TECHNICAL DATA SHEET

Product Data Sheet · Revision: November 2026

APPLICATION EQUIPMENT

Manual Powder Coating Gun

The Manual Powder Coating Gun puts electrostatic powder coating directly in the operator's hand. Using corona charging (with an optional tribo mode) to charge the powder, it delivers precise coverage for touch-up work, small batches and complex or one-off parts. An ergonomic body and quick recipe adjustment let the operator tune voltage, current and powder flow to part geometry on the fly; it pairs with Elite, Elite Plus and Smart control units and powder delivery to form a coordinated line.



Open online

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

KEY FIGURES

Nominal input voltage	Operating frequency	Nominal output voltage	Maximum output current
10 V eff (varies by project)	**18 kHz**	**100 kV**	**120 µA**

OVERVIEW

For Every Job That Needs Flexibility.

The manual gun steps in where an automatic line cannot reach: sample and prototype coating, recessed or complex geometries, low-volume production and touch-up after automatic application. The operator directs powder straight at the target and relies on electrostatic corona charging to make it cling to the part.

For demanding Faraday-cage areas or fine finishes, a tribo charging option is available. The gun works alongside STRONG3000 control units and powder delivery to keep application consistent and repeatable.

TECHNICAL TOUR

Get to Know the Gun.

Key details of the gun, with frames from the walkthrough video.



01

Precise Trigger System

A microswitch-based trigger senses the smallest finger movement — starting and stopping powder exactly when you want, for a stable, fatigue-free application feel.



02

Head Group in One Turn

The head group releases with a single turn. The electrode group and nozzle come off tool-free — cleaning, maintenance and color change take seconds.



03

Clip-On Hose Holder

The hose holder is fixed with a clip; turn it and it comes off and back on easily. A practical yet solid connection for everyday use.



04

Rear Control Buttons

Rear buttons switch between modes; the kV (kilovolt) value is adjusted instantly with + and – buttons. Fast, precise optimisation per part.

KEY BENEFITS

Precision in Hand.



Ergonomic Body

Balanced handheld use that stays comfortable over long shifts.



Instant Communication & Adjustment

The gun communicates with its control unit in real time; kV, µA and powder settings apply instantly from the touchscreen.



System Compatible

Pairs with Elite, Elite Plus and Smart control units and the powder feed system.

ORIGINAL TECHNOLOGY

Cast Cascade Technology.

The cascade is the heart of the gun that converts low voltage into high electrostatic voltage. Its durability directly determines the gun's lifetime and coating quality.

CONVENTIONAL CASCADE

Add-On Cartridge Type

A cartridge-type cascade added onto the body from outside is exposed to moisture and dust at its connection points, and is easily damaged or fails on impact and drops.

STRONG3000

Cast in One Piece with the Body

Our cascade is cast as a single piece together with the gun body and fully encapsulated with a special vacuum technique. Ultra-durable against moisture, dust and drops.

Moisture & Dust Sealed · Impact & Drop Resistant · Long Service Life

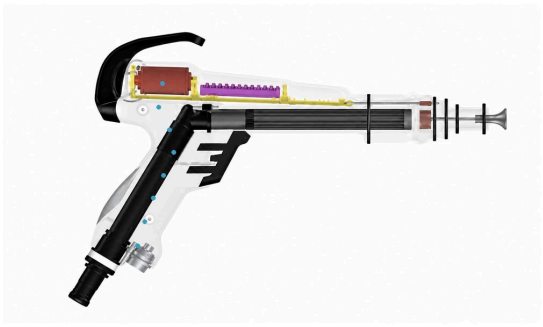
Watch the Technology

Explore Our Technologies →

CORONA SYSTEM

How Does Corona Charging Work?

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



1

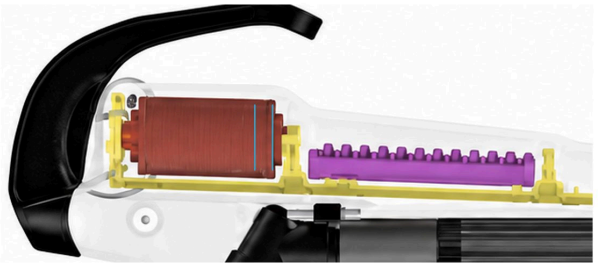
Low Voltage

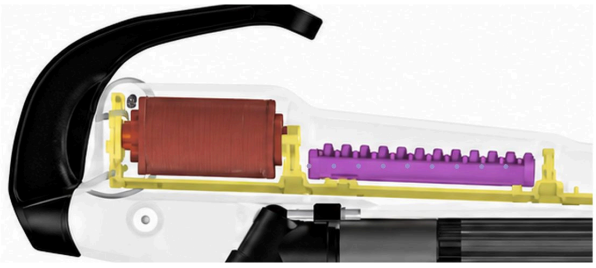
The gun is supplied with a low, safe DC voltage from the control unit.

2

Coil

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





3

High-Voltage Cascade

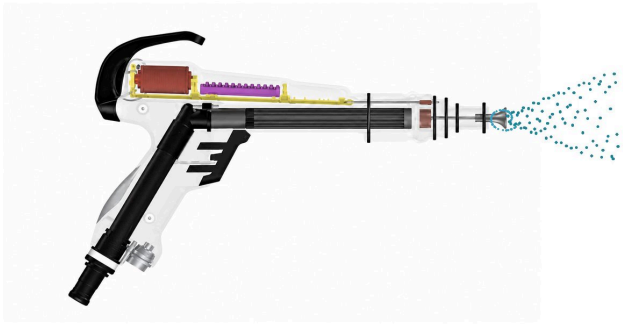
The cast cascade boosts the voltage to around 100 kV — the source of the gun's charging power.

4

Electrode and Ionization

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





5

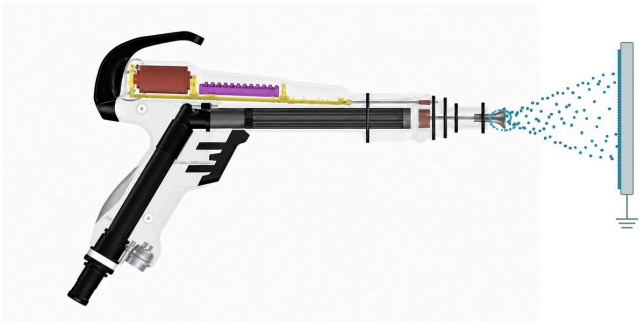
Charging the Powder

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

6

Adhesion to the Surface

The charged powder is drawn to the grounded part by electrostatic force and adheres to the surface.



CONFIGURATIONS

Choose Your Setup.



Manual Powder Enamel Gun

Abrasion-resistant manual gun for vitreous/porcelain enamel.



Manual Powder Coating Gun

Manual gun for standard powder coating applications.



Manual Laboratory Gun

Lab-type gun for samples and R&D work.

TECHNICAL SPECIFICATIONS

Manual Gun — Technical Specifications.

Values are taken from the technical manual of the Strong3000 Manual Powder Coating Gun (Document No: 451124-T-001). Nominal input voltage and frequency may vary by project/control unit.

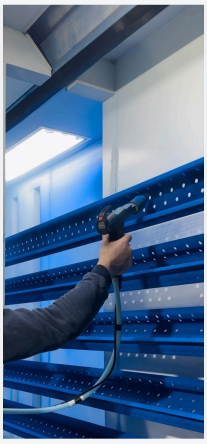
Nominal input voltage	10 V eff (varies by project)
Operating frequency	18 kHz
Nominal output voltage	100 kV
Maximum output current	120 µA
Polarity	Negative (corona charging)
Ignition protection	ATEX — II 2D
Operating temperature	0 °C – +40 °C
Maximum surface temperature	85 °C
Weight	530 g
Body	Plastic body — cast cascade (one piece with the body)
Head group / nozzle	Special engineering plastic (for powder coating)
Powder hose inlet diameter	11×17 mm, POE (double carbon)

APPLICATIONS

Where It Excels.

Touch-up & Repair

Touch-up & repair coating



Explore →

Samples & R&D

Sample and R&D work



Explore →

Low-to-Mid Volume

Low- to medium-volume production



Explore →

Complex Geometry

Parts with complex geometry



Explore →

COMPATIBLE EQUIPMENT

Part of the STRONG3000 System.



Smart

Smart control



Smart AI

AI control



Laboratory Unit

Samples & R&D



Venturi Injector

Precise powder feed

ACCESSORIES

Gun Accessories.

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

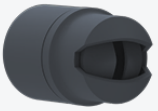
Extension — 30 cm
Access to deep and distant areas.



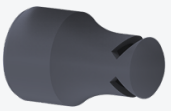
Extension — 15 cm
Mid-range access.



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.

CERTIFICATIONS

Built to Standards.

STRONG3000 Manual 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

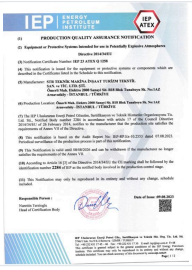
Download



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



CE — Device Certificate

2023PTC3601 · PDF · 1.2 MB

Download

VIDEO

Take a Closer Look.



Manual Powder Coating Gun — Overview

FAQ

Frequently Asked Questions.

How do I get spare parts?

Nozzles, electrodes and venturi sets from stock; order via the 24/7 support line.

How are kV and powder output adjusted?

Via recipes on the control unit; switch between stored programs per part type.

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/manual-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.