



Bystronic glass

LONGER – HEAVIER BIGGER – THE B'JUMBO XXL

'LONGER HEAVIER BIGGER'

The B'JUMBO XXL insulating glass production line from Bystronic glass can be described using these three adjectives inspired by the motto that was coined by Pierre de Coubertin for the Olympic Games. With this line, Bystronic glass is setting new benchmarks in architec-

tural glass production. The production line measuring 165 metres in length is used to automatically produce insulating glass up to 18 metres in length, a globally unique size.

Consequently, it is the longest insulating glass production line in the world and recently entered service at the famous German manufacturer Thiele Glas, based in Wermsdorf, Saxony. Thiele Glas has

achieved an excellent reputation in recent decades, particularly in terms of creating unusual façades in industrial buildings.

Bystronic glass is addressing the future of insulating glass technology in an innovative way that is also opening up completely new opportunities in the field of façade design.

The B'JUMBO XXL is able to produce insulating glass or façade glass in new di-

mensions. With maximum dimensions of 3.30 metres in height and 18 metres in length, and a maximum processable glass weight of up to 10 tonnes, the B'JUMBO XXL is the ideal solution for the current trend and demand for ever-larger architectural glass. "This production line is an enormous unique step that was previously unheard of and offers the glass processing industry compre-

The glass world is continuously working to innovate its technology, and the IG sector is no exception. With its most recent development for this type of glass processing, Bystronic glass presents the longest insulating glass production line in the world, with importance given to energy efficiency and sustainable production.



Semi-automatic framepositioner for spacer frames up to 18m length
© Thiele Glas



Integrated turning station for glasses up to 12m length
© Thiele Glas

hensive new options.”
“We are proud to combine our experience in innovation with our glass processing machine understanding which dates back over 50 years and subsequently can launch lines such as the B’JUMBO XXL onto the market,” explains Stephan Kammerer who, as Bystronic glass’ Product Engineering Manager, is responsible for the design and construction of this machine.

MACHINE COMPONENTS

Equipped with an edge deletion robot, a glass plate washing machine, a turning station, six inspection and frame positioning stations, five assembly, gas-filling and press robots, a sealing robot and numerous conveyor belts, the B’JUMBO XXL is an imposing complete line.

The world record-breaking machine length or the maximum glass dimensions are not the only characteristics

of this production line; it also has many other features:

- maximum individual glass thickness of 60mm;
- package thickness of the double or triple IG units of 150mm;
- maximum I.G. unit weight that can be transported is 600kg per running meter;
- the integrated turning station can turn glass measuring up to 12 metres in length;
- the semi-automatic framepositioner can be used to position spacers measuring 18 metres in length onto the glass;
- in addition to rectangular formats, the machine is also able to produce all shaped formats, as well as free shapes in accordance with the Bystronic glass shape catalogue;
- despite its dimensions, the line can be installed on a standard industrial floor so that special foundations are not required in the hall floor.



Obviously, the B'JUMBO XXL can also be used to produce up to four-sided stepped double- or triple insulating glass units. In doing so, the maximum frame setback on the fourth step is 250mm, measuring up to 1,000mm on the first step on the front edge of the glass, while there are no dimension limits whatsoever on the second and third step.

ENERGY-EFFICIENT AND SUSTAINABLE PRODUCTION

“However, sustainability is also extremely important to us,” explains Stephan Kammerer. “Despite all over-dimensions, extreme importance was attached to energy efficiency and sustainable production during the design of the line.” ‘Green Production’ consists of comprehensive and optimised energy efficiency and energy recovery mechanisms: For instance,

kinetic energy generated during braking processes is transformed into electrical energy. This recovered energy is fed back into the system and is distributed to the axles that currently require energy via a motor-management module. In this way, production on the B'JUMBO XXL enables a resource-efficient and sustainable production of the insulating glass or façade units.

MANUAL FRAME POSITIONING IS A THING OF THE PAST

A further highlight is the semi-automatic frame-positioner. Previously, manual positioning onto the glass was associated with a significant amount of human effort and also took a long time, especially when dealing with large format spacer frames. The framepositioner is able to quickly perform this task as the spacer frame is au-



Monumental giants: The five assembly-, gas fill- and press robots
© Thiele Glas



Impressive total view of the Bystronic glass B'JUMBO XXL
© Bystronic glass



tomatically positioned in the station and the grippers belonging to the upper bar automatically press the upper edge of the frame onto the glass.

PRECISE DOSING TECHNOLOGY

The core of the jumbo'sealer XXL sealing robot is its dynamic mixing system. In contrast to the static mixing system that is very common in the sector, the dynamic mixer works with a significantly reduced material pressure. With a flow rate of up to six litres per minute, it also makes the utmost material volume available. As a result, the jumbo'sealer XXL is able to seal even deep spacer setbacks of rectangular units and shaped formats considerably quicker than other robots that are common in the sector, even with the current maximum size of 3.30 x 18 metres.

“What also sets it apart

from other sealing robots in the glass industry is its automatic material changing system that allows operator-free changing of the sealing material – from polysulphide to silicone for instance – in less than two minutes,” explains Stephan Kammerer. “Furthermore, there are several undergripping options in the discharge area that support the removal of the fully sealed Jumbo units.” If, back in 1894, Pierre de Coubertin had known which technical opportunities would have come about in the field of modern glass processing in the 21st century, he would have maybe added ‘Longer – Heavier – Bigger’ to his classic Olympic motto.

 **Bystronic glass Group**

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glass

Because we care

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