



PAINTING SYSTEMS

**SMART
SOLUTIONS**

FOR ALL TYPES OF

**POWDER
& LIQUID
COATING
PROJECTS**

Welcome

Our products have been manufacturing under the trademark ELECTRON in conformity with the global advanced standards and have been preferred with full confidence both in domestic and worldwide markets. Our capacity has been growing everyday putting customer satisfaction at first priority together with our common sales and service network.

As a result of our investment to increase our existing capacity and to solidify our place in the sector, we started our production in a new and large factory that was built on a 8500 m² closed area in Izmir in November 2008. Our factory with our skilled team of 130 employees, is equipped with fully advanced machines and systems to provide a precious and an excellent production.



Sistem Teknik A.S. serves his customers with professional dealers not only in Turkey, but also in 35 different countries with full spare parts and aftersale services. Our products have a serious marketshare in the Middle East region, CIS Countries, East Europe, North Africa and the Balkans, and as a result of our quality policy and professional principles it expanded to the West European countries.

It is a sole principle of our company to keep improving itself in conformity with the new technological and commercial conditions that change everyday, together with our regular long term basis work ethics.

Our company is a leading Turkish company specialized in the manufacturing of “Electrostatic Powder Coating Equipment and Complete Painting Systems” with 20 years of knowledge and practical experience.

OUR PRODUCT RANGES

PRETREATMENT SYSTEMS

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- Tunnel Pretreatment
- Chamber Pretreatment
- Dip Tank Pretreatment

DRYING & CURING OVENS

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- Tunnel & U-Turn Continuous Ovens
- Box Ovens
- High Temperature Ovens

CONVEYOR SYSTEMS

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- Cardan Type
- Power & Free
- Webb Type

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- Powder Coating
- Liquid Painting
- PTFE (Non-Stick)

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SPECIAL DESIGN

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- Compact Type Powder Coating Line for Aluminium Profiles
- Aging Oven for Aluminium Profiles
- Wood Effect Line for Aluminium Profiles
- Special Purpose Curing & Drying Ovens

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PRETREATMENT SYSTEMS



Surface Pretreatment Lines, spraying or dipping type, are designed to provide a pre-paint cleaning process in the best way.

The most suitable surface pretreatment processes such as chromate, bonderite nano-phosphate, iron-phosphate or zinc phosphate, are projected by our technical team according to your factory conditions.

Our technical project team studies on your project by taking every detail into consideration and

calculating with a high precision.

Surface pretreatment line projects have a lot of important technical points such as heating type, heating capacity, water circulation systems, steam absorption systems, preventing the mixing of chemicals and steam between tanks.



TYPES OF PRETREATMENT APPLICATIONS

- Spraying & dipping pretreatment lines
- Nano technology lines (Oxsilan, Bonderite, etc.)
- Degreasing and etching lines
- Iron phosphating & zinc phosphating lines
- Chromating & chrome free lines

ADVANTAGES OF ELECTRON PRETREATMENT APPLICATIONS

- Maximum energy saving
- Minimum chemical and water consumption
- Correct engineering
- High quality components

DRYING & CURING OVENS



Our ovens, with enhanced insulation, minimize the operation costs and maximize the production capacity and can be operated in a desired temperature through a digital control unit and they also automatically exhaust the accumulated paint fumes during the works.

Electron ovens also provide the same curing quality with all types of materials with their special design that distributes the heated air homogeneously inside oven.



TYPES OF DRYING & CURING OVENS

- Tunnel & U-Turn continuous ovens
- Box ovens
- High temperature ovens

ADVANTAGES OF ELECTRON DRYING & CURING OVENS

- Maximum energy saving & high productivity
- Homogeneous air distribution
- Modern safety protections & standards
- Tunnel & U-Turn or special designs
- Correct insulation & minimum thermal leakage
- Precise engineering & smart solutions

CONVEYOR SYSTEMS



Conveyor Systems are one of the most important parts of the lines used in automatic coating facilities. Our conveyor systems, which carry the parts to be coated for meters daily and for kilometers yearly, have a significant duty and are consisted of webb type, power&free type and cardan type.

Heavy parts to be coated are carried by webb conveyors which perform for long years with their long lasting bearings and steel cast chains. It has a wide carrying capacity range starting from 120 kg to 2 tons.

Cardan type conveyors are models with boogies consisting of 4 bearing groups moving in a closed rail. Such conveyors are essential in the lines with its vibrationless moving, automatic greasing capability and good outlook.

Power&Free conveyors are a mutli-functional carrying system with the capability of meeting the capacities with the optimum solutions, ability to turn big size parts on the conveyors and availability to load&unload parts on a motionless bar. It is an up-to-date solution meeting the needs of the customers by using different automation variants.



TYPES OF CONVEYOR SYSTEMS

- Cardan Type
- Power & Free
- Webb Type

ADVANTAGES OF ELECTRON CONVEYOR APPLICATIONS

- Automatic or manual lubrication
- Optimum solutions as per customers requirements
- High Quality and durable bearings
- Modern safety and quality standards

POWDER COATING



Saving powder paint and human health are our first priority in the production of manual and automatic powder coating booths that enable the whole non-sticked paints to be kept within the booth. They can be easily mounted anywhere required, thanks to with the help of their ergonomic and disassembled construction.

Automatic powder coating booths provide a fast and quality painting solution by making a regular feeding of the paint without any interruption of the plant. Automatic booths are produced depending to customer need as filter type, monocyclone and multicyclone types.



TYPES OF APPLICATION SYSTEMS

- Cyclone or filter type recovery systems
- Plastic or metal bodies
- Quick-color-change or ordinary designs

ADVANTAGES OF ELECTRON APPLICATORS

- Quick-color-change
- High powder recovery percentage minimum paint loss
- Maximum energy save
- Soundproof fans in CE standards

LIQUID PAINTING



Liquid Painting Application Booths are designed as automatic or manual and projected specially for all types of pieces that will be painted. We produce dry filter type and water curtain type liquid painting

booths with the maximum efficiency. Liquid painting systems consist of paint booths, flash-off rooms, positive pressure rooms, curing ovens and can be produced as separated or complete automatic line.



TYPES OF LIQUID PAINTING

- Water curtain or dry-filter type filtration systems
- Pressurised room or open type designs
- Conveyorised or manual application
- Stainless steel or galvanized steel material

ADVANTAGES OF ELECTRON LIQUID PAINTING APPLICATION

- Heating or cooling options
- Suitable designs for big volume items or small parts
- High percentage paint stopping and separation
- Maximum energy saving

PTFE (NON-STICK)



Non-stick coating designed for application on cookware, baking forms, pastry sheets, equipments for the culinary industry.

The process of non-stick coating consists of: surface preparation, application of non-stick coating and polymerization.



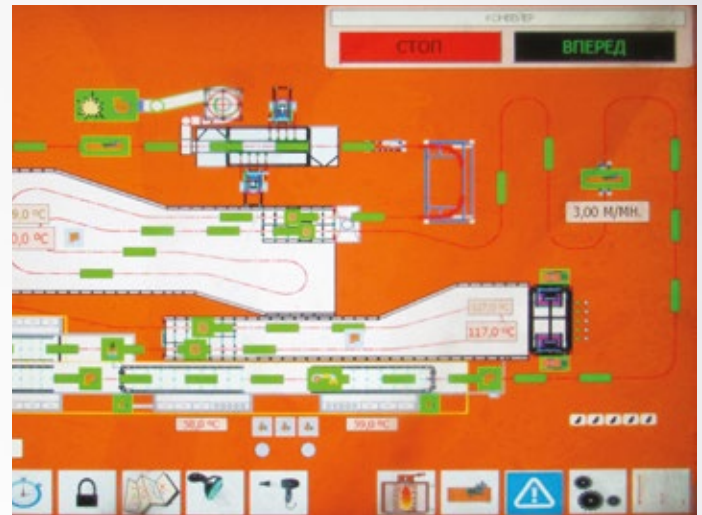
TYPES OF PTFE COATING

- Water curtain or dry type spray booths
- Preheating and high temperature curing ovens
- Pretreatment & washing systems
- Smart application systems
- Manual applications or applications with conveyor system

CONTROL SYSTEMS



In the automated systems, some of the parts of the work is left to the machines in order to save from human workforce. By the use of automated machines, the production is carried out continuously without any needs of interruption from outside.



ADVANTAGES OF ELECTRON CONTROL SYSTEMS

- Options of automatic start & stop
- Temperature observation graphics
- Distance control availability based on TCP/IP
- Option of weekly-programmable-operation
- Recording of working hours or the equipment

SPECIAL OPERATION SCENARIOS

- Operations with password
- Smart protecting applications for heating systems
- Flexibility of special scenario applications
- Less variant electrical components in the control boards

SPECIAL DESIGN



- PLC Scenarios prepared due to operator's requirements
- Adaptability of the product range and work scenarios according to the future requirements
- According to the requirements of the customer, the availability of exposure of the proper application to the proper product, and flexibility of working with receipt according to the product variability

ELECTRON is capable of realizing the special designs required by the customer and applications to meet the customers' needs.



TYPES of ELECTRON SPECIAL DESIGNS

- Compact type powder coating line for aluminium profiles
- Aging oven for aluminium profiles
- Wood effect line for aluminium profiles (sublimation)
- Special purpose curing & drying ovens

MANUAL APPLICATIONS



1- MANUAL POWDER/LIQUID PAINTING METHOD:

It is especially suitable for the organizations who have limited capacities of production and area. Those systems usually consist manual filter type booth, curing oven and powder coating equipment. If there is multi colour to be used, the booth can be cycloned type, if the application is liquid painting type, booth can be dry or wet type liquid painting booth. The curing operation is carried out in a box type oven. In such applications, coating is usually made manually.



Economically suitable for limited areas and low capacities.

BAR TRANSFER SYSTEMS



2- LOADING BAR TRANSFER SYSTEM POWDER/LIQUID PAINTING METHOD

Loading bar transfer system enables to transfer the coated parts into the curing oven without touching by hand. Such systems are usable in both powder and liquid painting systems. Coating operation can be carried out both manually and automatically. This line works with the PLC control system.



Optimum solutions for the companies where the economic and precise production is essential. High capacity rates in limited areas.

CONVEYORISED LINES



3- CONTINUOUS LINE WITH SURFACE TREATMENT POWDER/LIQUID PAINTING METHOD

Automatic conveyor lines are the solutions when the capacity of the line is exceeding the manual or semi automatic transfer options. Automatic conveyor lines, which are produced by an advanced technology, are detaily designed and precisely manufactured.



High capacity rates with low energy costs.
Suitable for bigger serial productions.

E-ROBOT

Reciprocators & PLC Systems

Reciprocators

- Smooth, swift and precise movement for speedy and uniform coating
- Reduced powder consumption
- Quick operation change with pre-programmable option settings for automatic selections of stroke and speed
- User friendly touch screen panel to control speed and stroke length
- Wide memory with 50 receipts. Last working time and total working time can be saved
- PLC controlled axis and automations



Automatic Series

- Get a perfect finish with consistent uniform film thickness
- Speed-up production
- Perfectly synchronized with reciprocators
- Centralized powder feed hopper with powder pumps

E-COAT Master

Automatic & Manual Powder Coating Equipment

The E-COAT Master Series devices are available to set up its electrical and pneumatical values via the PLC screen and are adaptable to the automation. With high coating performance it is capable of fast coating of difficult surfaces, has 50 different receipt saving memories, a double-action-trigger to recall the previous receipt and is available to set up from the back side of the gun. It also gets remote-connected and will work with the maximum highest performance. On the device itself, it has options as Smooth Surface Coating, Second Layer Coating and Difficult Surface Coating.

Specification

- Digital Statics Control
- Digital Pneumatics Control
- Remote Control on Gun
- Recipe System
- Rotary Knob Control
- Double Trigger Option
- TCP/IP Connection Option
- Fast-Purge Module Option
- Fast-Corona Module Option
- Immunity to Pneumatical Input Pressure Changes



E-COAT Master P

Automatic & Manual Powder Coating Equipment

The Electron E-COAT AP Master Series range of equipment is suitable for both manual and automatic applications. The AP Series rapidly applies powder on difficult coating surfaces, due to the dense phase powder feed pump. The dense phase transportation of powder allows the user precise control of the velocity of the powder on to the part. Coating thickness is easily achieved with repeatability and control due to the elimination of the Venturi Style pump. The Electron Master E-FEED AP pump allows the user to achieve the best possible finish with ultimate control.

Specification

- High Density, Low Velocity Transfer Technology
- Best Efficiency for thick and hot coating applications
- Digital Statics Control
- Digital Pneumatics Control
- Remote Control on Gun
- Recipe System
- Rotary Knob Control
- Double Trigger Option
- TCP/IP Connection Option
- Purge System Included
- Fast-Corona Module Option
- Immunity to Pneumatical Input Pressure Changes
- Double & Single Pump Compatibility



E-COAT Pro V2

Automatic & Manual Powder Coating Equipment

E-COAT Pro V2 Series devices are very efficient and intelligent with the availability to set the current and voltage values and use the manometer and regulator in common. E-COAT Pro V2 Series, with its working options in itself **Smooth Surface Coating**, **Second Layer Coating**, **Difficult Surface Coating**, is capable to keep 50 different receipts in its memory.

Specification

- Digital Statics Control
- Manual Pneumatics Control
- Recipe System
- Rotary Knob Control
- Fast-Corona Module Option



E-LAB BC (Bag type with cup)

E-LAB BC (Bag Type Lab Device with Master Controller ft Cup gun) is designed for movable and small-scale testing. Paint is put into the powder cup. E-LAB BC is used for this applications. E-LAB DI contains all electrical and pneumatic features of E-COAT master model. It can remove and mounted easily base of the Powder gun. It is the useful solution for sample small size testing and different colors that made. It is a portable application solution for sample tests made in different areas, which is easy to carry thanks to the structure of a complete bag when closed.

Content

- Master controller
- Lab Gun with cup gun
- Bond type bag
- Different nozzles set
- Hose ft Accessoires

Optional Accessories

- E-GUN Fast-Corona
- Ion Collector Module



E-LAB DC (Desktop type with cup)

E LAB DC desktop type lab device with master controller&cup is designed for applications where constant use is desired in laboratory environments ,small sample sizes are made and the paint is put into Powder cup.E LAB DC which contains all the electrical and pneumatic features of E coat Master model Powder coating application device ,is presented as a useful solution for small sample tests made with different colours in stationary use situations such as laboratory environment thanks to the dismantlable Powder paint cup and easily cleanable internal structure.

Content

- Master controller
- Lab Gun with cup gun
- E Coat series desktop assembly frame

Optional Accessories

- E-GUN Fast-Corona
- Ion Collector Module



E-LAB BI (Bag type with Inline Injector)

E-LAB BI (Bag Type Lab Device with Master Controller ft Manual gun with Powder Suction Extension) is used for small size sample lab testing. The paint is sucked through a sample bag. E-LAB BI contains all electrical and pneumatic features of E-COAT master model. It can remove and mounted easily base of the powder gun (E-GUN C1). It is the useful solution for sample small size testing and different colors that made. E-LAB BI can be used with E-HOPP HSS Slt and E-HOPP 50 which has E-FEED V2 injector. Thanks to these options, E-LAB BI is proper for all small or large scale of stationary uses.

Content

- Master controller
- Lab Gun with box feeder pipe
- Bond type bag
- Different nozzles set
- Hose ft Accessoires

Optional Accessories

- E-GUN Fast-Corona, Ion Collector Module
- E-HOPP HSS, SLT Powder Coating Hopper Mobile Carriage Kit
- E-FEED V2 Powder Coating Injector and Powder Coating Hose
- Powder coating storage systems that can be used with E-HOPP 50
- Chrome Powder Coating Hopper or E-FEED V2



E-LAB DI (Desktop type with Inline Injector)

It is used for small size sample lab testing. The paint is sucked through a sample bag. E-LAB DI contains all electrical and pneumatic features of E-COAT master model. It can remove and mounted easily base of the powder gun (E-GUN C1). It is the useful solution for sample small size testing and different colors that made. E-LAB DI can be used with E-HOPP HS8 8lt and E-HOPP 50 which has E-FEED V2 injector. Thanks to these options, E-LAB DI is proper for all small or large scale of stationary uses.

Content

- E-COAT Master type electrostatic powder coating device,
- E-GUN C1 Electrostatic powder paint gun,
- E-FEED VI, In-Line type under-gun suction injector,
- E-COAT series desktop mounting chassis

Optional Accessories

- E-GUN Fast-Corona, Ion Collector Module
- E-HOPP HSS, SLT Powder Coating Hopper Mobile Carriage Kit
- E-FEED V2 Powder Coating Injector and Powder Coating Hose
- Powder coating storage systems that can be used with E-HOPP 50
- Chrome Powder Coating Hopper or E-FEED V2



E-SENSE Smart Part Detection Systems

- E-SENSE is a part detection supervised automated painting control system where all the equipments of the painting system is controlled by a main PLC based controller depending on the signals received from the sensors.
- Reciprocators move and adjust themselves depending on the part height, distance and speed automatically
- Guns turn on and off their powder output depending on the parts and gaps
- Powders amount is adjusted automatically depending on the part speed and stroke height by the system when this option is enabled

Contents

- Part Detection Sensors
- Electrical Control Panel equipped with PLC based automation and 7" touchscreen
- Encoder to be placed on the conveyor

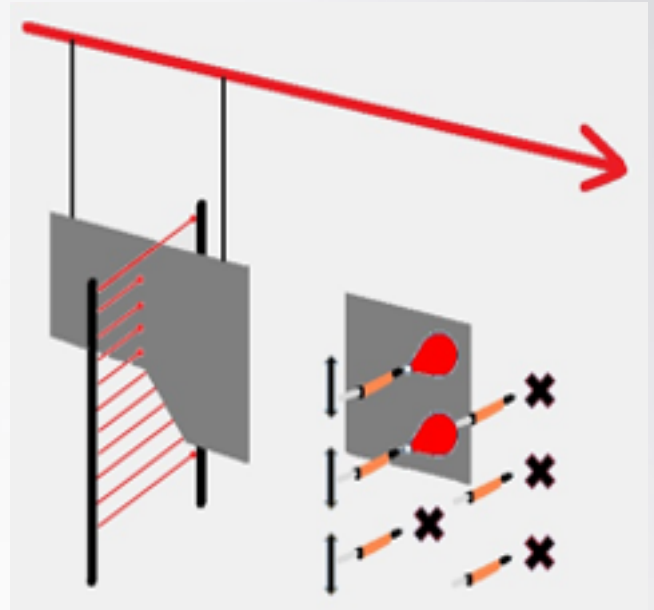
Options

- E-SENSE Kiosk with 12" touchscreen



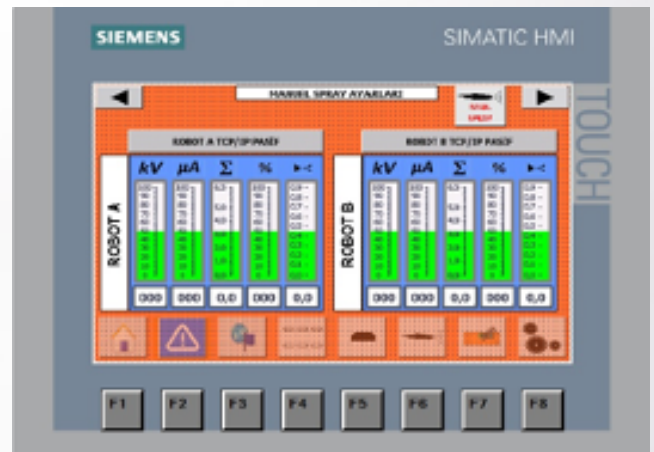
E-SENSE Gap Detection

- Different type of detection scenarios depending on the gun configuration
- Start/Stop delays and offsets adjustable by preferences
- Automatic reciprocator stroke control depending on the gun configuration
- Automatic reciprocator speed control depending on the conveyor speed when enabled



E-SENSE Powder Amount Control

- Automatic powder amount control depending on the conveyor speed and stroke height when enabled
- Independent adjustment capability of electrostatics
- TCP/IP communication with E-COAT Master series devices.
- Can be also used with E-COAT Pro type devices if only to be used without powder amount and electrostatics automatic adjustment.





E-FEED PM120

PM120 Series equipment is suitable for semi-automatic applications. Fast cleaning. The lean design lets you utilise the production floor space. Smooth and effective powder distribution. Brilliant Coating Performance. Available for 20 powder coating guns.

E-FEED PM220

PM220 Series equipment is suitable for automatic applications. Faster and thorough cleaning. The lean design lets you utilise the production floor space. The guided interface makes it easier to use the system. Smooth and effective powder distribution. Best solution for continuous production. Available for up to 20 powder coating guns.



E-FEED PM320

PM320E Series equipment is Electron's most advanced powder management center. Fastest and thorough cleaning. The lean design lets you utilise the production floor space. The guided interface makes it easier to use the system. Smooth and effective powder distribution. The system is fully encapsulated against any powder leakage. Used with an Exhaust System such as Electron Filter Groups. Best solution for continuous production. Available for 24 powder coating guns.



E-FEED HD

E-FEED HD is a pneumatic pump transferring powder coating from one station to another with very high efficiency. It works according to “high density, low velocity” principle and consists of two sections; a “Powder Transfer Unit” and a “Control Panel”. E-FEED HD holds the number spot for being the highest transfer rate among competitors with 7, 9 kg/min. transfer capacity. Through this high transfer capacity, total needed working time is reduced and lifetime of replacement parts is maximized. It has an ultra fast self-cleaning function which provides cleaning in a few seconds by the help of smooth inner surface and special material used. Replacement parts are changeable without stopping the pump by the help of quick connection design of replacement to the body of unit.

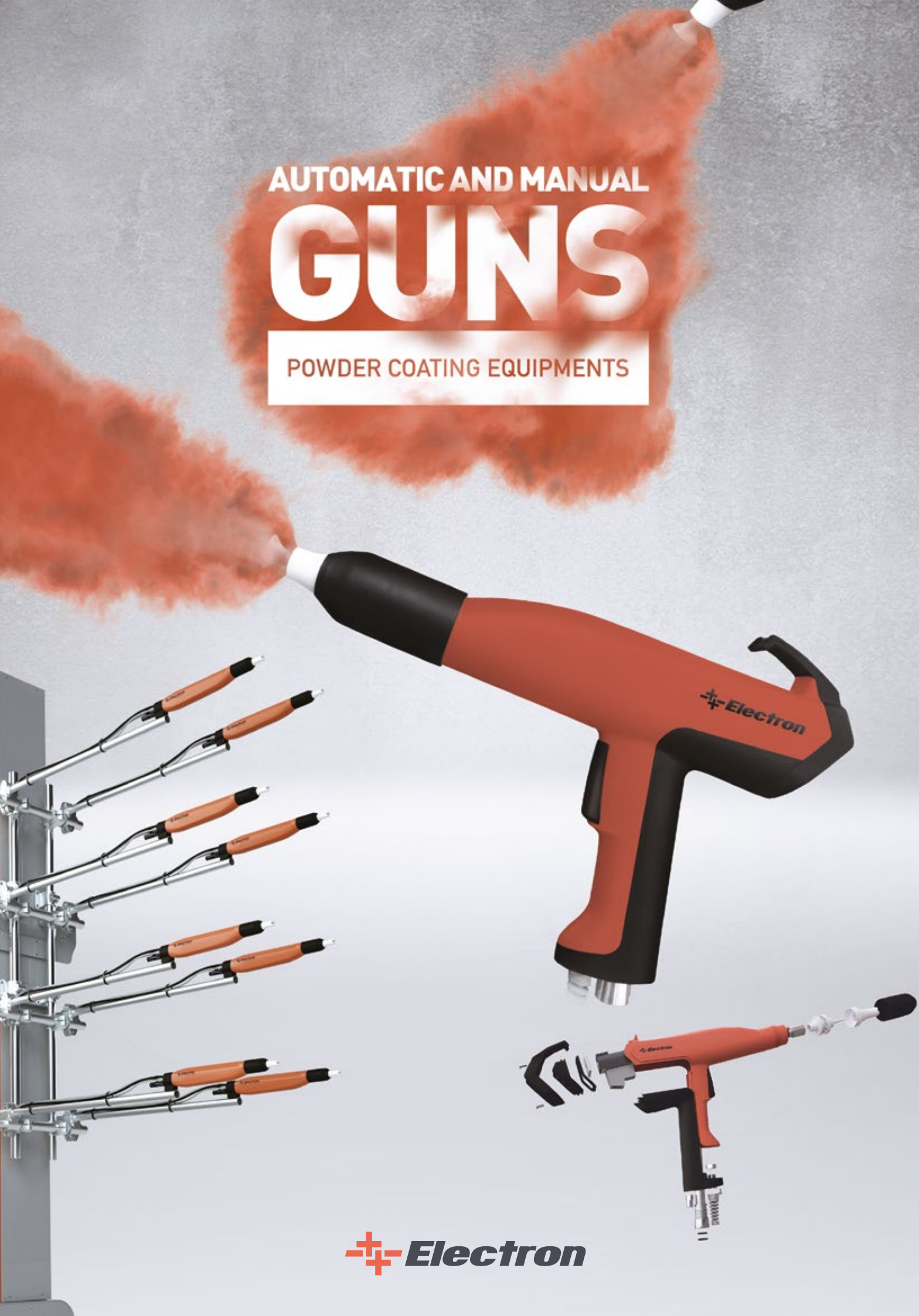
Some functions of the unit

- Transfer Pressure Adjustment
- Vacuum Pressure Adjustment
- 7,9 kg/min. powder transfer capacity
- Fast change of replacement parts
- Timer for replacement parts lifetime
- Control of output current and process with “Check Manometer”
- Control option by its own control panel or adaptable to any other industrial automation system
- 2 levels of pumping frequency selection
- Powder level sensor adaptable
- Dual transfer capability in both directions (top/down, down/top)
- Fluidizing output
- ATEX II 3D, IP54 Protection Class



AUTOMATIC AND MANUAL GUNS

POWDER COATING EQUIPMENTS



 **Electron**



Why you should choose us as a business partner?

Electron is the best partner for you.

Because:

- Electron has experience of production since 1998,
- Electron has quality production facilities and high capacity production lines,
- Electron has qualified, skilled, experienced and well-equipped engineers and workers,
- Electron owns certificates of production and quality for high standards,
- Electron has own production departments for complete turnkey projects and powder coating equipment,
- Electron exports to about 50 countries around the world and has capacity to make service and supply with spare parts all its customers.



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