



TORONTECH

# METAL FOIL CORONA SURFACE TREATMENT MACHINE



# **Metal Foil Corona Surface Treatment Machine - ToronCorona™ MF 100**

Metal Foil Corona Surface Treatment Machine – ToronCorona™ MF 100 is a high-performance corona treatment machine engineered for effective surface activation of conductive metal substrates such as aluminum foil, copper foil, electrolytic aluminum, and aluminum sheets.

This advanced corona surface treatment equipment utilizes controlled high-frequency electrical discharge to remove surface contaminants, break molecular bonds, and significantly increase surface energy, enabling improved adhesion for coating, laminating, printing, and bonding processes.

Designed with a rigid industrial frame, precision ceramic electrodes, and adjustable discharge gaps, the HCO Series delivers uniform, stable corona treatment across wide metal webs. Its robust construction, servo-driven synchronization, and integrated thermal control system make it suitable for continuous industrial operation in demanding production environments.

## **APPLICATIONS**

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## **Applications**

The corona treatment equipment is widely used in industries requiring enhanced adhesion and surface cleanliness on metal materials:

- Aluminum Foil Processing – Improves surface wettability and coating adhesion for battery, packaging, and insulation applications.
- Copper Foil Manufacturing – Enhances bonding performance in lithium-ion battery electrodes and electronic laminates.

- Electrolytic Aluminum Sheets – Removes surface oil and contaminants prior to coating, laminating, or printing.
- Flexible Packaging Materials – Prepares metal foils for adhesive lamination, ink adhesion, and composite film structures.
- Electrical & Energy Materials – Supports surface activation for capacitor foils, battery components, and conductive layers.



## FEATURES

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# Metal Foil Corona Surface Treatment Machine - ToronCorona™ MF 100

## Key Features

- High-Efficiency Corona Surface Treatment
  - Generates uniform, high-energy discharge to significantly increase surface tension on metal foils.
- Adjustable Discharge Gap (1.5–2.5 mm)
  - Enables precise control of corona intensity for different foil thicknesses and materials.
- Ceramic Electrode System
  - High-insulation ceramic tubes ensure stable discharge, long service life, and consistent treatment quality.
- Large Electrode Opening Design
  - Facilitates easy threading of metal sheets and foils, reducing setup time and improving operator safety.
- Servo-Driven Synchronization Control
  - Maintains precise web tension and alignment, preventing material deformation during processing.
- Integrated Temperature Control
  - Hot-cold integrated mold temperature system stabilizes the corona roller temperature for consistent performance.
- Anti-Ozone & Corrosion-Resistant Structure
  - Fully oxidation-resistant materials protect the machine from ozone exposure and extend service life.
- Modular, Easy-Maintenance Design
  - Electrode covers and discharge racks are designed for quick access, cleaning, and replacement.

## TECHNICAL SPECIFICATIONS

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# Metal Foil Corona Surface Treatment Machine - ToronCorona™ MF 100

## Technical Specifications

| Parameter                | Specification                                                      |
|--------------------------|--------------------------------------------------------------------|
| Model                    | ToronCorona™ MF 100                                                |
| Treatment Method         | High-frequency corona surface treatment                            |
| Applicable Materials     | Aluminum foil, copper foil, electrolytic aluminum, aluminum sheets |
| Discharge Gap            | Adjustable, approx. 1.5–2.5 mm                                     |
| Electrode Type           | High-insulation ceramic electrode tubes                            |
| Drive System             | Servo motor control with precise synchronization                   |
| Temperature Control      | Integrated hot & cold mold temperature regulation                  |
| Surface Treatment Effect | Oil removal, surface cleaning, surface tension enhancement         |
| Structural Materials     | Anti-oxidation and ozone-resistant industrial materials            |
| Operation Mode           | Continuous inline processing                                       |
| Maintenance              | Modular electrode and discharge rack design                        |
| Application Environment  | Industrial production lines                                        |



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