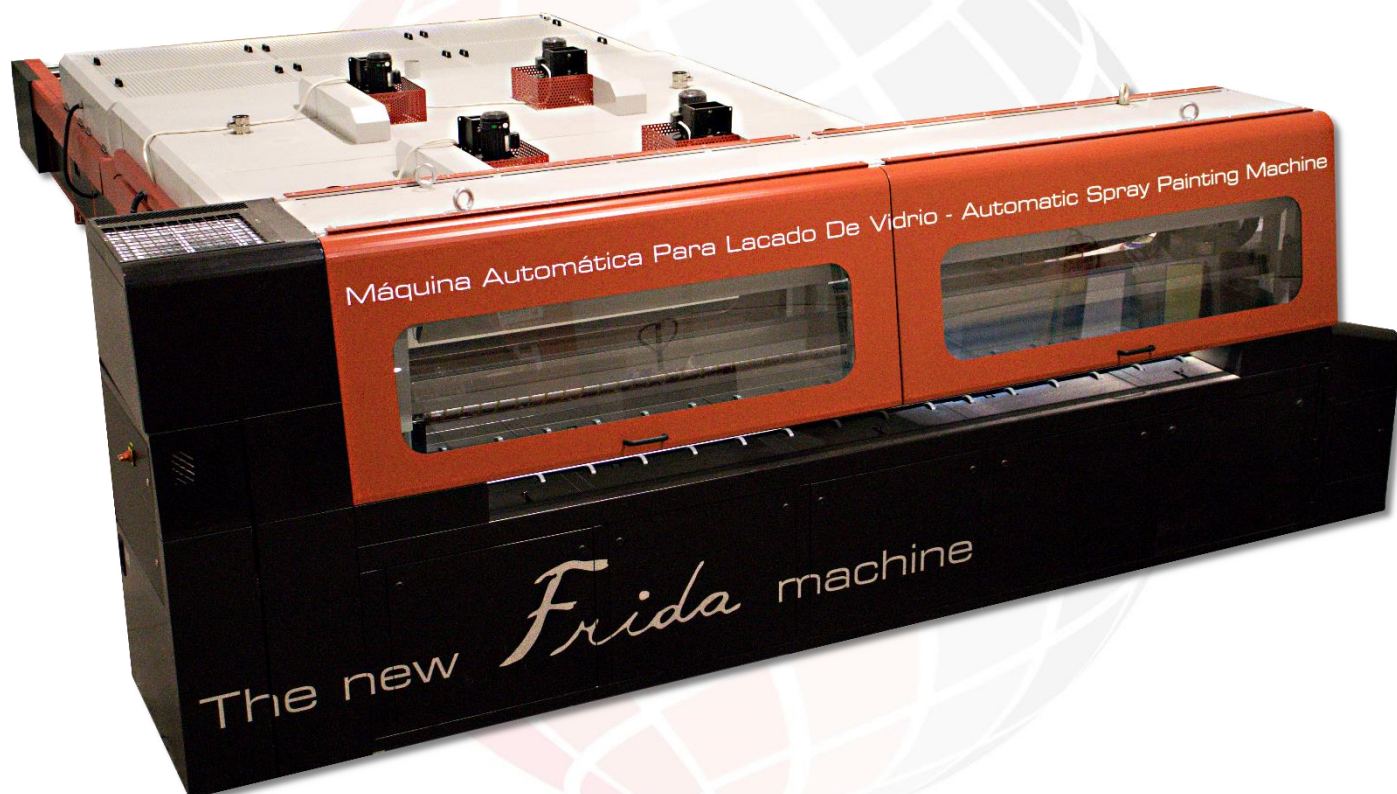




Frída



NEW FRIDA 330 MACHINE:

BIGGER, FASTER, BETTER

By GCV Glass Machinery

- **History:**

GCV Glass Machinery was born as an affiliate company of Grupo Crespo Vidrio, a family company dedicated to glass business since the 70s. All this time we have been able to verify the peculiarities of this market, from small productions to long outputs of glass of the same color for airports, shopping malls, etc.

- **Singularities of the market:**

As well as the different production requirements, we have many types of paints to apply: ceramic enamels, organic paints based on water or solvent, polyurethane inks, etc. Each one of them with its particular characteristics and complexities.

- **New Frida line:**

In response to all these requirements, we have created the Frida machine: a module of just over 1 meter wide capable of being attached to an existing painting line or creating a new one with manual or automatic loading and unloading tables, transfer tables, drying, cooling, washing machines, robots, etc. All synchronized to avoid bottlenecks or interferences.

- **News:**

What brings back this machine or what makes it special? That combines the high production of a roller coater with the versatility of the Picasso machine, making the color change a fast, clean and comfortable process. In this way we can make 10 color changes in one hour of short outputs with organic resin and in the next hour make 500 square meters of ceramic paint for example.



FAQs FRIDA



- Preliminary considerations:

- **I am currently painting with a roller coater, which are the benefits of the Frida machine to my production?**

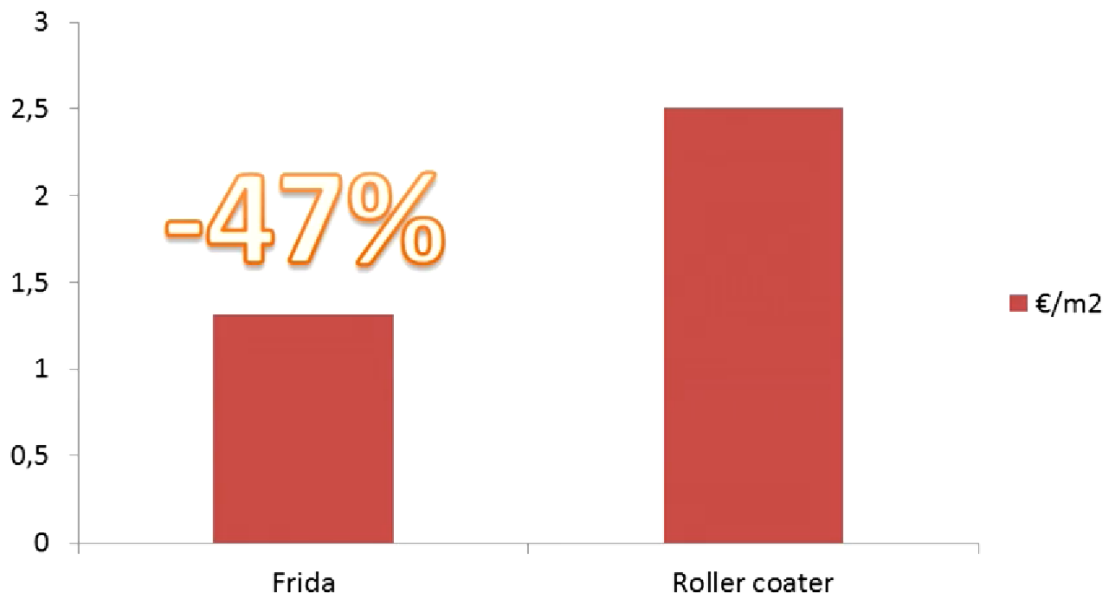
Roller coaters have many advantages like the high speed of application. We reached the same speed with the Frida machine but with the quick colour change and versatility of the Picasso. Apart from that, we can paint Jumbo size (3.3m width) and apply the digital printing background because we do not touch the glass and there is not risk of damage on the print.

- **I want to install a Frida line, what do I need?**

Electric connection, compressed aire line and one operator willing to learn. It is not necessary to have previous experience painting because the GCV Glass Machinery team will install and teach how to use all the equipment. If you also want to adapt the Frida to your roller coating line, it may be replaced or installed next to it. It would be necessary to connect the conveyor drivers to synchronize all the parts. GCV does all the process.



Price per square meter



- **I do not have space to take the paint tank out of the machine to clean it, what can I do?**

No problem. As we control all the processes from the design to the manufacturing, we can adapt the machine to your needs. If there is not space outside, it is possible to modify it to do the maintenance work from both sides. Also, the Frída machine is reversible: it can paint from left to right or the other way round. We are always looking for our costumers requirements.

- **Do I need to install a clean room or any controlled atmosphere around the machine?**

Whenever the ambient room where the machine was installed is normal (well ventilated, suspension dust-free or without silicones), it is not necessary to install any kind of clean room. The air flow in the Frída is prefiltered to avoid any kind of pollution.

- **Is it necessary to filter the exhaust air of the machine?**

The Frída machine has its own filters and blows completely filtered, clean and smell-free air. If possible (but not mandatory), we recommend to connect a pipe from the exhaust to the outside of the factory to avoid the active carbon filters which are very expensive.

- Application:

- **I need to apply an exact amount of paint, can it be controlled?**

Of course. With the Frida machine you can change the nozzles, product pressure, gun speed, overlapping, advances, etc. Everything is completely adaptable to get the desired finish or amount everytime.

- **I use my own paints, may I use them in the Frida machine or do I must use any special one?**

It is well known that our paints, acrylic Creative Resins Europe resins (with 10-year outdoor warranty) and ceramic enamel, have shown a perfect compatibility with Picasso and better performance than any of the competitors. But if you want to use any other brand, it is completely possible to use any other kind of paint in the market: water-borne, epoxy paints, polyurethane, ceramic, etc. This is possible because we have many different configurations and variety of adjustments able to be adapted to all the paints.



- **I use both waterborne and solvent based, what I need to do to change between them in the machine?**

To go from solvent based to waterborne, you must do the following: cleaning with acetone or solvent, cleaning with hot demineralized water and cold one. To do the opposite change, you have to reverse: cold demineralized water, hot water and acetone/solvent. Everything in less than 5 minutes.

- **What happens with the non-painted side of the glass? Is it dirty after the painting process?**

The Frida machine has an Air Assisted system which means that depending on the adjustments and the kind of paint could do more or less overspray. Even that, in most cases the overspray is minimum and it is removed simply with a cloth or with our additional brushing module. When using ceramic enamels, cleaning the other side is important to avoid any possible damage in the ceramic rolls of the tempering furnace with time. In all the rest of the paints, the small amount that it could be, without any kind of cleaning process after painting, will be removed in one of the multiple cleaning steps during the manufacturing until the final customer.

- **I want to paint only the frame of the glass, can I do it with the machine?**

Of course. With the "Frame mode" on, the machine program knows when to paint to save paint and money. You must cover the non-painted part with a vinyl mask or tape to avoid any small spray there.

- **I paint different glass thickness, do I need to change any parameter or be worry about anything?**

Nothing to be worry about. Frida machine is allow to paint up to 100mm (4 inches) of thickness with no problem.

- **I know the machine is the best for big jobs but, what happens if I want to paint few square meters?**

There are not problems. As you will recover all the paint in the pipes with our new compressed air draining system, there are not differences between painting 2 or 2000 square meters.

- **What is the minimum amount of paint needed to fill the pipes of the application circuit?**

Around 1l is necessary to start painting (depending on the configuration). At the end, it would be recovered and able to use again later.



- **What is the production for every litre of paint?**

It obviously depends on the type of paint but the Frida AirMix system is the one with the best transfer rate in the market. With our acrylic resins we reach more than 6 square meters per litre of paint in most of the colours. With our ceramic enamels and white and black colours (the most typical ones), we reach 8 square meters per litre.

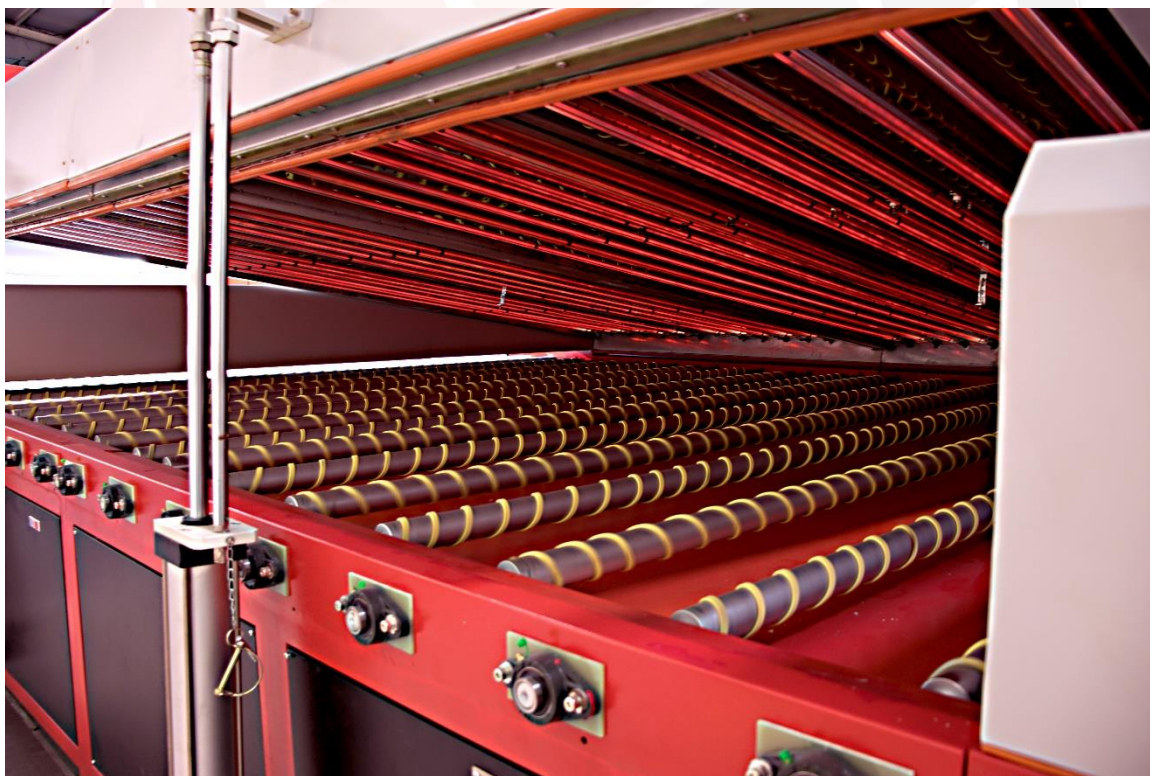
- Dryer:

- **Is the dryer necessary for all the paints?**

It depends. For example, our resins dry at ambient temperature but the dryer, with its IR lamps technology, cures the paint from inside to the outside. You can get lower drying times and bigger production with this.

For the ceramic enamels is mandatory the heating dry because the paint must be completely dried before the tempering furnace to avoid any bad result.

Anyways, a combination between IR heating and cooling by convection gives an extra hardness to the paint.



- **I have limited space for the line, how big is the dryer?**

Thanks to its desing, our dryers have modules with just 2 meters long. Totally adaptable to your needs of power and length.

- **I have a lot of space, can I dry at the same rate as the machine paints?**

Of course. As the design of the dryer is made in 2 meter long modules, we can prepare a drying tunnel as long and powerful as desired. Let us know your requirements and we will set to work straight away!

- **I use several kinds of paint, can I dry all of them with the same dryer?**

Due to its temperature and drying time regulation, we can choose between a quick drying at 60°C for a solvent based paint or a complete drying at 250°C for ceramic enamel for example.



- Warranty and after-sale service:

- **Due to after-sale service, what happens if I have a problem?**

After every installation, we create a WhatsApp group which is the easiest and fastest way to be in touch with the operators. We can make videocalls to check if everything is correct or not. Most of the problems are solved in just minutes because there is any parameter wrongly



changed. If there is a problem from the electronic part, our programmer will be connected remotely to the PLC to solve anything.

- **I have an old program version, how can be updated?**

When we launch a new program version of the program, all the costumers know it and we arrange a time to update it remotely. It is a really easy and fast process with just 10 minutes and then you can enjoy the new options or advantages.

- **If you launch a new interesting equipment in the future, can it be adaptable to my actual line?**

Our goal is always improve our equipment. Therefore, we always think in the costumers that trusted in our products to do everything adaptable to their lines. Our close treatment with costumers forces us to take account of them first when we create new machines.

