STRONG3000

TECHNICAL DATA SHEET

Solution Sheet · Revision: November 2026

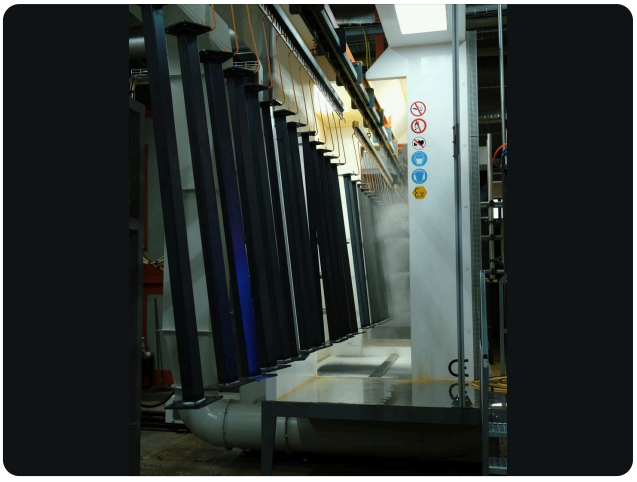
SOLUTIONS

Turnkey Powder Coating Line

We engineer, manufacture and commission pretreatment, the powder coating booth, electrostatic application, powder recovery, the curing oven and automation as a single powder coating plant.

Open online

strong3000.com/en/solutions/turnkey-powder-coating-lines/



SYSTEM OVERVIEW

A Line Designed as One System.

The output of a powder coating line depends on how well its stages work together. STRONG3000 engineers pretreatment, drying, electrostatic application, powder recovery, the curing oven and PLC control as one integrated system. The line is sized to your part geometry, hourly throughput and available floor space.



Automatic · Frequent color change

Automatic System for Fast Color Change

For production that changes color many times a day. The automatically purged color center, PVC monocyclone booth and reciprocators work together, turning color change into a planned, repeatable routine.

- Injectors, hoses and guns are purged automatically with compressed air
- Color change: similar colors 10–15 min · contrasting colors 20–25 min
- Booth, color center and guns are managed from one PLC touchscreen



Automatic application · Simple color center

System with Base Color Center

A system that keeps the color center simple and manual. Powder separated in the cyclone is sent to the color center hopper by a transfer pump; application is automatic with reciprocators.

- Simple, manually operated Color Center Base
- Powder transfer from the cyclone to the hopper by transfer pump
- Powder recovery with monocyclone and after-filter



Color center inside the booth

All-in-One System

The color center is integrated into the booth body, so no separate color center area is needed. Booth, reciprocators, cyclone and filter unit come together in one compact system.

- Color center in the booth body
- No separate color center area needed
- For plants with limited space and single-unit solutions



Full automation · Part recognition

OWL-Integrated System with Part Recognition

A fully technological system with part recognition and OWL integration. Reciprocators position automatically through part recognition; OWL heads rotate up to 75° in every direction to direct powder into corners and inner surfaces.

- Automatic positioning with part detection
- OWL head rotates up to 75° in every direction
- Up to 6 OWLs from one screen, each with its own settings

LINE LAYOUT

What Is Inside the Line?

The components of the automatic fast color-change system and the role each one plays in the line.





1 Powder Center

The hub that feeds powder to the guns. Virgin powder and powder returning from the cyclone mix in one hopper; injectors deliver it through the hoses to the guns.

COLOR CHANGE
Similar colors 10–15 min · contrasting colors 20–25 min

PURGING
Injectors, hoses and guns: automatic, with compressed air

Explore the Color Center →



2 Automatic Gun Reciprocators

Carry the automatic guns to the part through the booth openings and run in sync with line speed. The working area is enclosed by a safety fence.

STROKE
500–2,500 mm (project-based)

CONTROL
Line PLC synchronization

Explore the Reciprocator →



3 PVC Powder Coating Booth

The PVC walls do not hold powder; it slides down and is drawn to the monocyclone through the extraction ducts under the booth. No filter cartridge change for every color.

BODY
Powder-repellent PVC panels

POWDER EVACUATION
Floor air valves + under-booth extraction

Explore PVC Booths →



4 Monocyclone

Separates the powder from the air extracted from the booth. There is no hopper underneath; the TP-2 transfer pump sends the powder straight to the color center hopper.

POWDER TRANSFER
TP-2 — 6 kg per minute over 15 m

AT COLOR CHANGE
Only the lower section is opened by pistons and cleaned

Explore Cyclones →



5 Extraction Ducting

Connects the booth, monocyclone and filter unit in a closed air circuit. The extraction points on the color center also send airborne powder to the cyclone through the same circuit.

AIRFLOW
Booth → monocyclone → filter unit

RECOVERY
Monocyclone + after-filter (hopper under filter)

See the Powder Flow →



6 Filter Unit

Captures the very fine powder that passes the cyclone with cartridge filters and returns clean air to the shop floor. The captured powder collects in the hopper below the filter.

CLEANING
Jet-pulse, 5–6 bar

FAN FLOW RATE
5,000–15,000 m³/h (project-based)

Explore the Filter Unit →

KNOWLEDGE CENTER

Powder Coating or Powder Enamel?

The two processes look similar on the line, but the material, temperature and result differ.
We explain the basics and the differences in the Knowledge Center.

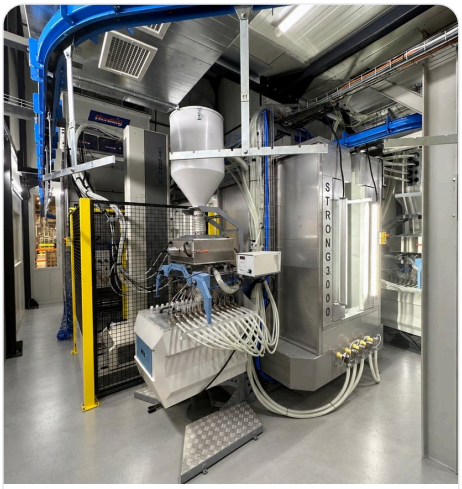


POWDER COATING

What Is Powder Coating?

Electrostatic charging, the cure window and recovery — how a powder coating line works.

7 min read • Fundamentals



POWDER ENAMEL

What Is Powder Enamel?

What vitreous enamel is, what happens at 780–850 °C on steel and 530–570 °C on aluminum, and where powder enamel and wet enamel diverge — an end-to-end guide.

9 min read • Guide



COMPARISON

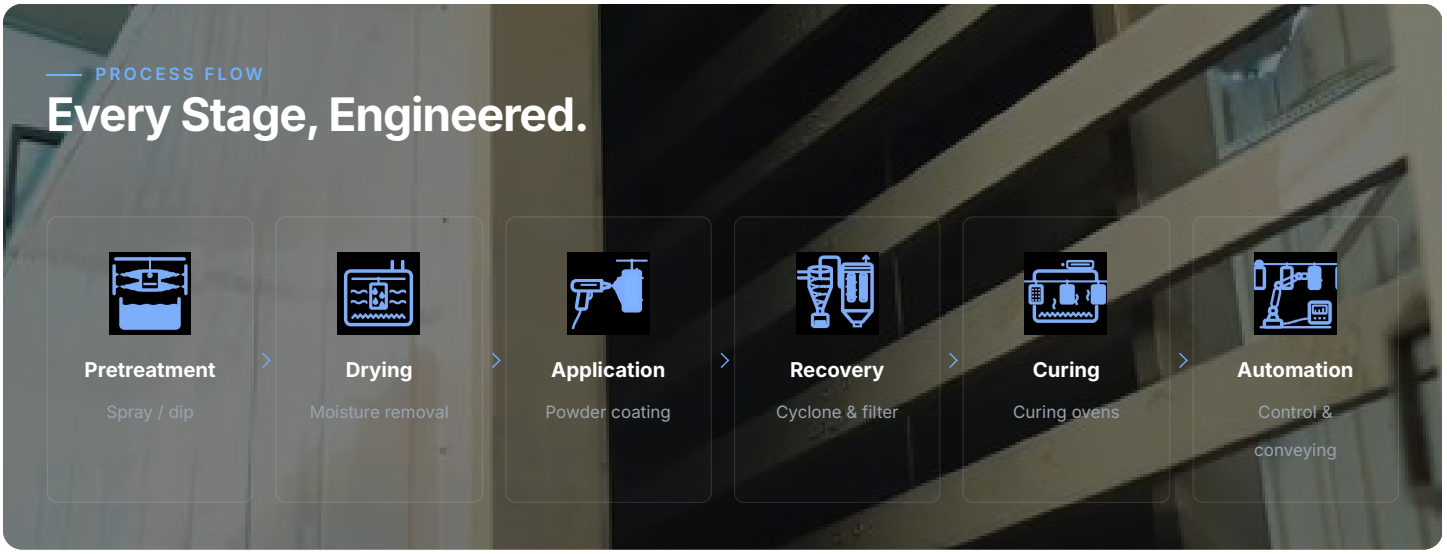
The Difference Between Powder Coating, Powder Enamel and Wet Enamel

Which part needs powder coating and which needs enamel? A decision guide based on temperature, durability and cost.

6 min read • Comparison

PROCESS FLOW

Every Stage, Engineered.



Pretreatment
Spray / dip

Drying
Moisture removal

Application
Powder coating

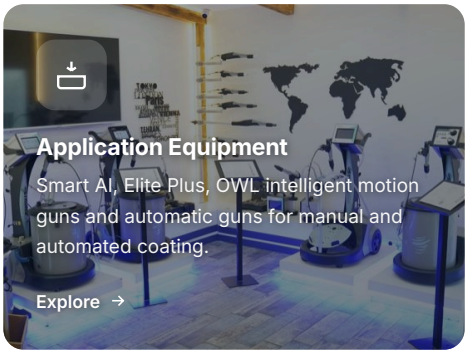
Recovery
Cyclone & filter

Curing
Curing ovens

Automation
Control & conveying

CORE EQUIPMENT

Built from Proven STRONG3000 Systems.



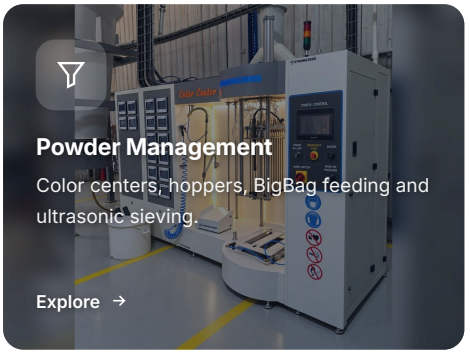
Application Equipment
Smart AI, Elite Plus, OWL intelligent motion guns and automatic guns for manual and automated coating.

Explore →



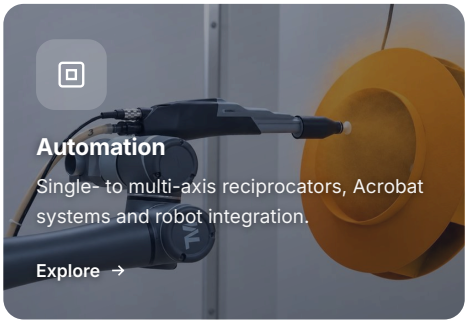
Booths & Recovery
PVC / steel monocyclone booths with cyclone and filter recovery for efficient powder use.

Explore →



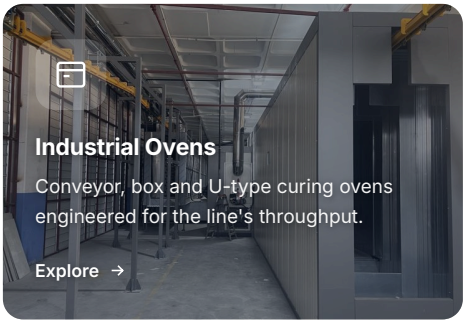
Powder Management
Color centers, hoppers, BigBag feeding and ultrasonic sieving.

Explore →



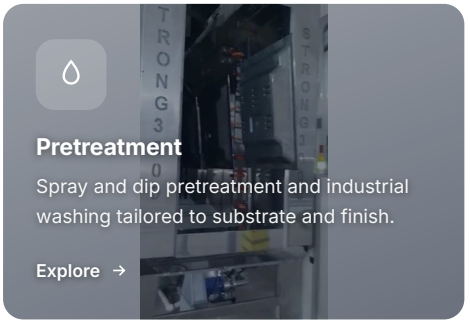
Automation
Single- to multi-axis reciprocators, Acrobat systems and robot integration.

Explore →



Industrial Ovens
Conveyor, box and U-type curing ovens engineered for the line's throughput.

Explore →



Pretreatment
Spray and dip pretreatment and industrial washing tailored to substrate and finish.

Explore →

PRETREATMENT · WASHING

Multi-Stage Washing Line

Surface preparation before coating is carried out with a spray (tunnel) or dip washing line consisting of degreasing, rinsing, phosphating or nano-ceramic conversion and drying stages. Correct pretreatment is the foundation of coating adhesion and long-lasting corrosion resistance.





DRYING · MOISTURE REMOVAL

Pre-Coating Drying

After washing, parts are freed of moisture in a pre-coating drying oven. Because residual surface water directly affects coating adhesion and film quality, drying is sized to part geometry and line speed.

OVENS · ENERGY EFFICIENCY

Curing Sized to Throughput

Ovens are dimensioned to part load and line speed, with attention to thermal efficiency to help manage energy consumption across the production cycle.



OPTION

Climate Room.

If required, the application area is enclosed in an insulated room with controlled temperature and humidity, so coating conditions stay stable regardless of the season.



Temperature · Humidity control

Controlled Application Environment

Panel construction, climate control and air circulation keep the application zone under stable conditions. The room is planned together with the booth and application equipment.

- Temperature and humidity control
- Insulated panel construction
- Filtered air supply

TYPICAL APPLICATIONS

Where Turnkey Lines Are Used.

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

Home Appliances

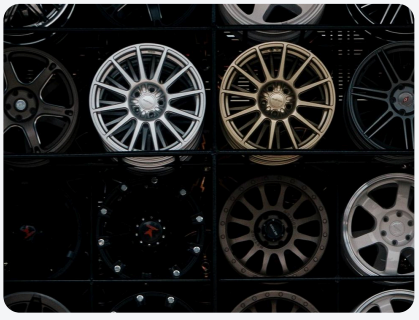
Ovens, cooktops, refrigerators



Explore →

Automotive

Wheels & parts



Explore →

Valves & Pipes

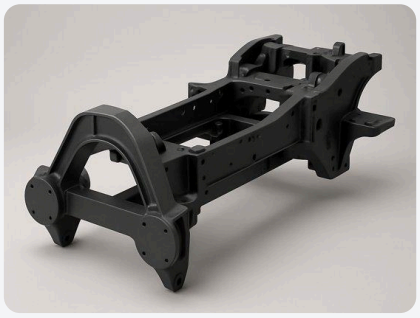
Epoxy powder coating



Explore →

Agriculture & Heavy Industry

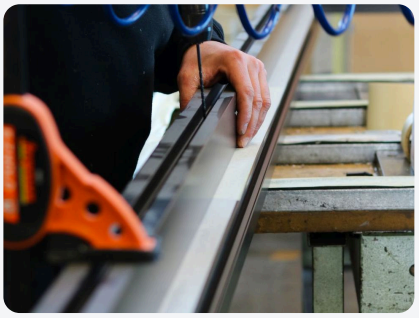
Chassis, trailers & body panels



Explore →

Aluminum

Profiles & facades



Explore →

Wire Fencing & Mesh

Panel fencing & mesh



Explore →

Electrical Enclosures

Enclosures & cabinets



Explore →

Metal Industry

Furniture, shelving, sheet metal



Explore →

APPLICATION · VALVES & PIPES

Epoxy Powder Coating for Valves and Pipes.

Water and wastewater valves, fittings and pipes are also coated with epoxy powder for corrosion protection. After surface preparation the part is heated; the epoxy powder is applied by electrostatic spraying or fluidised-bed dipping, melts on the hot surface and cures.

Key standards in this field include DIN 3476 for internal epoxy coating of valves and fittings for raw and drinking water, and EN 14901 for heavy-duty epoxy coating of ductile iron fittings.



- ✓ Valve bodies, bonnets and fittings — inner and outer surfaces
- ✓ Outer surface and inner lining of pipes
- ✓ Pretreatment, preheating, powder application and curing in one line

Need enamel? Go to wet enamel systems →

ENGINEERING & MANUFACTURING

Designed. Engineered. Manufactured. Under One Roof.

STRONG3000 combines mechanical and electrical engineering, automation, control software and application technology in a single organization — so responsibility for the whole line stays in one place.

Mechanical Engineering
Booths, conveyors, ovens and recovery hardware.

Electrical Engineering
Power, control cabinets and line wiring.

Automation
Reciprocators, robotics and PLC control.

Control Software
Smart AI platform and line integration.

Application Technology
Gun, injector and powder delivery development.

FAT & Commissioning
Factory acceptance testing and on-site start-up.



CASE STUDIES

Projects from the Field.

Examples from the field of our powder coating systems with PVC booths.



Powder Coating · Fast Color Change

Monocyclone PVC Powder Coating System

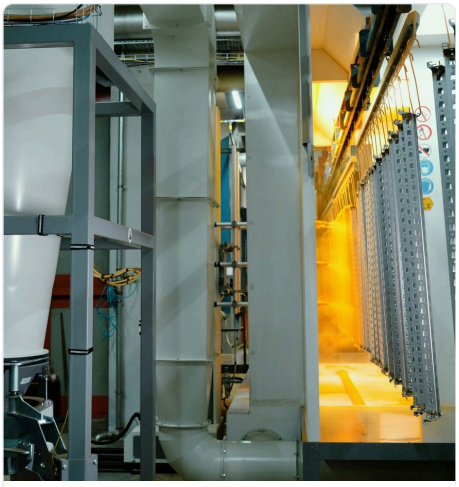
Powder coating system built on a conveyor line with a PVC booth, monocyclone and filter unit.



Powder Coating · Fast Color Change

PVC Powder Coating Booth with Operator Platform

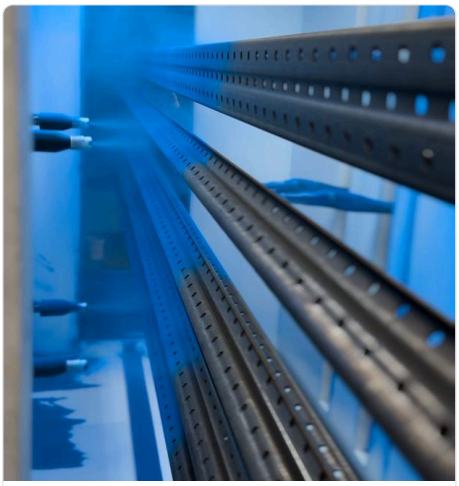
PVC booth installed together with a stair-access operator platform and a conveyor line.



Powder Coating · Fast Color Change

PVC Powder Coating Booth for Perforated Profiles

PVC booth with cyclone recovery, coating perforated profiles hung on the conveyor.



Powder Coating | Fast Color Change

PVC Powder Coating Booth with Automatic Guns

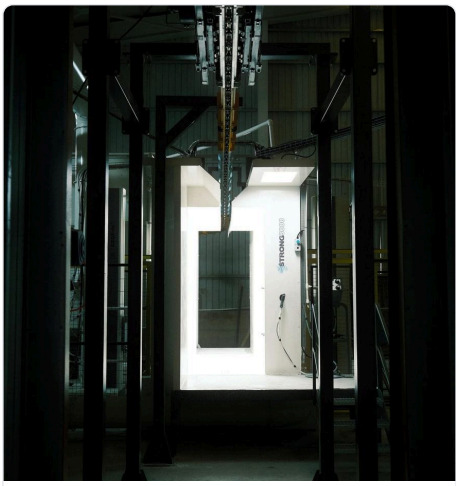
PVC booth where automatic guns apply powder coating to perforated profiles.



Powder Coating | Fast Color Change

Monocyclone PVC Booth with Color Center

Powder coating system made up of a STRONG3000 color center, monocyclone and PVC booth.



Powder Coating | PVC Booth

Conveyorized PVC Powder Coating Booth

PVC powder coating booth integrated into a conveyor line; parts pass through the booth on hangers.

See all case studies →

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/solutions/turnkey-powder-coating-lines/

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.