Participation of RCN SOLUTIONS at GlassBuild America

A leader in glass safety technology, RCN SOLUTIONS is set to showcase at GlassBuild America. Specializing in customizable laminating and bending machines, its advancements include the ISF system and its RD Clean concept for superior glass production. The company emphasizes innovation and digital communication - meeting diverse customer needs with tailored solutions.

GlassBuild America is a premier event in the glass industry. This year, RCN Solutions will be proudly participating as part of the Italian group. With over a decade of experience in the US market, the company has successfully sold numerous laminating and bending machines across the country. This is why participating at the event is crucial for the company's understanding of evolving market requirements as it seeks to effectively address customer inquiries and expectations.

BEGINNINGS

RCN Solutions is a medium-sized company located close to Milan. The business started in the nineties from the idea of manufacturing special glass fusing and slumping kilns. This production lasted until the twenties when the use of glass shifted to different purposes and boomed both for interior and exterior applications, increasing the demand for safety. Past experience in construction of glass machines and especially the mastering of the temperatures to work the glass allowed RCN to enter the era of glass lamination with the construction of special kilns working with EVA - ethylene vinyl acetate. In over twenty years there have been several developments and now the company is in a position to offer a complete, turn-key package for the production of safety glass - the aim of which is to minimize the possibility of breakage, resist shattering and guarantee the safety of both people and things, whether for flat or curved glass.

SO WHAT'S NEEDED FOR SAFETY GLASS PRODUCTION?

ISF, or Integral Sequencing Framework, is a RCN layout that includes bending, tempering and laminating machines - the sizes and positions of which are decided by the customer. The advantage of this proposal is that the line can be composed of small or big machines, oversize too, equipped with or without other facilities. Machines can have remote control installed and benefit from the RCN's Easy Connect Application, an interface of active communication man-machine to guarantee the utmost production control. Here glass lamination is a crucial focus, being required always more by glaziers who have understood the need for in-house production. Thus, RCN proposes its hybrid system based on convection and radiation.

CONVECTION

Convection is provided by armoured heaters, type K. Far from being fragile, these heaters are long-lasting and especially provide excellent heat distribution compared to other choices. RCN's kilns sold since 2002 did not require replacing one of the heaters and are still working. The company has been using this heater type since the beginning of its activity, in 1997, when they were installed in glass fusing and bending machines, for high temperatures and proved to be highly performing. But durability is their most amazing feature. Since the laminating area inside the kiln should stay clean, some heaters, easily breaking, can release dust or other waste resulting in undesirable issues and spare parts in stock. Instead RCN's heaters resist all the on/off of the recipes that stop the heat when the due temperature is reached, tuning it on when required - thus limiting energy consumption. At the same time, convection ensures that heat distribution remains uniform and not centered on the glass surface alone or solely in some areas of the laminating chamber as happens within kilns of poor construction.

RD CLEAN CONCEPT

The interlayer plays an important role. Autoclave-free kilns mainly use EVA - ethylene vinyl acetate. Easy to use and store, it resists being wet and won't yellow over time. After over 20 years, some such interlayers have reached a good quality, such as REVA BF, distributed by RCN and based on the company's chemical formula. While other interlayers can be used for lamination with different process parameters, what makes RCN's laminating system special, complete and performing is its RD Clean Concept. This is the company's patented system for clean edges - the winning card for quality output. This allows time saving because glass edges should not be

RESISTANCE TABLE

TYPE OF GLASS	ANNEALED	HARDENED	THERMALLY TOUGHENED	CHEMICALLY TOUGHENED
THICKNESS	from 2.3 to 19	from 2.3 to 8	from 3.2 to 19	from 0.7 to 19
RESISTANCE TO FLEXURE [N/mq]	30/40	50/100	120/200	250/600
RESISTANCE [°C]	30	40/100	110/180	Over 200

RCN™ solutions

cleaned after lamination, also protecting the operator who requires no sharp tools to remove the excess of the interlayer. Most of all, the system grants perfect glass flatness with no variation of the nominal value of the interlayer - thus responding to such building standard requirements as those of UNI EN ISO 12543-5:2022. The production of safety glass cannot be separated from a hardening treatment, and chemical tempering well meets that requirement. The role of this process is a key one since both flat and curved glass can be tempered, in all glass thicknesses, from 0.5mm to the thickest. This makes the glass three times more robust than some other options. But most of all, it makes it possible to drill or edge-shape after tempering. Here chemically-tempered glass is not distorted and its flatness is fundamental to the coupling of glass panes for later lamination. In matters of chemical tempering RCN's CT line can satisfy all requirements, together with long experience that's granted by a construction expert of such plants. Demands for different sizes, oversized too (or special configurations) can be evaluated and studied.

2024 TURNING POINT

2024 has been a turning point year for RCN Solutions: the new R&D office team worked on a new production layout, allowing it to take a step further in both technology and development. A step planned for some time and that was made possible thanks to the entry of the new generation ready for innovations. The Rotary Bending System is the first project RCN faced as it was evolving. Ordered mid 2023 by an Italian company that mainly produces curved glass for yachts, the plant (overall size 9700 x 12800 x h3800 mm) has four positions: loading/unloading; heating, bending and cooling. With delivery and installation at the end of January 2024, it is currently working on shifts for special curves. The system has met with great success, such that RCN is currently working on increased demand for a similar layout and setting. Named ECO Special, the traditional RCN bending line remains in production. Designed for the creation of special, complex curves, it is equipped with independent heating zones: 6, 8, 10 or more, depending on machine size and customer requirements. The system can produce complex curves that will focus heat where it is most needed to the benefit of the final product - which should be perfectly clear and so without marks or halos.

EASY CONNECT APP

In a world working to improve digital communication and with a view to increasing man-machine interaction, RCN's systems can be supplied with the company's Easy Connect App for process control from a smartphone, tablet or PC as well as communication with RCN's specialists should assistance be required. Flexibility in construction, together with customization, makes the difference in a competitive market. Here RCN is always available to consider the feasibility study of any project.

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SAFETY GLASS?

YES, BUT WITH ISF!

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ISF

RELY ON A COMPLETE LAYOUT FOR CURVED AND FLAT GLASS