



**iBOTIC**

SURFACE ENHANCEMENT TECHNOLOGY LEADER  
表面涂饰技术领导者







### OUR SITES

Cefla was founded in Imola, where we still maintain the headquarters. We also have 26 locations around the world.



### PLANTS

We have 12 production sites in Italy, China, Germany, Russia and USA, with a total surface area of 176,000 sqm.



### EMPLOYEES

Currently, we can rely on the professionalism and passion of 2,000 employees.



### ACTIVE CUSTOMERS

We have 55,000 active customers, who believe and invest in innovation as much as we do.



### PLANT SOLUTIONS

Civil and technological plant systems, cogeneration, trigeneration and systems for power generation and recovery.



### MEDICAL EQUIPMENT

Development and production of high-tech medical devices for the medical sector, for dental professionals and radiologists.



### C-LED

Design and production of high-tech electronic applications (including LED) for lighting and wireless connectivity.



### 我们的网点

赛福徕成立于意大利伊莫拉市,这也是公司总部的所在地。除此之外,赛福徕在全球各地还有26处网点。



### 工厂

我们在意大利、中国、德国、俄国和美国有12家生产基地,占地总面积达176,000平方米。



### 员工

目前,我们拥有2000多名专业、充满激情并值得信赖的员工。



### 活跃客户

我们有55,000多个活跃客户,像我们一样坚信创新精神并愿意不断投资创新技术。



### 工程建设解决方案

专注于民用工厂科技系统、热电联供系统、冷热电三联供系统和能源再生及回收利用系统。



### 医疗设备

专注于研发以及制造牙科和放射科医师使用的高科技医疗设备。



### C-LED照明系统

专注于高科技无线电子光源产品(包括LED)的设计和制造。





## FINISHING

### **SURFACE ENHANCEMENT TECHNOLOGY LEADER.**

We create innovative, technological solutions to improve the quality, the look and the feel of everyday products. We seek out the perfect mix of excellence, competitiveness and respect for the environment, together with our customers and suppliers. We invest in our passion, skills and creative genius to represent the benchmark in the field of premium quality decoration and finishing. Cefla Finishing - worldwide leader in the finishing of wooden, plastic and non-ferrous material products - has spent the last 70 years asking Customers worldwide "What are you looking for when investing in finishing automation?" The answers have come in hundreds of forms - the widest variety of coating, drying and wrapping machines for wood and non- wood panels and profiles used in all industrial sectors.

### **表面涂饰技术领导者**

我们携手客户和供应商追求卓越品质、市场竞争力和环保的完美结合。我们用无比的激情、精湛的技术和天才的创造力成就了表面装饰和涂装领域的典范和代表。

Cefla赛福徕涂装集团作为全球木材、塑料及非金属制品涂装行业的领导者，曾历时70年遍访全球客户“您投资自动涂装生产线的目标是什么？我们如何才能帮助您提升您的业务？”而从成百上千的形形色色的答案中，我们终于明白客户所需要的是：适用于各行各业的，加工原木和非原木型面板和线条的各种不同款型的涂装、干燥和包覆等一系列设备。

## Application Fields 应用领域



TYPE OF PROCESS: SPRAYING APPLICATION  
工艺类型:喷涂



**WOOD**  
木制品



**VETRO**  
玻璃



**PLASTIC**  
塑料制品



**METAL**  
金属制品



**COLLA**  
胶

## Product concept 产品概述

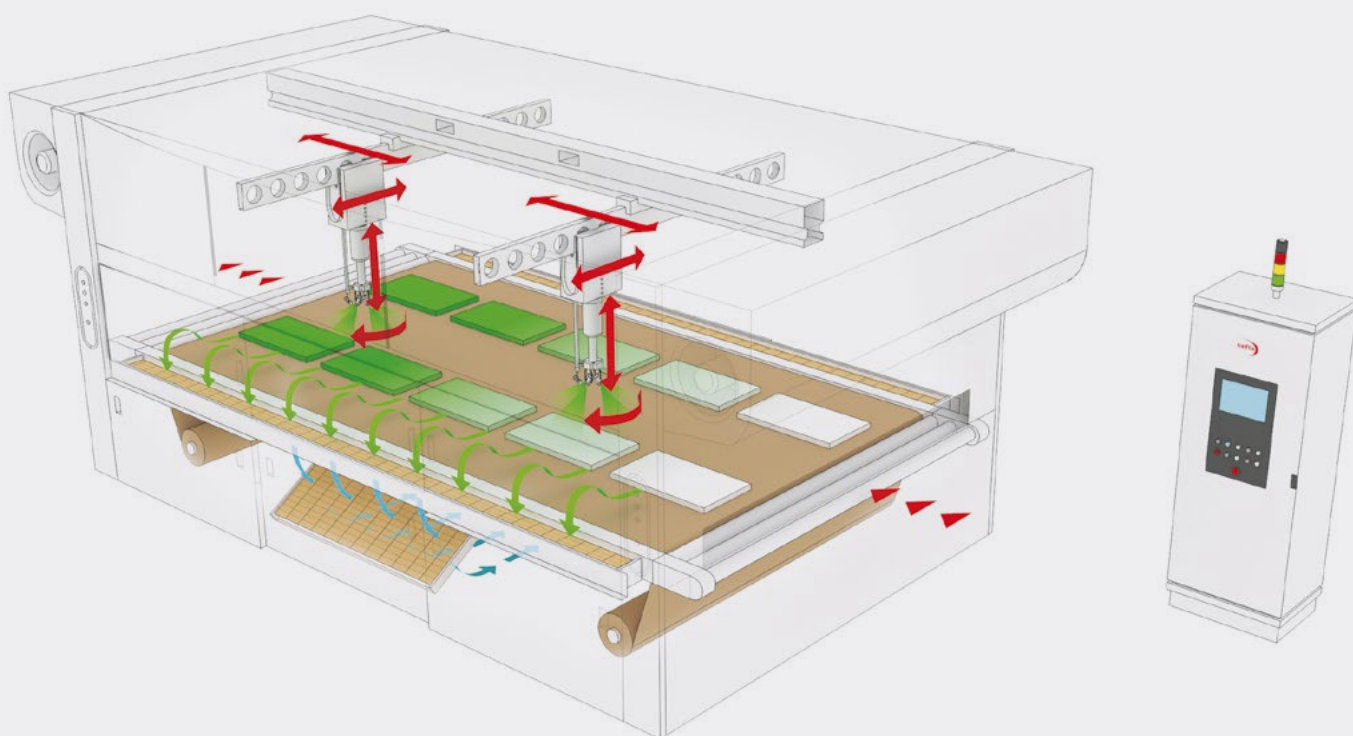




iBotic is the high-capacity spraying robot that can combine ultra-high finishing quality - on both the faces and edges of workpieces - with maximum flexibility. What makes iBotic so special is that it can work simultaneously on pieces of different shape and thickness, with the conveyor either at standstill or on the move in both the 1 and 2-arm configurations.

iBotic喷涂机是最高产、灵活性超高的喷涂机器人，可对平面和边部进行高质量精确涂装。iBotic区别于其他喷涂机的特别之处在于，它可以同时加工静止或移动状态下，不同形状和厚度的工件。可选用单机械臂和双机械臂喷涂模式。

## Configurations 配置



2 DP

- **L** 长度 = 6500-7500 mm
- **W** 宽度 = 4600 mm
- **H** 高度 = 3300-3500 mm

VACUUM BELT COVERED WITH A PAPER ROLL  
真空纸式传输带

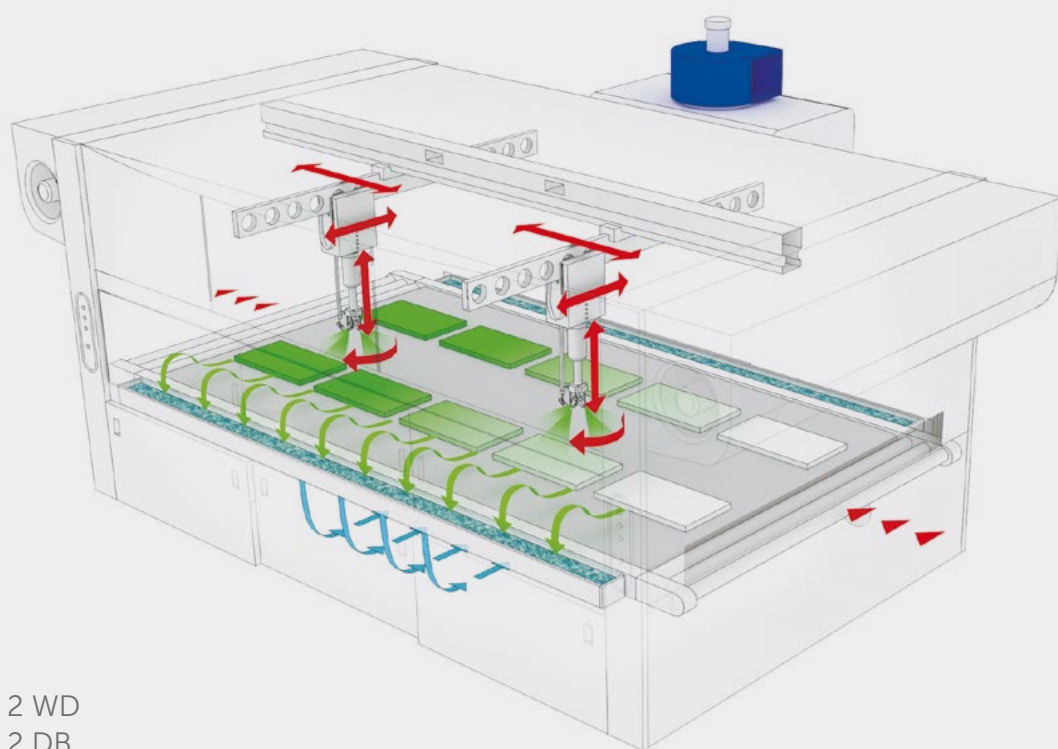


1 OR 2 ARMS  
单机械臂或双机械臂



WATER OR DRY FILTER  
水帘式或干式过滤





2 WD  
2 DB

- **L** 长度 = 6500-7500 mm
- **W** 宽度 = 4600 mm
- **H** 高度 = 3300-3500 mm

**WORKPIECE CONVEYING SYSTEM WITH CFB BELT**  
**CFB碳纤维传输系统**



**1 OR 2 ARMS**  
**单机械臂或双机械臂**



**WATER OR DRY FILTER**  
**水帘式或干式过滤**



## Configurations

### 配置

1 ARM  
单机械臂



WATER OR DRY FILTER  
水帘式或干式过滤



- **L** 长度 = 5300 mm
- **W** 宽度 = 4500 mm
- **H** 高度 = 3300-3500 mm

### iBOTIC K

iBotic K is the compact version of the iBotic robot. It provides the same high performance, outstanding flexibility and quality of work as the standard size robot (working length 3500 mm, 4500mm in the L version). It is available in the 1-arm configuration, with paper belt (working width 1300 mm) and dry filters. Equipped with the special arm, it can also be used in glue applications. The machine complies with the new energy saving and environmental protection standards, with considerable savings on running costs.



## iBOTIC K

iBotic K喷涂机是iBotic智能喷涂机器人的精简版本，它具备和标准iBotic机器人相同的高性能、高度灵活性和优异的喷涂质量（本款设备工作长度3500mm，L款工作长度4500 mm）。本款配备单臂机械手、纸质传输带和干式过滤器（工作宽度1300mm）。换用特殊的喷臂后，也可用于喷胶作业。

本机还同时满足了节能和环保方面的新标准，极大地节约了作业成本。

## Reading Barrier 感应光栅



### cVision

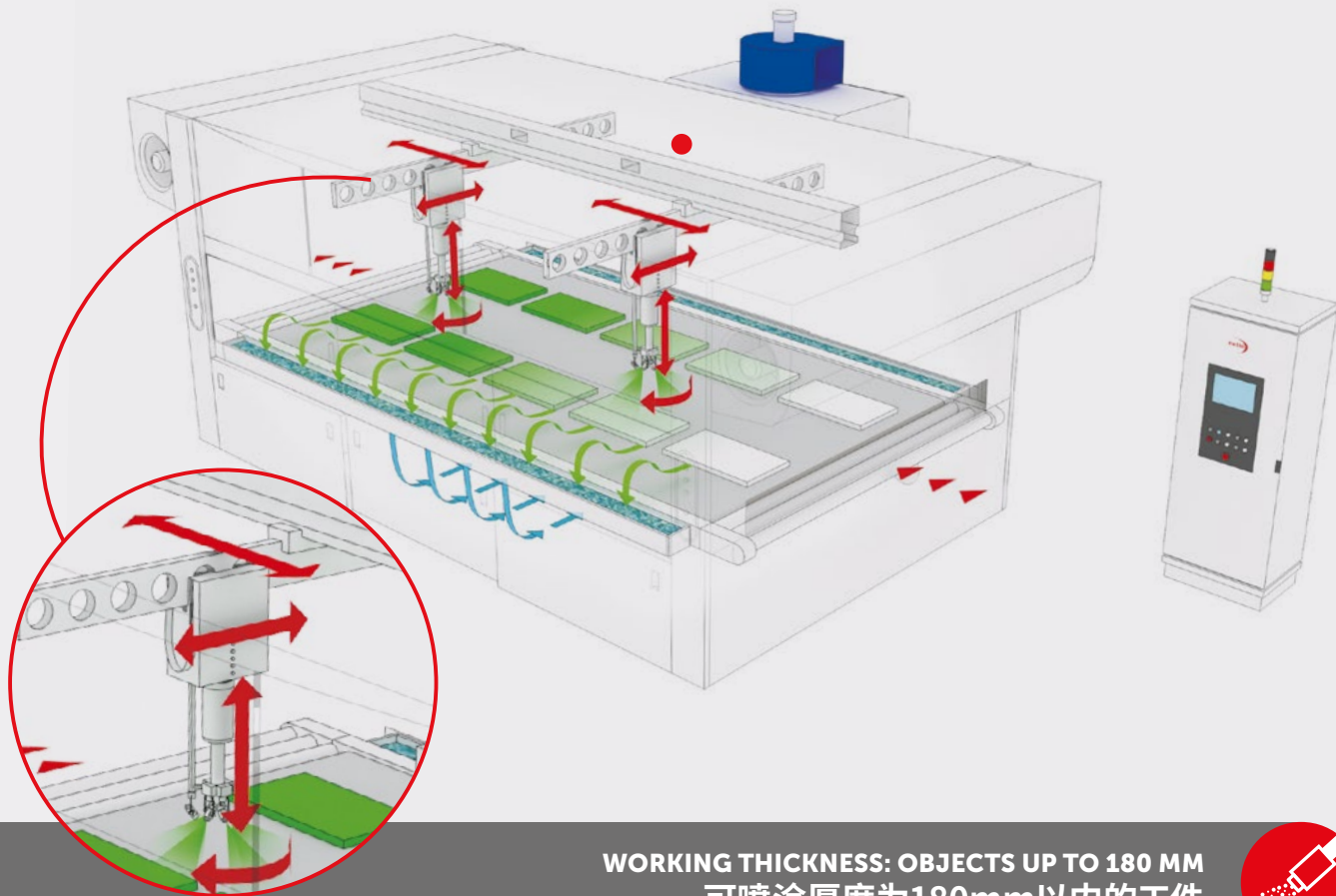
Reading at the inlet ensures high definition in the acquisition of shape, size, piece position, to automatically generate the best spraying paths: 2D version with 128 and 512 photodiodes and latest-version 3D cVision available.

### cVision

在进料处读取工件形状、尺寸和位置，自动生成最佳喷涂路径：

2D版本配备128只或512只电子眼；最新3D版本配备C-Viewer智能追踪系统。

## Spraying arms 喷臂



**WORKING THICKNESS: OBJECTS UP TO 180 MM**  
**可喷涂厚度为180mm以内的工件**

iBotic can be equipped with 1 or 2 arms, each with 4 spray guns. What makes this robot different from a normal sprayer is its 5-axes movement: the four X - Y - Z -  $\beta$  face painting axes are electronically controlled. The fifth edge painting axis is controlled via programmed automatic positioning.

iBotic可配备单机械臂或双机械臂，每只喷臂配备4把喷枪。和其他喷涂机不同的是，本款喷涂机配有5支移动轴：4支轴电动控制，分别为X - Y - Z -  $\beta$ 轴，用于喷涂工件表面；1支轴用于喷涂工件边部，可自动定位。

**ARMS ARE REMOVABLE WITH QUICK COUPLING AND ARE THEREFORE INTERCHANGEABLE.**

**机械臂配备快速拆卸紧固件，因此可迅速拆卸和更换。**



## Spraying arms 喷臂



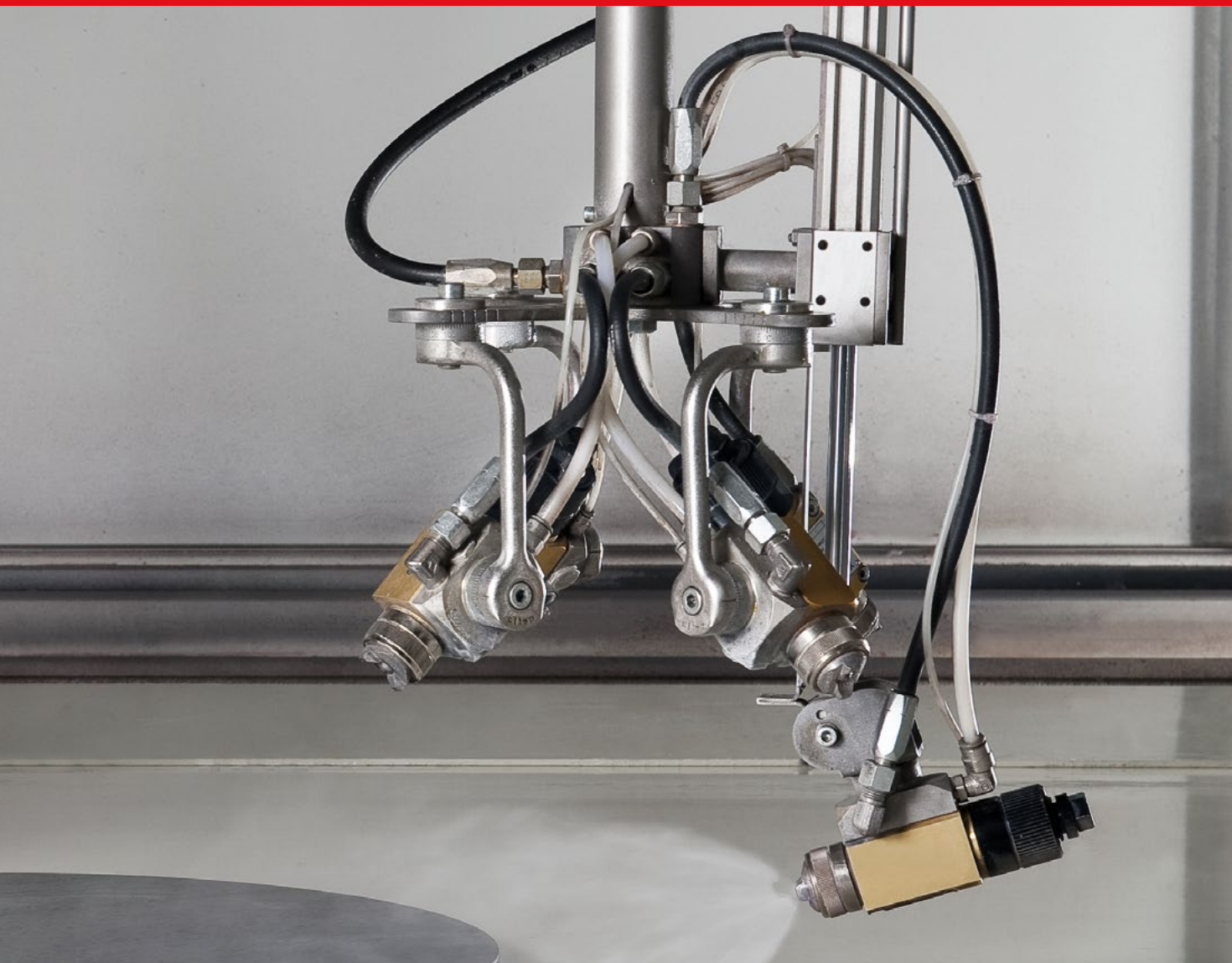
The fifth axis maximises iBotic flexibility performance as it allows workpiece edges to be painted even where there are variations in thickness.

针对静止工件，iBotic的五轴设计保证了其高度的作业灵活性，使其可以加工外缘不平整的边部。

AUTOMATIC AND PROGRAMMABLE GUN CLEANING SYSTEM

自动可编程喷枪清洁系统



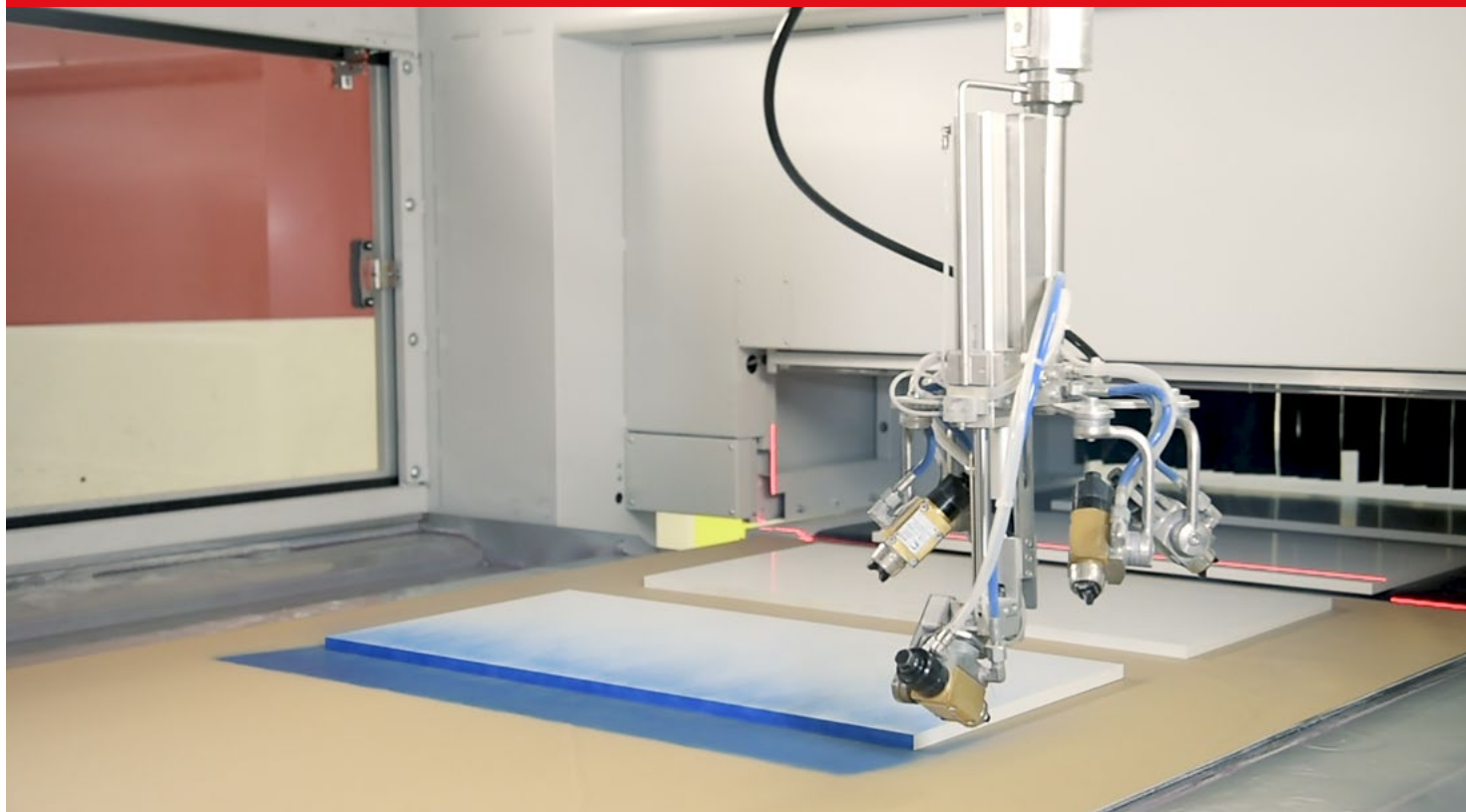


PAINT ARM WITH JIT (JUST IN TIME) SYSTEM PATENTED BY CEFLA FINISHING

-赛福徠专利的JIT系统（即时更换）



## Spraying arms 喷臂



Spraying of raised panels.

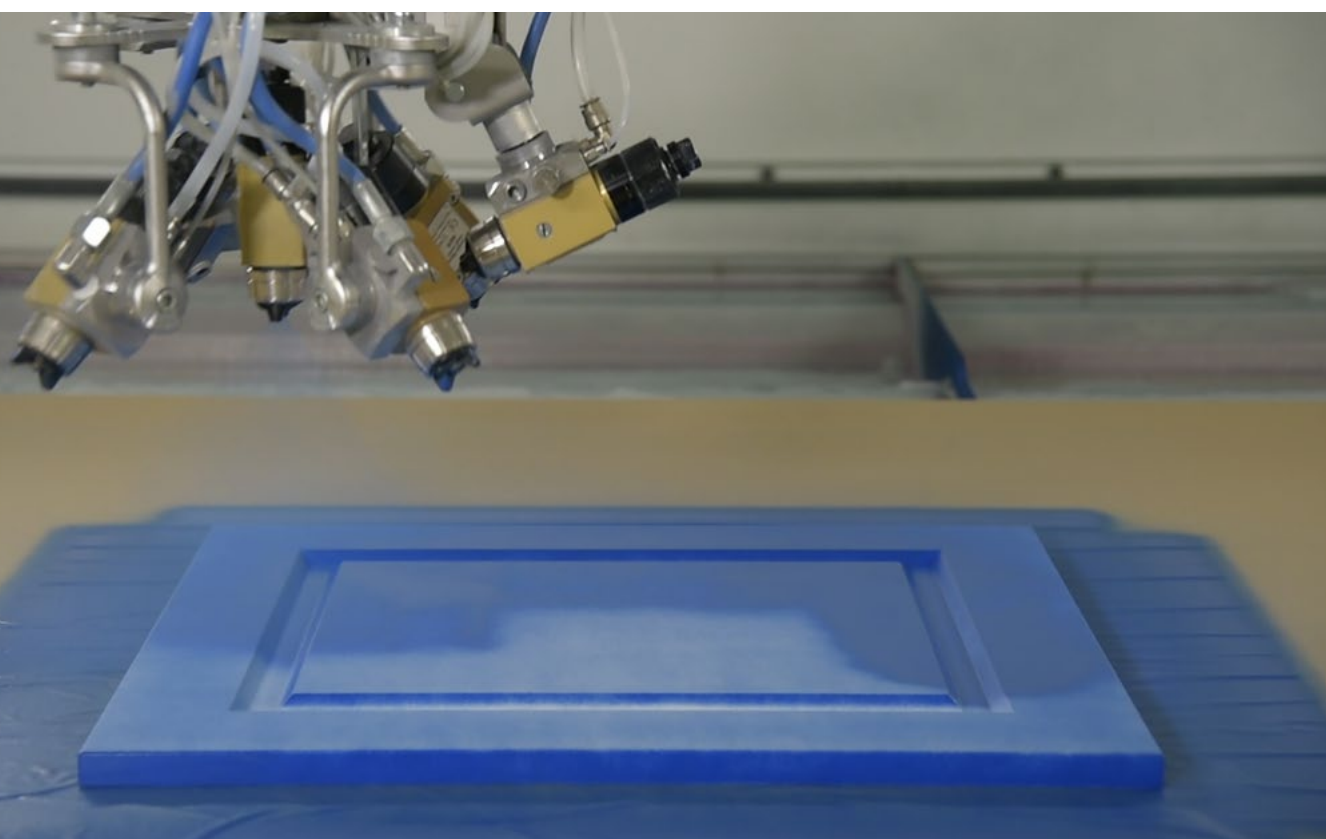
异形板喷涂

### Tracking mode

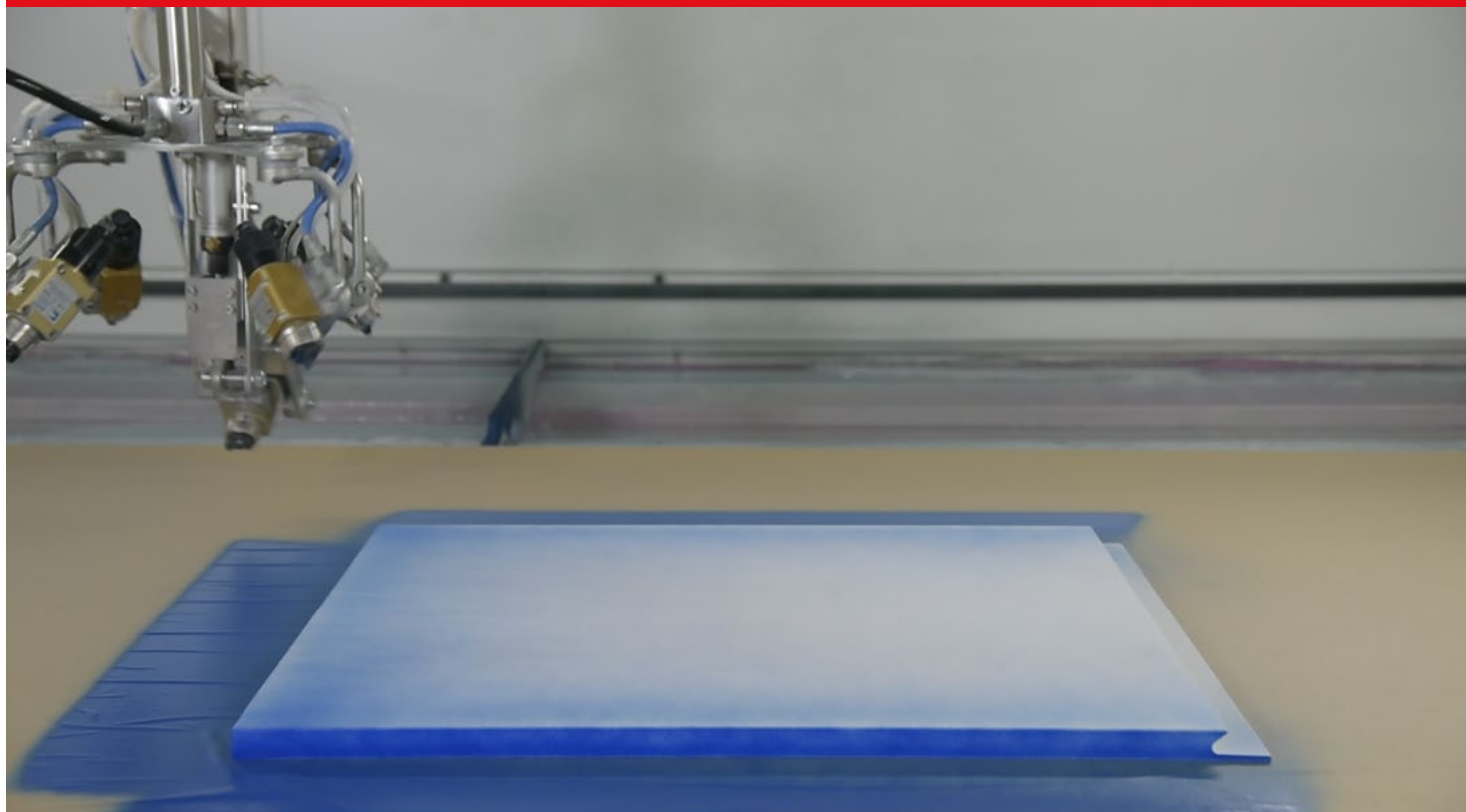
The arms are able to spray objects with loading on the move.

### 追踪模式

机械喷涂手臂可跟踪喷涂在传输台上处于移动状态的工件。



## Spraying arms 喷臂

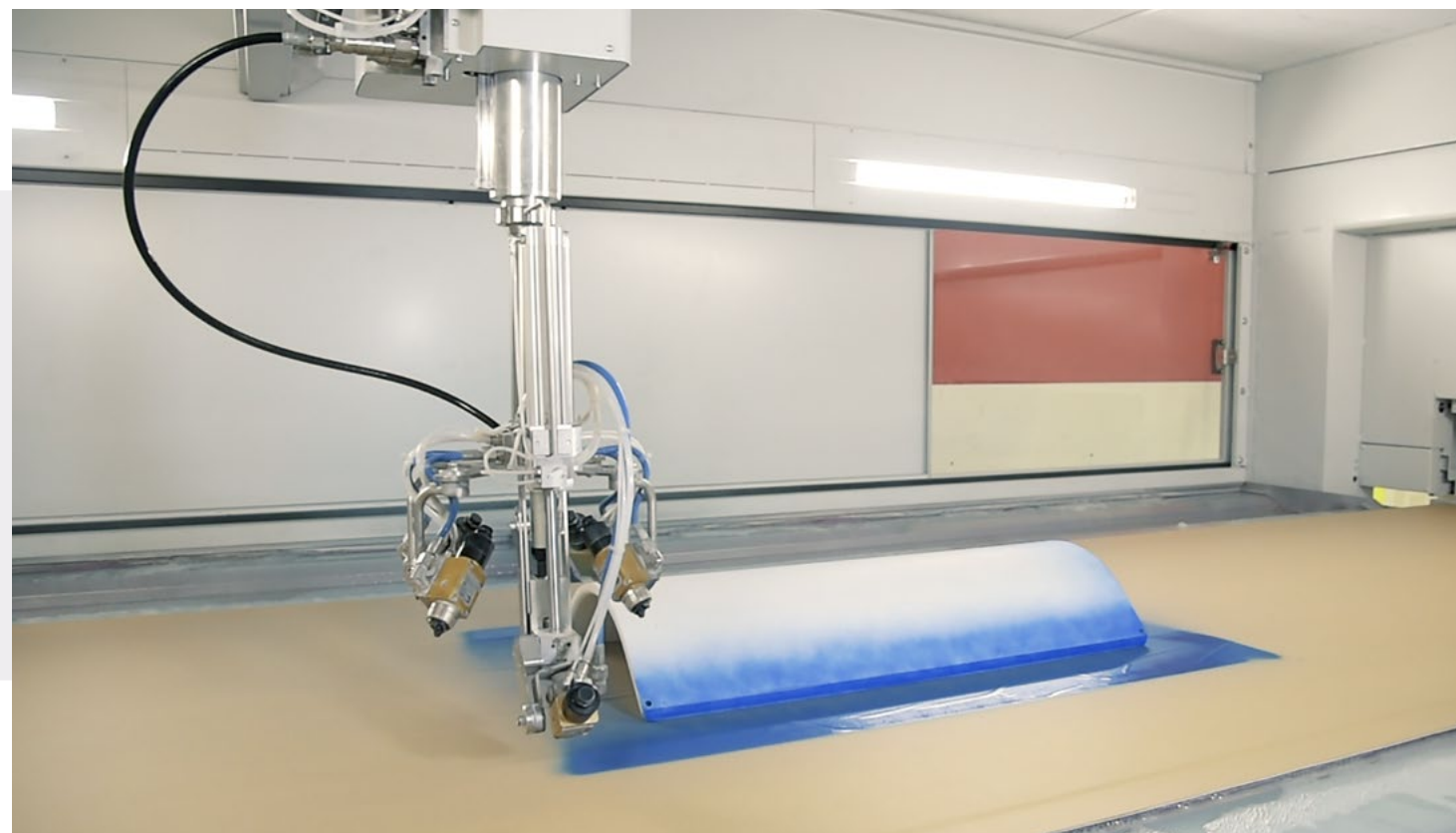


The new interpolated axis allows painting of any type of object, such as curved panels, with perfect adaptation to their profiles and edges.

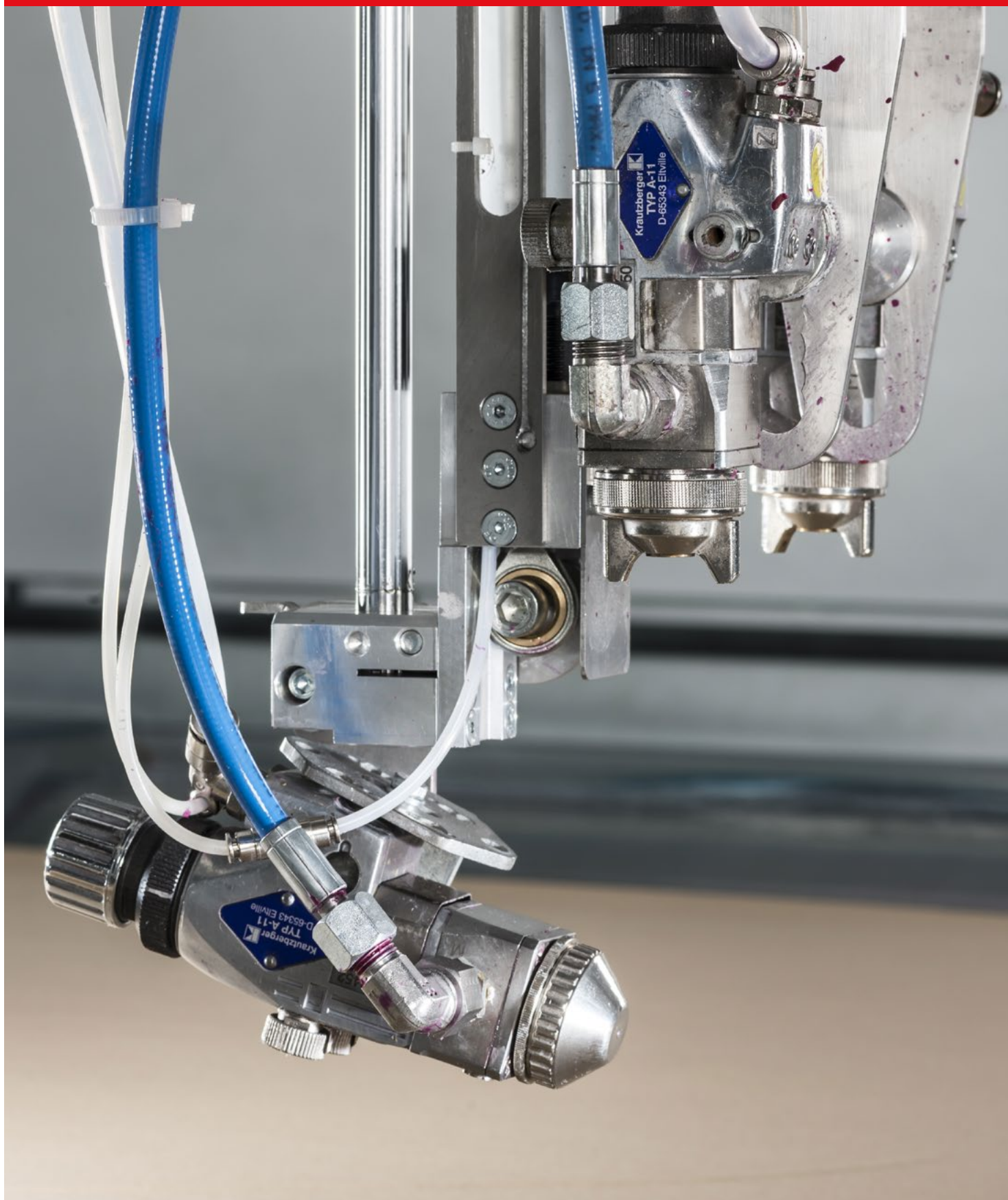
新加入的竖轴设计，允许本机喷涂如曲面板等任何类型板件，并完美地处理其轮廓和边缘。

iBOTIC is able to paint even complex edges, such as J-pull handles.

iBOTIC甚至可以喷涂如J型免拉把手之类的复杂边型。



## Spraying arms 喷臂



## Plenum 增压散气罩



Perfect control of ventilation flow  
within the spraying booth.

完美的控制喷漆房内的气流。

## Overspray Filtration 空喷漆雾净化



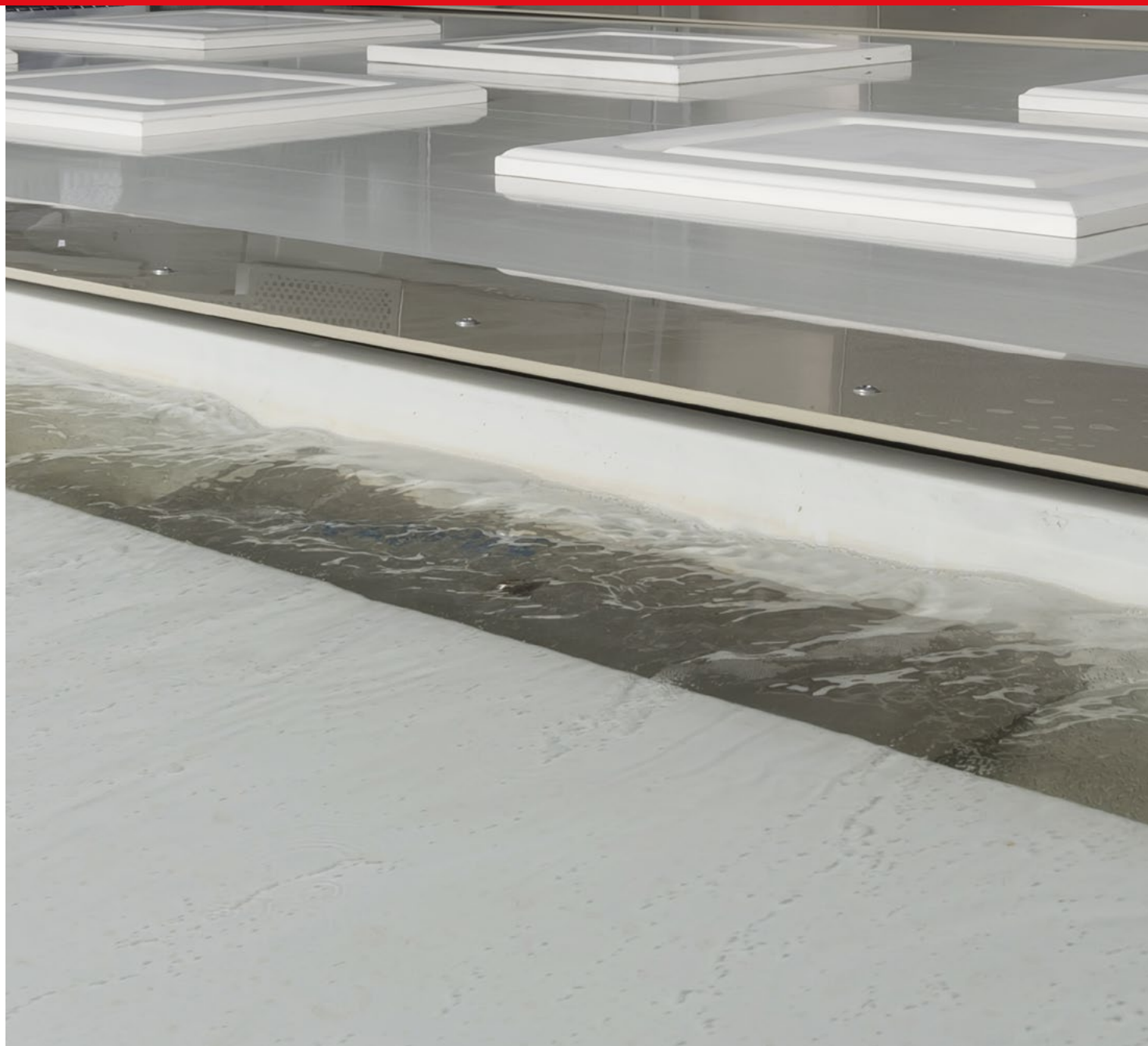
### Dry filter

The dry extraction system to eliminate the overspray features a two-stage paper filter solution. Maintenance and replacement are extremely fast and simple

### 干式过滤

抽风系统，配备两个干式过滤器的大面积过滤区。

方便操作人员进出、拆卸和维护。



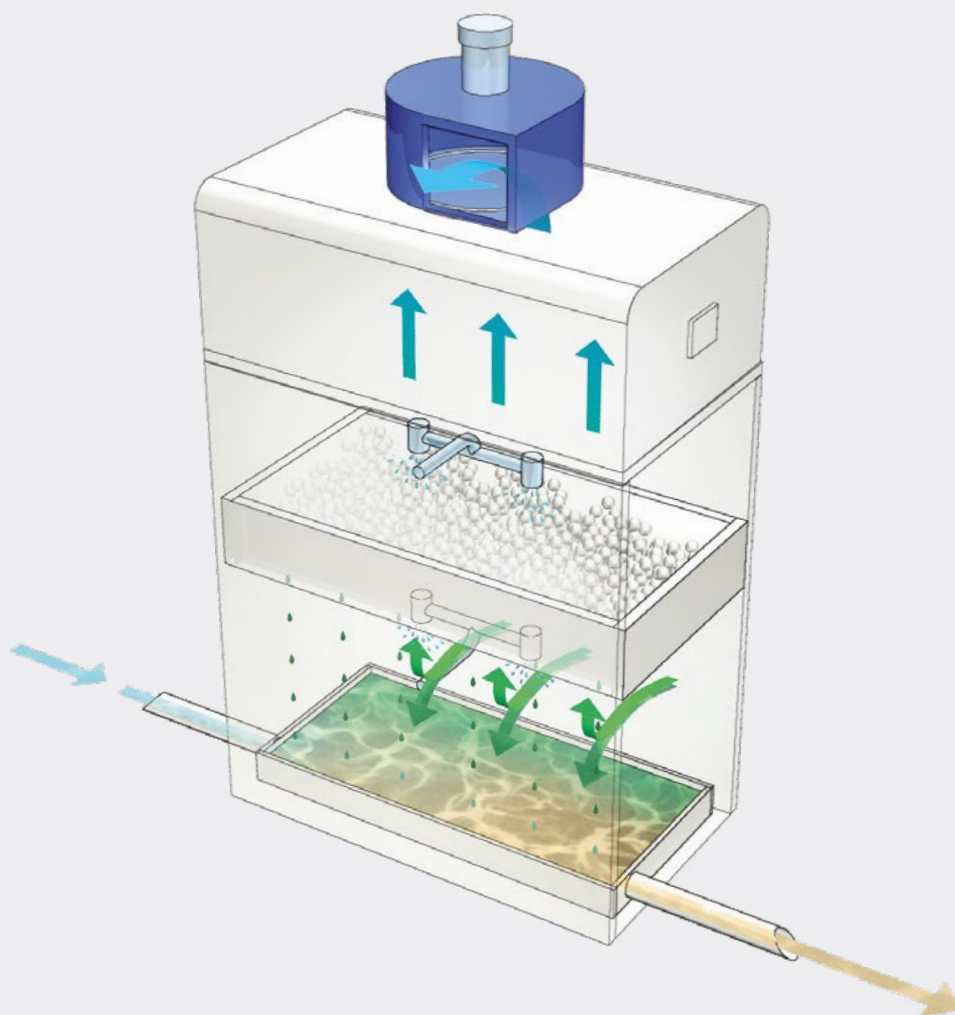
### Water filter

Equipped with a high capacity tank, the water curtain extraction system reduces overspray, ensuring maximum finishing quality and allowing more consistent application within the work cycle. This solution is particularly suitable for maximum quality finishes.

### 水帘式过滤

通过一个大容量水槽中的水帘吸收空喷漆雾，确保最优喷漆质量和漆膜的均匀度。水帘式过滤尤其适合对喷漆质量要求特别高的客户。

## Overspray Filtration 空喷漆雾净化

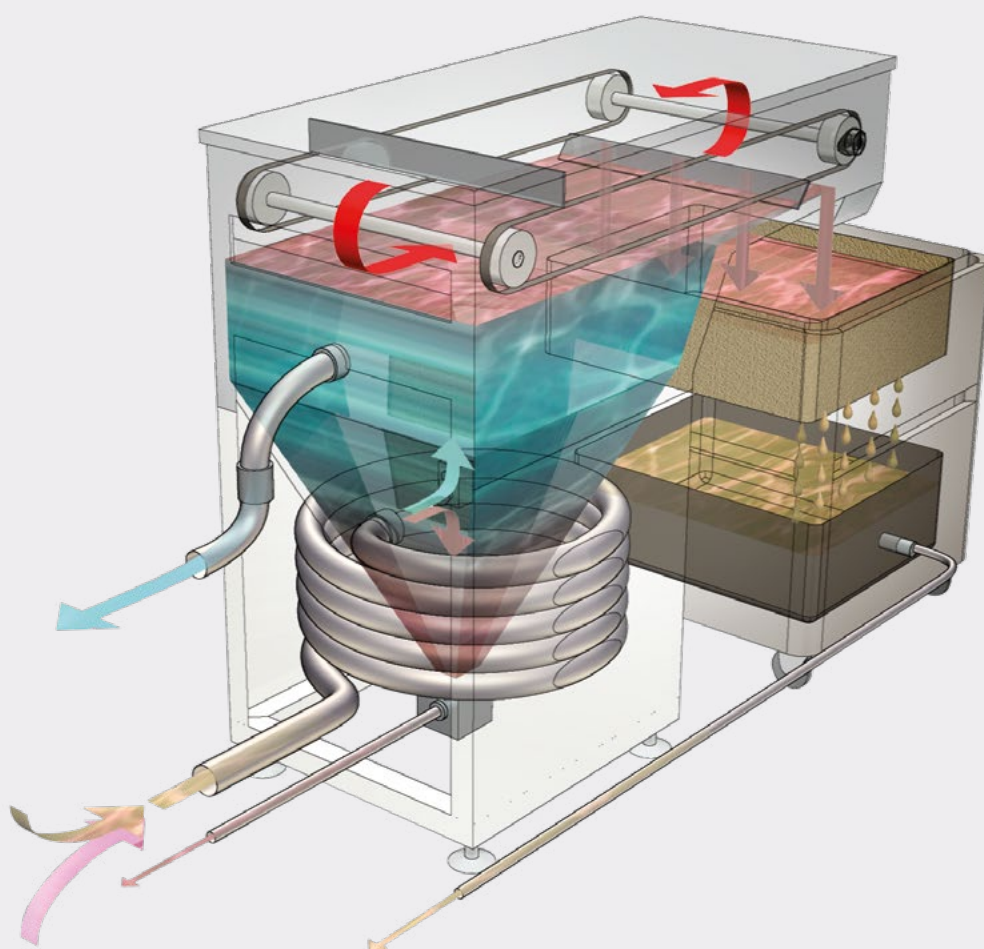


### Scrubber

The air, fed inside by the delivery plenum, pushes the overspray into the water curtain filters through the dynamic turret-type filtration system, called "Scrubber", to collect fine paint particles, abate them and, lastly, eliminate them via the ejection fan.

### Scrubber

从增压室抽吸的空气，可将空喷漆雾带入水帘式过滤系统，后再送入“Scrubber”喷洗装置- 截留固体残留物 – 最后送入排风机。



### Skimmer Big Bag

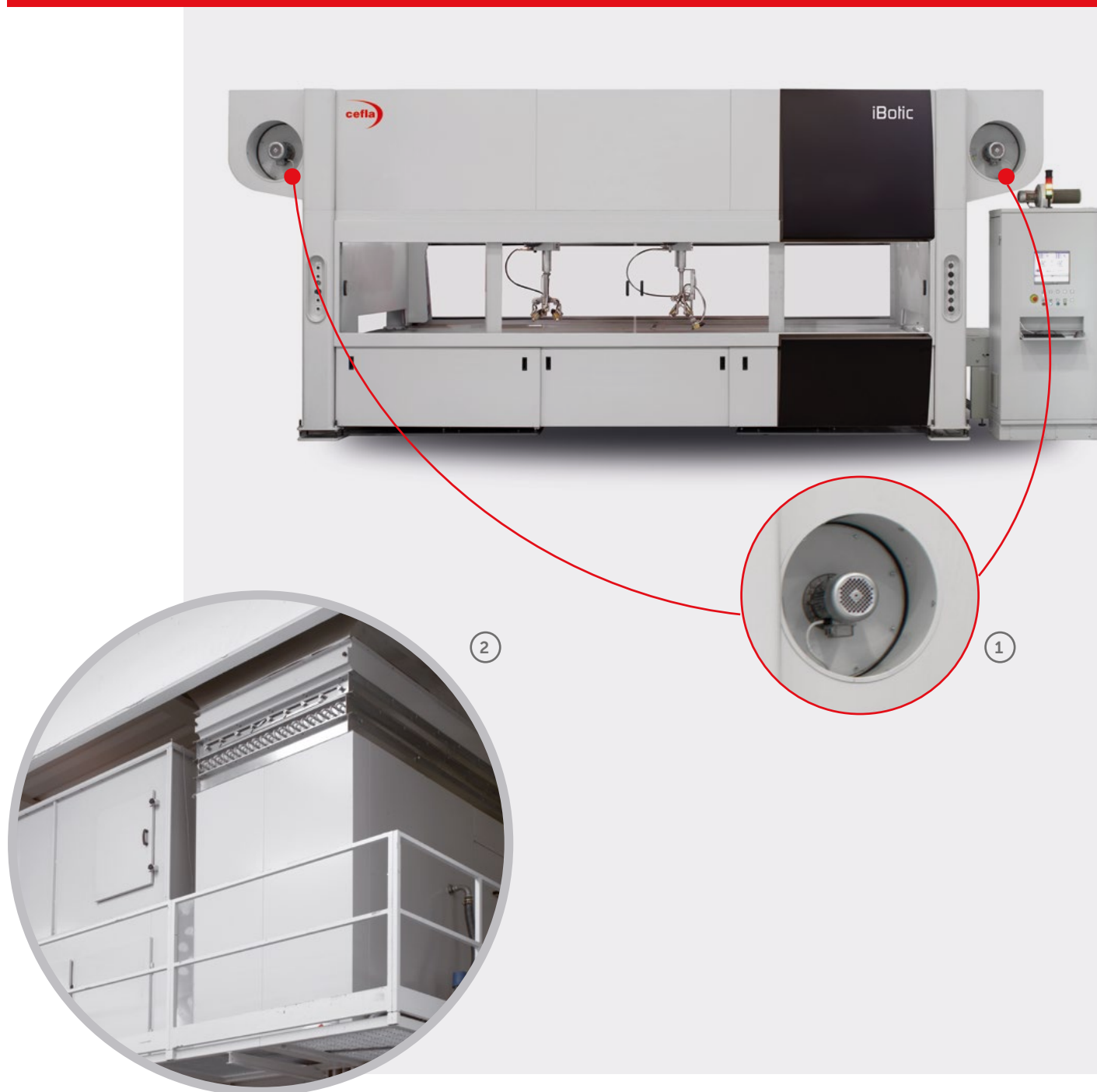
Filtering water is treated in a tank where sludge is collected by means of flocculation and skimming.

Solid particles are collected with scrapers and filtered water is then re-circulated.

### 污水过滤厢

污水被送入水箱，此处水中的漆分子凝成絮状并被滤除。滤渣被刮板推送到过滤袋中，而过滤后的清水则进行循环再利用。

## Pressurization 增压系统



Spraying zone air can be treated with autonomous fans inserted on the machine body ① or, on more complex lines, via external pressurisation and/or humidification units ②, also useful for serving the drying ovens to obtain global protection of the application / drying zone.

喷房内的气流通过内嵌在喷涂机上的风机进行自动增压处理；或者通过外置空气过滤装置和/或加湿装置进入喷涂/干燥区，为喷涂/干燥区域提供全面防护。

## Conveyor 传输系统



### CFB conveyor

iBotic can be equipped with a highly efficient CFB carbon fibre conveyor belt. Advantages:

- Maximum cleanliness of objects' underside.
- Paint retrieval.
- The longitudinal extraction carriage cleans the conveyor belt perfectly with minimum solvent consumption and very short cleaning times.

### CFB碳纤维传输带

iBotic可配备高效CFB碳纤维传输带。优点：

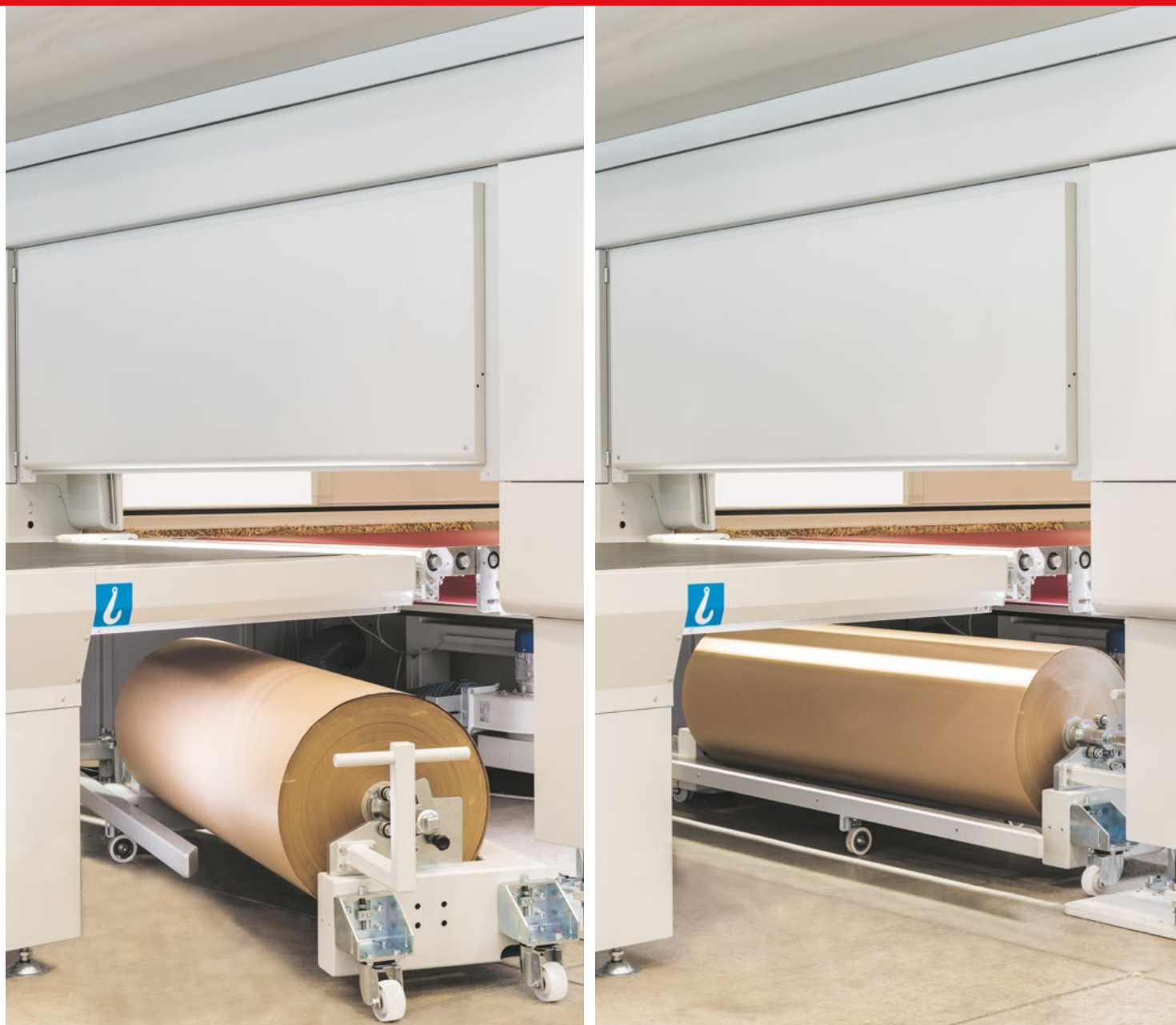
- 最大程度的清洁工件底面
- 黏留油漆
- 纵向抽拉式设计，使用最少的溶剂、最少的时间高效清洁传输皮带

## Conveyor 传输系统



### Paper conveyor

Tightening electronic control system for paper.  
This is the most cost-effective solution for non recoverable coatings or glues.  
The cover belt flows and pieces are laid on a surface which is always perfectly clean. The belt is electronically wound and unwound. Long lasting reel.



## 纸质传输带

电动纸膜收紧装置。

针对无需回收油漆的工艺以及喷胶工艺来说，纸质传输带是最高效的解决方案。它可以保证传输带上的工件和皮带表面一直处于完全洁净的状态。传输带电动张紧，使用寿命长。

## Recovery System 油漆回收系统



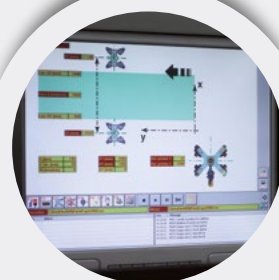
CLEANING SYSTEM PATENTED BY CEFLA FINISHING  
赛福徠涂装设备集团清洁专利系统



Cefla has been the very first company to develop a CFB roller cleaning system, aiming at perfect finishing quality and maximum overspray recovery.

赛福徠是第一家开发CFB 碳纤维滚轮清洁系统的公司，着力于完美的涂装质量和最大化回收空喷油漆。

## Electric board 电器控制柜



## Software 软件



For IBotic, Cefla Finishing has developed exclusive , highly advanced software that can set and control all robot movements, from the simplest sequence of operations to the most sophisticated.

This special control software provides easy, user-friendly control of any parameter.



针对iBotic, 赛福徕开发了独一无二、最先进的控制软件, 用于操控喷涂机所有的动作, 包括最简单的往复作业模式到最精细复杂的机器人模式。

这款控制软件将为用户提供最便捷最友好的参数管理体验。

## LAB 实验室



### A WORLDWIDE REFERENCE FOR FINISHING RESEARCH.

The LAB in Imola, recognized by the “Ministry of University and of Scientific and Technological Research”, stands out as state-of-the-art research centre in the wood finishing field.

Out of this positive experience, the Group has opened new test sites around the world - Pesaro (I), Charlotte(US), Schloß Holte-Stukenbrock (D) and Meckenheim (D), Suzhou (China).



## 世界顶级的涂装技术研究中心

位于Imola的赛福徕研发中心。经科学技术研究部和高校部认证，是涂装领域的顶级研发中心。

凭借丰富的成功经验，赛福徕集团在Pesaro (意大利), Charlotte (美国), Schloß Holte-Stukenbrock (德国), 苏州(中国)的实验室均已相继组建。

# Cefla Finishing subsidiaries and branch offices

## 全球分公司及办事处分布图

● MANUFACTURING SITES  
生产基地

● SALES OFFICES  
销售办事处

### BRAZIL

**CEFLA FINISHING BRAZIL** ●  
Rua José Rodrigues Pinheiro, 502.  
Curitiba-Paraná-Brasil

### USA

**CEFLA NORTH AMERICA** ● ●  
6125 Harris Technology Blvd.  
Charlotte, NC 28269  
USA

### USA

**DV - SYSTEMS** ● ●  
6125 Harris Technology Blvd.  
Charlotte, NC, 28269  
USA

### SPAIN

**CEFLA FINISHING SPAIN** ●  
Valencia - España

### GERMANY

**CEFLA DEUTSCHLAND GMBH** ●  
Eisbachstrasse, 2  
D-53340 Meckenheim  
Germany

### GERMANY

**DÜSPOHL MASCHINENBAU GMBH** ● ●  
An der Heller 7-13  
33758 Schloß Holte-Stukenbrock  
Germany

### ITALY

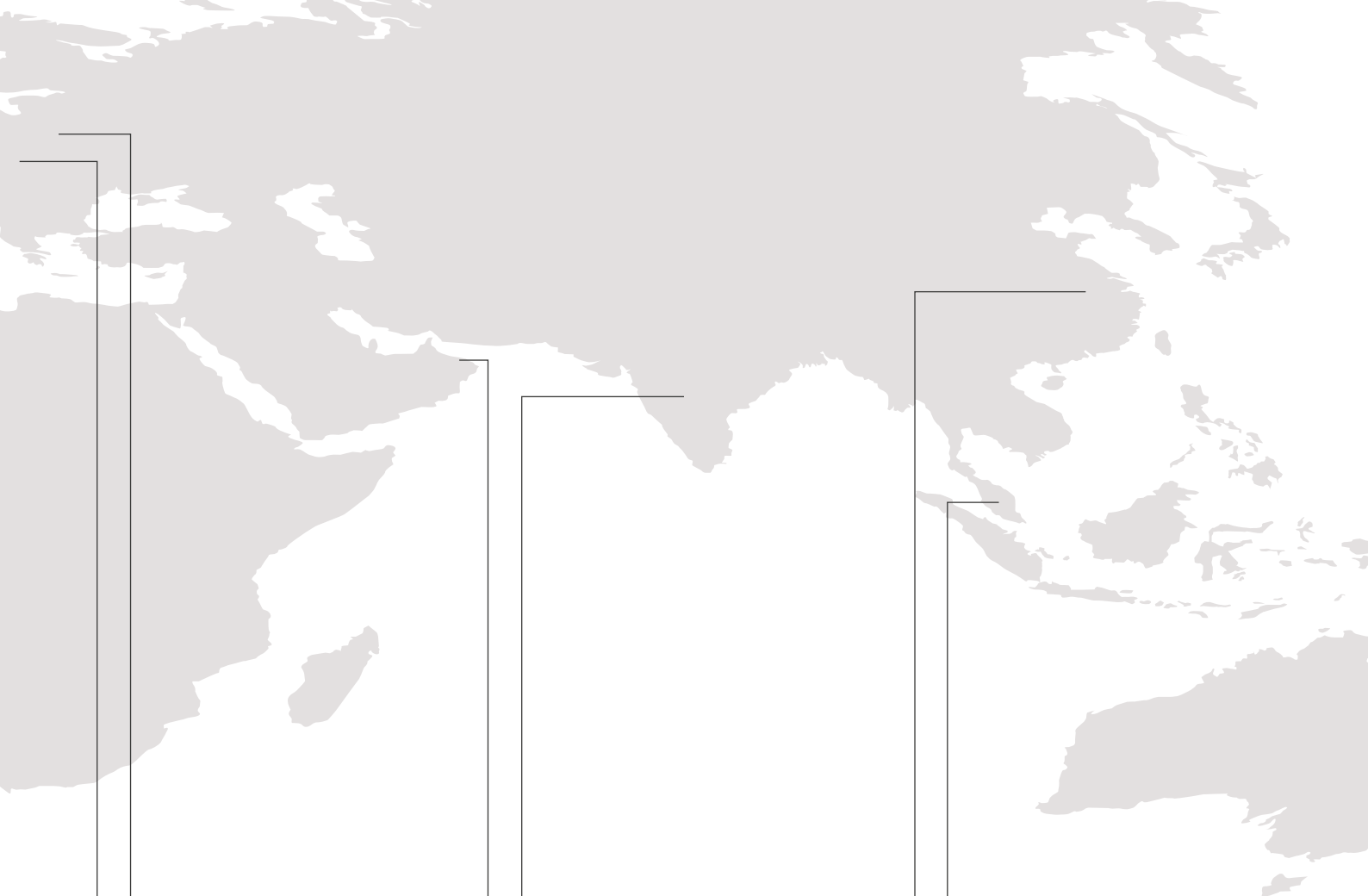
**CEFLA FINISHING HEADQUARTER** ● ●  
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40026 Imola (BO)  
Italy  
Tel. +39 0542 653441  
Fax +39 0542 653444  
cefla.finishing@cefla.it

### ITALY

**CEFLA FINISHING BERGAMO PLANT** ● ●  
Via Enrico Fermi 9  
24036 Ponte San Pietro (BG)  
Italy

### ITALY

**CEFLA FINISHING PESARO PLANT** ● ●  
Via della Meccanica 3  
61122 Pesaro (PU)  
Italy



## **RUSSIA**

**CEFLA FINISHING RUSSIA** ●  
Proletarskiy Prospekt 10, Office 706  
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Russia

## **INDIA**

**CEFLA INDIA** ●  
37/3901 B3, OPP.Mathrubhumi,  
Kaloor, Kochi Ernakulam  
682017, Kerala, India

## **SINGAPORE**

**CEFLA FINISHING ASIA** ●  
Block 808, French Road, Unit 06-157,  
Kitchener Complex  
Singapore 200808

## **POLAND**

**CEFLA FINISHING POLSKA** ●  
Ul. Utrata 4 Lok.38  
03-877 Warszawa  
Poland

## **UNITED ARAB EMIRATES**

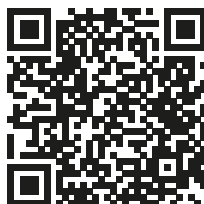
**CEFLA FINISHING MIDDLE EAST FZE** ●  
P.O Box: 261 633  
Warehouse No. FZS2AB02  
Jebel Ali Free Zone Dubai, UAE

## **CHINA**

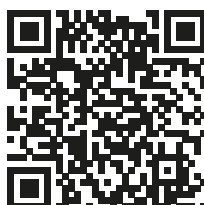
**CEFLA FINISHING EQUIPMENT** ● ●  
(SUZHOU) CO. LTD.  
Bldg#12 No.855. ZhuJiang Rd Suzhou  
New District Jiangsu China 215011



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