

# iNNODEK

DECORATION  
TECHNOLOGIES





# innodek

DECORATION  
TECHNOLOGIES

INNODEK is the Technologies Division of the DFV Group, focused on the engineering, development, and sales of machinery and advanced industrial systems for the aluminium profiles and laminates decoration.

We design and manufacture aluminium decoration systems using:

- EGÒ® digital technology
- EZY® powder-on-powder technology



Developed through the DFV Group's R&D, these proprietary technologies deliver outstanding aesthetic finishes while ensuring exceptional technical performance.

INNODEK brings to market the latest generation of aluminium decoration finish systems, leveraging over fifty years of DFV Group expertise in the aluminium industry.

// INNOVATION, KNOW-HOW,  
AND INDUSTRIAL VISION TRANSLATE INTO  
A TANGIBLE COMPETITIVE ADVANTAGE  
FOR THE CUSTOMERS.

## **INNODEK IS A LEADING TECHNOLOGY PARTNER FOR ITS CLIENTS**

We carefully design and build each system to meet our customers' specific production needs and operating environment, ensuring efficiency, continuity, and a substantial ROI.

A dedicated team of specialists supports customers from technology selection through installation and commissioning, providing technical consultancy, operator training, and ongoing support for spare parts, powders, and advanced software for performance monitoring and process optimisation.

## **INNOVATION AND SUSTAINABILITY**

Close cooperation with our suppliers ensures continuous access to the latest innovations and technologies, seamlessly integrated into our processes to enhance efficiency, quality, and sustainability.

A customer-first approach guides every decision, ensuring operational flexibility, responsiveness and results-oriented execution, while our ongoing commitment to innovation delivers market-recognised technologies distinguished by aesthetic excellence, high quality, and long-lasting finishes.

INNODEK.  
TECHNOLOGIES  
FOR PREMIUM  
ALUMINIUM  
FINISHES.





**DIGITAL DECORATION  
TECHNOLOGY**



## ALUMINIUM DIGITAL DECORATION TECHNOLOGY

EGÒ® is the cutting-edge digital technology for aluminium decorative finishing. Thanks to digitally controlled processes, EGÒ® opens up endless combinations of textures, patterns, and colours, overcoming the limits of traditional aluminium decorative finishing technologies, and creating exclusive finishes that give each project a unique, one-of-a-kind identity.



**MAXIMUM FLEXIBILITY WITHOUT COMPROMISE**

At the heart of EGÒ® is **Innodek Printing Technology (IPT)** that combines the key advantages of both Multi-Pass and Single-Pass printing technologies. Digital graphics management lets you set and change textures, colours, and graphics in real time to adapt to each project, without system changes, machine downtime, or production stops.

**ONE SYSTEM, ENDLESS CREATIVE POSSIBILITIES**

From woodgrain to material finishes, with the freedom to switch between designs with the ease of a digital file. This versatility makes EGÒ® a technology that meets any aesthetic requirement.

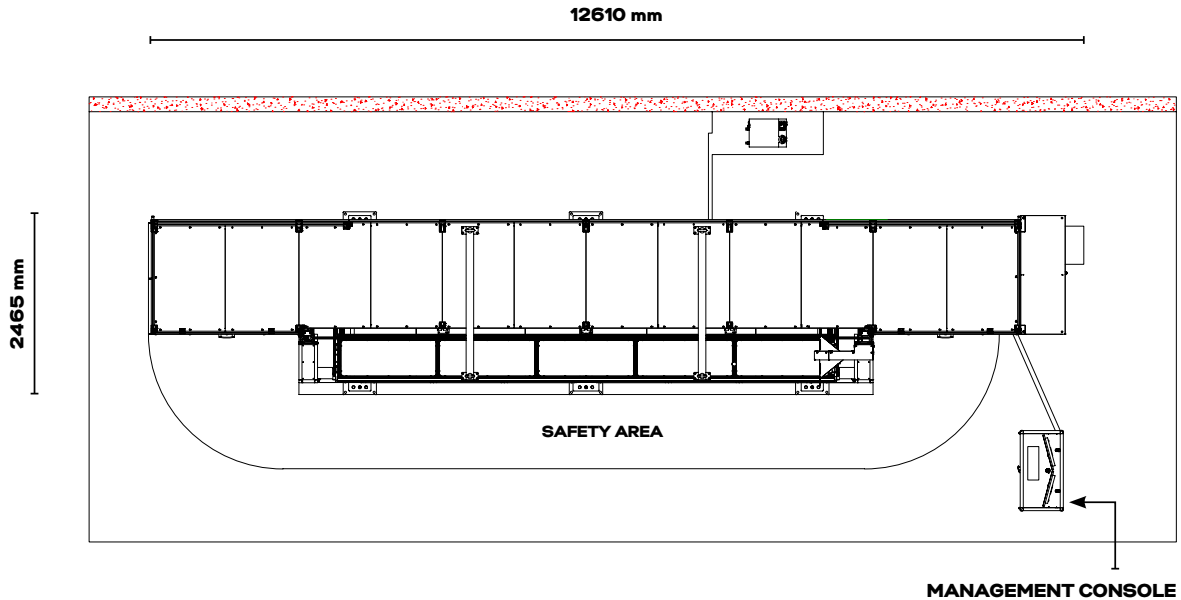
**PERFORMANCE BEYOND THE STANDARD**

EGÒ® digital technology ensures greater precision in ink application, more natural nuances and superior texture definition, offering surfaces with strong aesthetic impact and high perceived value. The quality of the inks and our expertise in the control processes enable the production of finishes designed to maintain a high level of aesthetic performance, even in the most demanding outdoor applications.





# SYSTEM LAYOUT



## TECHNICAL DATA

### Innodek Printing Technology (IPT):

EGO® system combines the key advantages of both Multi-Pass and Single-Pass printing technologies. It delivers the exceptional image quality, colour accuracy, and flexibility typically associated with Multi-Pass printing, while achieving high productivity through an optimized print architecture and a high-density printhead configuration.

### Printing Quality & Resolution:

High-definition printing capable of reproducing fine details and sharp images.

### Repeatability:

Consistent, reproducible results over time, with control of colour tolerances.

### Available Colour Gamut &

### Colour Management Capabilities:

A wide colour gamut and advanced colour management system ensure accurate, consistent and long-lasting colour reproduction.

### Printing system:

High-resolution UV inkjet printing technology. Printing carriage houses 6 independent ink recirculation circuits, with 4 piezoelectric printheads dedicated to each colour. An integrated ink recirculation system enables precise control of ink temperature (heating/cooling) and ink flow rate, provides continuous ink recirculation between the main tank and the sub tank, and can perform partial or complete purge cycles of the recirculation circuit.

### Inks:

It is specifically designed for organic and inorganic UV-curable inks, ensuring reliable operation and long-lasting adhesion on non-porous substrates such as PVC, metal, aluminium, and similar materials.

### Maximum Printing Area:

400 × 7,000 mm (W × L)

### Maximum Printable Profile Height:

360 mm

### Multi-Side Printing Capability:

EGO® technology is suitable to decorate non-flat surface. Ability to print on 1 to 4 sides of the profile, making the system ideal for window and door profiles, frames, and interlocking cladding panels.

### Semi-Automatic Loading and Unloading System:

sliding work trays.

### Decorative Printing Applications:

Door and window profiles, flat and interlocking cladding panels, façade.

## DECORATION PROCESS

The EGÒ® digital decoration industrial printer features a large work area, simultaneous management of multiple profiles, a dual automatic tray system, and maximum operational flexibility, all designed to reduce downtime and boost the overall efficiency of the production process.



### LOADING

Profiles or sheets are loaded onto the large tray and transported through the printing area. Before loading, the profiles are pre-treated and base-coated.



### TRAYS AUTOMATIC EXCHANGE

EGÒ® digital printer has 2 trays that automatically shift into and out of the print area, allowing you to exchange the profiles to be decorated with the decorated profiles. This ensures a continuous decoration process, without downtime.



### GRAPHICS SETTING

From a dedicated console, an operator starts the automatic process, selects and sets the graphics and other printing parameters. The dedicated software allows real-time adjustments to texture, colours, and design without downtime in the production process.



### DIGITAL DECORATION

The system automatically detects the position and height and applies the print sequence without interruptions or the need for manual adjustments. Industrial printheads accurately deposit the inks and create the selected texture effects in perfect register. The profiles are decorated one side at a time, and rotated without any interruption to the process.



### UNLOADING

At the end of the printing process, the tray automatically shifts from inside to the outside of the printer area, and the operator can download the printed profiles. At the same time, the unprinted profiles move into the printer for decoration.

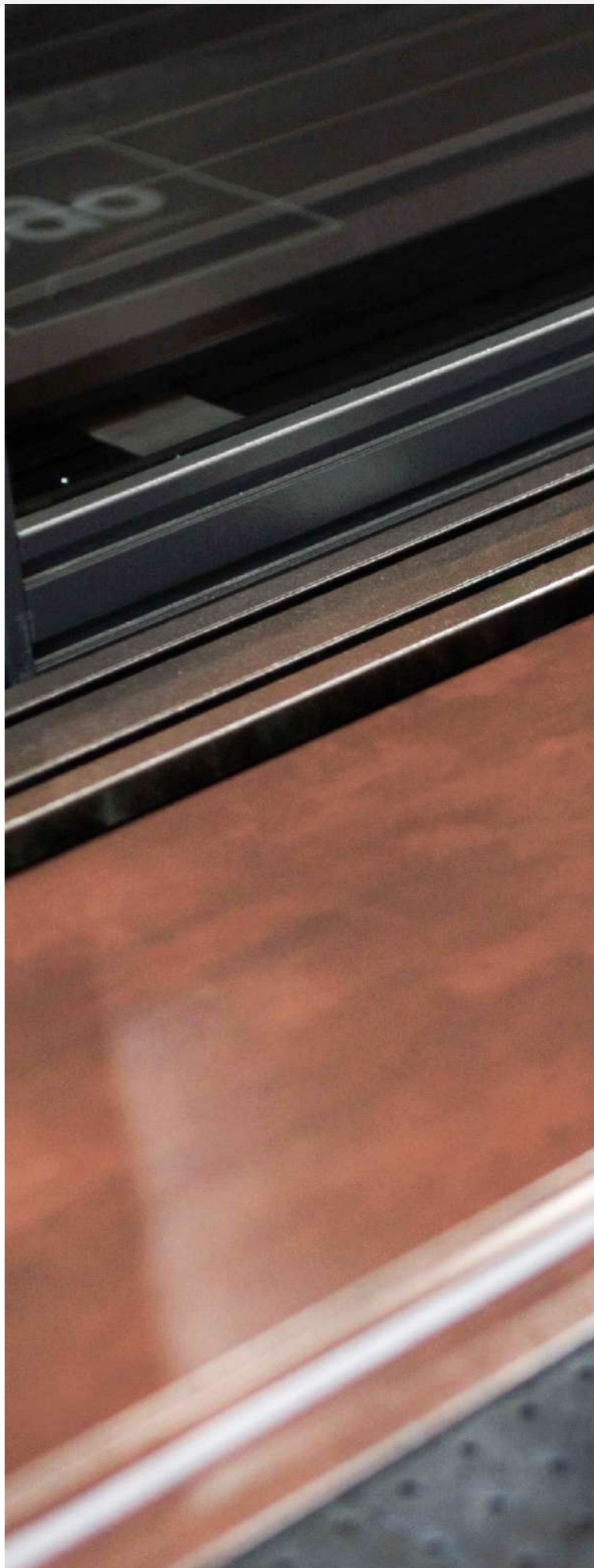
## FINISHES

EGÒ® finishes deliver exceptional depth, detail, and naturalness, creating aluminium surfaces with distinctive character and a rich material feel. Every nuance is reproduced with precision to create decorative finishes that impress both visually and to the touch.

From woodgrain to material decoration, EGÒ® lets you create exclusive finishes that set each project apart from the competition.

EGÒ® technology combines high-definition graphics with excellent colour stability and superior resistance to wear and weathering.

Tests carried out in Qualital laboratories certify that EGÒ® finishes maintain 100% gloss and colour retention after 3,000 hours.





## WOOD LINE



**BQ00H00**  
**OAK**



**BN02H00**  
**COGNAC WALNUT**



**BN01H00**  
**DARK WALNUT**



**BO00H00**  
**ELM**

**WOOD LINE**

**EL00H00**  
**LARCH**



**DR00H00**  
**OLD OAK**



**BR05H00**  
**CLASSIC OAK**



**DP00H00**  
**BLONDE ROSEWOOD**

## MATERIC LINE

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**EF02H00  
ECLIPSE IRON**



**BC00H00  
CORTEN**



**BC01H00  
HERITAGE CORTEN**

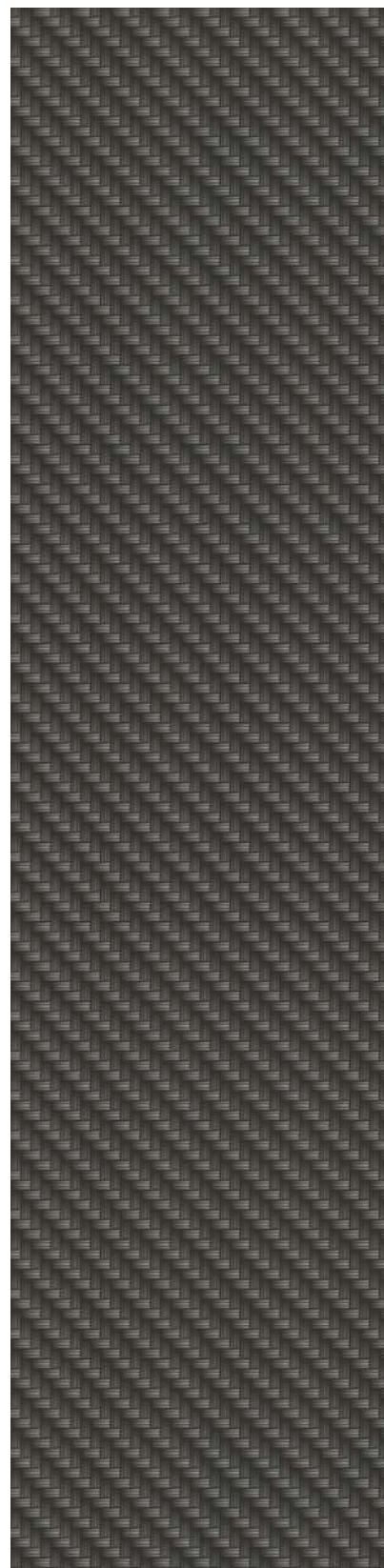
# MATERIC LINE



**BB00H00  
BRONZE**



**EF03H00  
OCEAN IRON**



**EC00H01  
CARBON**



## EXCLUSIVE VALUE-ADDED SYSTEM

### VALUE-ADDED FEATURES

**Decoration without limits.** EGÒ® is a technology designed to expand creative freedom and unlock new business opportunities through exclusive surfaces, offering a high degree of customisation and enhanced perceived value.

**Digital Technology without compromise.** EGÒ® technology ensures greater precision in ink deposition, more natural gradients, and superior texture definition. Professional RIP software with advanced colour management, ICC profiling and nesting optimises material utilisation and printing efficiency.

**Production Flexibility.** Instant design changeovers as easily as changing a digital file, with no mechanical tooling, lengthy setup times or production interruptions. This enables fast and efficient order management: the ideal system for small- and medium-sized production batches. A large working area, simultaneous handling of multiple profiles and a dual automatic tray system maximise operational flexibility, minimise downtime and enhance overall production efficiency.

**Precision with any length.** EGÒ® prints profiles up to 7 metres in length, delivering seamless graphic continuity, outstanding precision and consistent quality across the entire profile.

**Labour saving process.** EGÒ® is designed to optimise labour efficiency by reducing manual operations throughout the decoration process. Automated handling and digital process management minimise operator intervention, reducing the resources required to manage customised production

**A solution for different aluminium market applications.** Windows and doors, façades, solar shading systems and architectural applications, where large dimensions demand uncompromised aesthetics and precision.

**Durability beyond the standard.** EGÒ® digital technology exceeds current durability standards.

### VALUE-ADDED SERVICES

A dedicated range of services designed to maximise system performance, simplify operations, and support customers throughout the production process.

■ **Professional System Start-Up Support.** Available remotely or on-site, ensuring fast and efficient commissioning, start-up and performance optimisation.

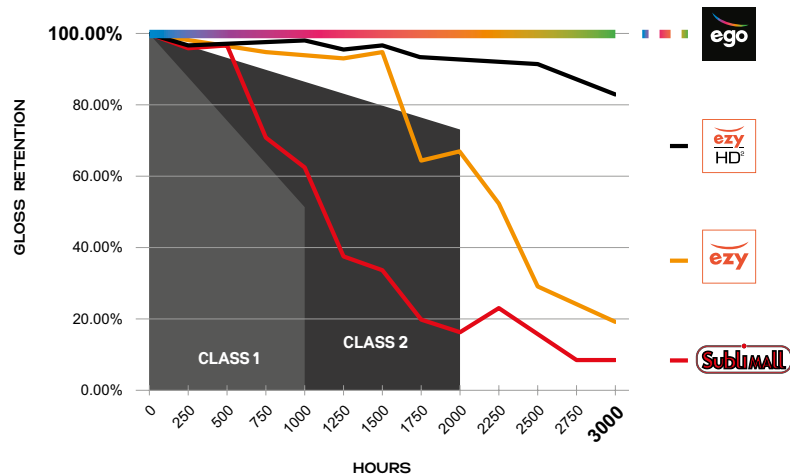
■ **Customised Technical Training.** Tailored training programmes for production and maintenance operators, supporting effective system operation and long-term performance.

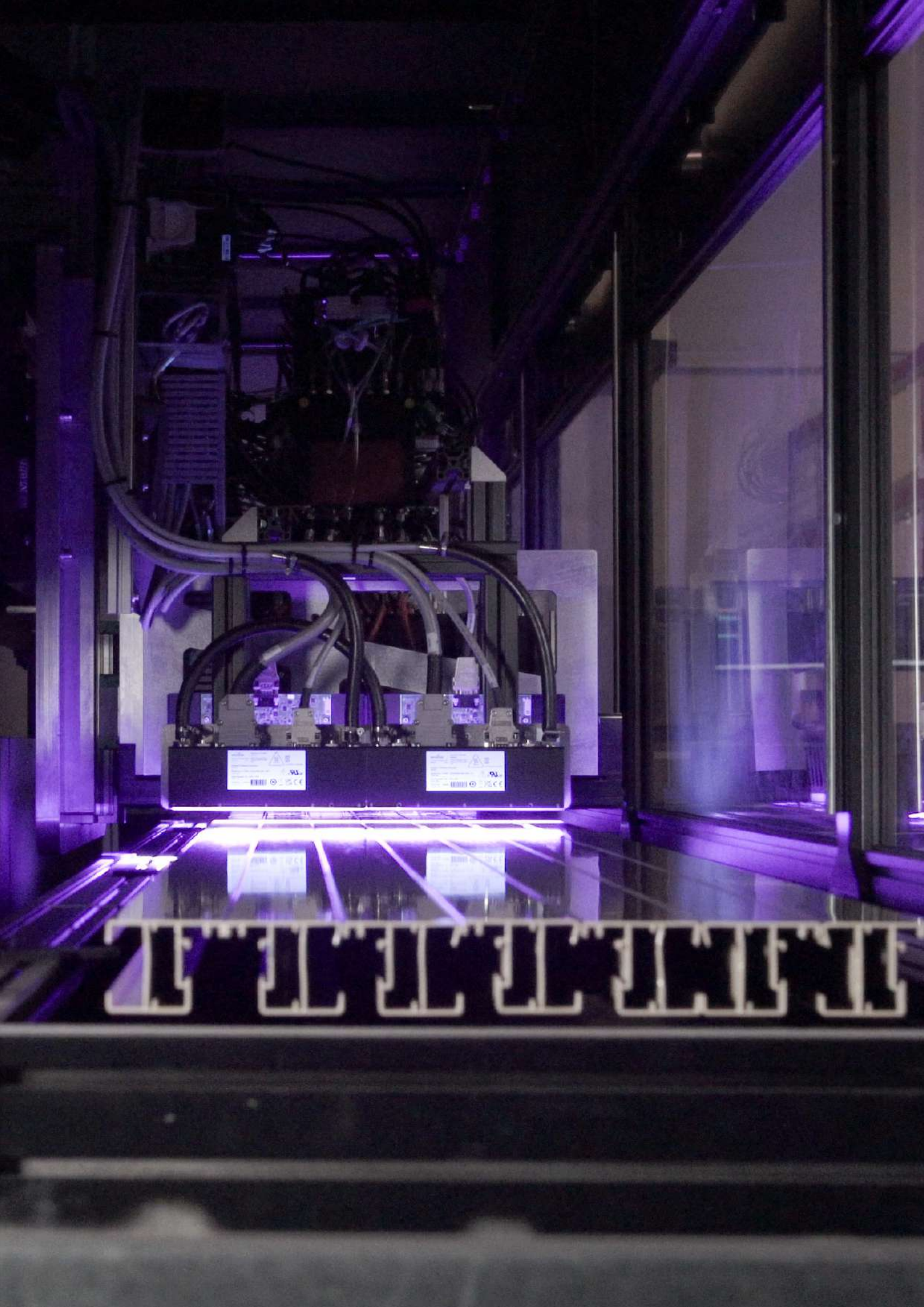
■ **Graphics Supply Service.** Ready-to-use digital designs tailored to your production requirements, enabling faster start-up and greater creative flexibility.

■ **Comprehensive spare parts management and supply.** The service includes identification of essential parts, procurement, and on-time delivery directly to the customers, supporting operational continuity and consistent plant performance.

### Durability Performance

GLOSS (GU) UNI EN ISO 2813:2016









**POWDER-ON-POWDER  
DECORATION TECHNOLOGY**



## ALUMINIUM POWDER ON POWDER DECORATION TECHNOLOGY

DFV has developed the proprietary **EZY® wood-effect** aluminium decoration technology, widely recognised for the high aesthetic quality and technical performance of its finishes.

The EZY® system delivers refined, uniform, and realistic surface finishes, while ensuring **process reliability, repeatable decoration and durability**.

A modern, efficient, and highly automated solution, EZY® significantly reduces labour costs and boosts overall plant productivity. The system also enables fast and simple colour (powder) and finish (pattern) changes, **minimising line downtime**.

Compatible with aluminium profiles of various shapes and sizes, the EZY® system integrates the entire decoration and polymerisation process, **ensuring continuous production and consistent quality**.

### SUSTAINABLE TECHNOLOGY

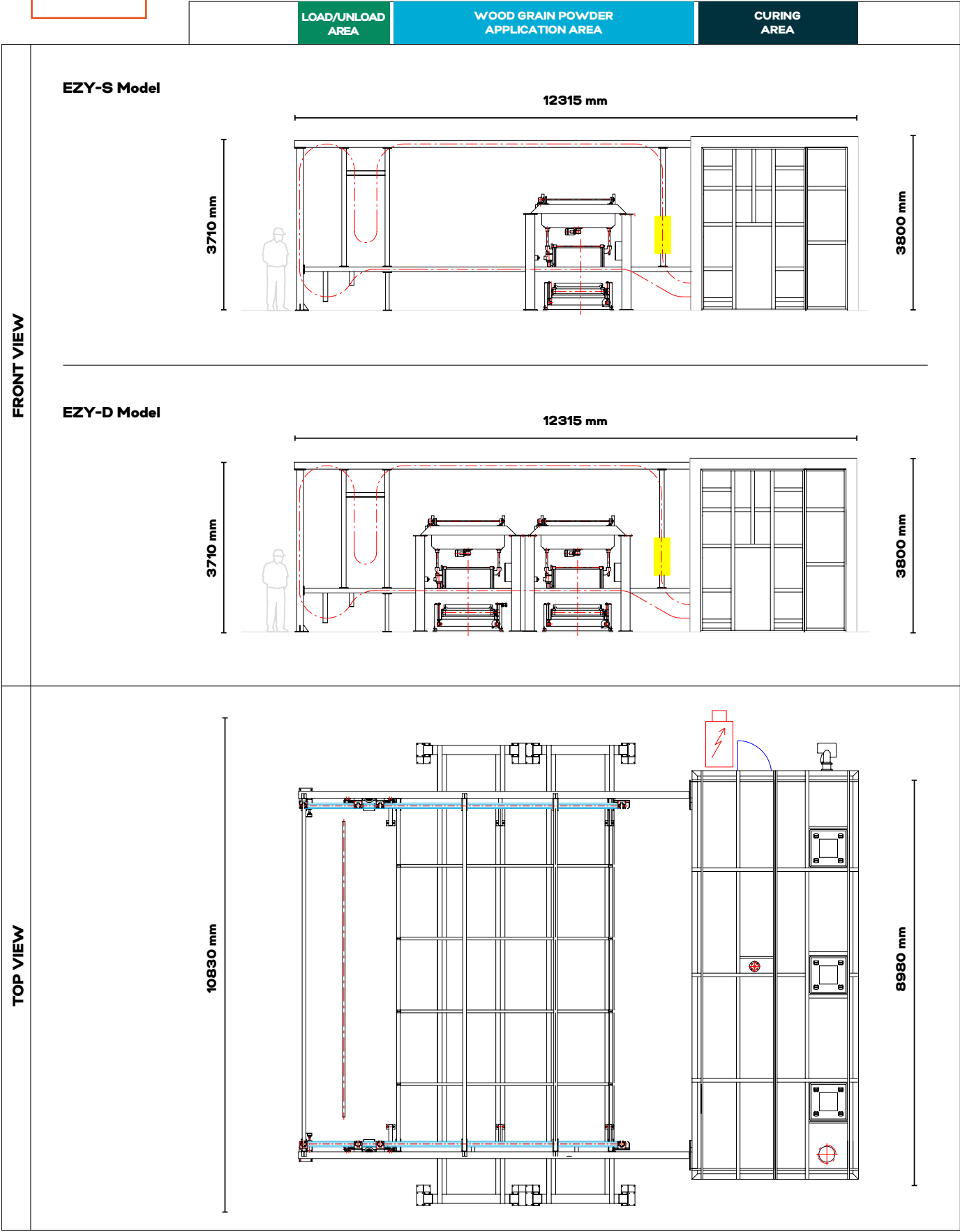
DFV Group uses premium, VOC-free polyester powders engineered for superior resistance to weathering and UV radiation (Qualicoat Class 2 powders). The EZY® system includes also a powder recovery unit ensuring minimal waste. All this reflects our ongoing commitment to providing sustainable and environmentally responsible solutions.



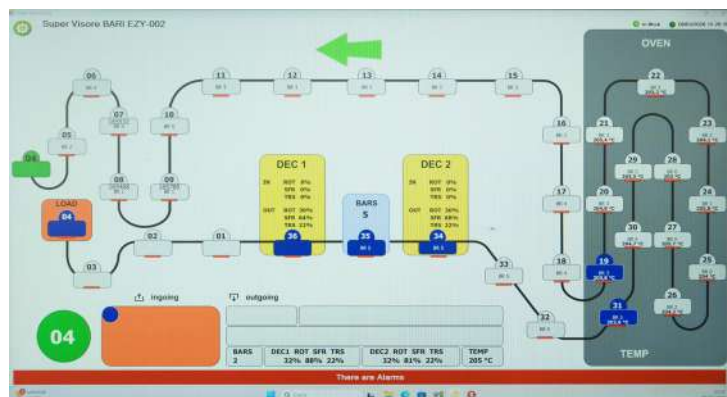




SYSTEM LAYOUTS



## DECORATION PROCESS



### LOADING AREA

/ **Profiles loading.** Profiles are loaded onto the transport system connected to the decoration drum. Before loading, the profiles are pre-treated, base-coated and partially cured.

### WOOD GRAIN POWDER APPLICATION AREA

/ **Transport to application area.** The profiles are transported to the surface finish application area. The system can be equipped with one or two decoration drums to maximise productivity.

/ **The decoration drums** automatically apply the powder according to the selected pattern.

/ Once the first face of the profile has been decorated, operators rotate it to finish the remaining sides.

### CURING AREA

/ **Final curing in the polymerisation oven.** Once all required sides have been decorated, the profiles are conveyed by chain to the polymerisation oven for curing. This process simultaneously cures both powder layers: the base layer, previously applied and partially cured outside the EZY® system and the EZY® wood grain powder layer.

### UNLOADING AREA

/ **Profiles are unloaded** in the same area where they were initially loaded, by the same personnel who handled the loading phase.

## SYSTEM COMPONENTS



Transportation system composed of two chain conveyors.



Hooking system ensures the correct tension of the profiles, of any type, allowing even flexible bars to be processed correctly.



The profile-levelling system ensures high planarity during coating



Shuttle on a bridge structure with the decorating drum.



Automatic system for applying the wood grain powder.

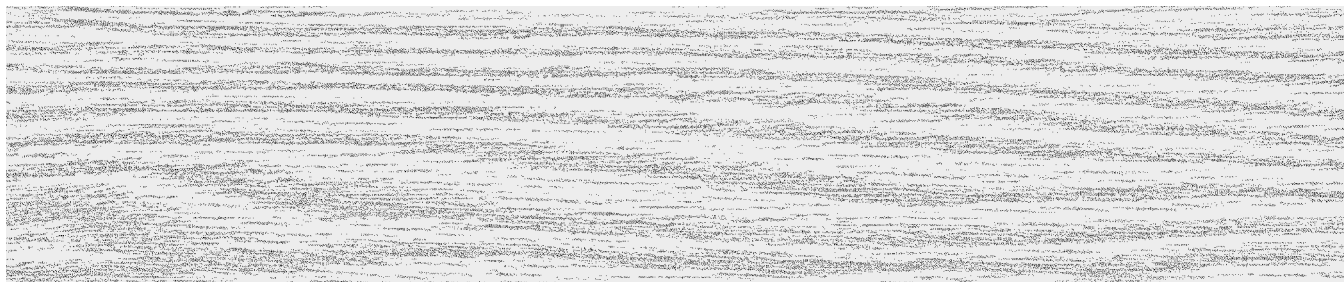


Polymerisation oven with forced-air combustion system and a burner that can be powered by natural gas or LPG, thermally insulated for high energy efficiency.

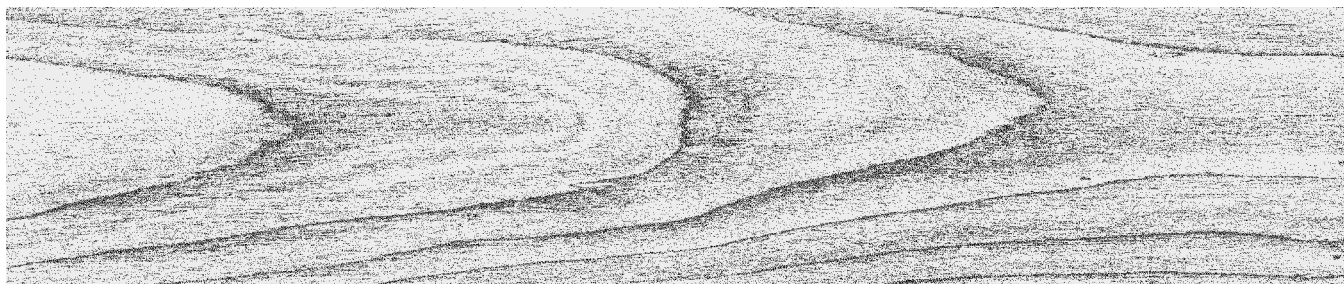
# TEXTURES



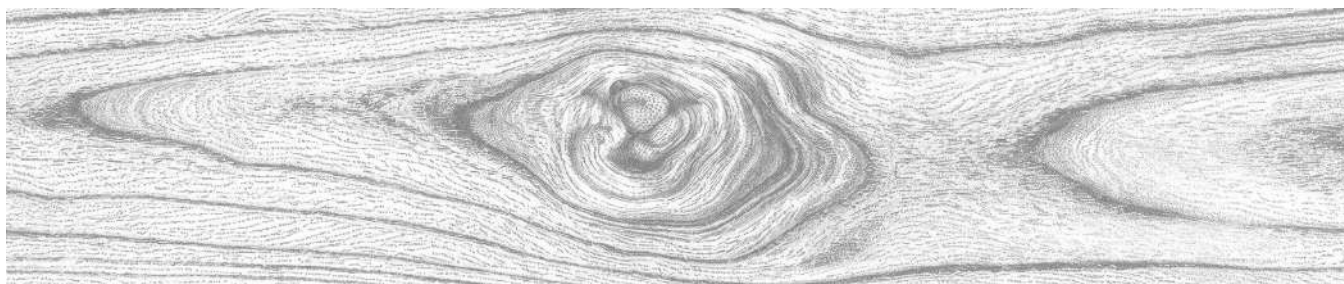
## ASH



## CHERRY



## ICONIK



## OAK



## WALNUT



# COLOUR COMBINATIONS



| COLOUR COMBINATION | BASE- CLASS 2 POWDER | GRAIN - CLASS 2 POWDER | FINISH*         |
|--------------------|----------------------|------------------------|-----------------|
| <b>INFINITY</b>    | INDKLHD302BA         | INDKLHD302BA           | INFINITY ASH    |
| <b>POLAR</b>       | INDKLHD302BA         | INDKLHD303VE           | POLAR ASH       |
| <b>IVORY</b>       | INDKLHD805BA         | INDKLHD820B1           | IVORY ASH       |
| <b>ICE</b>         | INDKLHD805BA         | INDKLHD801VE           | ICE OAK         |
| <b>WHITE</b>       | INDKLHD805BA         | INDKLHD805VE           | WHITE OAK       |
| <b>GREY</b>        | INDKLHD820B1         | INDKLHD820V1           | GREY OAK        |
| <b>LIGHT</b>       | INDKLHD330BA         | INDKLHD330VE           | LIGHT CHERRY    |
| <b>AMERICAN</b>    | INDKLHD870BA         | INDKLHD870VE           | AMERICAN CHERRY |
| <b>GOLDEN</b>      | INDKLHD812BA         | INDKLHD812VE           | GOLDEN WALNUT   |
| <b>WESTERN</b>     | INDKLHD510BA         | INDKLHD310VE           | WESTERN ASH     |
| <b>RED</b>         | INDKLREBAH00         | INDKLHD812VE           | RED CHERRY      |
| <b>ROYAL</b>       | INDKLHD832BA         | INDKLHD832VE           | ROYAL WALNUT    |
| <b>BROWN</b>       | INDKLHD821BA         | INDKLHD832VE           | BROWN WALNUT    |
| <b>VOLCANO</b>     | INDKLHD818BA         | INDKLHD818VE           | VOLCANO OAK     |
| <b>SILVER</b>      | INDKLHD360BA         | INDKLHD360VE           | SILVER ICONIK   |
| <b>DARK</b>        | INDKLHD366BA         | INDKLHD366VE           | DARK ASH        |

\* Examples of decorative finishes achieved by combining textures and powders. Colours are indicative only.



## EXCLUSIVE VALUE-ADDED SYSTEM

### VALUE-ADDED FEATURES

**Designed for long-lasting performance.** The EZY® aluminium decoration system combines advanced technology and high build quality to ensure reliable performance and long-term production efficiency, delivering a strong return on investment.

**All-in-one system.** EZY® is a compact, fully integrated decoration system. Conveying system, decoration unit, and curing oven all in one machine.

**High productivity** in terms of output per worker and powder efficiency. The complete decoration process requires only three workers.

**Efficiency and speed of execution:** the EZY® system is built to assure fast colour (powder) and pattern (drum) changes. After the polymerisation phase, the profiles can be immediately packaged, shipped or assembled.

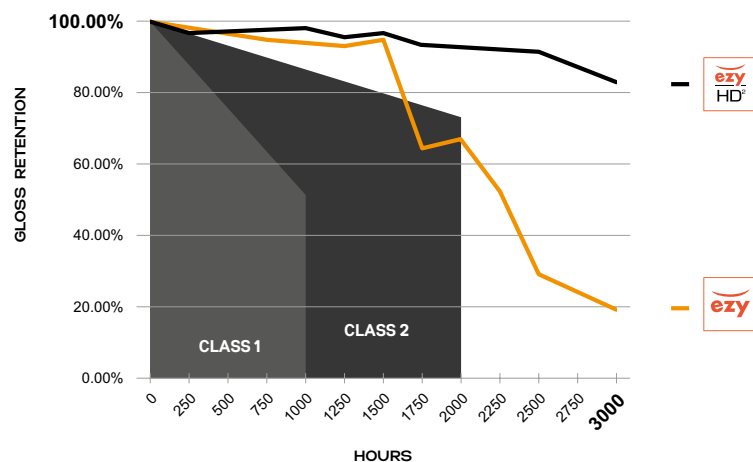
**Sustainable Premium Finishes.** EZY® finishes deliver superior aesthetic quality and durability, even in extreme conditions. The use of specific powders ensures highly corrosion-resistant, low-maintenance and a wide variety of colours and textured wood-grain patterns. All powder are VOC-Free.

### VALUE-ADDED SERVICES

A set of exclusive services integrated into EZY®'s systems:

- **Professional system start-up support**, available both remotely and on-site, designed to ensure a fast and efficient commissioning, start-up and performance optimisation.
- **Customised technical training programmes** for production and maintenance operators. Training covers process management, optimisation of application and curing parameters, quality monitoring, and routine and preventive maintenance.
- **Powder Selection and advanced technical consulting.** INNODEK offers the supply of Ezy® powders that meet QUALICOAT Class 2 certification. Our technical support enhances plant performance and simplifies procurement through a single-source supply solution, giving your operation a decisive competitive edge.
- **Comprehensive spare parts management and supply**, the service includes identification of essential parts, procurement, and on-time delivery directly to the customers, supporting operational continuity and consistent plant performance.

## Durability Performance



GLOSS (GU) UNI EN ISO 2813:2016

# DFV

## GROUP



Since 1972, DFV has operated in the aluminium sector, in a leadership position for coating and powder-on-powder and sublimation wood-effect decoration services for aluminium profiles and building systems.

Today, DFV is a multinational group with facilities in Italy, Australia, and Brazil. It integrates the whole production chain from extrusion to coating and architecture systems, offering advanced logistics services and warehouse service.

### TOTAL PROVIDER PARTNER IN ALUMINIUM

- EXTRUSION
- TECHNOLOGIES
- COATING
- ARCHITECTURE



### VISION

Be a global company in the aluminium sector, to offer a new customer experience through innovative and sustainable solutions.

### MISSION

Develop excellent products with low environmental impact and pursue increasing digital integration with the customer.

**MAKEIT**  
INNOVATION & SUSTAINABILITY

It's the reference framework for a leadership and organisational culture, which is increasingly focused on innovability.

# **iNNODEK**

DECORATION  
TECHNOLOGIES

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TECHNOLOGIES

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