



The Blue Solution

Innovative solutions in  
special glassworking  
machinery

## FORVET: EVOLVE AND KEEP EVOLVING

The reputation Forvet has gained in the machines construction for the glass industry, conceiving equipments that are “out of the crowd” is convincing more and more important large players, that the technology is the key for the future of their company.



A question is to set: from where these new ideas arrive, from where this ingeniousness in the construction of the machines, this great innovation, these punctual investments every year despite the crisis and the dark situation of the market?

The answer for the ones who know Forvet is easy: from the passion! An ancient, but unshakable passion, a passion that increases despite the difficulties. Without enthusiasm and passion anything great has never been completed.

In a world where the economy sometime seems made of smoke and cold financial operations there are individuals that still thinks that the human relationship, the service and the collaboration are the necessary values also to build the glassworking machines. This is Forvet!



For these reasons the Forvet machines have found this great success: over the high technology applied, the sturdiness and reliability, they are thought, conceived and built with extreme care and attention and have inside the keenness and enthusiasm of the Forvet people working on.

Whilst these values met the appreciation of the Forvet customers worldwide, there are aspects that still refrain others from investing in advanced technology, especially in the glass processing,

One of these aspects is the belief that a simple traditional machine has less chance of problems and is less expensive, without analysing the advantages that a more sophisticated solution would bring to the company productivity and prestige.

Investing on a traditional double edger is purchasing a strong, reliable machine. But is also the acquisition of a non flexible, slow to adjust, space consuming, non productive equipment for short runs.

The NC edger – CHIARA MTP 8 - is representing a true solution to these weak points.



- The CHIARA is flexible.
- Loading different sizes and thicknesses, in continuous sequence, without having to manually adjust neither the size nor the wheels position.
- The CHIARA does not need adjustments.  
Changing grinding /polishing wheels require short time FOR ALL WHEELS, but above all, there is no need to set for the new wheel position. This mean that the first glass loaded and processed will already have the correct size.
- The CHIARA has a limited foot print.

The advantage of having the glass flow “in line” without lateral transfer tables limits the space requirement to 1/3 of the space requested from a double edger with the same glass size.

- The CHIARA is very fast .  
50 pieces (150 square meters) from 5 to 15mm of glass thickness with 50 different sizes from 1000 x 1500mm up to 2000 x 3000mm. produced in one hour and 20 minutes.
- The Chiara line including the Francesca FC machine for drilling allows to reduce the manpower cost and the risk of human mistake, up to 60% with respect to traditional equipment.

The new NC edge Processor CHIARA MODULAR is capable of polishing also the out of square glasses.



This revolutionary machine has a completely new approach to glass handling when shaped or Low-E glass has to be processed. All the operation required to obtain edge polishing or grinding on different sizes, shape and thicknesses, are governed by the NC. The only operation requested to the operator, is the glass loading.

The machine control has full management of all machine parameters. This permits the sequencing of different sizes, shape and thicknesses continuously, without manual interventions or adjustments.

Being the glass sustained by underneath by means of automatically positioned suction cups, will not be affected at all on the upper surface, when the glass is coated.

Speaking of technology and productivity, has to be stated that the Forvet machines range can offer integrated grinding / drilling solutions that will cope with the above productivity sample, (50 pieces in 80 minutes) even if each one of those pieces was either a door ( with 2 hinges cut outs and a knob hole) or a spider glass ( with 4 countersunked holes).

This is possible by integrating the grinding machine CHIARA with the NC working centre Francesca FC 32M 3300 Mill.

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The FRANCESCA FC 32M 3300 MILL is capable to load, work and unload a single glass with large dimensions ( up to 3300 x 6000 mm) or two glass panels simultaneously, without intermediate handling.

FRANCESCA FC 32M 3300 Mill is a fully Numerically Controlled glass working centre, capable of performing drilling, countersinking and milling operations on flat glass sheets, including “out of square” pieces, without the hassle of manual glass positioning.



Complete line Chiara Mtp 8 Modular & Francesca FC 32M 3300

The patented transport devices based on dynamic vacuum system belts, grants the glass to be perfectly hold by its lower surface only, allowing operations on any kind of LOW-E glass.

The machine is equipped with 32 tools installed on 4 heads that can operate simultaneously, independently or in conjunction with each other.

Francesca FC 32M 3300, allows the insertion of the drilling and milling processes in automatic lines of production, since it is equipped with load - positioning - and unloading, completely automatic. Besides, thanks to its extreme speed and possibility to contemporarily work two plates, enhance the productivity up to twice as much compared to the other traditional machines.



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Double glass on Francesca FC 32M 3300

With the last company size extension, it is possible to achieve full productive tests before machine shipping, also for large lines. This allows the end user to check and verify the machine performances before shipping. This is representing an enormous advantage for both the customer and the producer since it will avoid any problem at the installation site.

The passion that characterizes the evolution and the ideation of the Forvet machines has allowed in the last months the creation of another great Forvet novelty: The Francesca FC H.O. !  
Francesca H.O means progress, because there is true progress when the advantages of a new technology become available for everybody.



New Francesca FC H.O.

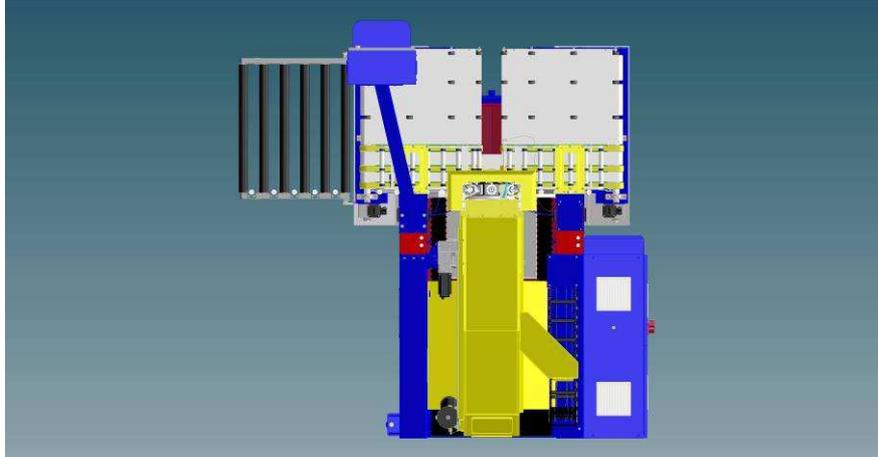
The target set at the beginning of the project, was to have a smaller and compact machine able to satisfy the exigencies of all the glaziers.

The path followed to realize this result, has been directed, as usual, from Davide Gariglio and his engineer's team.

The new **FRANCESCA FC 1250 H.O.** is a Numerically Controlled (NC) working centre, capable of performing drilling, countersinking and milling operations on flat glass sheets, ranging in thickness from 3 to 25 mm. including “out of square” pieces.



The machine size has been reduced to a mere 3x3m, maintaining the possibility to operate big glass sizes.



Footprint Francesca FC H.O.

Thanks to an improved design, the motion of the moving parts is obtained with faster acceleration/decelerations, granting more machine production.

The use of the state of the art electronic technology, reduces the running costs of the machine power consumption, thanks to the ability of the NC to recover the kinetic energy of the moving masses up to the 25% of the installed power (KERS)

The experience made in machine construction, the use of the latest 3D CAD software and the state of the art NC joined with a more industrialized productive process that require less assembling time, positively influenced the investment factor.

