STRONG3000

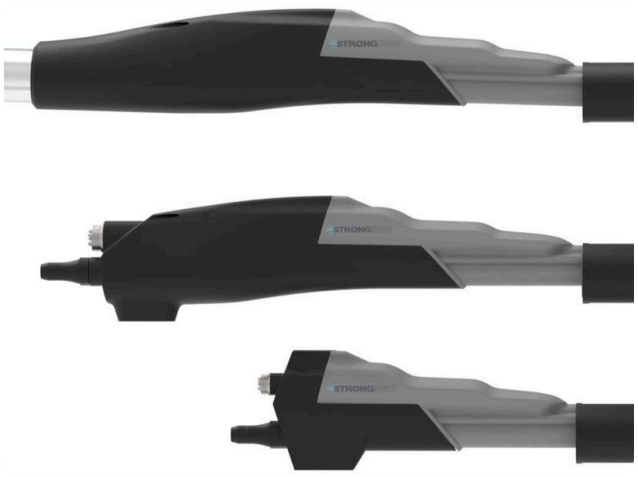
TECHNICAL DATA SHEET

Product Data Sheet · Revision: November 2026

APPLICATION EQUIPMENT

Automatic Powder Coating Gun

The Automatic Powder Coating Gun makes electrostatic powder coating continuous and repeatable for high-volume production lines. Mounted on a reciprocator or robot, it works in a fixed or moving array; voltage, current and powder flow are managed centrally to give every part a consistent film thickness. Integrated with the Smart and Smart AI control platforms and line automation, it engages in sync with conveyor speed, part detection and recipes.



Open online

strong3000.com/en/products/automatic-powder-gun/

KEY FIGURES

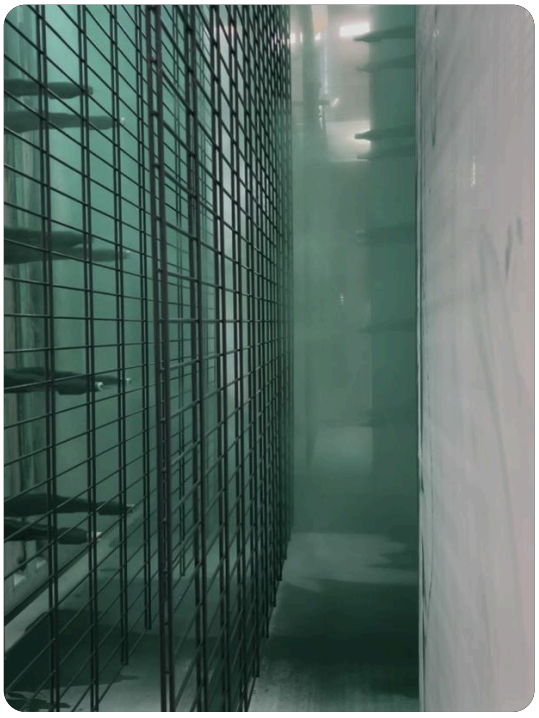
Output voltage (U max)	Output current (I max)	Charging system	Polarity
100 kV DC	**120 µA DC**	**Corona**	**Negative**

OVERVIEW

Consistent Quality for Series Production.

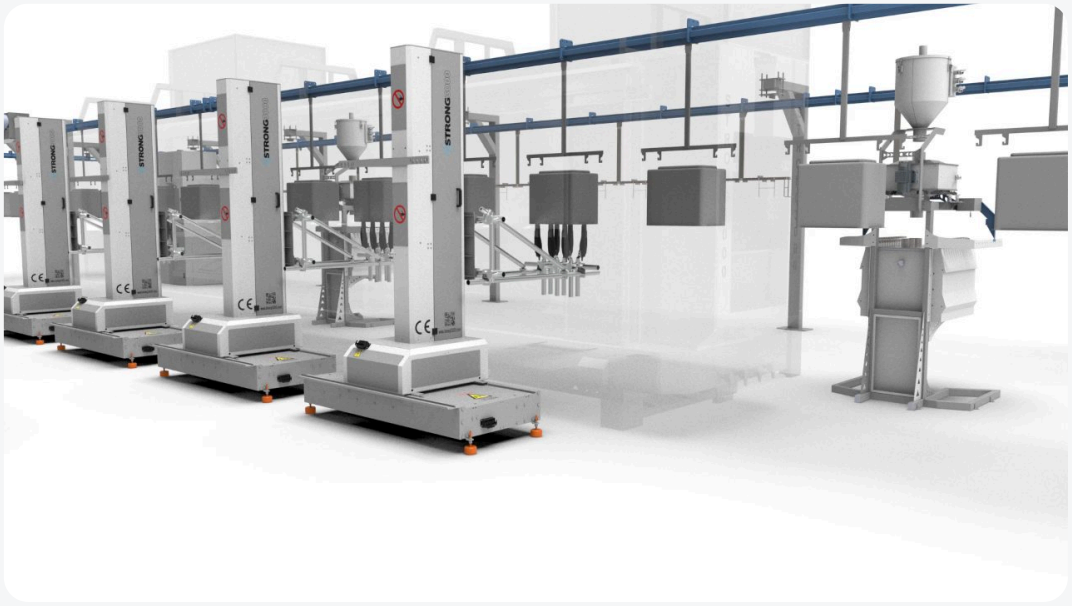
The automatic powder coating gun is designed for continuous coating on conveyorized production lines without operator intervention. The guns are mounted in an array on a reciprocator; as parts travel past on the conveyor, an up-and-down stroke covers the entire surface. The number and spacing of guns are defined per project according to line width and part size.

The kV, µA and powder output of each gun are managed individually from the central control unit and run in sync with the conveyor and reciprocator motion. When integrated with the Smart and Smart AI platforms, all parameters are stored as recipes; the same part is coated with the same film thickness every time, giving repeatable, operator-independent results.



KEY BENEFITS

Built for Automation.



High Volume

Operator-independent operation for continuous production.

Fixed or Moving Array

Flexible layout with reciprocator or robot mounting.

Repeatable Quality

Consistent film thickness on every part with recipes.

Automation Integration

Synced with Smart / Smart AI control and line automation.



HEAD GROUPS

Head Groups and Nozzle System.

The head group of the automatic gun is the critical component that holds the nozzle, deflector and electrode assembly together. Depending on part geometry, flat, angled (45° / 90°) or rotating nozzle heads change the shape and direction of the powder cloud.

Choosing the right head group delivers even film thickness and high transfer efficiency in corners, recesses and cavity areas. Watch the video to see how head groups work and the different nozzle types.

For More Information →

ACCESSORIES

Gun Accessories.

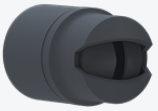
Adapt the gun to part geometry and application with deflectors, nozzles and extensions.

Extension — 30 cm
Access to deep and distant areas.

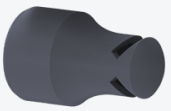
Extension — 15 cm
Mid-range access.



Deflectors (Ø14–Ø26)
Powder cloud width and direction.



Flat Nozzle (Flat / Rotating)
Wide, even powder distribution.



45° Angled Nozzle
Corners and inner surfaces.



45° Angled Nozzle
Double angle for challenging geometries.



90° Angled Nozzle
Cavities and perpendicular surfaces.



Head Nut
Nozzle/deflector retention.



Corona Plus Ring
Reduces back-ionization.



Electrostatic Nozzle Body
Nozzle and deflector mounting body.

AUTOMATION & ROBOTICS

Robot Integration.

Automatic guns are mounted on different automation systems according to part geometry — from single-axis reciprocators to multi-axis robotic motion.



SINGLE AXIS

Single-Axis Reciprocator

Moves automatic guns up and down on a single vertical-stroke axis; delivers repeatable, uniform coating coverage on flat and tall parts.

Explore →



TWO AXES

Two-Axis Reciprocator

Adds in/out motion to the vertical stroke to move the guns toward and away from the part; delivers consistent powder coverage on surfaces of varying depth and recesses.

Explore →

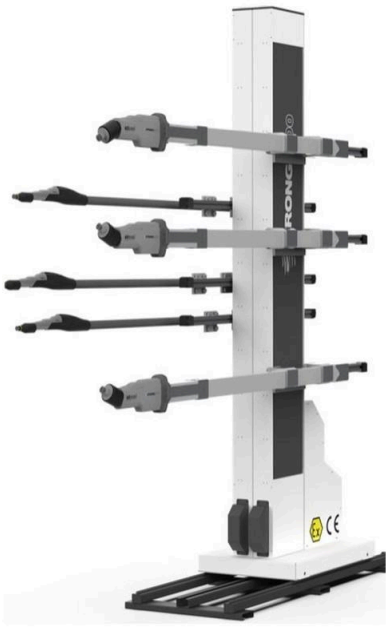


THREE AXES

Three-Axis Systems

Adds a third axis to the vertical stroke and in/out motion; delivers wider, uniform coating coverage on variable-profile parts with more degrees of freedom.

Explore →



ROBOTICS

Robot Integration

Mounts automatic guns on multi-axis / 6-axis robotic motion; working integrated with Smart AI, it delivers precise coating on complex, deep and shadowed geometries as well.

Explore →

ORIGINAL TECHNOLOGY

Cast Cascade Technology.

The cascade is the heart of every gun, converting low voltage into high electrostatic voltage. Its durability directly determines gun life and coating quality — and on automatic lines running continuously, that durability is even more critical.

CONVENTIONAL CASCADE

Add-On Cartridge Type

A cartridge-type cascade attached externally to the body is exposed to moisture and dust through its connection points; under vibration and continuous operation it is easily damaged and fails.

STRONG3000

Cast in One Piece with the Body

Our cascade is cast in one piece with the gun body and fully encapsulated using a special vacuum technique. It is ultra-resistant to moisture, dust and continuous line operation.

Moisture & Dust Sealed · Continuous-Duty Durability · Long Service Life

Watch the Technology

Explore Our Technologies →

TECHNICAL SPECIFICATIONS

Automatic Gun — Technical Specifications.

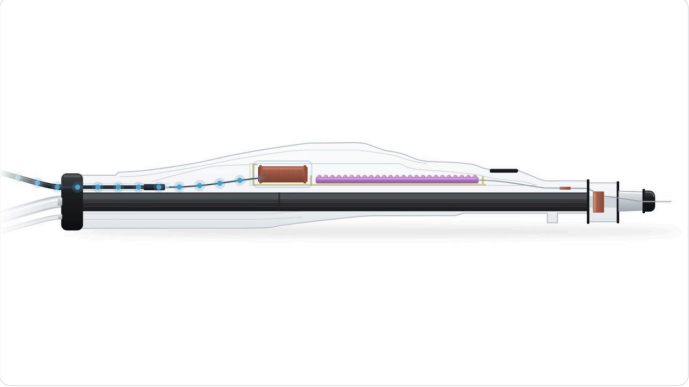
Values are based on the ATEX certificate (IEP 23 ATEX 1256X) of the STRONG3000 SMART series electrostatic gun. Body length and mounting configuration are defined per project.

Output voltage (U max)	100 kV DC
Output current (I max)	120 µA DC
Charging system	Corona
Polarity	Negative
Powder output	450 g/min (max.)
Hose length	6 m
Protection class	IP 54
Operating temperature	+5 – +40 °C
ATEX marking	⟨Ex⟩ II 2D (≤ 2 mJ)
Certificate & standard	IEP 23 ATEX 1256X · EN 50050-2
Body lengths	Short / medium / long
Mounting	Reciprocator & robot integration
Control	OKP automatic control panel, line-PLC synced

CORONA SYSTEM

How Does Corona Charging Work?

From low voltage to surface adhesion — the six steps of electrostatic powder coating.



1

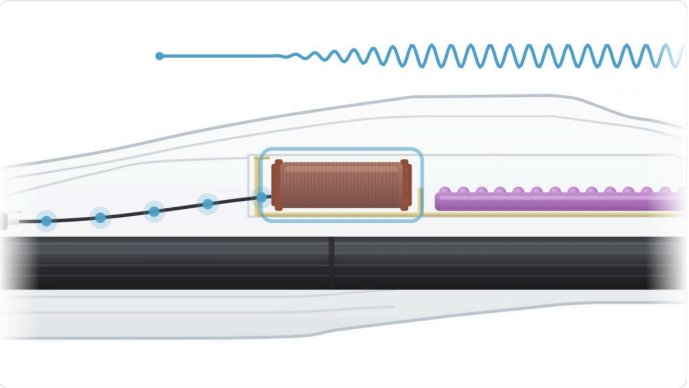
Low Voltage

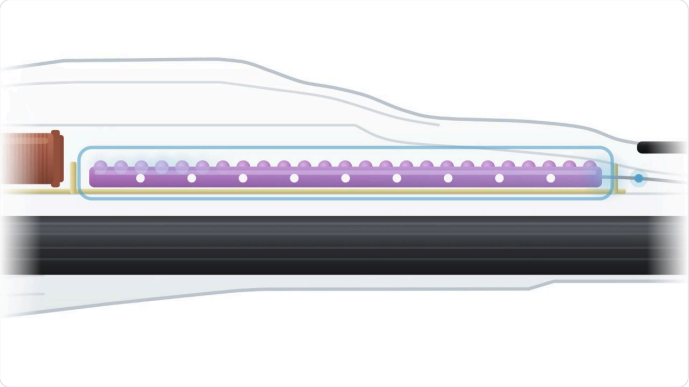
The gun is supplied with a low, safe DC voltage from the control unit.

2

Coil

The coil converts this low voltage into a high-frequency oscillation, preparing it for amplification.





3

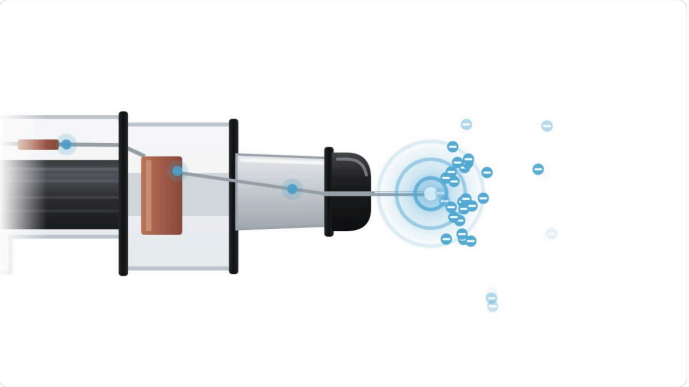
High-Voltage Cascade

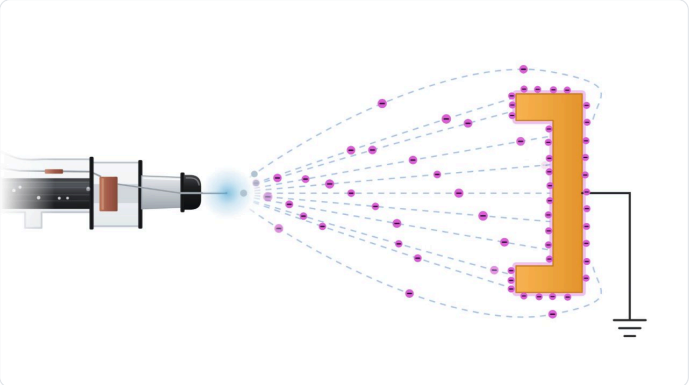
The cast cascade boosts the voltage to around 100 kV — the source of the gun's charging power.

4

Electrode and Ionization

The strong electric field at the electrode tip ionizes the surrounding air (corona discharge).





5

Charging the Powder

The ions formed charge the powder particles leaving the gun negatively.

CONFIGURATIONS

Choose Your Setup.



Short / Medium / Long Body

A short, medium or long body is selected according to booth depth and part size. The long body reaches further in deep booths and on large parts, while the short body offers easier positioning and mounting in tight spaces. Body length is defined per project together with reciprocator stroke and gun spacing.



OKP Control Panel

An automatic control cabinet that manages multiple guns from a single point. kV, µA and air settings are made individually for each gun, and the entire line is monitored from the touchscreen. With PLC integration it runs in sync with conveyor and reciprocator motion, enabling recipe-based, repeatable production.



Reciprocator Package

A complete application cell with a single- or two-axis reciprocator that moves the guns in a vertical stroke. Stroke length, speed and number of guns are engineered according to part size and line capacity.

INDUSTRIES

Engineered Around Your Product.

Different parts require different processes. STRONG3000 tailors application, automation and curing to your product, geometry and capacity.

Home Appliances

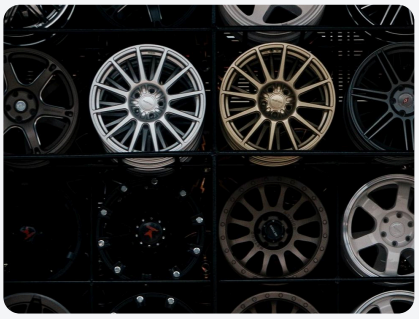
Ovens, cooktops, refrigerators



Explore →

Automotive

Wheels & parts



Explore →

Water Heaters

Tank interior enamel (electrostatic)



Explore →

Cookware

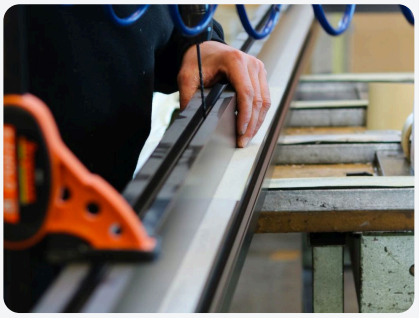
Steel & cast iron enamel



Explore →

Aluminum

Profiles & facades



Explore →

Wire Fencing & Mesh

Panel fencing & mesh



Explore →

Electrical Enclosures

Enclosures & cabinets



Explore →

Metal Industry

Furniture, shelving, sheet metal



Explore →

CERTIFICATIONS

Built to Standards.

STRONG3000 Automatic Powder Coating Gun holds ATEX and CE documentation. You can download the documents below.

CE 2284 · ATEX II 2D · IEP 23 ATEX 1256X · EN 50050-2



ATEX — Hand-held Gun

IEP 23 ATEX 1256-X · PDF · 3.5 MB

Download



CE — Device & Gun

2023PTC3602 · PDF · 1.2 MB

Download



ATEX — Controller

IEP 23 ATEX 1257-X · PDF · 2.7 MB

Download



ATEX — Production Quality Assurance

IEP 23 ATEX Q1258 · PDF · 2.2 MB

Download

VIDEO

See It in Action.







FAQ

Frequently Asked Questions.

How many guns are used on a line?

2–24 guns depending on part width and line speed; our engineering team plans the layout.

How long does a color change take?

Typically 10–15 minutes with color center integration.

How does it differ from OWL?

OWL goes beyond a fixed-axis gun, using head motion to reach deep/cavity geometries; the two can also be used together.

Can it be integrated into an existing line?

Yes. The OKP panel connects to your existing line PLC via communication.

WHY STRONG3000?

The Engineering Difference.

We don't sell equipment and walk away; we stay with your line from design through commissioning and beyond.

Integrated Engineering

Machinery, electrical, automation and software under one roof — not sourced and assembled.

In-House Technology

Smart AI and OWL are original STRONG3000 technologies developed in-house.

Proven Experience

25+ years of engineering; installation, commissioning and service in 40+ countries.

24/7 Support

Phone, remote connection and 24/7 live support via WhatsApp.

Quotes & Technical Consulting

Tell us about your part, capacity and process. A STRONG3000 engineer will get back to you with a tailored proposal.

Production Center	Ömerli Mah. Elektro 2000 Sanayi Sitesi B18 Blok, Tunaboyu Sk. No:1AZ, 34555 Arnavutköy / Istanbul, Türkiye
Phone	+90 212 438 56 94 · +90 534 037 98 10
E-mail	info@strong3000.com
24/7 WhatsApp	+90 537 353 54 19
Web	strong3000.com/en/products/automatic-powder-gun/

FOR A QUOTE, PREPARE

- Product to Be Coated
- Max. Part Dimensions
- Required Capacity
- Number of Colors
- Daily Color Changes
- Coating Process
- Project Timeline

Values are typical ranges; final values are confirmed per project by STRONG3000 engineering. This sheet summarises the product page on our website; scan the QR code for the latest information.