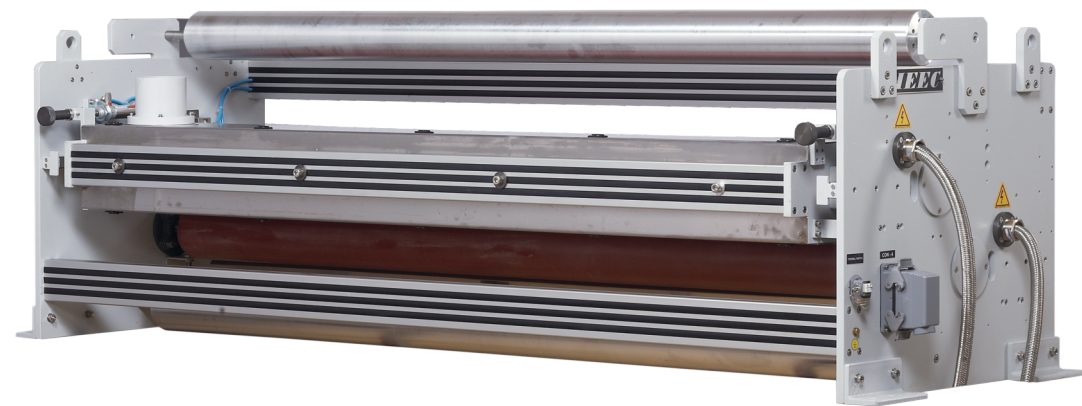


CORONA TREATMENT for EXTRUSION BLOWN FILM



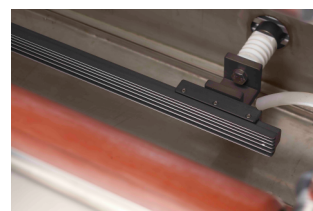
Description :

On a blown Film machine corona treatment is essential to achieve good surface tension on the Film to have better adhesion in subsequent converting application. Better treatment is achieved when the Film is corona treated at the time of extrusion.

It is important to have a reliable corona treatment system on the Blown Film machine that can ensure uniform & effective treatment levels across the film width. IEEC corona treaters are designed for our customers keeping in mind the challenges they face. We ensure that our corona treatment systems give uniform treatment levels without any unplanned stoppage to the production process .

Technical Advantages

- Web widths up to 3000mm.
- Line speeds up to 200mpm.
- Single or double sided treatment.
- Corona Treater Rollers covered with high dielectric grade silicone sleeves.
- Electrodes coated with corrosion resistant chemical.
- Aluminum segments in widths of 5mm or 10mm.
- Electrode head fabricated out of stainless steel.
- Pneumatically actuated treating heads for easy threading of the films.
- Idler rollers at film entry & exit to ensure wrap angle of film with treater roller.
- Easy Inline air gap adjustment with knobs provided externally on the ducts.
- S.S. Braided double dielectric sheathed high tension cable to ensure safety.
- Dynamically and statically balanced rollers.
- Proximity switch for zero speed sensing & closed loop feedback for Auto watt density control.
- Assembly open safety switch for human safety.
- Rigid cross members and electrode holding bars to ensure uniform and parallel air gaps.



CORONA TREATMENT for CONVERTING



Description :

Corona treatment is an essential process in the converting application. On printing and coating machines it ensures excellent anchorage of the ink/coating with the substrate. On a lamination machine corona treatment guarantees proper bond strength between the substrates. Pre treated substrates which lose its treatment level over a period of time can easily be enhanced with IEEC corona treatment systems when used inline with a converting equipment. Excellent treatment levels and bond strengths are achieved with our corona treatment system at higher line speeds. IEEC corona treaters can treat conductive as well as non-conductive substrates with our high efficiency ceramic electrodes and Ceramic coated rollers.

Technical Advantages

- Web width up to 2100mm.
- Line speeds up to 600mpm.
- High definition ceramic electrodes with ridge profile to ensure uniform treatment levels at high efficiency.
- Fully Isolated ceramic electrodes with no effect of humidity during operation
- Easy pull out electrode cartridge design for easy maintenance and cleaning
- Corona Treater Roller made out of Aluminum.
- Individual Electrode replacement facility
- Precise air gap adjustment during operation.
- Vacuum switch for ensuring negative pressure inside the electrode cartridge.
- S.S.Braided double dielectric sheathed high tension cable
- Proximity switch for zero speed sensing and closed loop feedback for auto- watt density control.
- Assembly open limit switch for human safety.
- Glazed ceramic insulators for rigid mounting of ceramic electrodes.
- Pneumatic actuation of electrode heads for easy threading of film.



CORONA TREATMENT for NARROW WEB & LABEL PRINTING

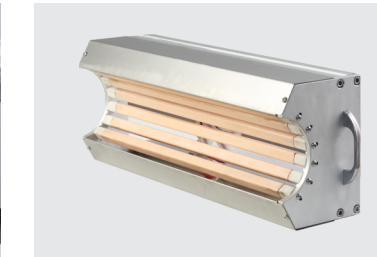


Description :

Corona treatment is extremely important in label printing process. While printing on plastic substrates the ink anchorage is a serious issue due to poor surface tension of the base substrate. IEEC corona treatment systems helps in delivering quality print results and also helps the user eliminate the use of top coated substrates there by decreasing the production cost significantly. Also quite often the material though previously treated lose their treatment levels just before the printing process. An inline IEEC corona treater ensures enhancing of the treatment levels to the values desirable for quality printing.

Technical Advantages

- Working width up to 1000mm.
- Working speeds up to 300mm.
- Upto 6 ceramic electrodes per side.
- Compact design to fit in smallest working spaces.
- Proximity switch for zero speed sensing, pulse block and closed loop feedback for auto-watt density control.
- Specially designed assembly switch which ensure ultra-fast supply disconnection when actuated.
- Stainless steel electrode head mounting.
- Built in Coloured HMI for easy operator interface.
- Realtime downtime analysis.
- Easy pull out cartridge design for easy change of electrodes and its maintenance.
- Single or double side treatment.
- Non inter-changeable plug & socket connection system.



PLASMA TREATMENT for 3 DIMENSIONAL APPLICATION



Increasing surface tension of substrates through
Advanced Technology

The process of increasing Surface Tension (dynes/cm) of a substrate by exposing it to an Atmospheric Plasma Flame is called Atmospheric Plasma Treatment. Non-contaminated, refrigerated dry, moisture free, and oil-free compressed air is passed through High Voltage at High Frequency. Air molecules get ionized and air reaches fourth stage of matter (Plasma), creating Atmospheric Plasma.

Principle :

This treatment works on a simple principle that the Ion and the electron mixed in the Plasma Zone run against each other in High Speed on the surface of the material. This eliminates foreign matter (dust etc.) and helps the functional coating radical to stick on the surface. This process helps achieve a rinsing effect and Hydrophilic effect on the surface – resulting in increased Surface Tension.

Applications :

AUTOMOBILE INDUSTRY : Head lights, door sealing profiles, decorative trim, switch components, control unit housings, Body bumpers.

PRINTING INDUSTRY : For inkjet Printing on bottles, caps, wires and cables, pipes, glass, Plastic Cards and other materials. For pad printing on pens, mobile covers, switches, switch boards etc.

MEDICAL DEVICES :

Dialysis machines, disposable syringes, catheter, ampoules, contact lenses, test tubes, petri dishes.

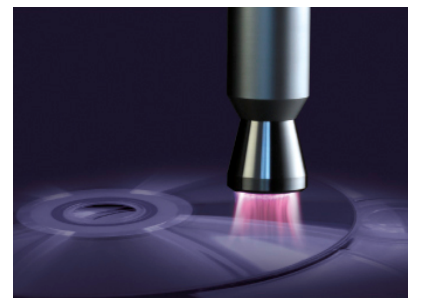
GLASS INDUSTRY: Window seals, window frames, printing on drinking glasses and bottles, perfume flacons.

COATING : Foil coating, flocking, laminating

ADHESIVETECHNOLOGY : Plastic sheets, furniture coatings.

LAMINATING : Instrument panels, interior door coverings, car boot linings.

EXTRUSION : Signage, pipe extrusion, EPDM profile extrusion.



CORONA GENERATOR



Systems with user-friendly sophistication

IEEC Corona Generators are CE Standard Generators engineered with perfection and sophistication. User-friendly and easy-to-operate, these highly efficient generators provide better treatment at lesser power. They are packed with the most advanced features including Latest Mixed Signal Microcontroller Programming, High Frequency which makes it long-lasting and maintenance-free, and Frequency Auto-tuning which makes it compatible with any assembly and operable at optimum required power.

Key Features

- Latest IGBT Technology and PWM Self Tuning Techniques for efficient output.
- Efficient Modulation and Frequency Circuits.
- MMI (Man-Machine Interface for easy operation)
- AUTOWATT DENSITY CONTROL (To control power w.r.t speed)
- DISPLAY: LCD 2 X 16 (For RFG1, RFG2), LCD 4 X 40 (For RFG3, RFG4, RFG5), Touchscreen.
- Realtime Analysis with Data Logging of faults if any
- Totalizer of Corona working time
- Trouble Shooting Guide
- Buzzer Alarm.
- Fault Indication.
- Frequency Auto-Tuning.
- Air Conditioner. (Optional)
- Heavy Duty Plug In/Out Connectors.
- Corrosion Proof Paint.

Available Models

| RFG 1: 0.5KW, 1KW, 2KW | RFG 2: 03KW, 04KW, 05KW | RFG 3: 06KW, 08KW
| RFG 4: 12KW, 16KW | RFG 5: 20KW, 40KW, 60KW

OZONE GENERATOR for EXTRUSION LAMINATION / COATING



Ozone Generator for Extrusion Lamination/Coating

Most innovative and efficient technology in extrusion coating: Ozogen 500

With emerging trends of packaging and improved demand of high quality products, we are committed to adopt these technologies to achieve better quality at high line speeds. Ozone Treatment is a significant step in that direction. When packaging uses extrusion coating, good bond strength is required between laminates. With consistent R & D and customer feedback, we developed "Ozogen-500" - an efficient technology in extrusion coating. Ranked alongside Corona and Flame Treatment as one of the three main treatment technologies in extrusion coating process, Ozone Treatment provides good bond strength, avoids odour and off-taste, while delivering efficient bond strengths at high line speeds.

OZONE DESTRUCTOR

A highly-efficient catalyst to convert Ozone to air Ozonash is an Ozone destruction unit which converts Ozone into Oxygen. During Corona Treatment, high-concentrated Ozone is produced, which is harmful to the environment and the human operators. Using a highly efficient metal oxide catalyst and pre-filter combination, Ozonash reduces Ozone to air. The construction material is corrosion resistant to ensure longer life of the equipment. Differential pressure gauge is used to monitor pressure between filter stages and catalyst reduction stage.



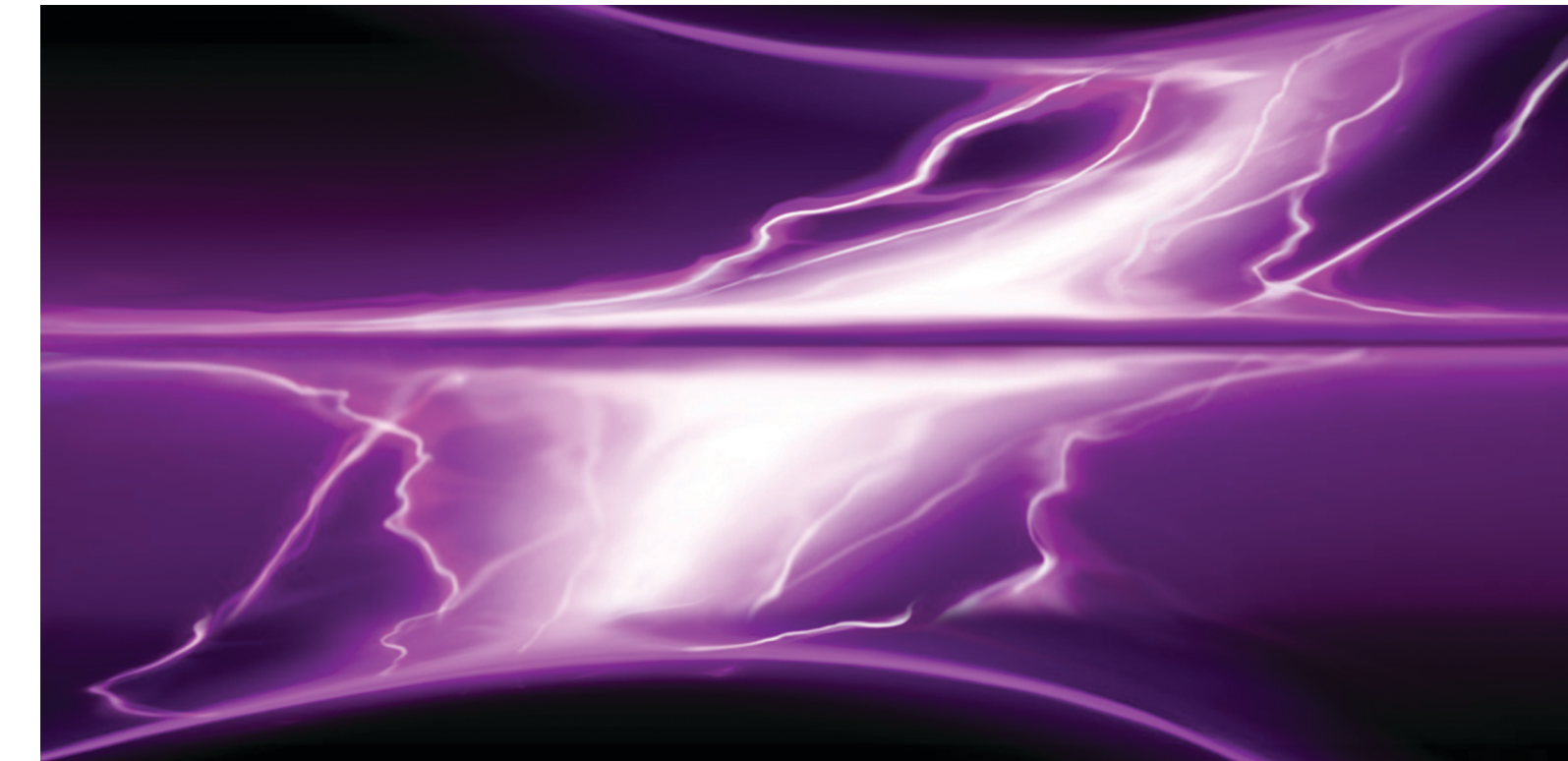
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TREATMENT

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OZONE
GENERATOR & DESTRUCTOR

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About us : IEEC (Industrial Electronics Equipment Corporation) is a leading supplier of Electronic Process Control Equipment, and developer of quality Corona & Plasma Treatment systems, Automation Solutions and Moving Band Pinning Systems for BoPET films.

Registered in 1969 in Mumbai, India as PBJ – Industrial Electronics Pvt Ltd, IEEC is a fully-indigenous organisation that caters to Indian and International clients seeking specialized equipment in Extrusion, Converting and Surface Pre-treatment applications. Backed by intensive Research & Development and excellent after-sales service, we deliver upon our vision to achieve total customer satisfaction by continually improving our products and services.