

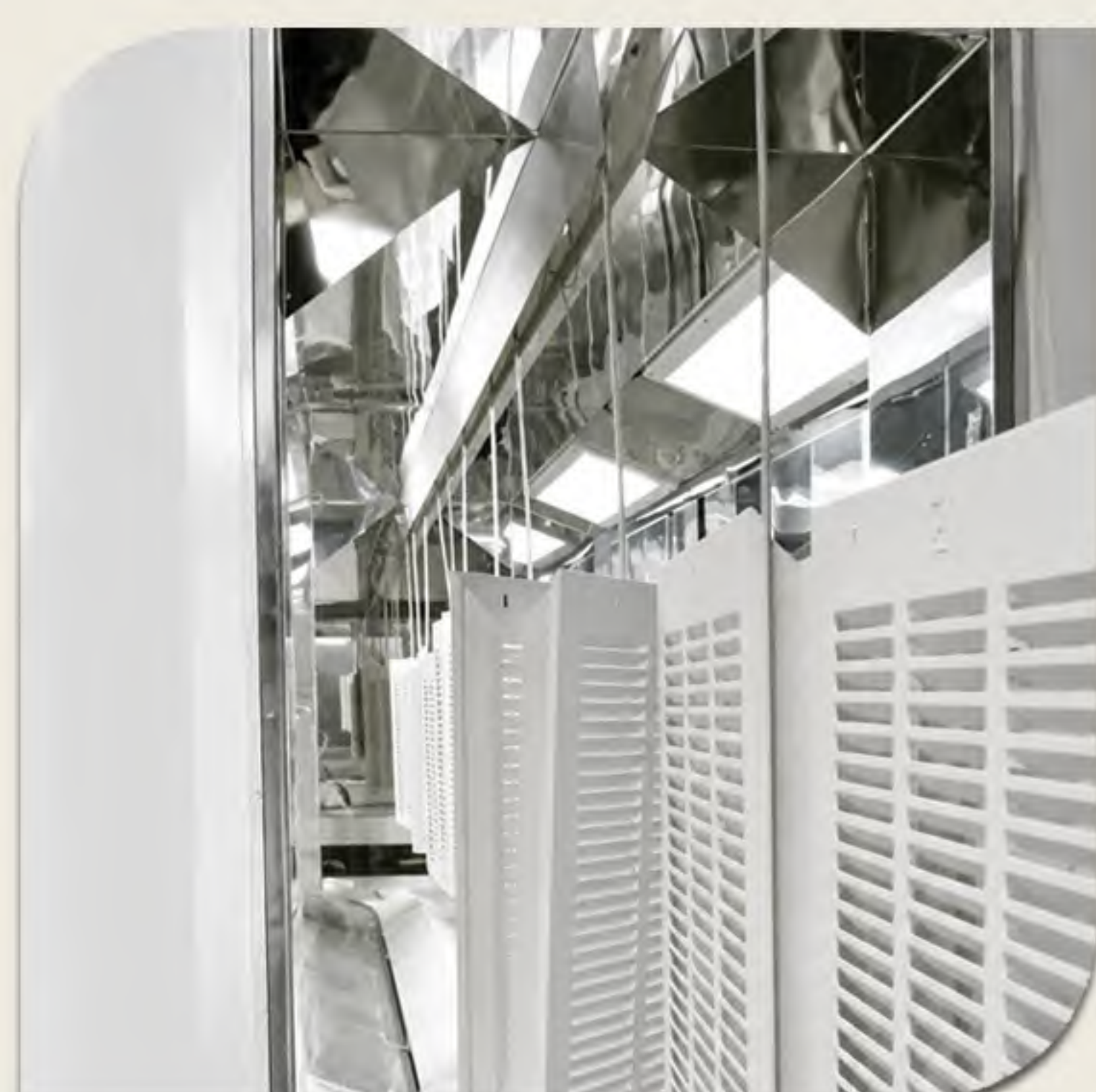
FANAVARAN INDUSTRIAL GROUP

Powder Coating Solutions



Your Vision, Our Process.





21 Years

Outstanding role
in Powder Coating Industry

Complete powder coating projects in:

- Aluminum industries
- Home appliance industries
- Lighting industry
- Office furniture
- Manufacturers of bicycles, motorcycles, ...
- Agricultural industries
- Paint and coating service workshops



Welcome!

Fanavar Industrial Group was established in 2005 with the aim of manufacturing spray coating equipment, as well as supplying various types of powder coatings and powder coating line equipment.

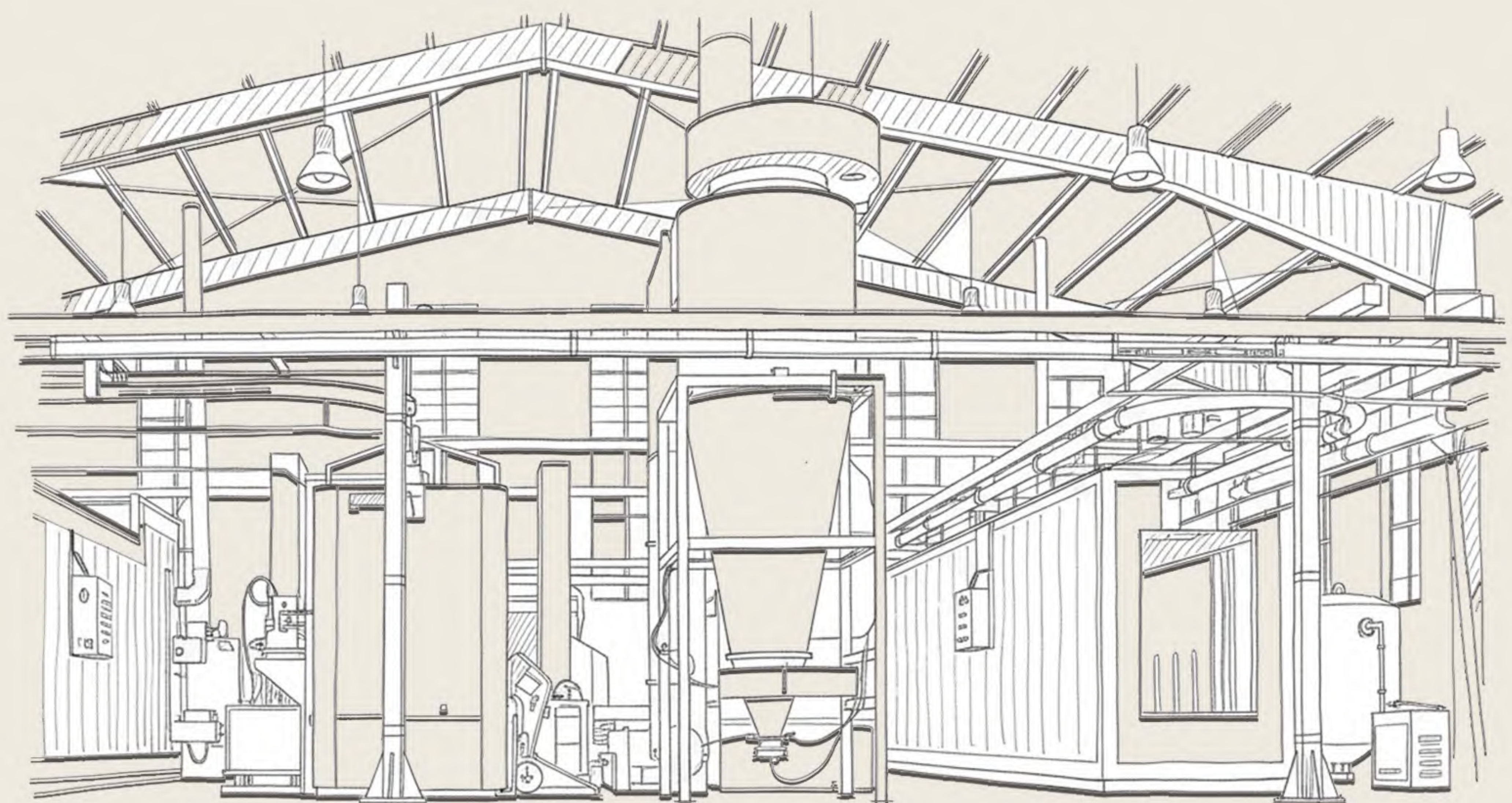
The company's core activities are focused on the manufacturing of powder coating line equipment, as well as design, consultancy, execution, and installation of industrial coating line systems, including: Pretreatment and washing systems, Powder spray booths, Manual and automatic powder coating guns/spray units, Central control systems, Advanced powder recovery systems, Powder coating reciprocators, Drying ovens, Powder center systems, Transfer sieves, Curing ovens, Laboratory systems

The company has introduced its products to the market under the ELCOAT brand, offering high quality and reliable performance. To date, the sales volume of various powder coating spray unit models has exceeded 4,500 units.

In the field of powder coatings, the company supplies a wide range of powder coatings with premium quality and competitive pricing to its customers. Export of powder coatings to neighboring countries, including the Kurdistan Region of Iraq, Afghanistan, Central Asia, and the Persian Gulf countries, constitutes a significant part of the company's foreign trade.

Over the years, Fanavar Industrial Group has equipped, modernized, and commissioned numerous coating lines. Among the company's largest projects to date are:

- The commissioning of the first and largest vertical powder coating line in Iran for the aluminum industry, featuring 48 powder spray units
- The installation of 60 automatic and manual powder coating spray units in one of the well-known coating service companies



Contents

Powder Coating Process

Pretreatment Section 6

Powder Spray Section 7

Powder Recovery System 14

Powder Curing System 16

Coating Line

Horizontal Powder Coating line 18

Vertical Powder Coating line 19

Other Equipoment

Coil Coating Line 23

Sublimation System 25

Sheet sumblimation 26

Film Bagging Machine..... 26

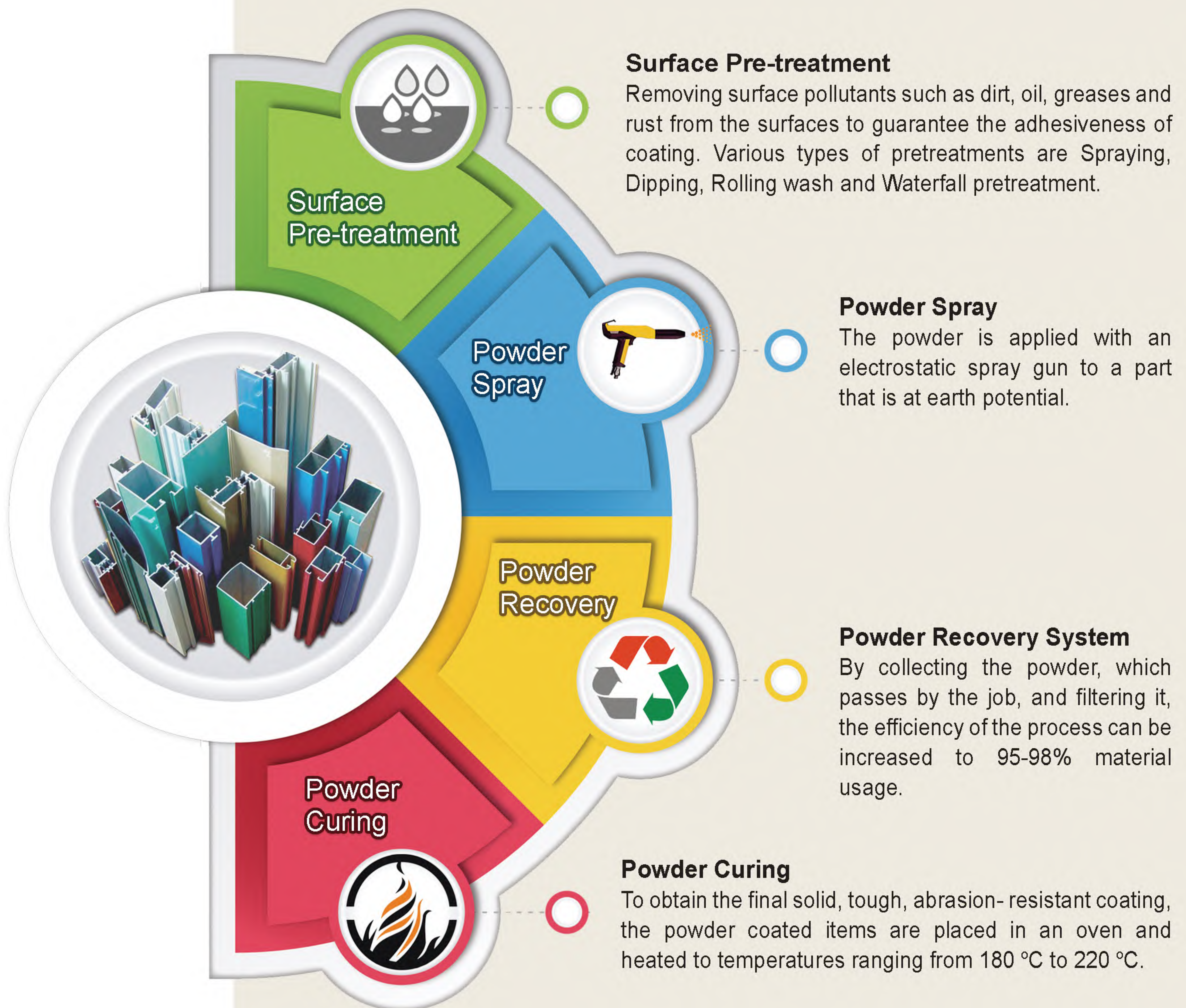
Spare Parts..... 27

Raw Materials

Powder Coating 28

Our Clients 30

Powder Coating Process



Pretreatment Section

Effective surface preparation is essential to ensure optimal adhesion, corrosion resistance, and long-term durability in electrostatic powder coating processes. Prior to coating, metal components must undergo a controlled pretreatment sequence including cleaning, degreasing, rinsing, and phosphating. The selection of the appropriate washing method depends on production volume, component weight, geometry, and available factory space.

Two primary methods are commonly implemented:

Immersion (dip) systems and spray washing systems.

Immersion systems are ideal for heavy, complex, or high-volume parts requiring thorough chemical contact and uniform treatment.

Spray systems, on the other hand, are well-suited for continuous production lines, offering efficient chemical application, reduced processing time, and optimized water and chemical consumption.

Fanavaran designs and manufactures customized pretreatment solutions tailored to each customer's specific operational requirements.

Based on production capacity, part dimensions, workflow layout, and available workshop space, our engineering team develops the most efficient and cost-effective system configuration.

Manufacturing begins only after full technical review and customer approval.

Fanavaran has successfully implemented a wide range of immersion and spray washing systems at customer sites, delivering reliable performance, compliance with industry standards, and long service life.



Manual Powder Spray Systems

Sigma Serie is equipped with a digital/analog control panel and the operator can powder coat the parts' corners and angles by adjusting voltage and electrical current. Thanks to the stability of the system structure, two units can be assembled one over another using one powder container. Likewise, it is a suitable choice for metallic, textured and special powder coating by increasing powder adhesiveness through high voltage. The system can be used for enamel coating by adding Enamel powder gun. A high-performance control system ensures precise airflow and voltage control.



We offer you
the best key!



Sigma Prime



Sigma 2



Sigma Plus



Technical Specifications

Gun's length: 360 mm

Gun's weight: 430 gr

Input voltage: 220 v, 50-60 Hz

Output voltage: 100 Kv

Frequency output: 17 KHz

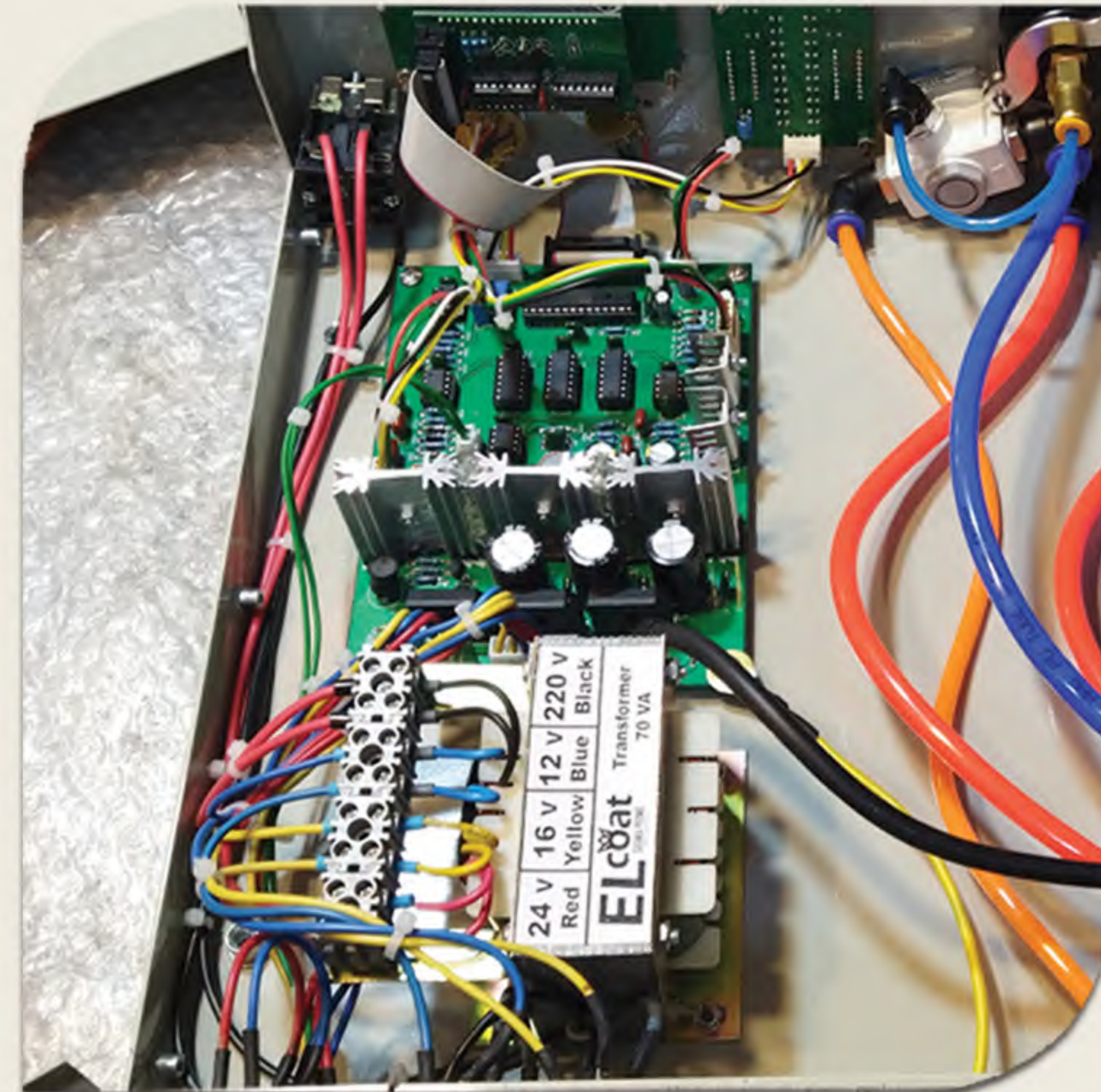
Polarity: Negative

Air input pressure: 6-8 bar

Max. air consumption: 12 m³/h

Max. powder output: 600 gr/min

Protection class: IP54



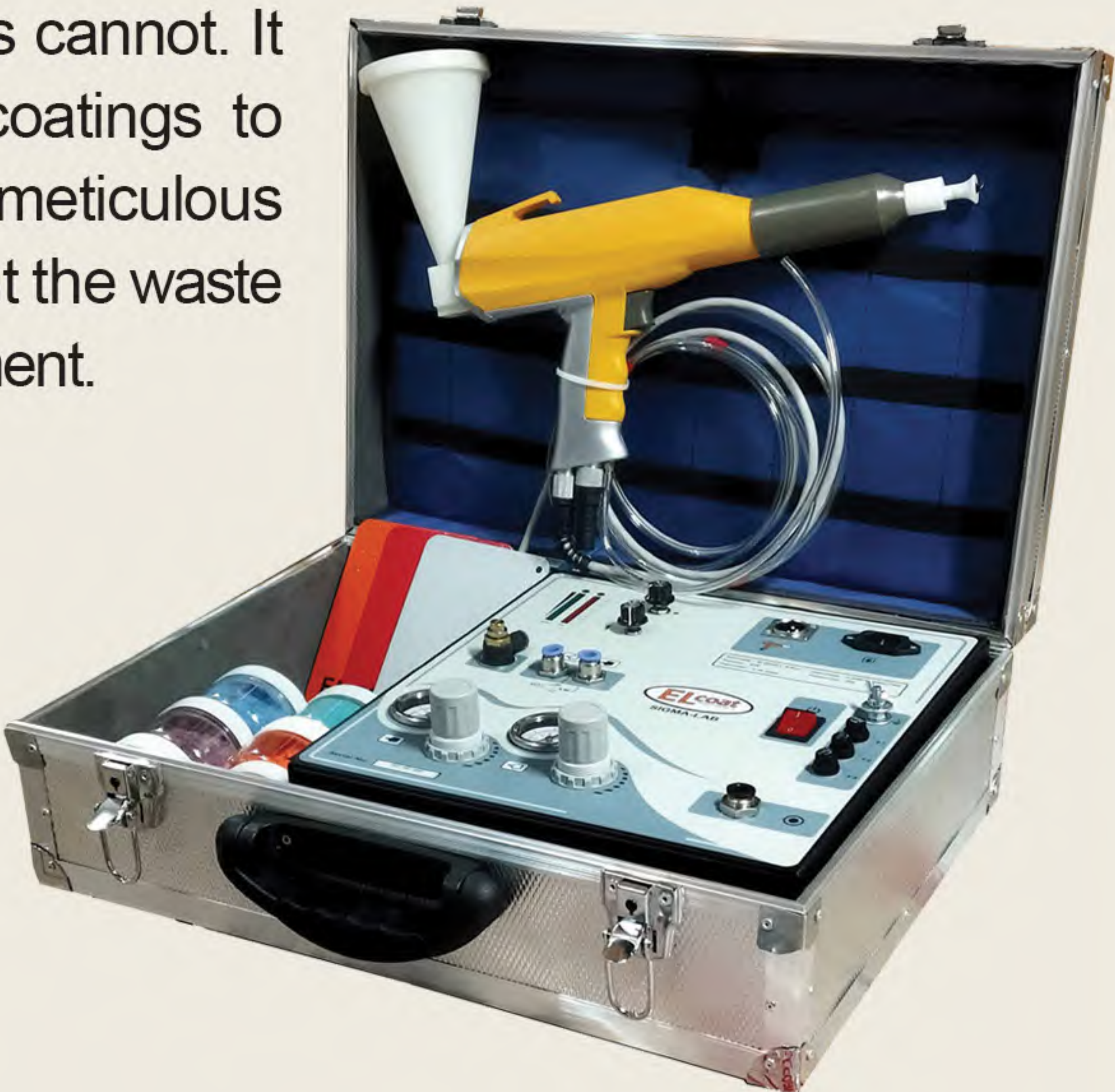
ELCOAT Products Manufacturing

Portable Lab Powder Spray System

Designed for manual application, this compact kit excels where large automated systems cannot. It is the ultimate solution for applying coatings to very small series of parts, allowing for meticulous color matching and finish testing without the waste associated with production-scale equipment.

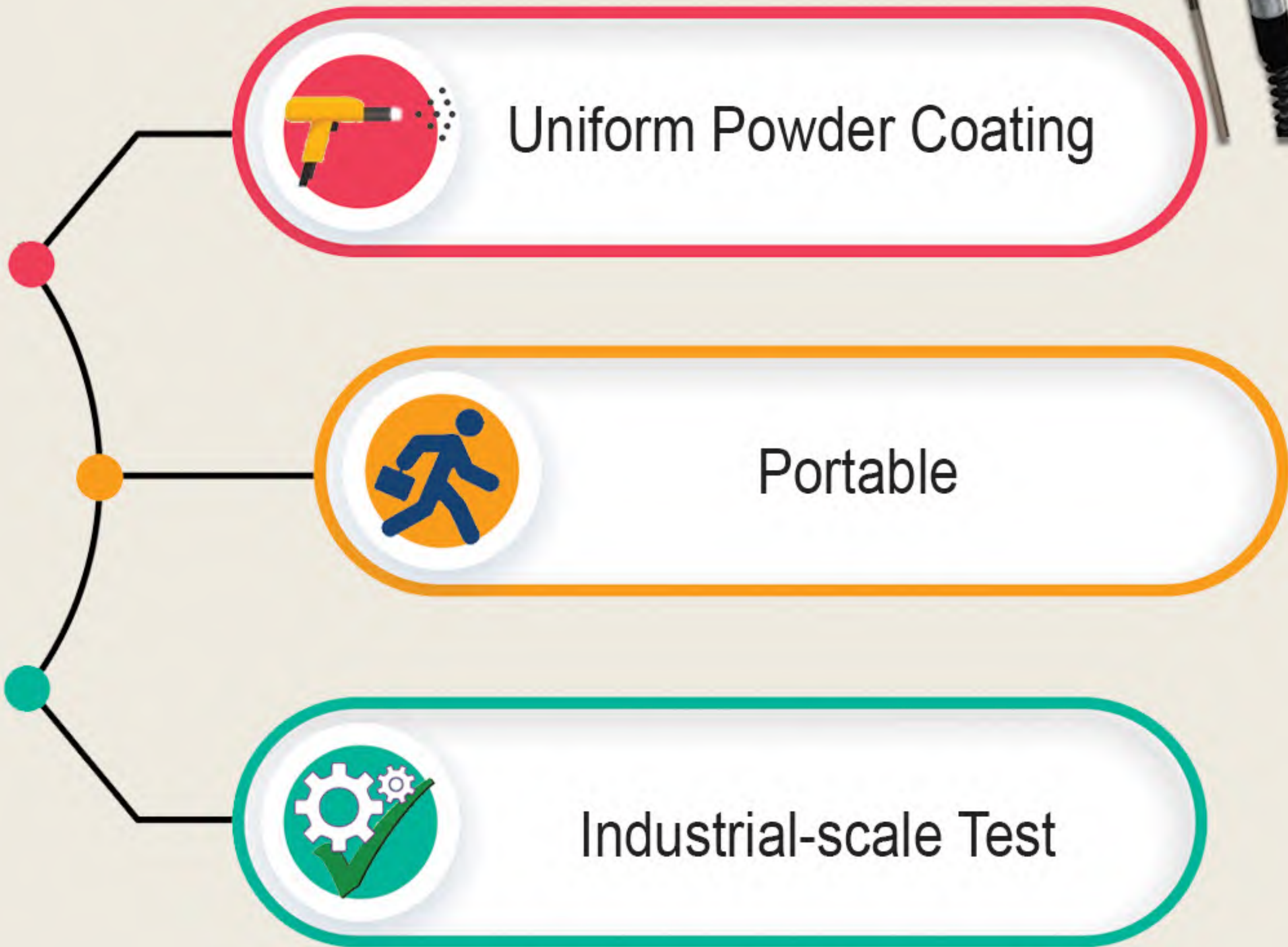
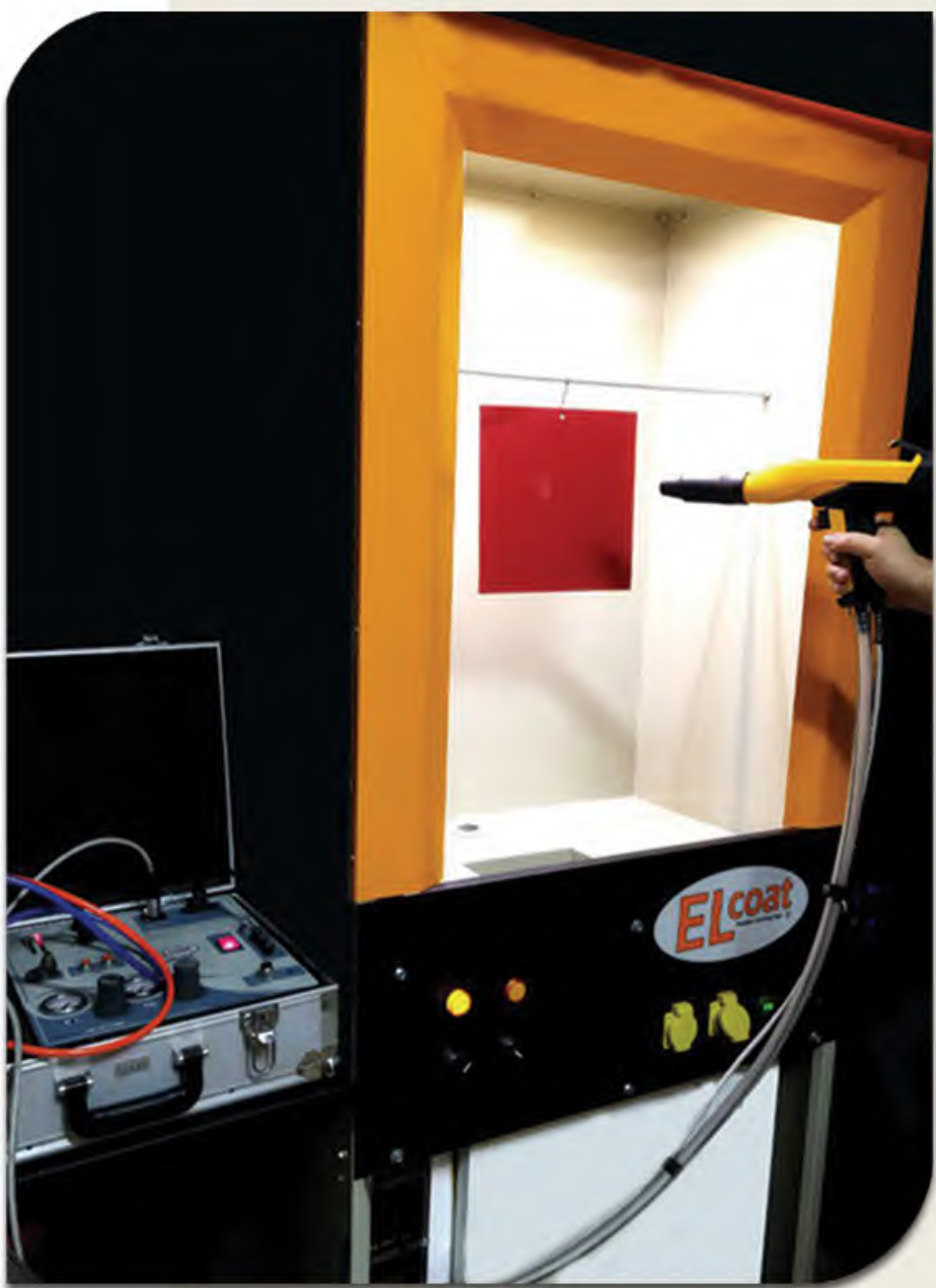
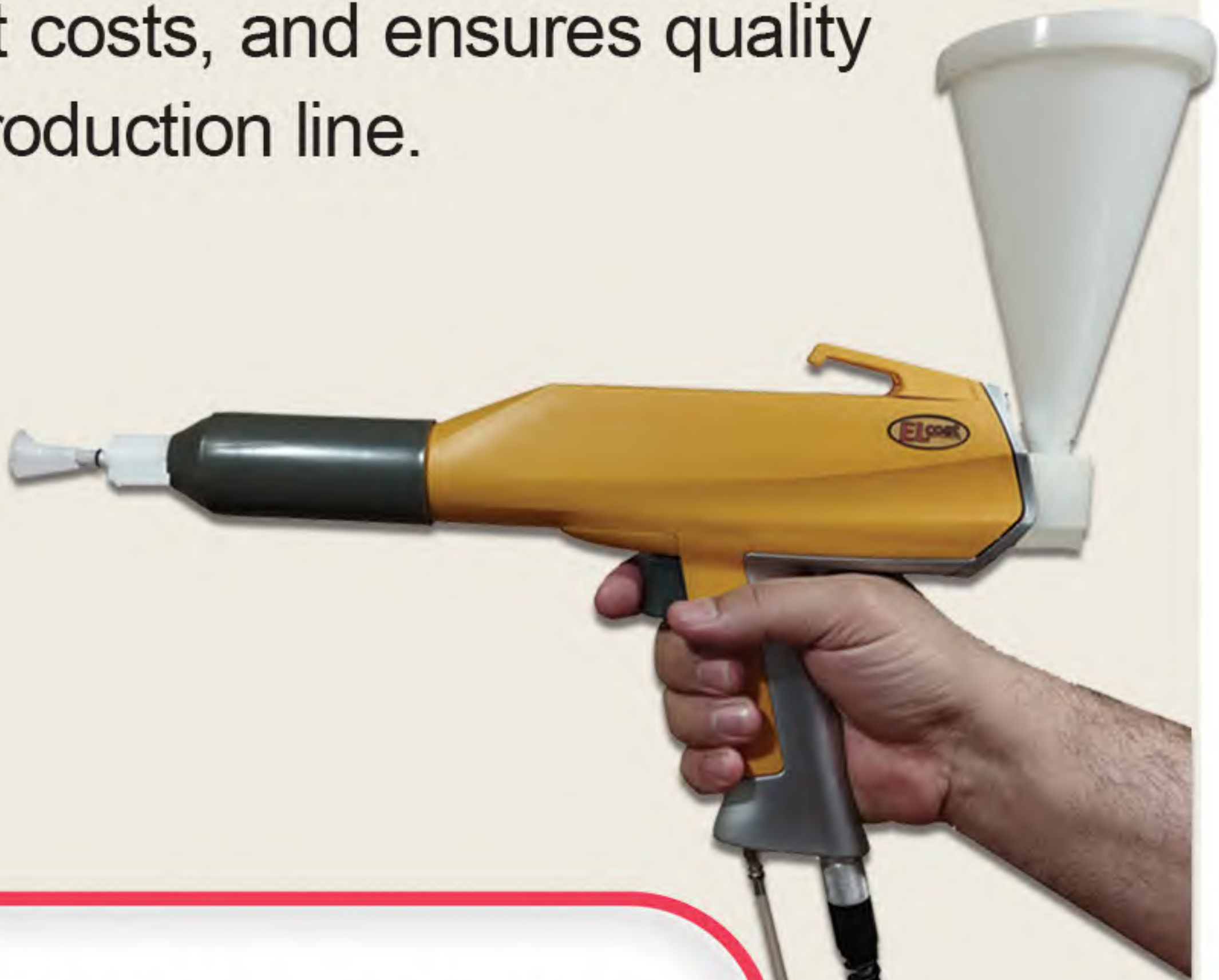


Art of engineering



The advantages are clear

Minimal material consumption, unmatched flexibility for small batches, and direct, hands-on control over the application process. This package transforms testing from a theoretical step into a practical, results-driven activity. It saves time, reduces development costs, and ensures quality before any product ever reaches the main production line.



ELCOAT Reciprocator

The Elcoat reciprocator system aims to provide precise and uniform spraying of powder or paint on moving objects by adjusting the up-and-down motion of the spray guns. This is achieved by mounting the guns on an arm extended from a carriage, which can move vertically at variable speeds and stroke lengths. The system adapts to the height and dimensions of the object being sprayed to ensure even coverage.

Key features of the Elcoat reciprocator include:

Programmed Control via PLC

The system is controlled by a fully programmed PLC, allowing the operator to store and easily select different spraying programs for various parts.

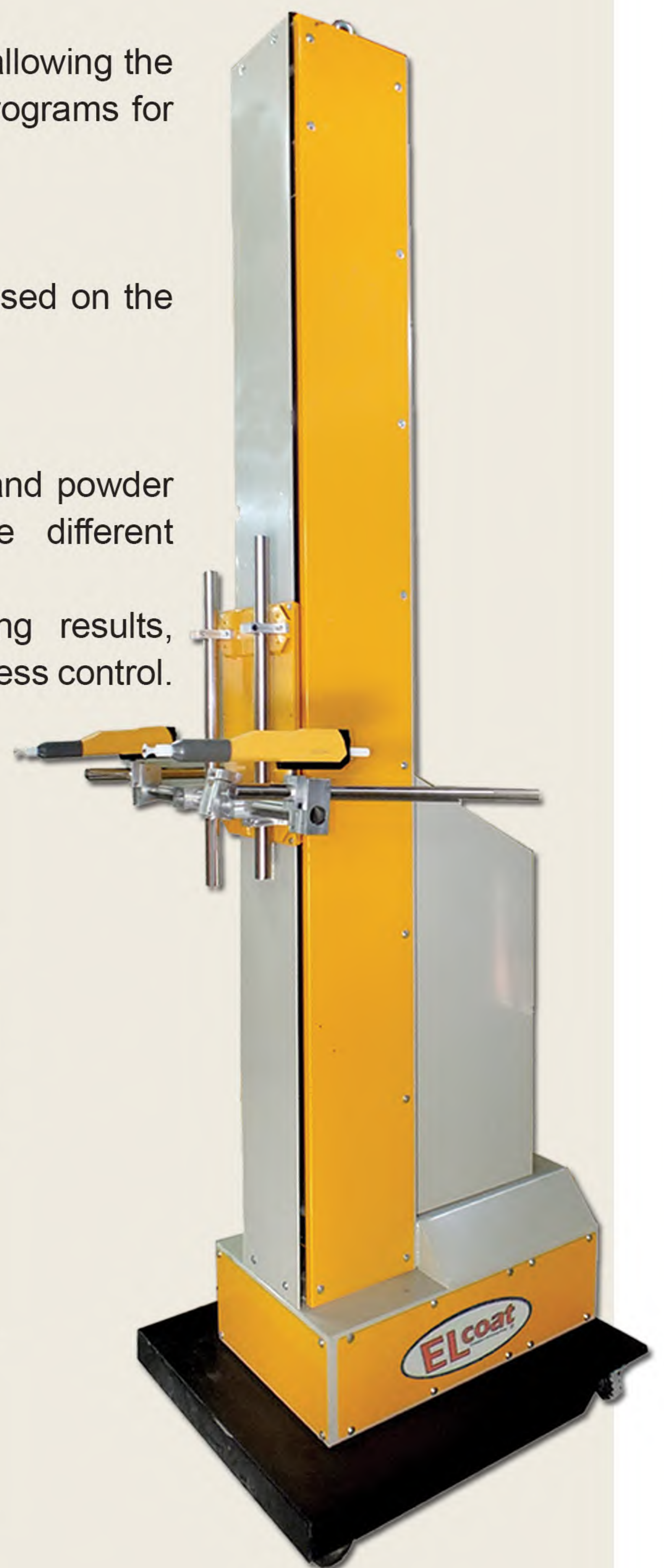
Customizable Stroke and Speed

The reciprocator adjusts stroke lengths and speeds based on the object's height, ensuring optimal spray patterns.

Integration with Conveyor and Powder Spray Rate

The PLC also allows adjustments to conveyor speed and powder spray rate, enabling the system to accommodate different operational conditions and product requirements.

This setup ensures consistent and efficient spraying results, minimizing material wastage and improving overall process control.



Main advantages

- Easy to set/change the stroke by finger touch
- 25 storable programs can be executed
- Extremely smooth running through high-precision and wear resisting metal chain transmission, unaffected by temperature change
- Eight nylon wheels are adopted with ingenious mechanical structure, ensure equal pressure on the four sides of the column, and minimize vibration during reciprocation.
- Upper and bottom limit, self protection against mis-operation

Reciprocator Technical Data

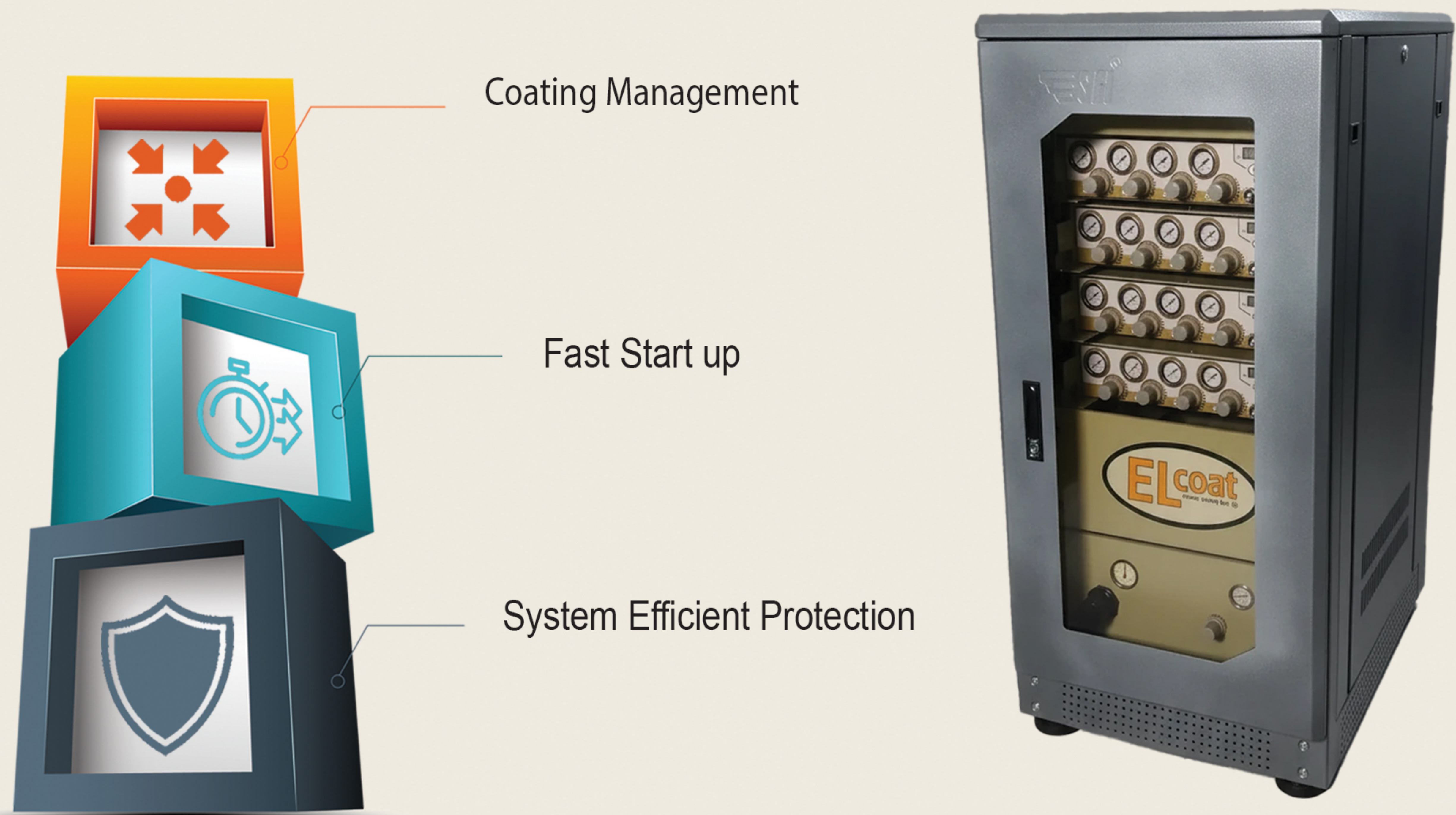
Controller System	PLC
Motor power	1.1 Kw
Motion System	Chain
Input Voltage	220 V, 50-60 Hz
Stroke	2000 mm
Max. weight on arms	30 Kg
Dimensions	310*90*75 Cm
Weight	180 Kg



Sigma Central Control Unit (CCU)

It is the heart of an automatic powder coating line. It directly controls the powder coating whole process, and the rate of powder coating, so that the operator can monitor the whole coating zone operations easily and closely.

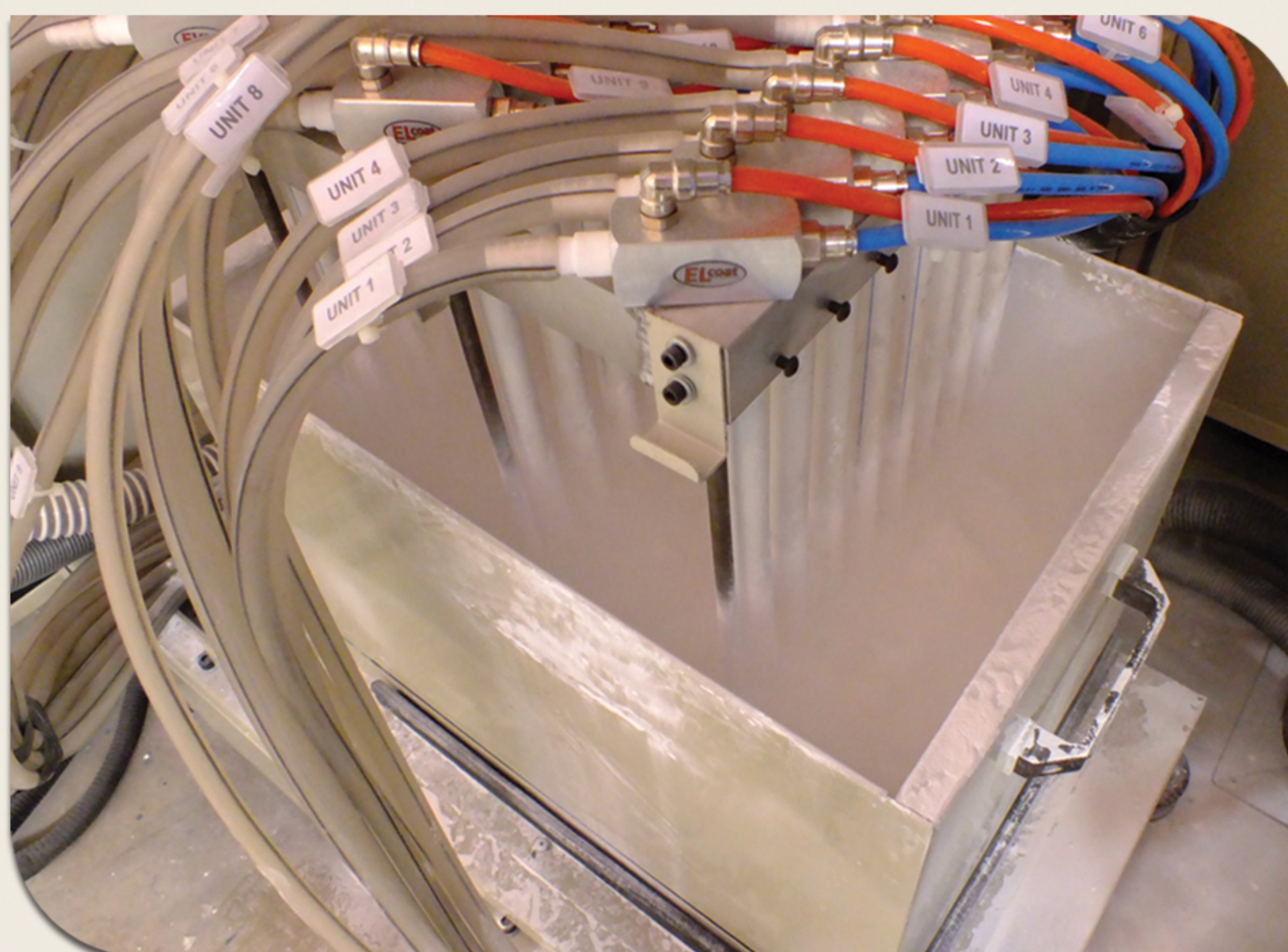
In ELCOAT system, up to 8-10 powder spray guns can be monitored and necessary changes can be made in line within a minute.



Powder Center

The advantages of powder center:

- Designed for quick color changes
- Using the powder directly from the original container
- Use of a fluidized hopper for working with difficult powders
- An independent exhaust air system prevents powder escaping
- An even powder output due to level-controlled injectors
- Automatic internal cleaning of the injectors, hoses and guns
- Optimum powder quality due to built-in sieve machine



Powder Coating Vibro Sieve

The vibro sieve for powder coating is a specialized device designed for filtration and homogenization of various powder paints in electrostatic coating lines. Equipped with a powerful vibrator system and a high-mesh screen, it effectively removes coarse particles, lumps, and impurities, delivering a uniform, consistent powder texture for optimal application.

Features and Benefits

- Adjustable industrial vibrator
- Durable high-mesh screen
- Simple operation and fully pneumatic system
- Robust and stable construction
- Easy maintenance and quick screen replacement

Applications

- Automatic and manual powder coating lines
- Powder recovery and recycling systems
- Preparation of new or reclaimed powder coatings before feeding to the spray system



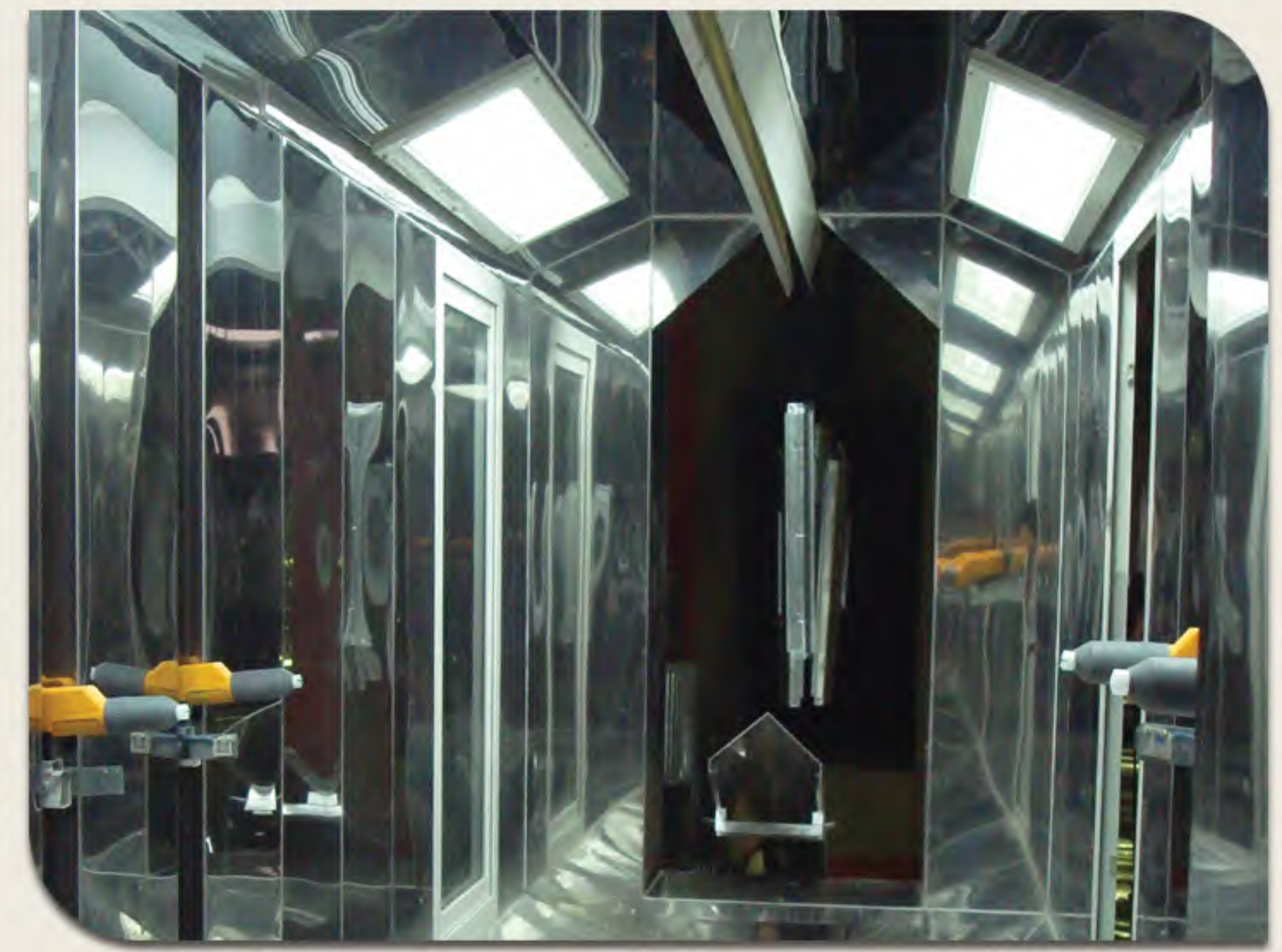
Central Powder Hopper

In industrial conveyor lines, a single large-capacity powder hopper replaces multiple smaller units to streamline operations. This centralized system features several injectors mounted directly on the tank lid, feeding multiple coating guns simultaneously. Managing all powder from one central point ensures consistent material flow, simplifies maintenance and boosts overall production for high-volume, professional powder coating applications.



Powder Coating Booth

Fanavaran designs and manufactures powder coating booths tailored to each customer's needs. Depending on the required capacity, production workflow, and the size or geometry of the parts to be coated, Fanavaran engineers create customized booth solutions that ensure efficient powder application, high performance, and reliable long-term operation.



Typical Cyclone

The typical cyclone is engineered for efficient powder reclamation in industrial coating lines, delivering high separation performance, reliable airflow control, and clean operation.

With overall dimensions of 3300 mm height, 1200 mm width, and 1800 mm length, the unit is designed for seamless integration into modern powder coating plants while maintaining a compact industrial footprint.

The body is manufactured from oil-rolled steel sheet in thicknesses of 1.5 mm, 2 mm, and 3 mm, ensuring durability, and long service life under continuous production conditions.

The system is powered by a 3 Kw motor operating at 2800 rpm, providing efficient airflow for powder separation and recovery.

Equipped with a centrifugal backward fan, the cyclone delivers an airflow capacity of 1750 m³/h, supporting effective suction and optimized powder circulation.

Powder transfer is carried out through a 5-inch Heli-Flex hose, enabling smooth material conveyance throughout the recovery process. The unit achieves an impressive 95% recovery efficiency, helping reduce powder waste, improve material utilization, and lower operating costs. Each cyclone has 9 polyacrylic fiber filters, offering excellent dust capture performance.



Mono Cyclone

The function of a powder recovery system is to collect the over sprayed material and render it suitable for recycling and at the same time to remove the powder particles from the exhaust air stream before discharging into the atmosphere. There are multitude systems for recovering powder and these fall broadly into two types:

Cyclones and Filters

Suppliers often employ both principles together to manufacture mono cyclone. The efficiency of such systems reaches 99%. The powder and air mixture enters the cyclone tangentially and thus assumes a spinning pattern. The centrifugal force resulting from the high inlet velocity separates the powder from the air. As it loses speed the powder sinks towards the discharge unit in a spiral pattern. When the air enters the cyclone, its cross-section changes, causing the air velocity to drop. Powder can be recycled from the base of the cyclone through a sieve and back to the powder supply feed.



Inspired by Nature!



Technical Specifications

Capacity: 10-12 m³

Including Powder Hopper

Made of Stainless Steel

No. of filters: 12

Equipped with filter cleaning system

12 Solenoid Valve

Motor : 15 KW

Powder Curing System

Fanavaran designs, manufactures, and installs powder coating curing ovens in both conveyORIZED and batch (manual) configurations to match a wide range of production requirements. Each oven is engineered according to workshop layout, available footprint, target throughput, and the maximum dimensions and mass of the parts to be coated.



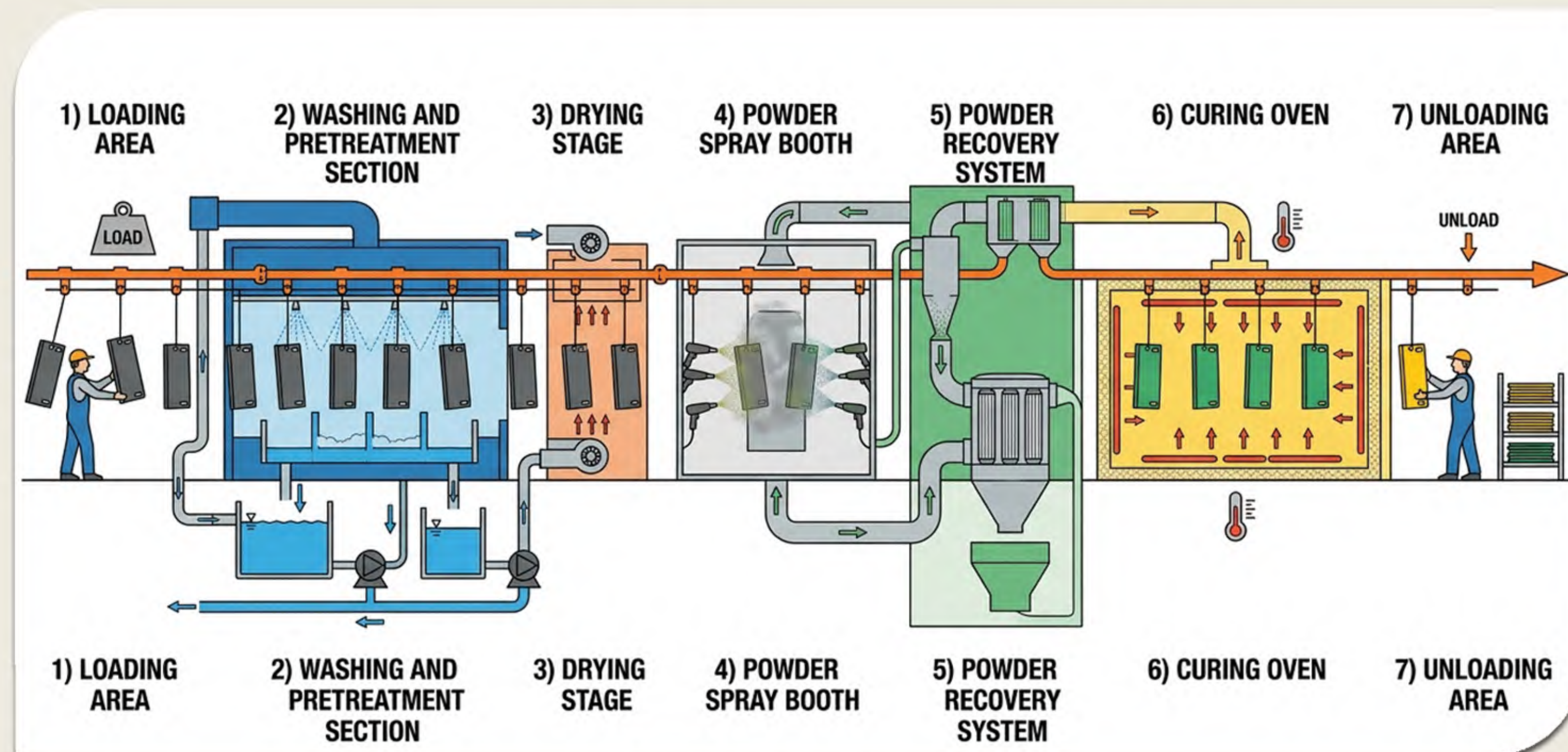
Our curing solutions provide stable and uniform temperature distribution, controlled airflow, and repeatable dwell time to ensure consistent film performance and optimized coating quality. Depending on the line concept, Fanavaran can supply complete integrated systems including loading/unloading areas, insulated chambers, and control panels tailored to customer standards. In addition to curing ovens, Fanavaran also produces preheating and drying units utilizing the same core thermal and airflow principles, enabling a fully coordinated process from surface preparation to final cure. Whether for compact workshops or high-capacity industrial lines, Fanavaran delivers robust, serviceable equipment designed for reliable operation, energy efficiency, and long-term productivity.



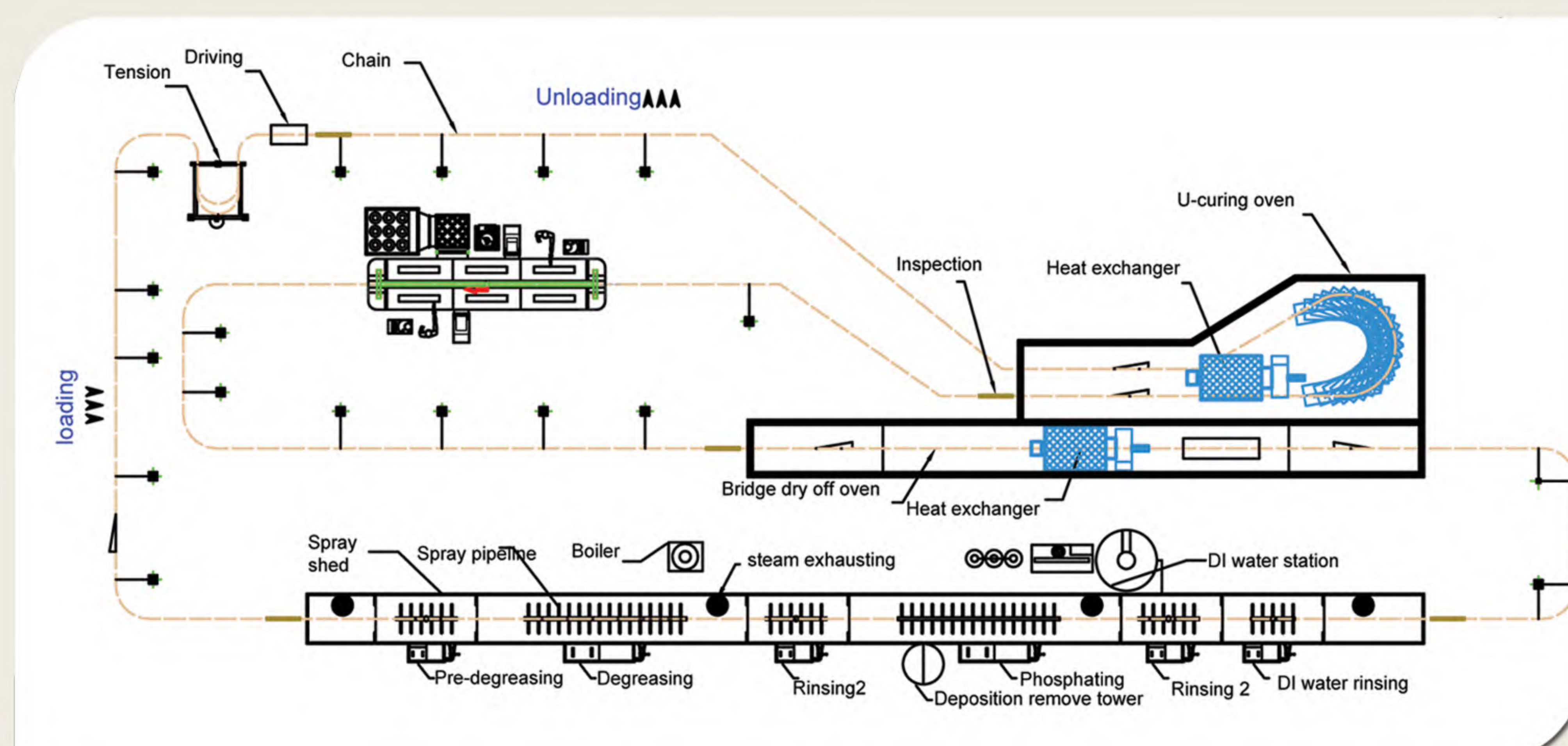
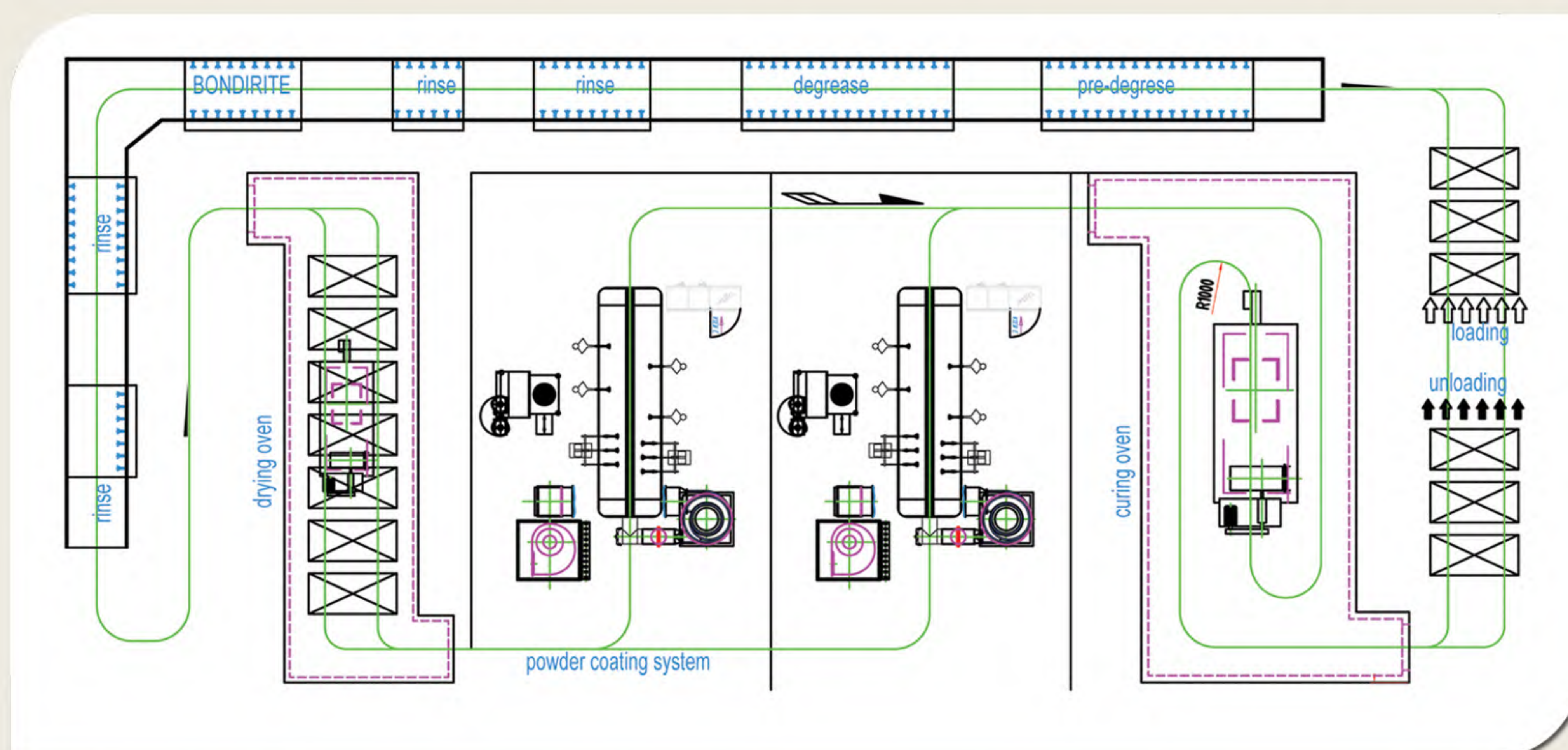
Powder Coating Line

We have the resources and background to provide conceptual design, detailed engineering, fabrication, installation, and start up services for your project.

Our project management teams have years of quality experience, will always prove us to be a dependable supplier for turnkey finishing systems within agreed schedule and reasonable cost.



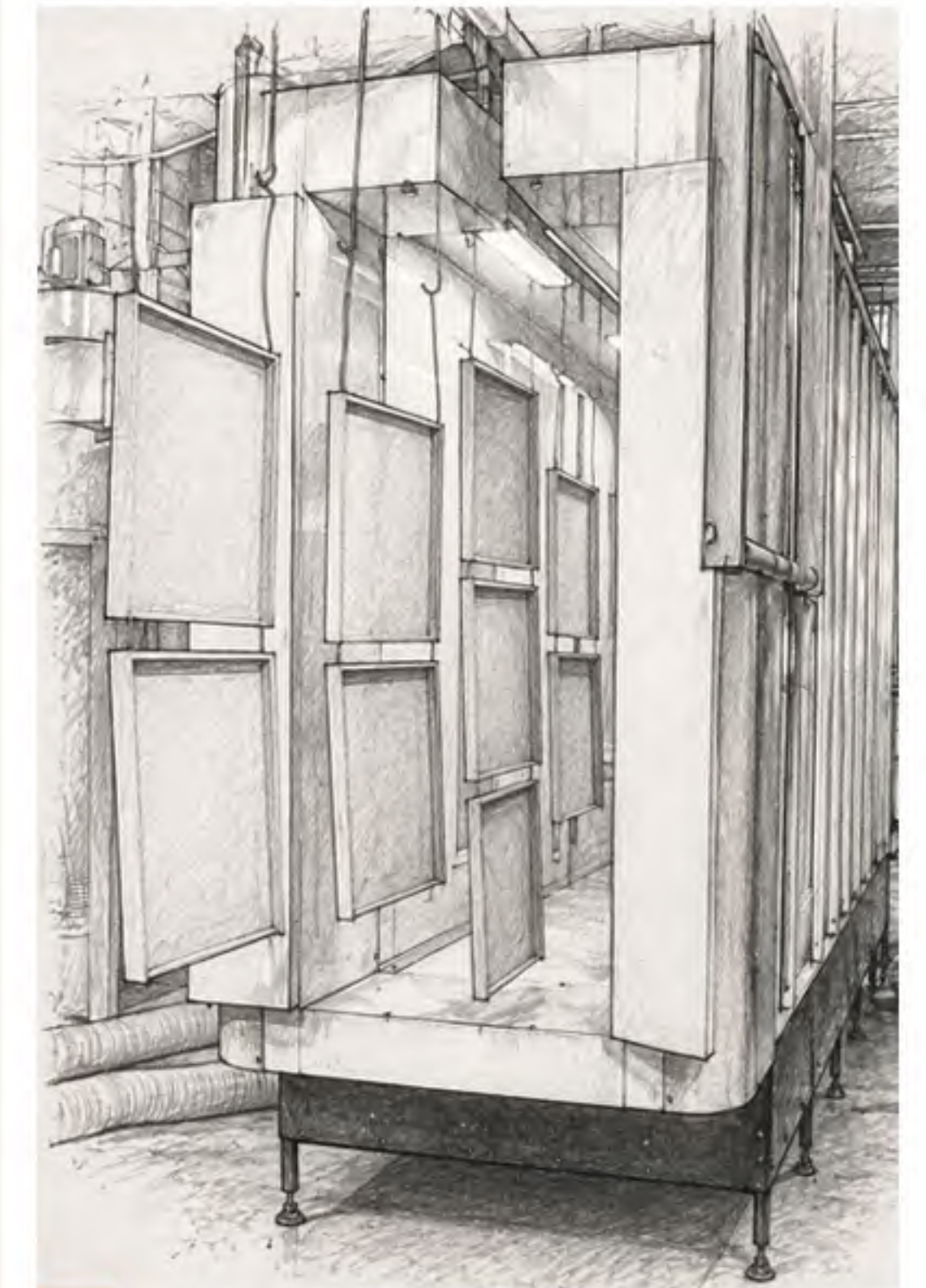
A plant for automatic electrostatic powder coating normally consists of multi stage pretreatment, drying oven, coating zone, curing oven and conveying system.



Horizontal Powder Coating line

Horizontal powder coating lines efficiently process a wide array of parts, from flat panels and profiles to complex assemblies. Ideal for components requiring uniform coating on all sides, these lines offer excellent finish quality and high throughput.

Fanavaran specializes in designing and implementing bespoke horizontal powder coating systems tailored to client-specific needs. Our expertise ensures optimal layout, process integration, and equipment selection for maximum efficiency and superior results in any industrial application.



Built to Last!

Conveyor

Monorail conveyors are efficient and reliable systems widely used in powder coating and industrial production lines. They enable continuous, smooth movement of parts through each processing stage with minimal manual handling. Fanavaran integrates advanced monorail conveyor technology in its customized line designs, ensuring flexibility, durability, and precise control of part flow. Each system is engineered according to customer requirements, providing optimized performance, reduced downtime, and seamless synchronization with painting operations.



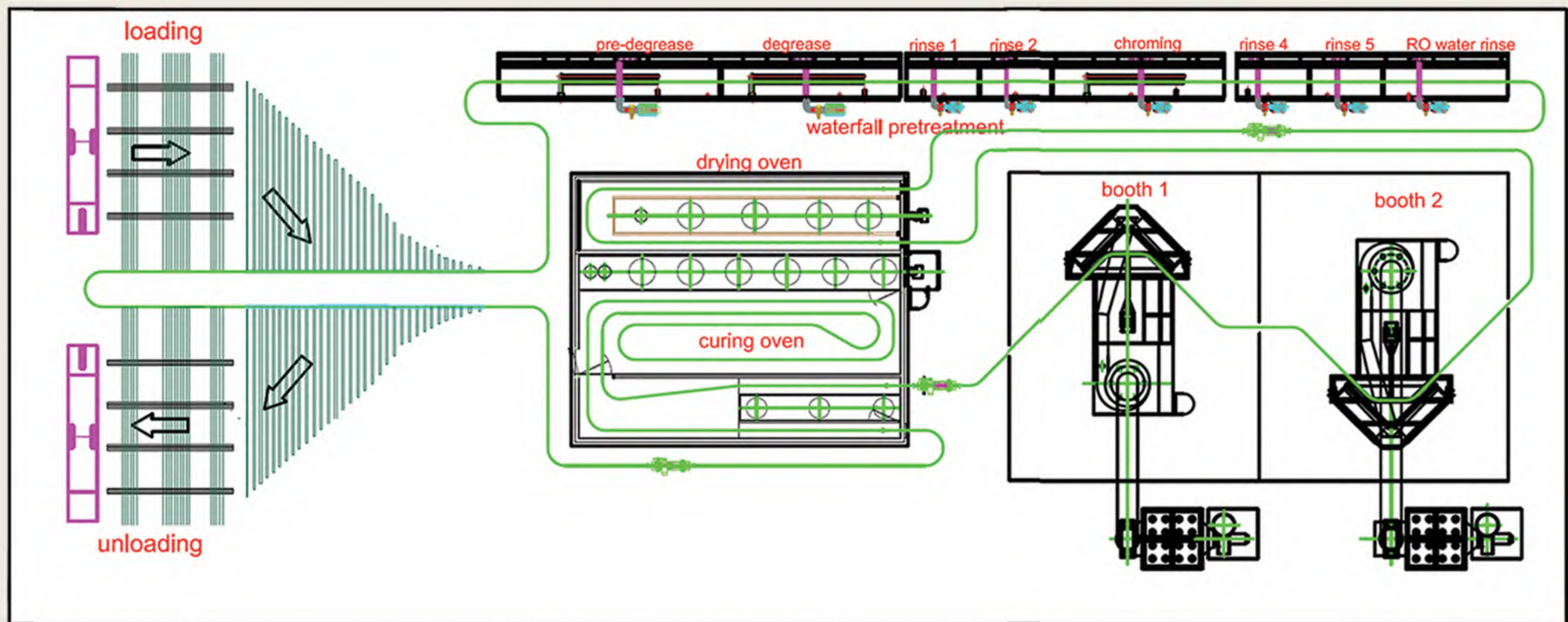


Beyond imagination!

Vertical Powder Coating Line

This type of powder coating line is especially designed for aluminum profile. The nominal capacity of such line can reach to 40-60 tons per 8 working hours, considering the weight of 4 Kg for a profile of 6 m long. In vertical line, the aluminum profiles position are changed in loading section from horizontal into vertical. Then the profiles go through the coating process and finally at unloading section, the profiles position change into horizontal again.

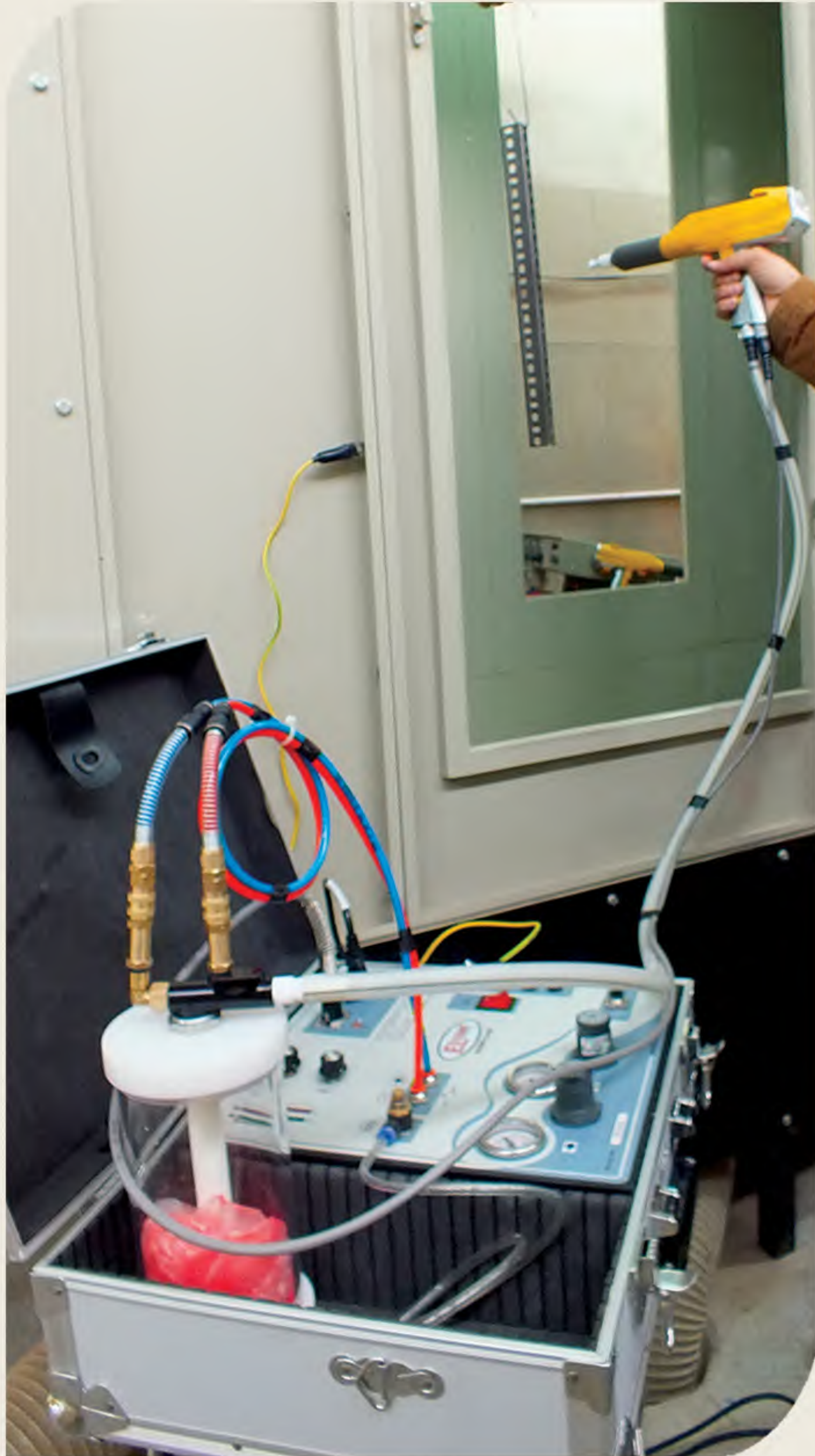
The advantage of such line is its huge capacity. To install the vertical line, the height should be 14 m. The huge equipment used in this line are manufactured exclusively for this type of line. The conveyor speed can be adjusted up to 3 m/min. For a normal vertical powder coating, 48 powder spray guns are working in 2 separate powder booth.



Vertical Powder Coating Line







Coil Coating Line

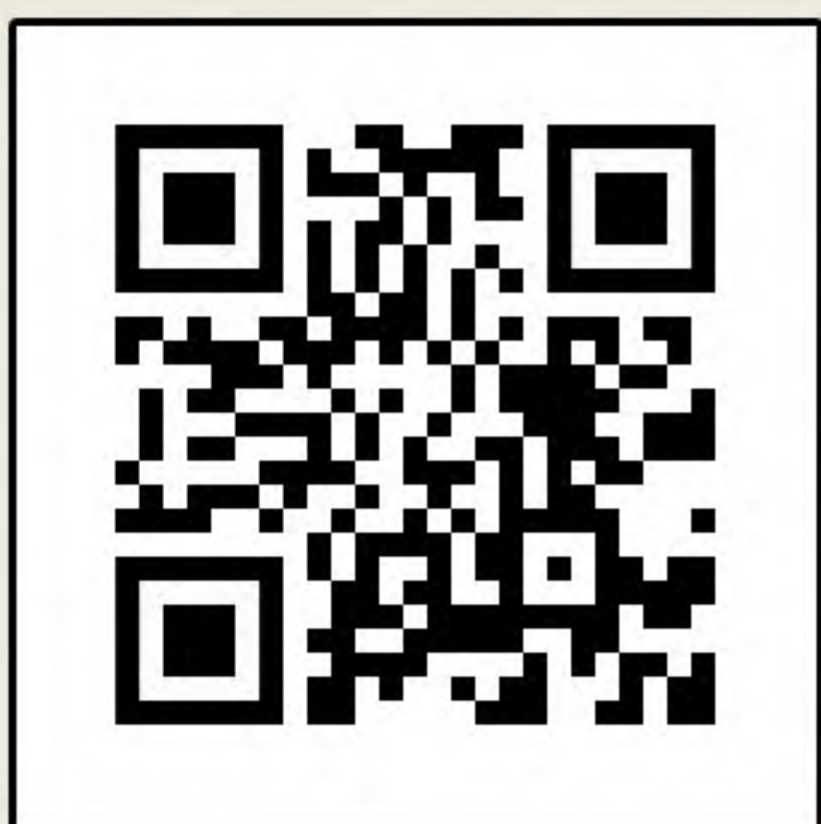
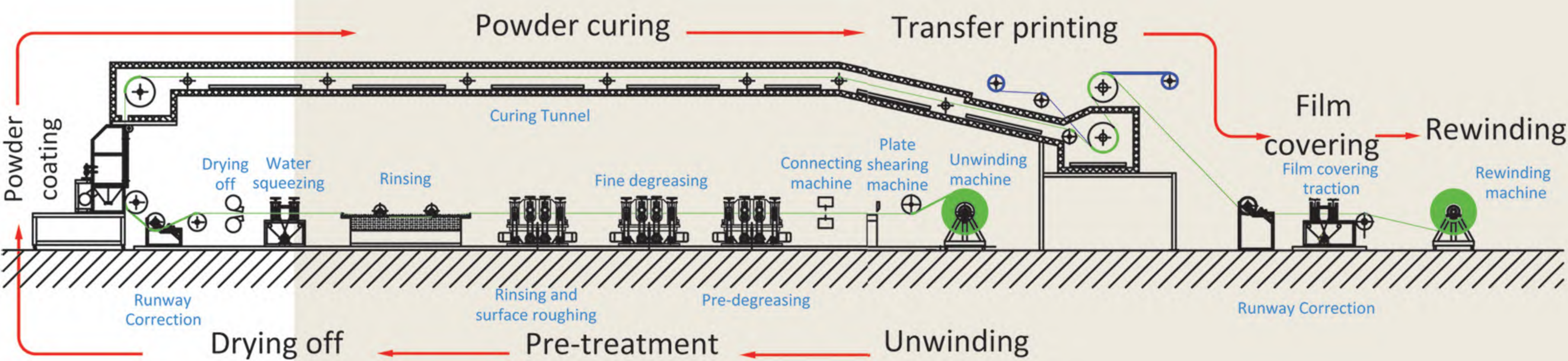
Aluminum or steel coil, will be fed in as raw material coil sheet, while finished as perfect decorated coil.

The latest surface pre-treatment technology, the 6~8 μm powder coating layer, enables the coil to accept sublimation, and enables the sheet to be used widely, for various normal applications, such as doors, building decoration panels, ceiling....(while liquid coating coil can be used in limited circumstances only).

High capacity continuous decorating line has now become true!



The completing Piece!

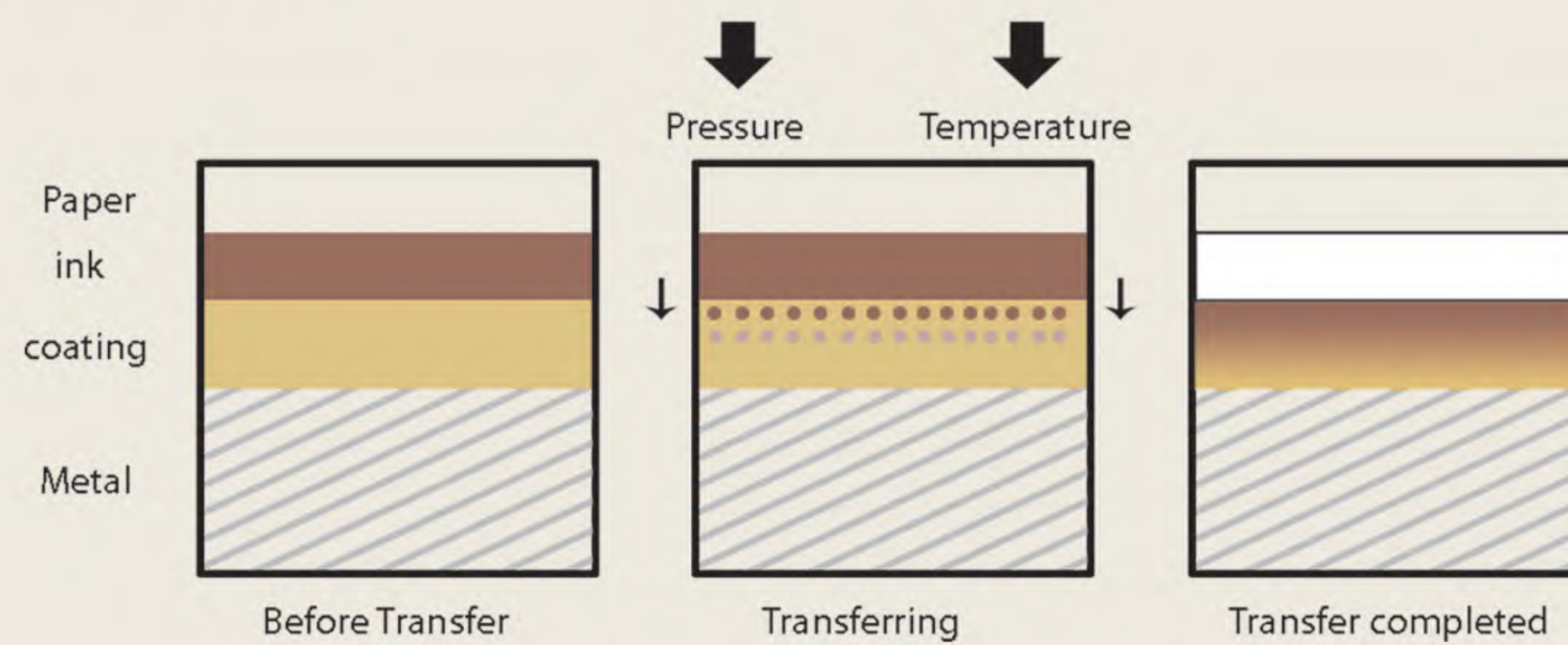


Coil Coating Performance Video

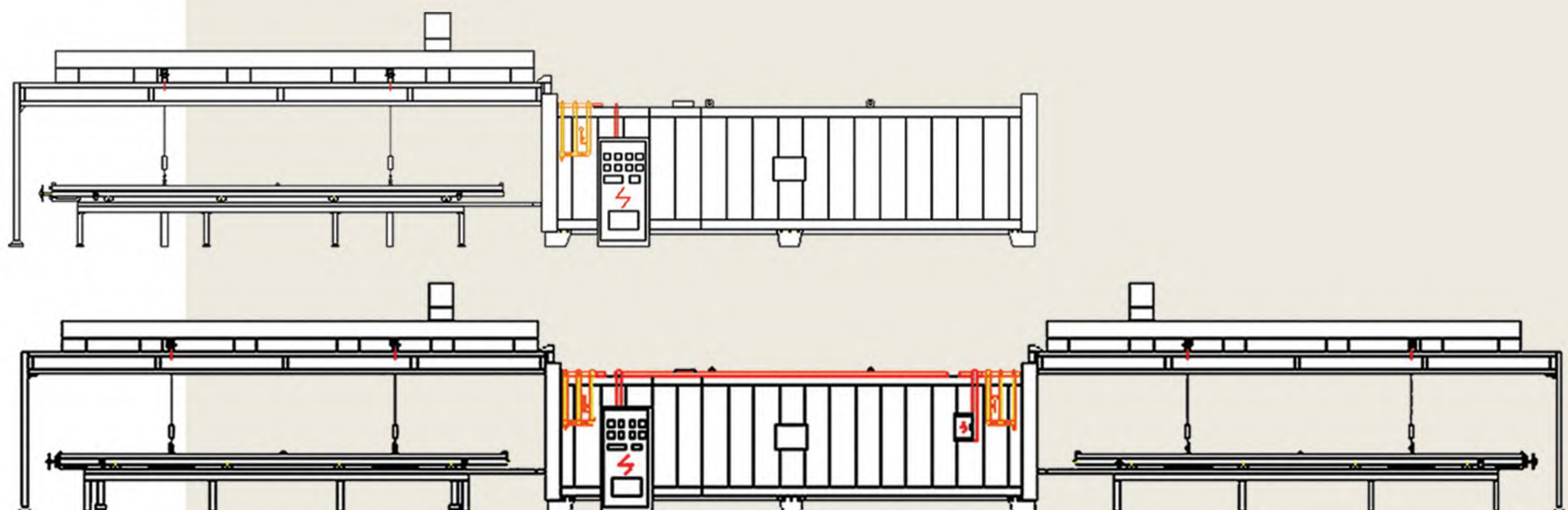


Transfer Printing Machine(Sublimation)

Pre-printed film or paper transfer completely cover the metal surface. Through a vacuum suction system all inside air is taken away. Then the sheets, profiles ,... are placed in a special oven where the decoration takes place.



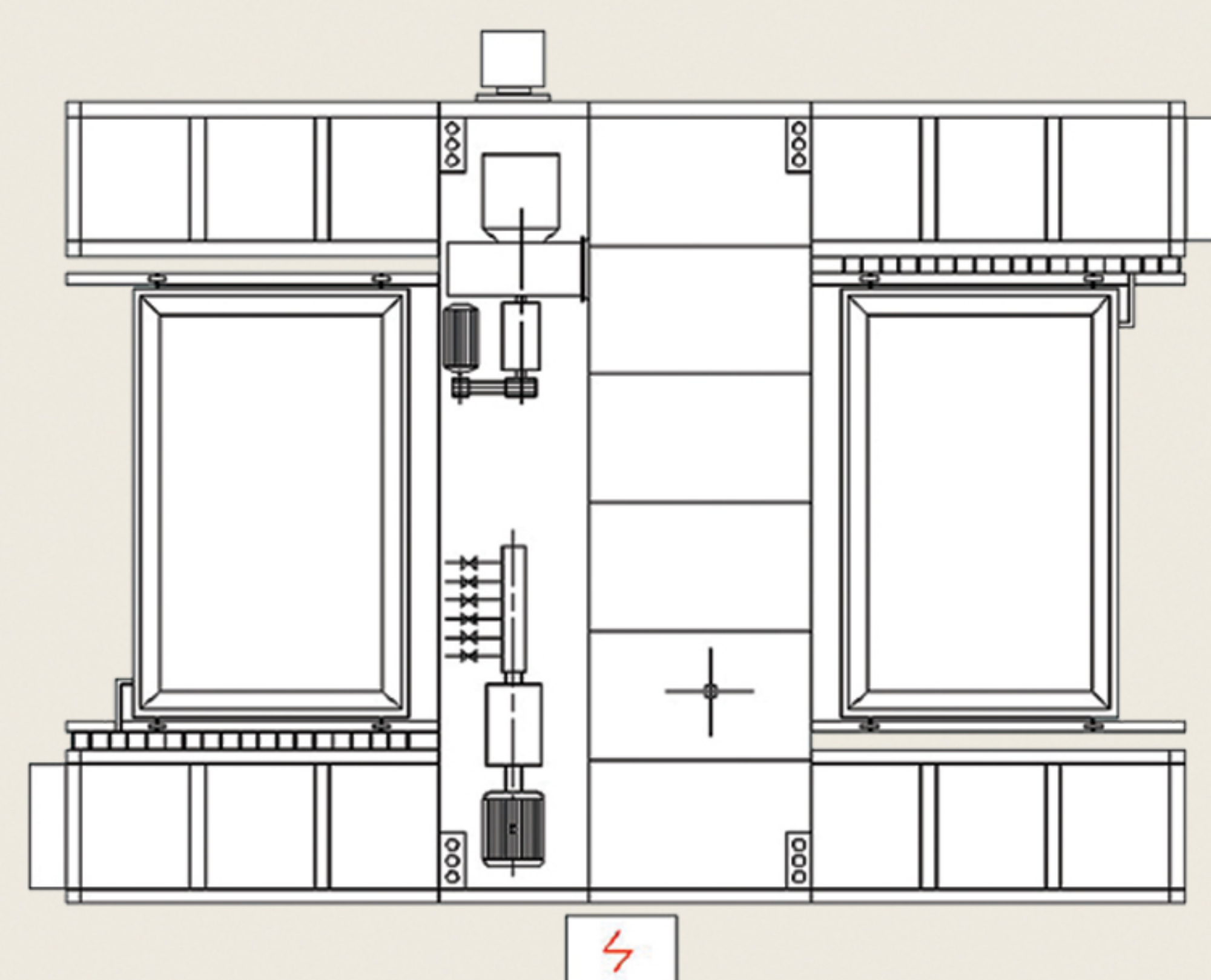
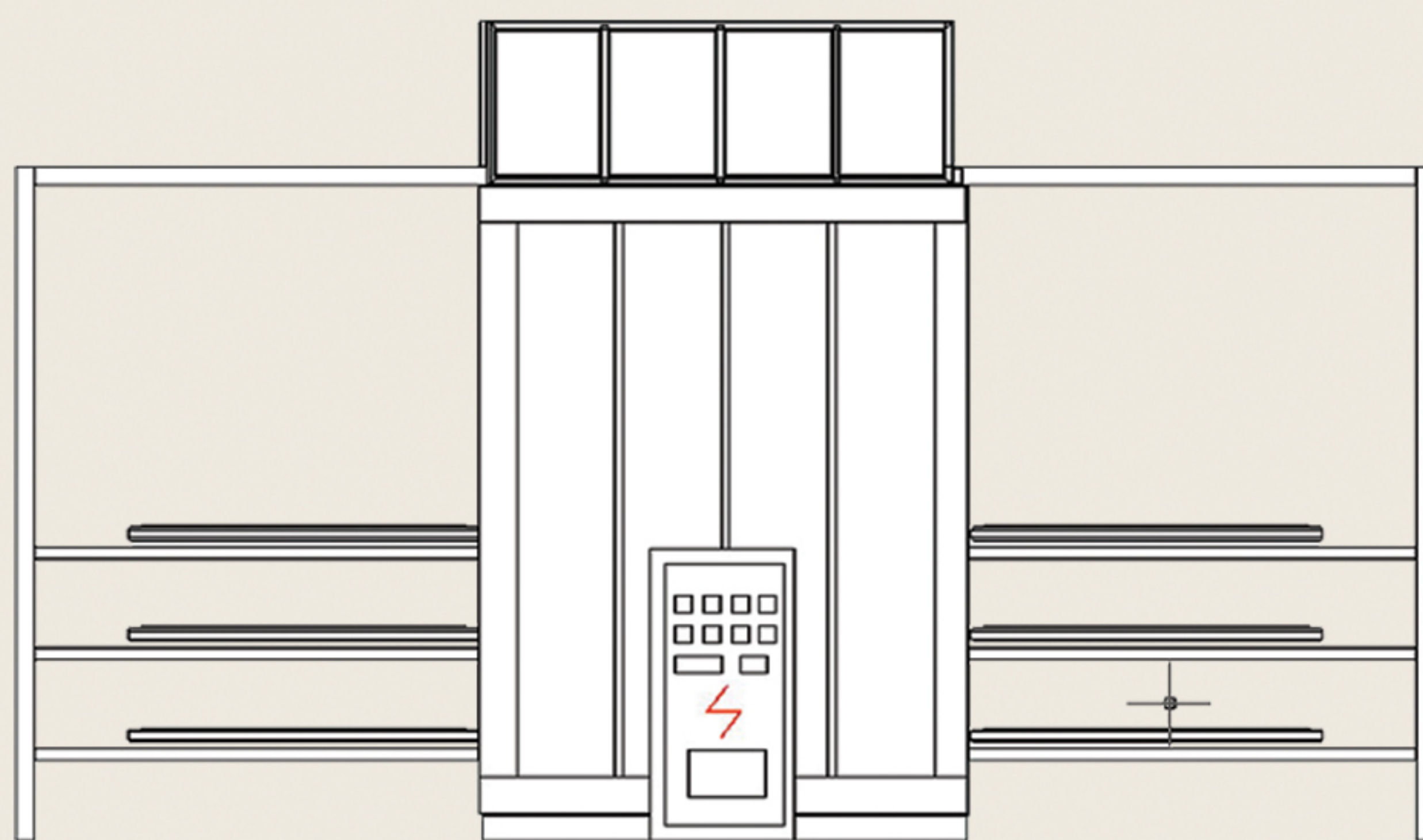
A world of diversity!



Sublimation System Performance Video

Sheet Transfer Machine

ZKP-6 is a transfer machine special for metal sheet. Decorated sheet can afford bending, punching, embossing, so it is widely used in door production, furniture production, house and office decoration field. Pretreatment can be done using a high capacity (100 sheets per hour) washing machine.



Film Bagging Machine

The ultrasonic welding technology is used in film bagging machine, which the heat fuses transfer film together. Exposed to ultrasonic generating box, the film starts to vibrate. Two sides of the film starts to create friction and the heat of friction reaches the melting point of the film, so the film layers are welded together.

Powder Coating

Metal objects are electrostatically coated with powder paint. Usually you have seen its use in Home Appliances, office furniture, Garden equipment, Car accessories, connections, Wire goods and Metalworks. There is a variety of powder, from which you can choose. The final selection depends on the final use requirements of the coated surface.



ELCOAT is dedicated to Quality!



From the standpoint of visual appearance, a wide range of finishes can be provided, including hammer-tone, sand-textured, leather-like, metallic, and wrinkle textures in various gloss levels, ranging from super matte to super glossy. Precise compliance with international color calibration standards, including the extensive range of RAL codes, ensures accuracy and repeatability in your industrial projects.



RAL 1001	RAL 1013	RAL 1014	RAL 1015	RAL 1018	RAL 1021	RAL 1028
RAL 1035	RAL 1036	RAL 2004	RAL 3000	RAL 3004	RAL 3012	RAL 3015
RAL 3020	RAL 4004	RAL 4007	RAL 4008	RAL 5002	RAL 5005	RAL 5015
RAL 5018	RAL 6005	RAL 6018	RAL 6021	RAL 6024	RAL 6029	RAL 7001
RAL 7005	RAL 7016	RAL 7021	RAL 7024	RAL 7032	RAL 7035	RAL 7040
RAL 7043	RAL 8017	RAL 8019	RAL 9005	RAL 9006	RAL 9007	RAL 9016

Our Clients





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