

# BARBERAN EIR

HAPTIC FEELING FOR TEXTURED FINISHES





**BARBERÁN S.A.**, founded in 1929, is a family owned business that manufactures industrial surface finishing machinery.

We design and manufacture machines to improve productivity in manufacturing processes of the furniture, construction, decoration and packaging industries.

Our business is structured in 4 divisions: lamination, wrapping, lacquering and digital printing.

We develop Single Pass digital printers since 2007, and in this last decade has been innovating the digital printing technology. Our latest revolution, is the sleekest technology for texture creation: BARBERAN EIR.



## WHY BARBERAN EIR?

BARBERAN EIR is the most innovative technology for digital texture generation. It differs of other texture technologies because the texture is not created by addition but by subtraction of the product applied previously, making it a negative process.

During a decade Barberan has been leading the development of digital single pass presses for the furniture and flooring industry with great success, reaching a high print quality imitating wood, stone or any other types of design at industrial speeds.

But in order to make it look real it also has to feel real and this is where the efforts of these last years have been for Barberan, resulting into the BARBERAN EIR technology.

This new technology presented by Barberan is an innovative and game-changing technology which will generate a multitude of different embossing effects imitating to perfection the real wood look.

## BARBERAN EIR

BARBERAN EIR solves the main issue with the existing technologies: **design sharpness** and **texture depth**. Unlike with other technologies, the texture is not generated directly by printing on the board. The applied material modifies the mechanical properties of the wet coat only in selected areas of the pattern and at different depths and the texture is generated in the brushing stage.

## ADVANTAGES

- ideal for flooring and furniture applications
- sharp structure
- adjustable depth of texture with grayscale generation of deeper structures depending on the wet coat thickness
- low texture generation cost

## DESIGN SHARPNESS

A precise, sharp design is printed with a digital process for a perfect finish.

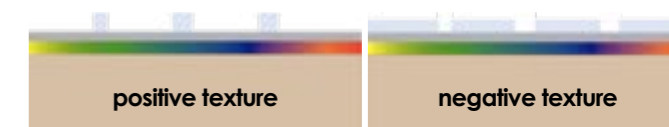
## TEXTURE DEPTH

Texture deepness is variable according designers' desires to realistically reproduce natural textures.

## 3D EFFECTS

There are two main ways of generating texture: a positive and a negative one. The positive texture is created by addition, while the negative is created by subtraction.

BARBERAN EIR is a negative one, meaning it generates its haptic effects by extracting material from the panel.



## TECHNOLOGY COMPARISON

	3D Print	Digital Embossing	BARBERAN EIR
Texture deepness	10-100 microns	20-80	20-120
Mechanical properties	limited	high	high
Structure shape	positive	negative	negative
Texture cost	high	low	low
Structure sharpness	medium	low	very high
Pattern design limitations	no limits	only generates narrow areas, as wood grain	no limits



## BARBERAN EIR LINE

The line with which digital texture in register is applied onto surfaces is formed by a Jetmaster (4 or 6 colors), that prints digitally the panel, and a Jetmaster TRT, that applies the product to generate the texture.

### PROCESSES

- panel preparation
- printing primer
- digital printing Jetmaster
- printed panel protection (wear layer)
- texture preparation
- digital texture application Jetmaster TRT
- cleaning station
- finish application

### APPLICATIONS

- Flooring
- Furniture components, doors, decorative panels, kitchen tops, etc.

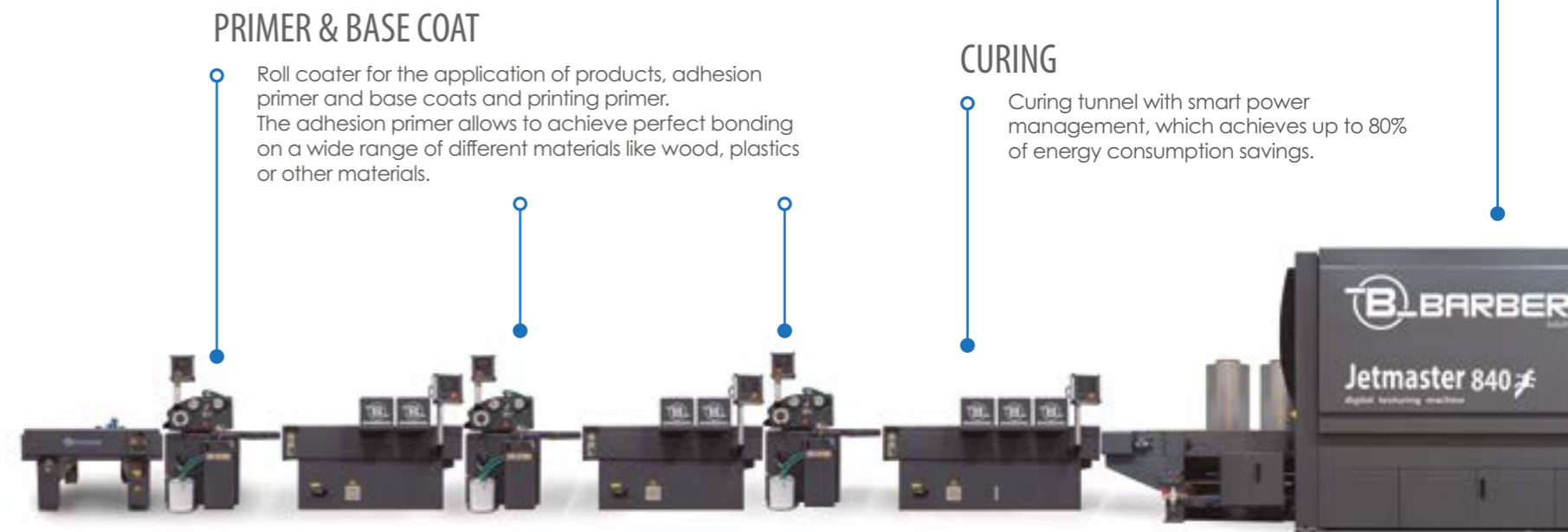
### OTHER TECHNOLOGIES

**3D printing:** digital printing with UV clear ink directly onto the surface. Suitable for furniture industry, as the 3D layer applied has less wear resistance. High costs when making negative 3D effect.

**Digital Embossing:** digital printing with special UV or water based ink onto a wet UV coating. A digital press displaces the wet layer creating valleys, and a UV curing process solidifies the layer. It has many disadvantages: very limited in sharpness and depth, which only depends on the chemistry, and it is not possible to generate wide areas, as needed in stone designs for instance.

### JETMASTER 840

Single-Pass Digital press for widths of up to 840mm. It can print in 6 colors (CMYK + light cyan and light magenta) with UV inks for better quality and metamerism. It features a variable data system, and allows modifications on the printing queue on real-time, improving productivity.



panel preparation	printing primer	Jetmaster digital printer
initial stage were the panel is cleaned and prepared for the digital printing process	the board goes through a station where primer and base coat are applied prior to the digital printing	the image, any kind of design, is printed onto the panel



## JETMASTER TRT - TEXTURE APPLICATION

Single-Pass digital press for widths up to 840mm to print digital patterns and create a texture effect. It creates a texture applying a specially formulated fluid onto a previously printed and coated panel modifying the properties of the coating and making it soft into selective areas. This modified coating will be cleaned in the following stage.

### PROTECTION COAT

Roll coater for the application of a UV product, in this case a layer to protect the digital printed design.

### BASE COAT FOR TEXTURING

Roll coaters for the application of a wear layer which is used to create the texture.

### CLEANING

This cleaning machine is key in the generation of textures. It cleans the remained product, leaving only the previously cured one, maintaining, therefore, the digital impression and subtracting selected areas from the realistic pattern in order to create depth effects.

### TOPCOAT APPLICATION

Roll coater for the application of a top coat, gloss or matt finish.



printed panel protection	texture preparation	Jetmaster TRT texture application	cleaning	finish application
a UV coat to protect the printed image is applied	a thick wear layer of varnish is applied and partially cured	a specially formulated product is applied in selected areas, conforming a design with the image printed before	texturized areas are cleaned	a last UV top coat is applied in order to obtain final desired finish. The panel is ready for further processing



## JETMASTER G5

G5 is the new software platform developed by Barberan that has been designed to intuitively manage all the printing operations, turning a highly complex machine into a system that is easy to handle. This tool has been specifically designed for single-pass printing technology and is inspired by the experience provided by our customers.

## AVAILABLE MODELS

BARBERAN EIR system is available in different printing widths: 690mm, 840mm, 1260mm, 1890mm and 2100mm.

Printing system	Single Pass
Colours	CMYK standard, optional: Light Cyan & Light Magenta
Resolution	360 dpi
Drop sizes	3 drop sizes, 4 grey scales
Inks	UV curable inks
Printing speed	up to 60m/min

## JETMASTER CLOUD

Get the most of a centralized system to analyze the work data of your printing machine, from anywhere, anytime.

Make the best decisions in terms of production, costs and preventive maintenance, getting to know in depth the machine performance.

Through a web browser, you can view a detailed history on:

- **Productivity data:** printed meters, printed boards, production time, finished orders, printed images.
- **Production costs:** quantity of ink used in the production, purge done.
- **Incidents:** machine stops, alarms, etc.

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**Jetmaster Series**   
digital printing machine 

**TB BARBERÁN**  
Solutions since 1929



First Place  
LIGNA  
SYMPOSIUM  
2007



BEST INDUSTRIAL  
PRINTING  
SOLUTION  
2011



BEST  
INNOVATION  
2013



INNOVATOR  
of  
THE YEAR  
2016



EDP  
AWARDS  
2019



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