona technology. It's now possible to in-line Corona-treat virtually any extrusion or injection blow-molded container. Treatment is done delicately, quickly and efficiently, without any damage to the surface being treated and without any adverse effect on the molding, printing or labeling process.

The state-of-the-art self-contained floor model systems are designed for easy installation into molding, printing and filling lines or can be used as stand-alone. Treatment of cylindrical, rounded oval, rectangular and square containers.

### Advantages:

- Open air Corona discharge, directed to the surface requiring treatment, for high treating levels, even on polypropylene containers
- Easily installed into molding, printing and filling lines or used as a stand alone work-station
- No open flame and no heat developments to contaminate the work environment or to increase insurance premiums
- No damage to the treated surface



## Sheet Corona Treatment

Some substrates are corona-treated when they are manufactured, Many of these substrates require a surface energy boost to match a particular ink or coating. This is done with corona pre-treaters on the press just prior to the Printing / coating application point.

Corona Treatment should be applied to plastic surfaces before lamination, glue coating or printing to prevent shedding of the ink or coating ensuring the best quality is achieved.

PVC, PP, LD, Foam, Flex, metallised polyester, PE, OPP, and other high-low density plastic materials should particularly be Corona treated to enhance the quality of the final product.

The equipment consists of mainly. Transformer, Dielectric insulated electrode, earthed rollers and free rollers which are enclosed in a properly made casing. Corona is generated by applying a high frequency, high voltage signal to an electrode separated from an earthed plane by an air gap. The sheet is passed from free roller through the air gap between Dielectric insulated electrode and the earthed roller which generated continuous shower of ionised air called as CORONA.



**Sheet corona treater**

## Inside treatment of container (For Roto-molded Insulated tubs)



Inside treatment of container is impossible by flame treatment, corona treatment

**Eltech** developed to treat the inside of products such as surf boats, coolers, small boats etc. - products that consist of glass fibre on the outside and foam on the inside - a so called sandwich construction. with conventional chemical method ,result is not so good and uneven, and also chemical cost is involved.

With our system adhesion problem will be solved drastically, without any chemical.



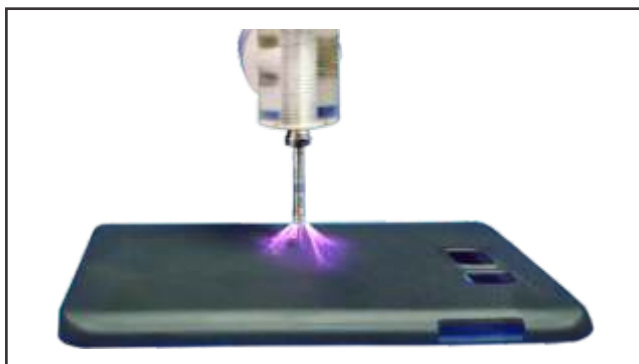
## Our Installation



**Installed On Extrusion Coating Plant**



**Treatment On metallised polyester film**



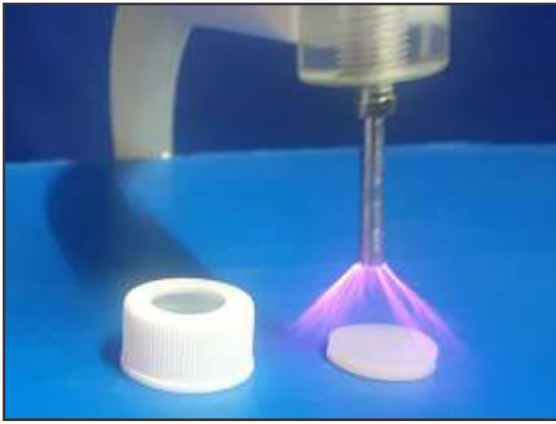
**Surface Treatment of Mobile Covers**



**Sheet treatment**



## Our Installations



Surface Treatment of Plastic Cap and Silicone Gasket



Treatment on Label flexo printing



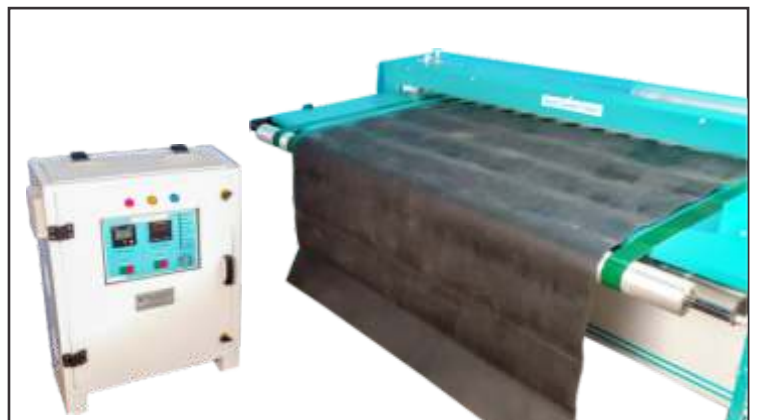
Installed on Blown Film Plant



Treatment on wire & Cable



Treatment on PVC Metallised Film



Treatment on EVA Rubber



Installed on coating plant



Treatment on Thick PVC Board

## Corona Treater Accesories



**Silicone Sleeve**



**Silicone HV Cable**



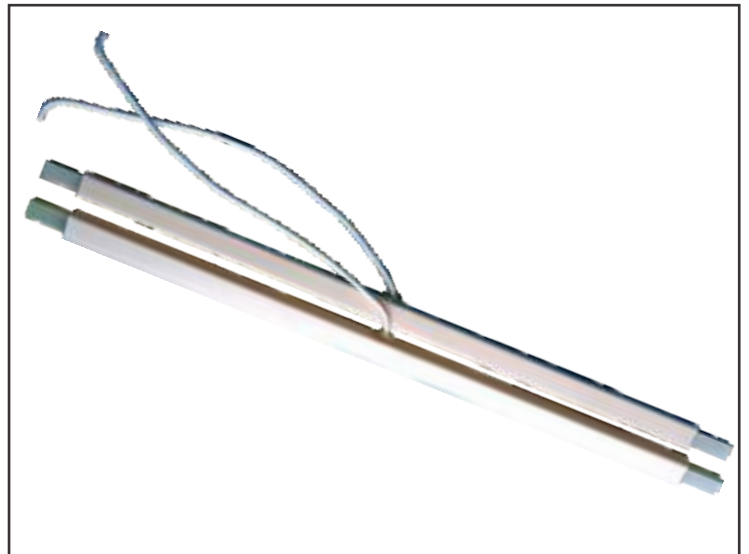
**Dyne Test Pen CDP-100**



**Dyne Test Pen CLP-100**



**Ozone Extraction Blower**



**Ceramic Electrode**



**Eltech**  
ENGINEERS

Since 1992

An ISO 9001-2000 Company

**Manufacturers of :**  
Induction Cap Sealer  
Corona Treater, Plasma Treater,  
3D Corona Treater, Static Eliminator  
Ionizing Air Gun, Ionizing Air Blower,  
Static Charger, Ozone Generator

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Due to our policy of continuous Research & Development, Design & Specifications may change for improvement of the products.