Glass stock management systems

BOTTERO

we • glass

we • glass

As a global leader in flat glass and hollow glass processing technology, we have been helping to shape one of the most beautiful and useful materials in the world for over 60 years. Its unique qualities, combined with the passion for technology and innovation, guide us in seeking for newer and more effective solutions to improve and expand its use.

We handling glass

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The solution to every kind of requirement

Bottero solutions for material storage and handling can provide answers to the requirements of any glass factories that want to make the connection between the material storage areas and the production lines more efficient and rapid. The Bottero systems compact and optimise the warehouse, and speed up the connection between the storage area and the processing lines, while offering the possibility of quickly managing sheets that differ in material, format and thickness.
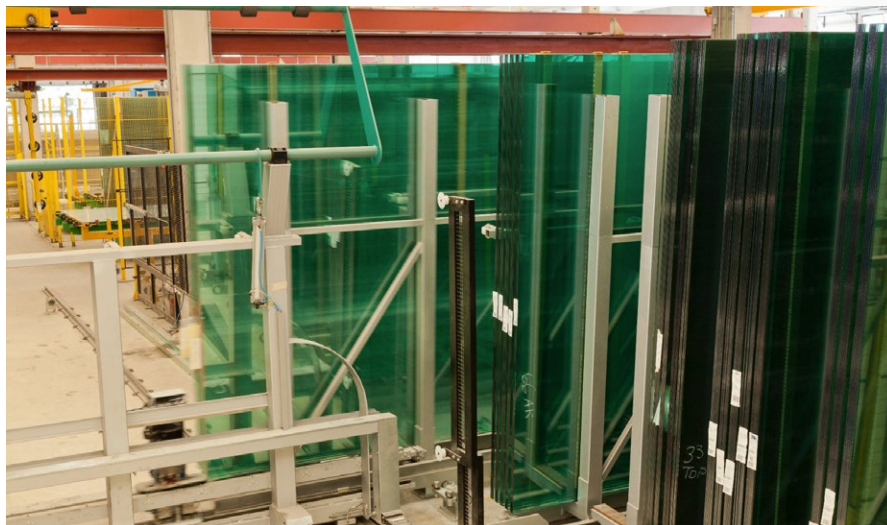
Automation or optimisation of the warehouse management system is an important development element for any glass factory.

The Range

The most vast range of products for any production and storage management requirement with any automation level. Whether you have large or small spaces, whether you process numerous types of glass in variable formats, or whether you produce a single product, Bottero can provide you with the machine or combination of machines that is suitable to improve the flow of work.
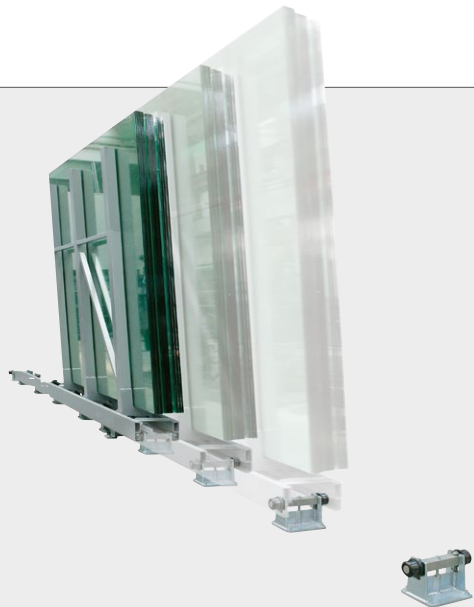
605 *Movable racks*

An extremely cost-effective and flexible solution for compact automated glass storage. The comprehensive range of racks keeps floor space requirements to a minimum.

Type of glass in stock	**Little**
Number of cutting lines	**Up to 2**
Automation level	★ ★ • • •

636 *Rack system*

Reliable and practical stand-alone, or automated overhead loader integrated warehouse systems. Every rack system is composed of one fixed rack, one motorized rack, whereas the following are movable racks.

Type of glass in stock	**Average/Many**
Number of cutting lines	**More than 2**
Automation level	★ ★ ★ • •
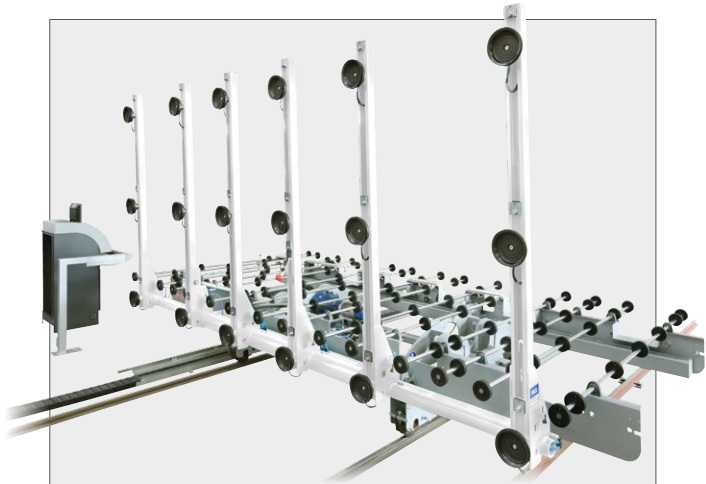
620|630|640 *Loaders*

These machines are recognized worldwide for their high degree of flexibility, reliability and ease of use. They can handle glass from 2 up to 25 mm with a glass depth of 1200 mm.
Unique system for glass detachment pneumatically assisted. The arm movements are mechanically actuated.

Type of glass in stock	**Little/Average**
Number of cutting lines	**More than 2**
Automation level	★ ★ ★ ★ •

621|631 *Loaders*

This type of loaders are suitable for standard line configuration to handle glass sheets from 3 up to 19 mm with a glass depth of 1000 mm.

|	
Type of glass in stock	**Little**
Number of cutting lines	**Up to 2**
Automation level	★ ★ ★ • •

Evaluation based on comparison with other Bottero products of the same category.

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650 *Shuttle system*

Ideal system for the management and storage of different types of glass and for restricted height buildings that are not suitable to accommodate overhead type loaders. The ultimate solution to manage an unlimited number of racks feeding an unlimited number of cutting lines.

Type of glass in stock	**Average/Many**
Number of cutting lines	**More than 2**
Automation level	★ ★ ★ ★ ★
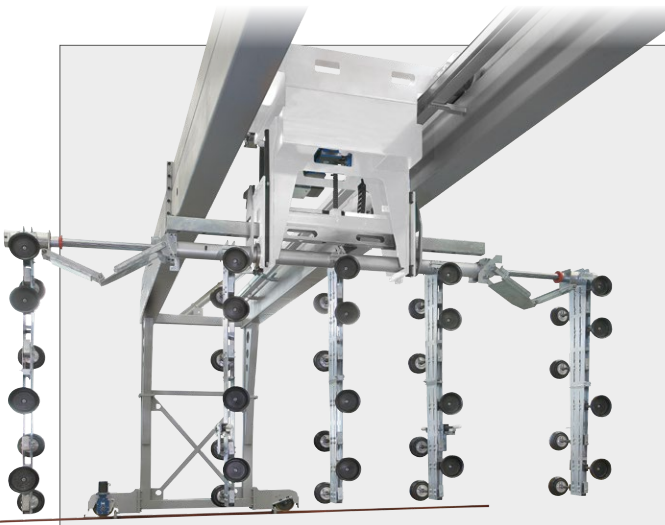
695 *Gantry system*

A unique telescopic frame system allows to organize a very flexible storage area with a combination of jumbo and regular sizes glass positions: in particular it is possible to load only one regular glass size, when it is needed, from racks with two rows of regular sheets placed aside. This system provides the most versatile solution for warehouse management and is designed to load glass sheets from any rack with any pack depth.

Type of glass in stock	**Average/Many**
Number of cutting lines	**More than 2**
Automation level	★ ★ ★ ★ ★
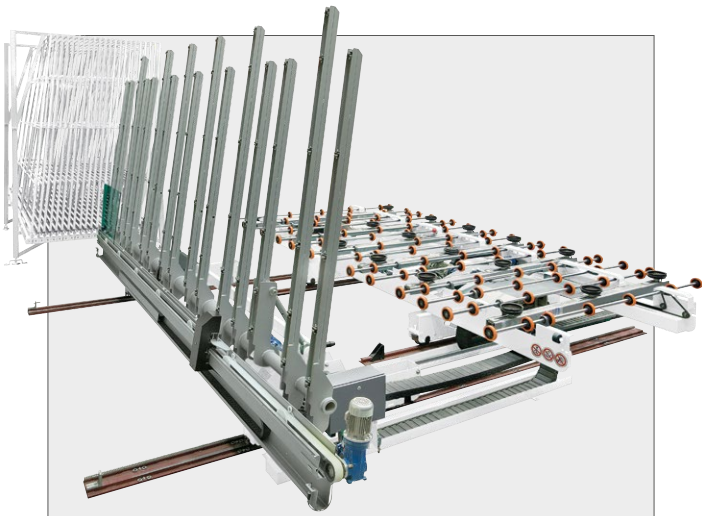
680 *Management system*

Simple vertical type storage system to manage remnant sheets efficiently and minimize waste.
It can handle glass sheets with a minimum dimension of 1500 x 2000 mm and with a maximum dimension of 6100 x 3300 mm with a maximum weight of 1000 kg.

Type of glass in stock	**Average/Many**
Number of cutting lines	**More than 2**
Automation level	★ ★ ★ ★ ★
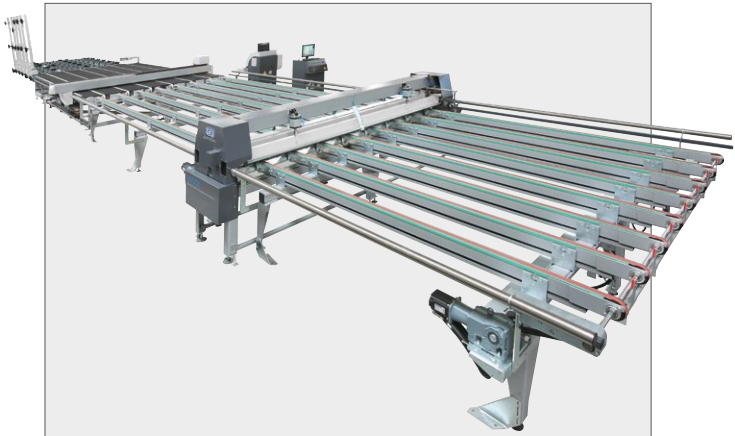
07 EX
Automatic breakout system

The automatic breakout solution is made up of a belt conveyor, a breakout unit and an air cushion table. The belt conveyor is a totally modular machine for transporting and positioning the sheet on the breakout unit, completed with a set of fishbone belts to ensure maximum positioning precision, and with a gear motor controlled by dedicated encoder and inverter.

Type of glass in stock	**Many**
Number of cutting lines	**Up to 2**
Automation level	★ ★ ★ ★ •

Evaluation based on comparison with other Bottero products of the same category.

Features

All Bottero warehouse management systems fulfil the highest standards of reliability and performance and are entirely designed and manufactured in the company's Italian facilities.

605
Movable racks

An extremely cost-effective and flexible solution for compact automated glass storage. The comprehensive range of racks keeps floor space requirements to a minimum.
This system can handle glass sheets up to 10000 kg.
The 605 movable racks can be integrated in to all types of automatic lines, and provide a highly versatile solution when combined with automatic loading machines. Furthermore they can be easily integrated in to existing facilities.

Technical features	Metric	Imperial
Max glass size	7000 x 3000 mm (opt.) 6100 x 3300 mm 3650 x 2750 mm	276" x 130" 240" x 130" 144" x 108"
Max weight	10000 Kg | 5000 Kg	22046 lb | 11023
Rack depth	320 mm	13"
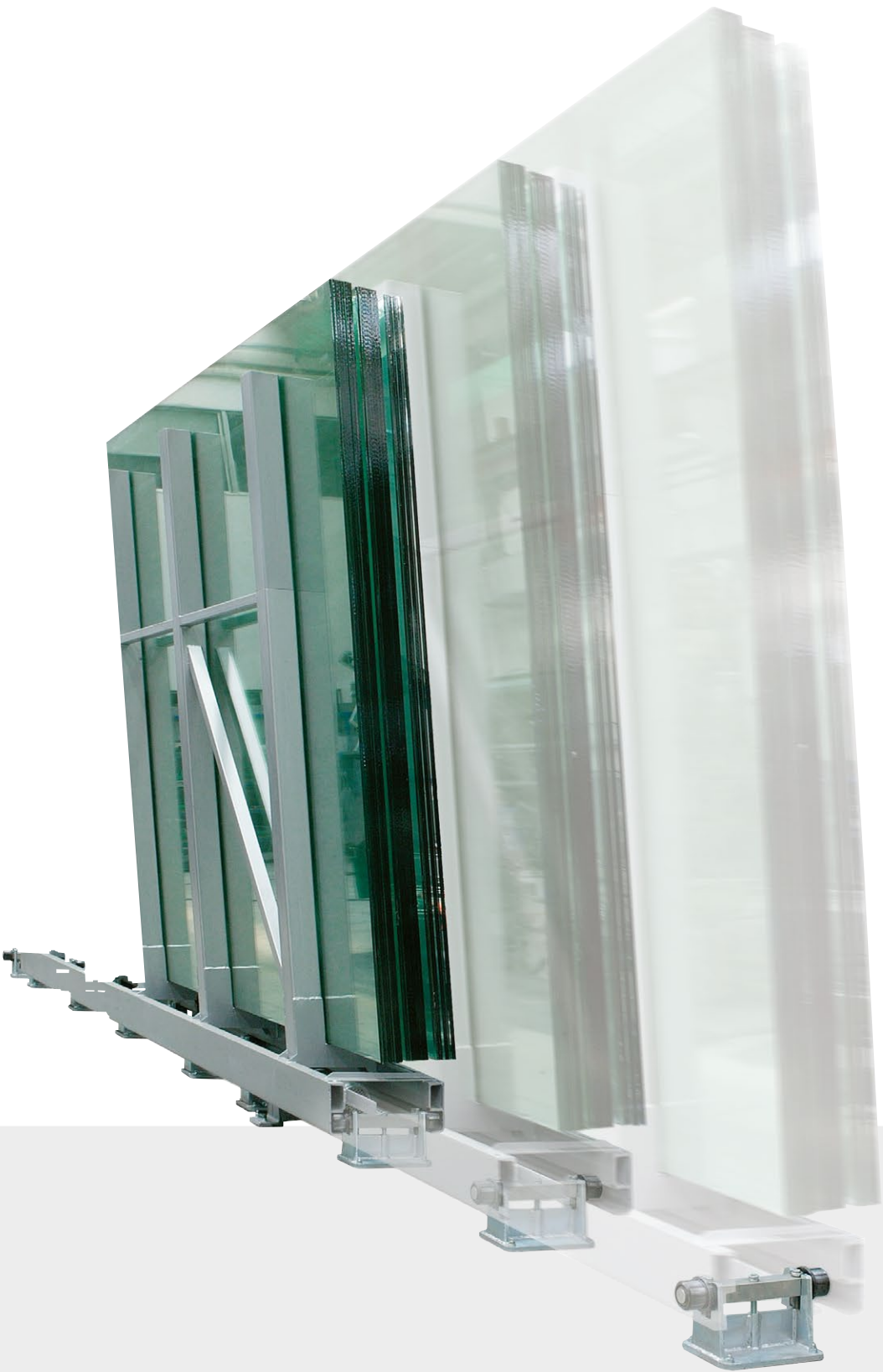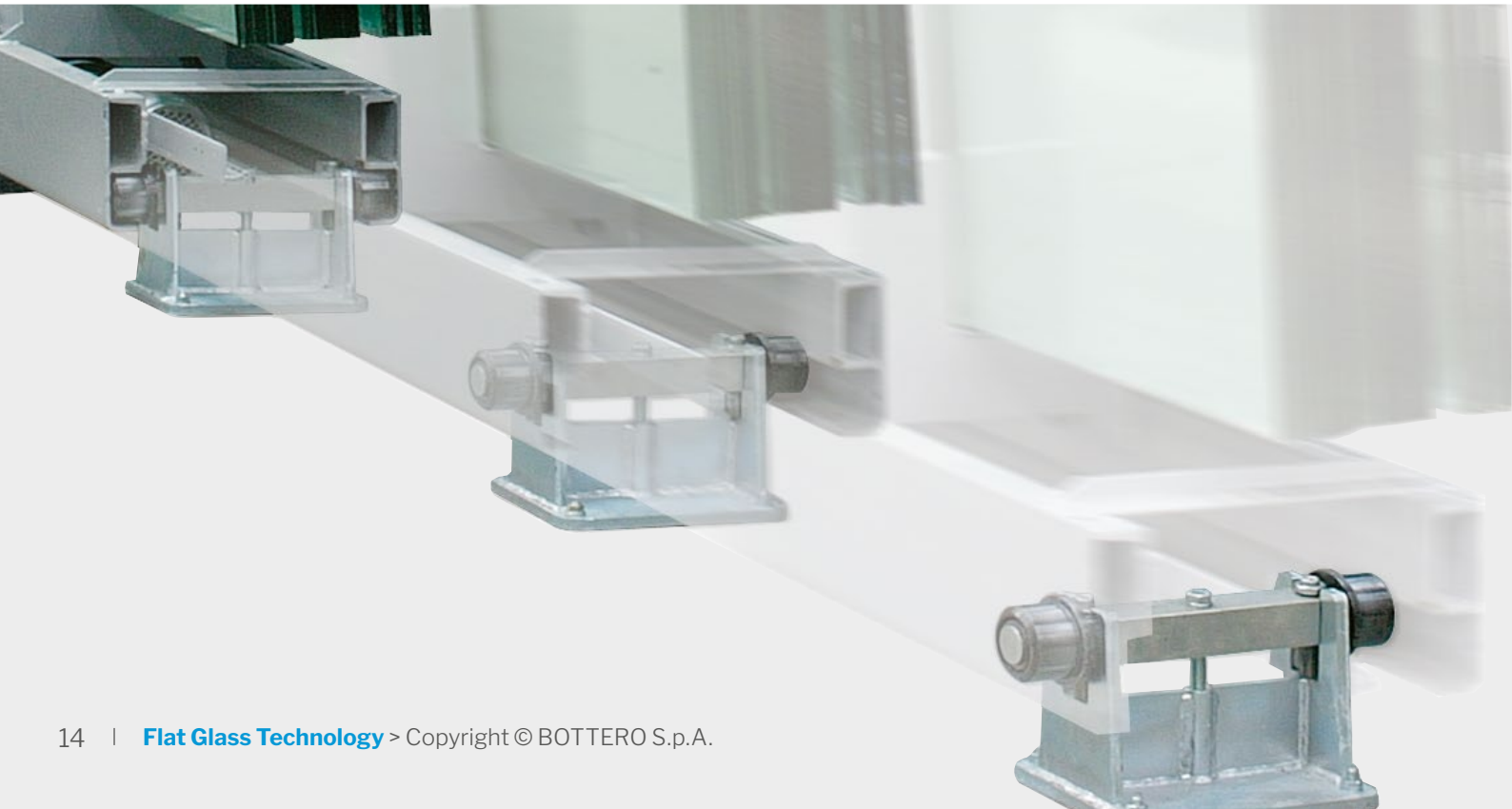
636
Rack system

Reliable and practical stand-alone, or automated overhead loader integrated warehouse systems. Every rack system is composed of one fixed rack, one motorized rack, whereas the following are movable racks. Rack opening and closing can be handled manually through pedal or in semiautomatic mode though PLC, by mean of a user friendly touch screen operator interface. The hydraulic handling system improves the movement of empty and loaded racks, providing a high degree of control over acceleration and deceleration forces. Furthermore with the option "integrated warehouse management" the rack system is equipped with an additional PC containing one single warehouse database, which is online connected to optimization office.

Technical features	Metric		Imperial	
Max glass size	6100 mm (7000 mm) x 3300 mm 3650 x 2750 mm		240" (276") x 130" 144" x 108"	
Glass pack thickness	Fixed rack	Movable rack	Fixed rack	Movable rack
	300 ÷ 800 mm	140 ÷ 800 mm	12" ÷ 31"	6" ÷ 31"
Max weight	Fixed rack	Movable rack	Fixed rack	Movable rack
	12 ÷ 30 ton 5 ÷ 14 ton	5 ÷ 30 ton 2,5 ÷ 14 ton	26456 ÷ 66139 lb 11023 ÷ 30865 lb	11023 ÷ 66139 lb 5512 ÷ 30865 lb

620 | 630 | 640
Loaders

These machines are recognized worldwide for their high degree of flexibility, reliability and ease of use. They can handle glass from 2 up to 25 mm with a glass depth of 1200 mm.
Unique system for glass detachment pneumatically assisted. The arm movements are mechanically actuated.

The loaders are available in the following configurations, transversally or longitudinally mobile:
- 620 single side loader
- 630 double side loader
- 640 combined double side loader.

A standard machine that can manage non-standard applications.

| Technical features	Metric	Imperial
Glass thickness	2 ÷ 19 mm	5/64" ÷ 3/4"
Optional glass thickness	2 ÷ 25 mm	5/64" ÷ 1"
Max glass size	6100 x 3300 mm | 3650 x 2750 mm	240" x 130" | 144" x 108"
Rack depht	1200 mm	47"
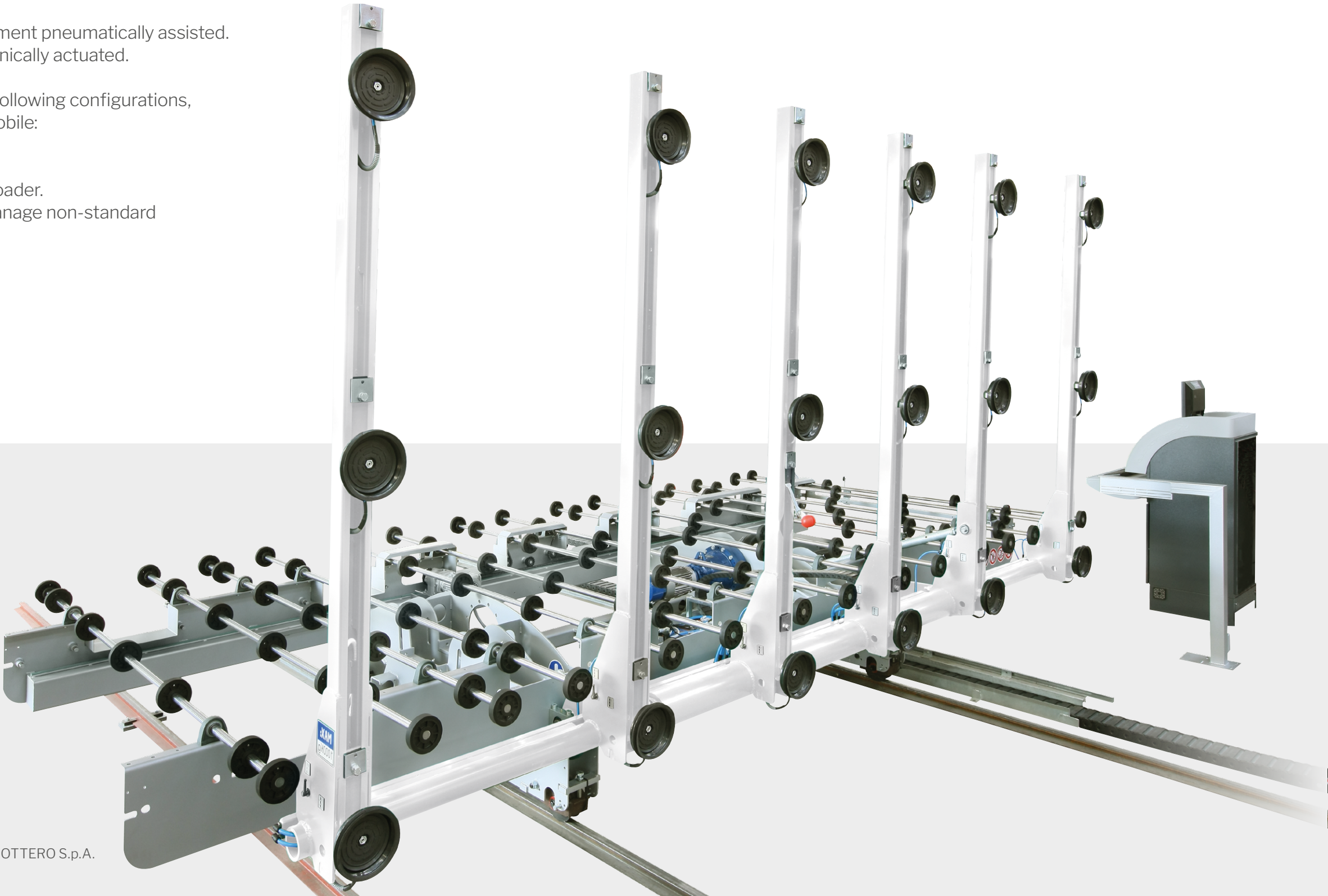
621 | 631
Loaders

This type of loaders are suitable for standard line configuration to handle glass sheets from 3 up to 19 mm with a glass depth of 1000 mm.

The loaders are available in the following configurations:
· 621 single side loader
· 631 double side loader.

Technical features	Metric	Imperial
Glass thickness	3 ÷ 19 mm	1/8" ÷ 3/4"
Max glass size	6100 x 3300 mm	3650 x 2750 mm	240" x 130" |144" x 108"
Rack depht	1000 mm	40"
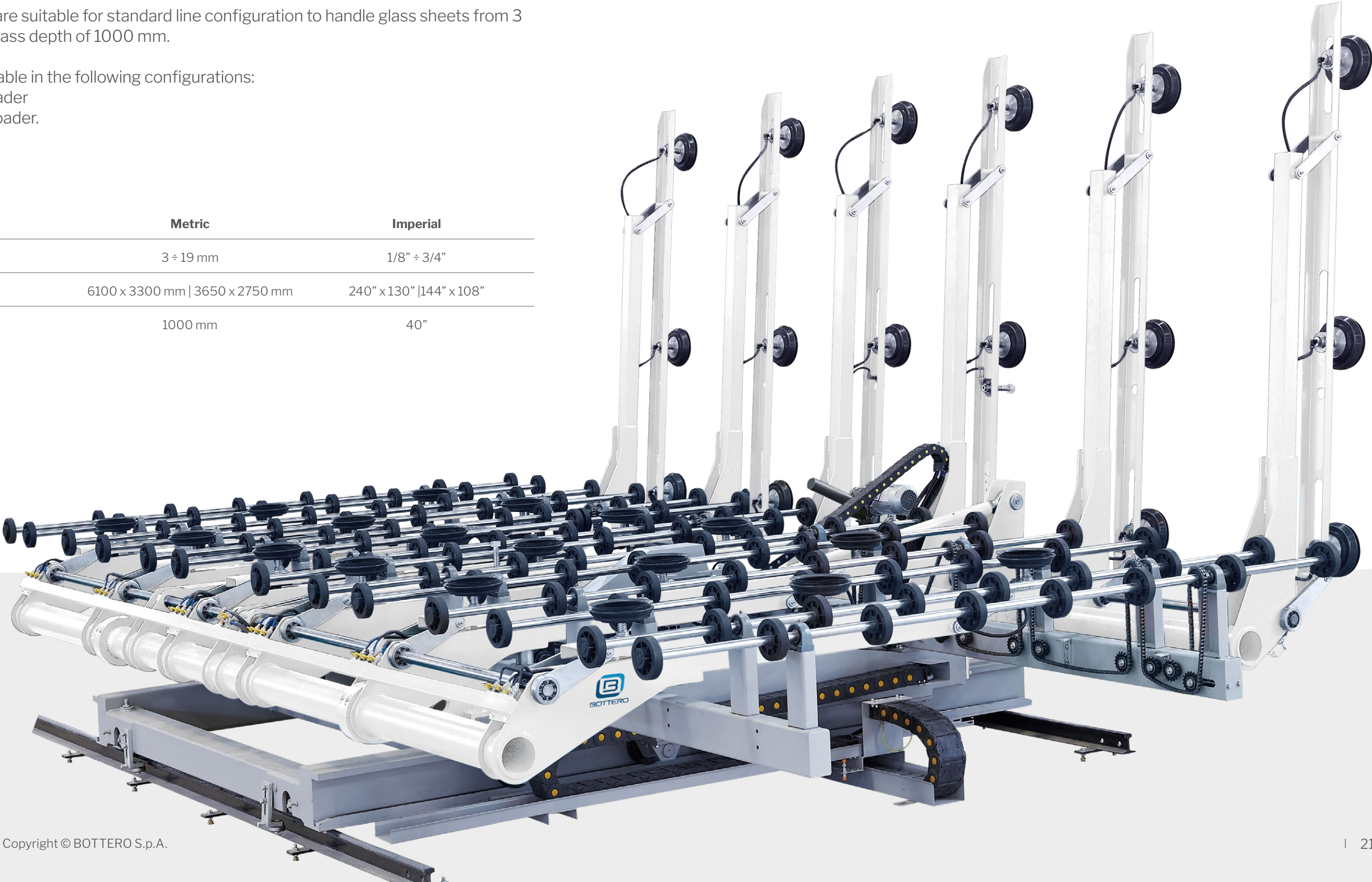
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650
Shuttle system

Ideal system for the management and storage of different types of glass and for restricted height buildings that are not suitable to accommodate overhead type loaders. The ultimate solution to manage an unlimited number of racks feeding an unlimited number of cutting lines. A single loading area located in close proximity to the main glass delivery entrance guarantees more safety, reduced glass handling movements and no production downtime. Furthermore all components requiring servicing are easily accessible from floor level, providing a safe and speedy intervention, and production is maintained during routine maintenance work. 650 shuttle moves at a speed of 40 m/min and can handle glass sheets up to 12500 kg. It is available in single sided or double sided versions. Double sided version is suitable to deliver glass sheets to two cutting lines with a single loader and a dual line with a double sided loader.

Technical features	Metric	Imperial
Max glass size	6100 x 3300 mm 3650 x 2750 mm	240" x 130" 144" x 108"
Max weigth	6000 ÷ 9000 kg 10000 ÷ 12500 kg 5000 ÷ 6300 kg	13227 ÷ 19841 lb 22046 ÷ 27560 lb 11023 ÷ 13889 lb
Max speed	40 m/min	1575 ipm
Rack depth	190 ÷ 250 mm | 320 ÷ 400 mm	7" ÷ 10" | 13" ÷ 16

695 HPS
Gantry system

A unique telescopic frame system allows to organize a very flexible storage area with a combination of jumbo and regular sizes glass positions: in particular it is possible to load only one regular glass size, when it is needed, from racks with two rows of regular sheets placed aside. This system provides the most versatile solution for warehouse management and is designed to load glass sheets from any rack with any pack depth. An infinite number of loading and unloading positions can be accommodated to feed any configuration of cutting line. 695 overhead type loader is provided with 270° rotation system and can be easy integrated with rack system and movable racks. It can load glass sheets with a thickness from 2 to 19 mm for a maximum weight of 1000 kg.

This system is suitable to delivery glass sheets to multiple cutting lines and is capable of handling glass sized up to 7 meters. Furthermore the gantry frame features telescopic arms allow the pick-up of two regular size glass sheets with different thicknesses from a single rack position. Upon request, the overhead type loader can be provided with a special system allowing the automatic transfer from float liner to stock position.
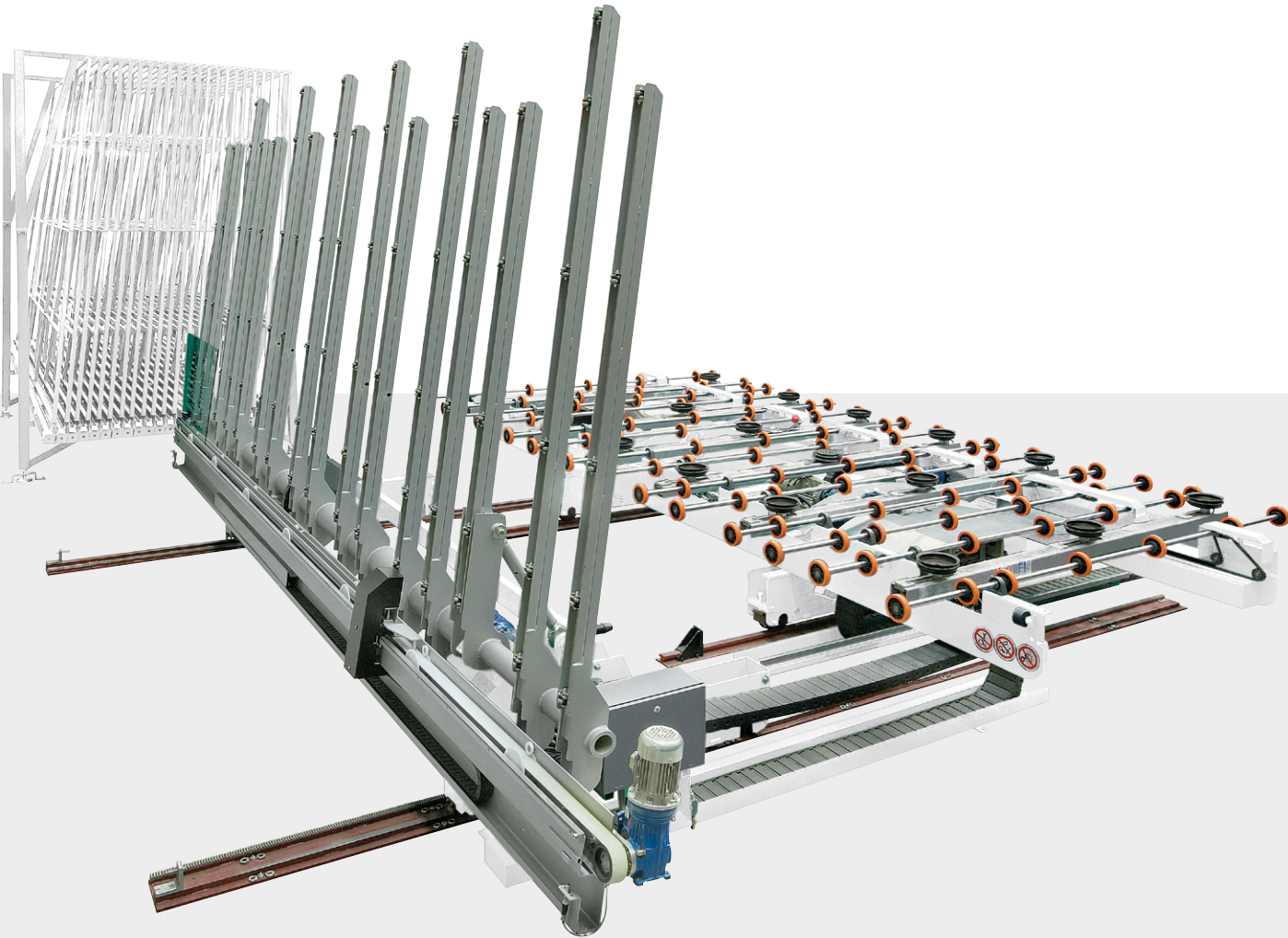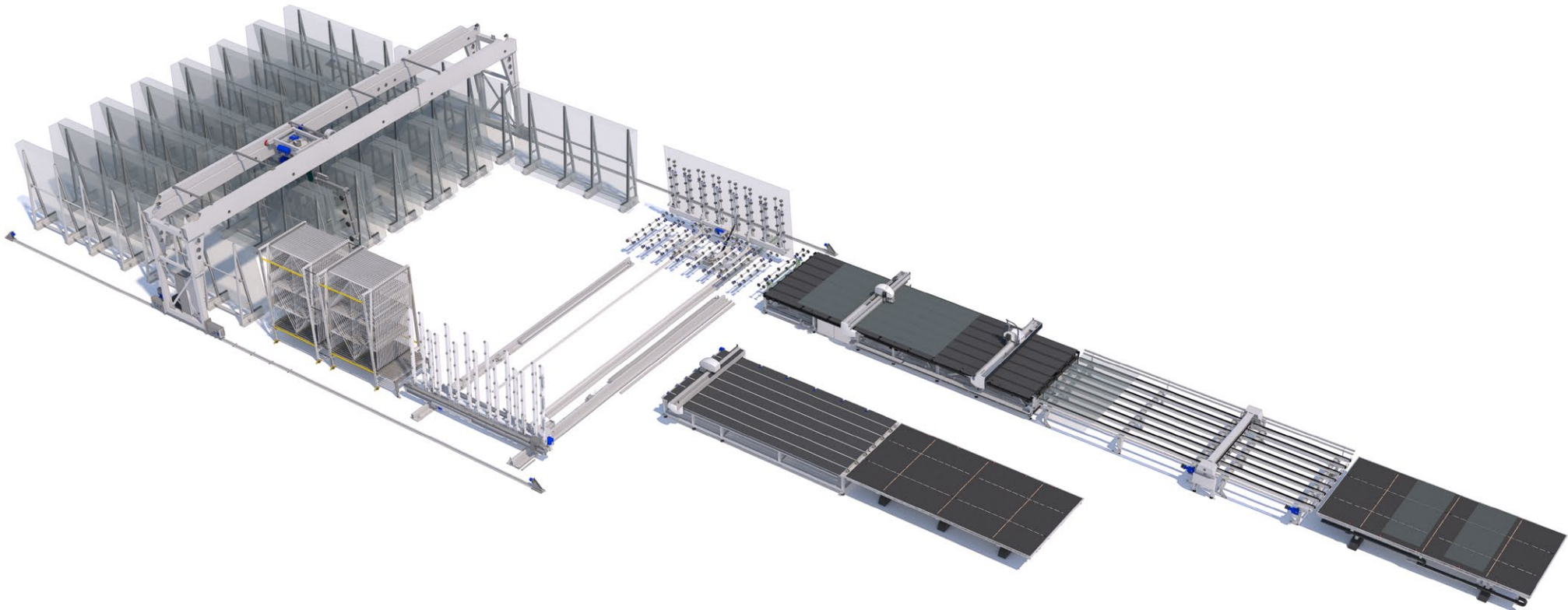
Technical features	Metric	Imperial
Speed	X 70 ÷ Y 60 m/min	X 2756 ÷ Y 2362 ipm
Min glass thickness	2 mm	5/64"
Max glass thickness	19 mm	3/4"
Max weight	1000 kg	2205 lb
Max glass size	7000 x 3300 mm (opt.) 6100 x 3300 mm 3650 x 2750 mm	276" x 130" (opt.) 240" x 130" 144" x 108"

680
Sub-plates management system

Simple vertical type storage system to manage remnant sheets efficiently and minimize waste. It can handle glass sheets with a minimum dimension of 1500 x 2000 mm and with a maximum dimension of 6100 x 3300 mm with a maximum weight of 1000 kg. **680 sub-plates management system** requires minimum floor space and is provided with a dedicated optimization and management software. Furthermore it is easily integrated with float and laminated glass loading systems and with storage systems, such as overhead loader, shuttle and mobile racks.
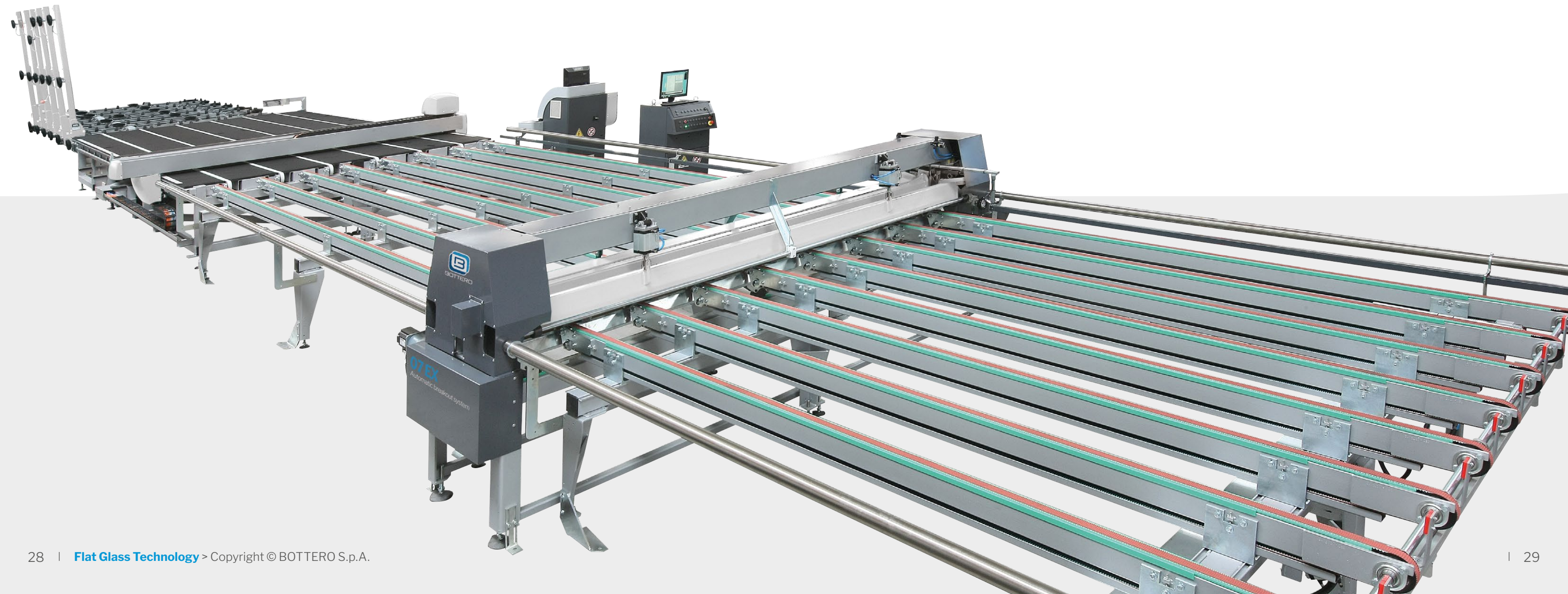
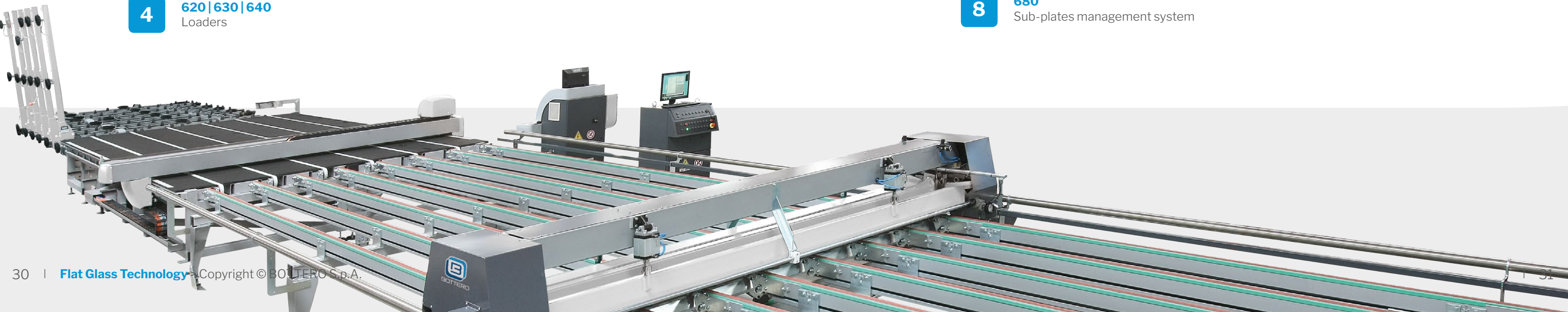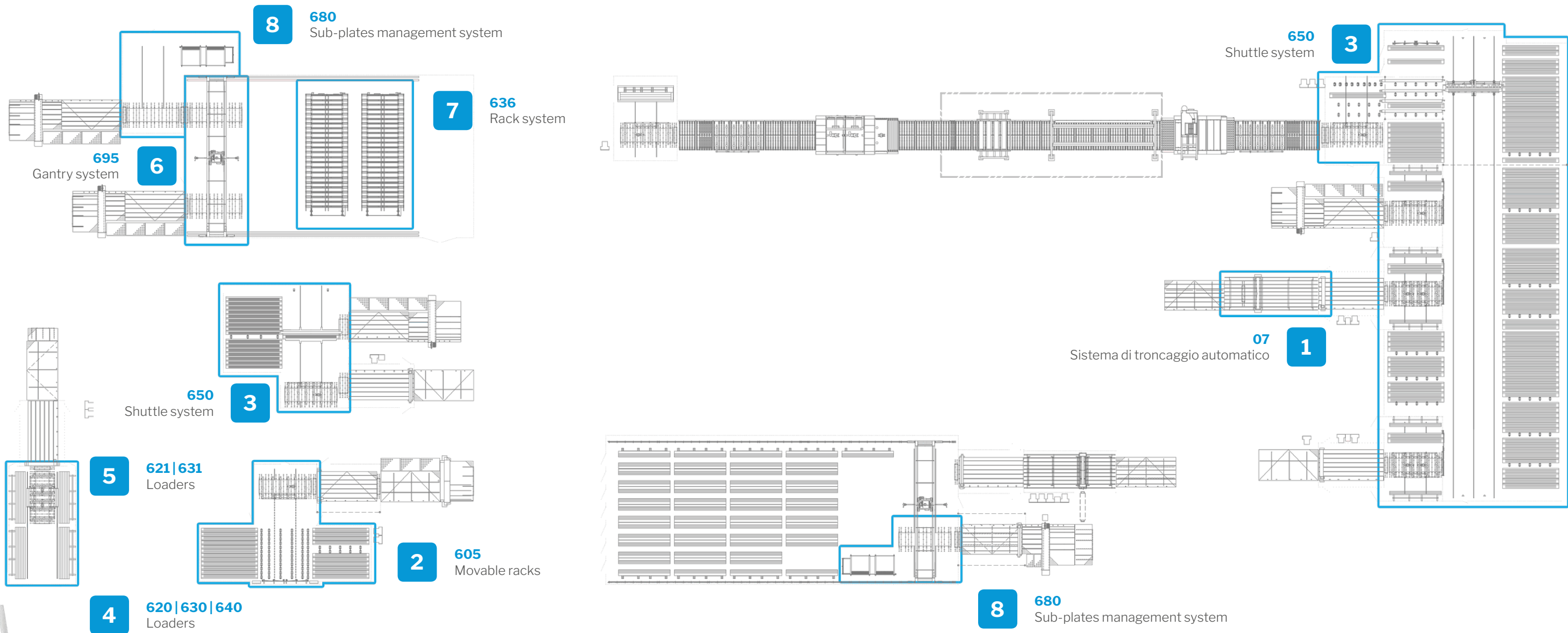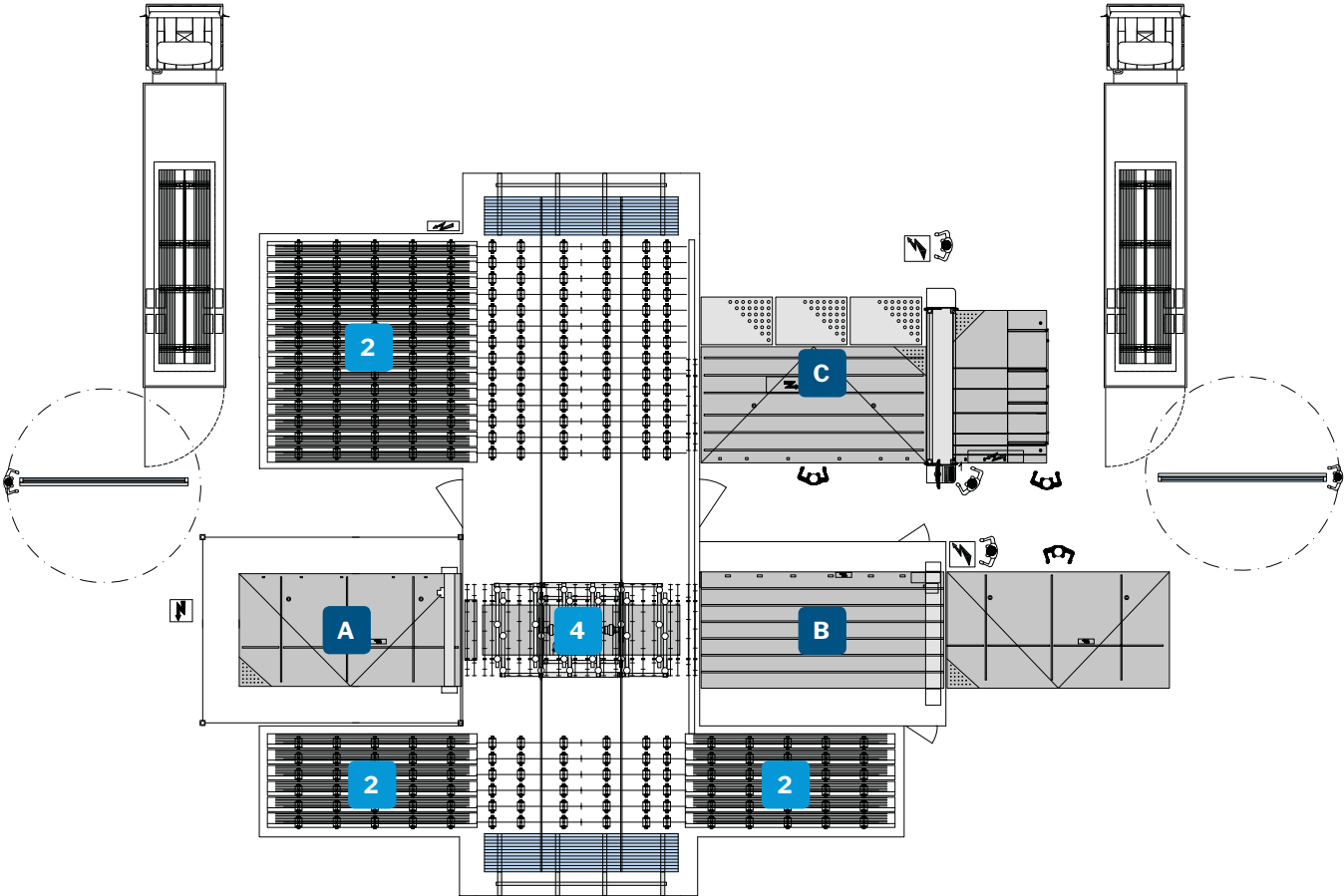| Technical features	Metric	Imperial
Max glass size	6100 x 3300 mm	240" x 130"
Min glass size	1500 x 2000 mm	59" x 79"
Max weight	1000 kg	2205 lb

07 EX
Automatic breakout system

The automatic breakout solution is made up of a belt conveyor, a breakout unit and an air cushion table. The belt conveyor is a totally modular machine for transporting and positioning the sheet on the breakout unit, completed with a set of fishbone belts to ensure maximum positioning precision, and with a gear motor controlled by dedicated encoder and inverter. The breakout module is a unit able to breakout glass with thickness in a given range, and is completed with pneumatic arms which, together with the combined action of the lower breakout roller, permit incision opening. The modules can work in a 'static' way.
The air cushion table is a breakout table provided with belts for traverse transport, breakout bars for manual breakout of all the cuts other than 'X' cuts and air cushion for traverse and final piece handling.

Technical features	Metric	Imperial
Max X breakout dimension	3300 mm | 2750 mm	130" | 108"
Min X & Y breakout dimension	400 mm	16"
Min trim	25 mm	1575 ipm
Glass thicknes	2 ÷ 8 mm	5/64" ÷ 20/64"
Opt. glass thickness	5/64" ÷ 20/64"	25/64" ÷ 1/2"

Layout

8 **680**
Sub-plates management system

7 **636**
Rack system

650
Shuttle system **3**

695 **6**
Gantry system

650 **3**
Shuttle system

07
Sistema di troncaggio automatico **1**

5 **621|631**
Loaders

2 **605**
Movable racks

4 **620|630|640**
Loaders

8 **680**
Sub-plates management system

Layout

650 Shuttle system	**2**
630 Movable double side loader	**4**
Float cutting table	**A**
Float cutting line	**B**
Laminated cutting line	**C**
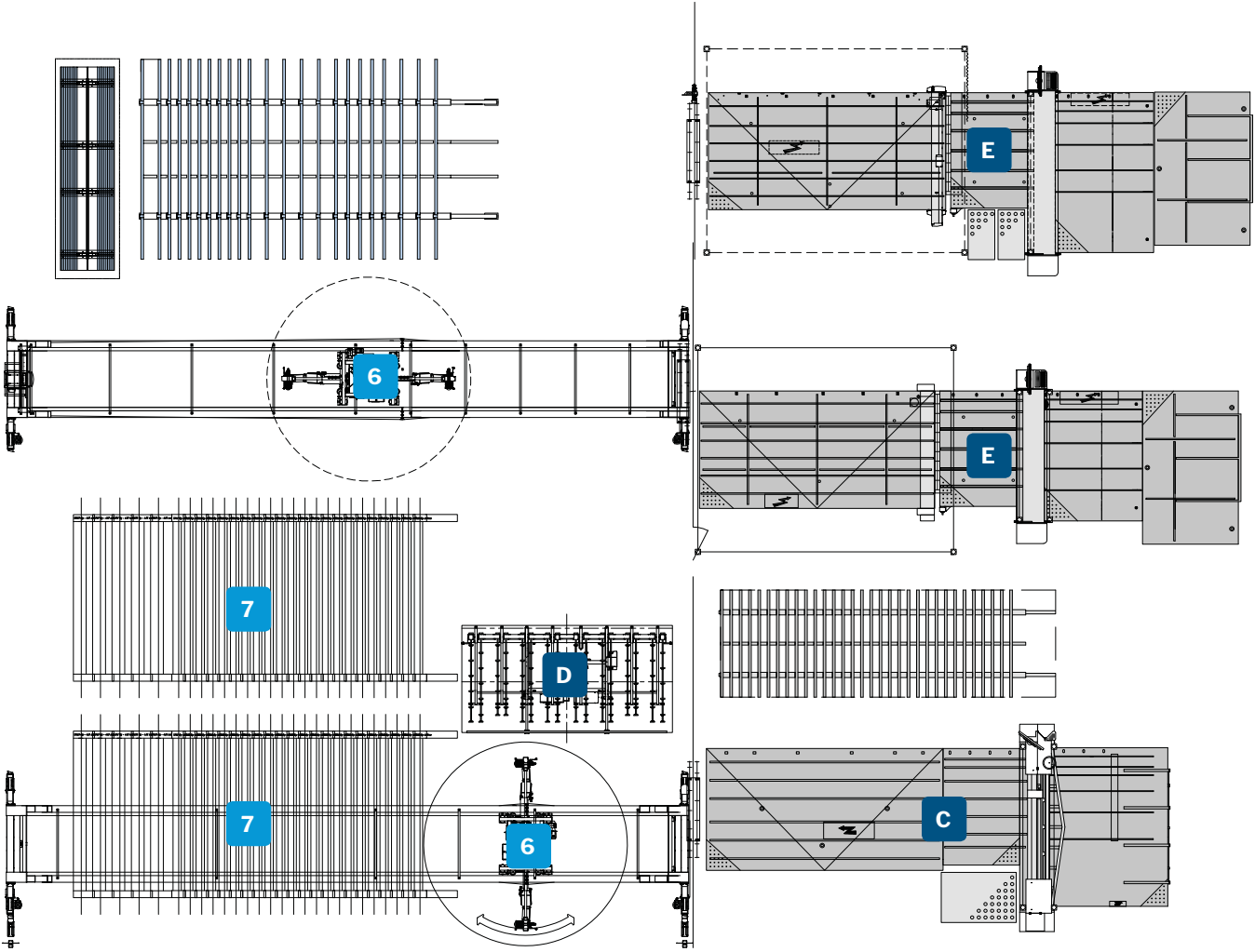
Layout

695 HPS Gantry system	**6**
636 Rack system	**7**
Tilting machine	**D**
Laminated cutting line	**C**
Dual line	**E**
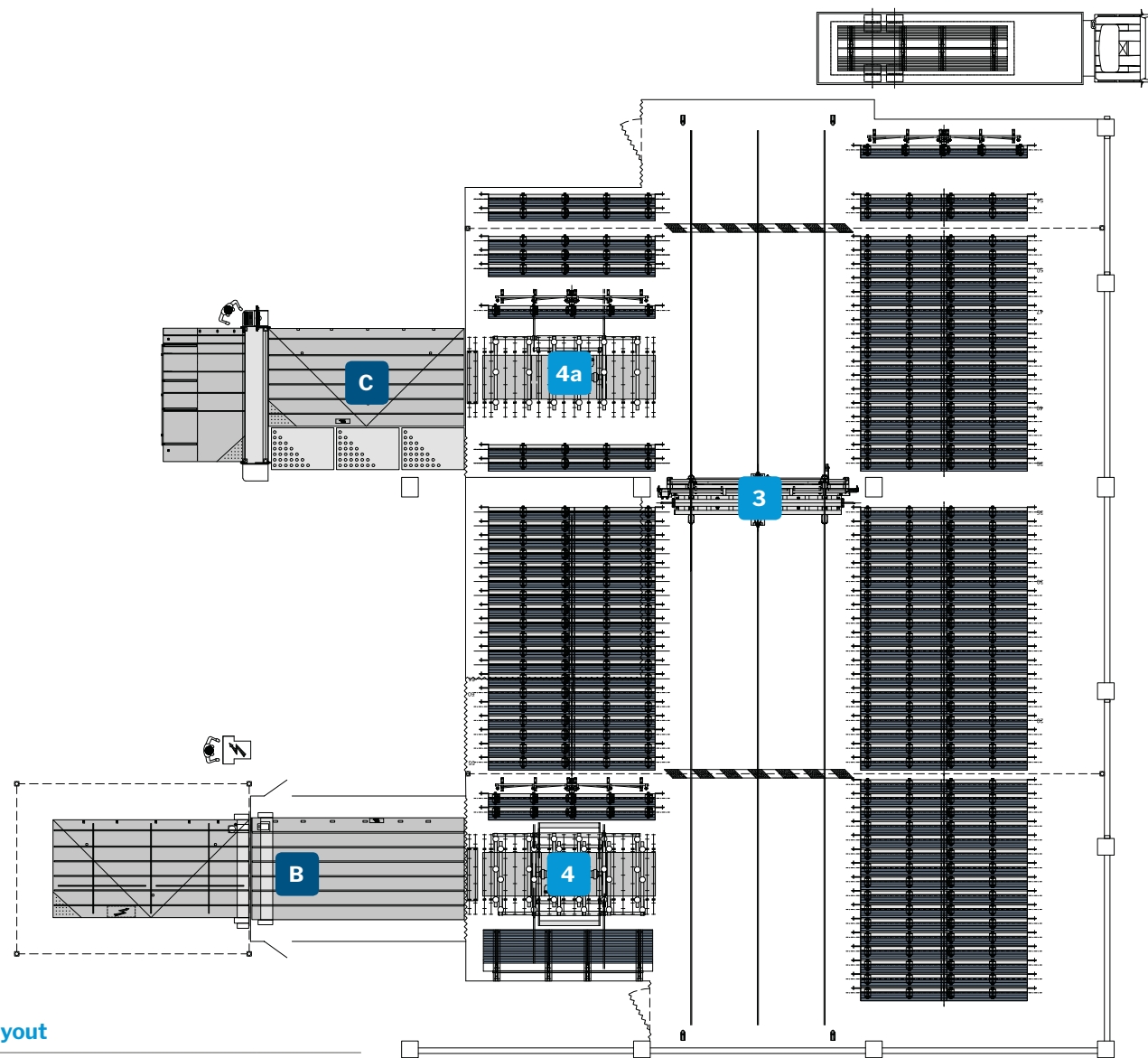
Layout

650 SH Shuttle system	3
630 Fixed double side loader	4
620 Single-sided fixed loader	4a
Float cutting line	B
Laminated cutting line	C
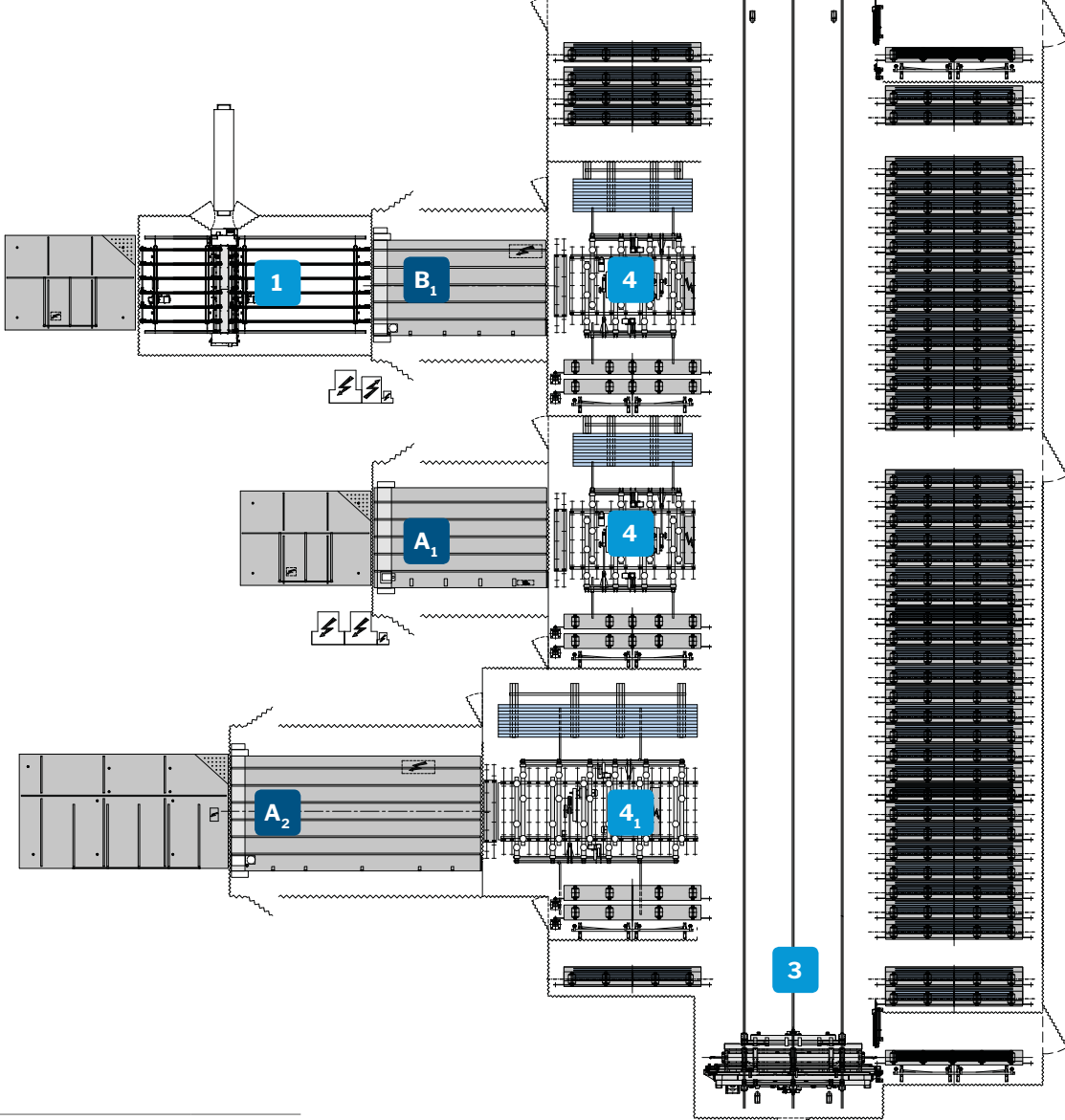
Layout

650 SH Shuttle system	3
630 Fixed double side loader regular size	4
630 Fixed double side loader jumbo size	4_1
07 EX Automatic breakout system	1
Float cutting line jumbo size	A_2
Float cutting line regular size	A_1
Float cutting table regular size	B_1

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A

D

A

D

6

7

7

7

Layout

695 HPS Gantry system	6
636 Rack system	7
Tilting machine	D
Float cutting table	A

2

E

4a

8
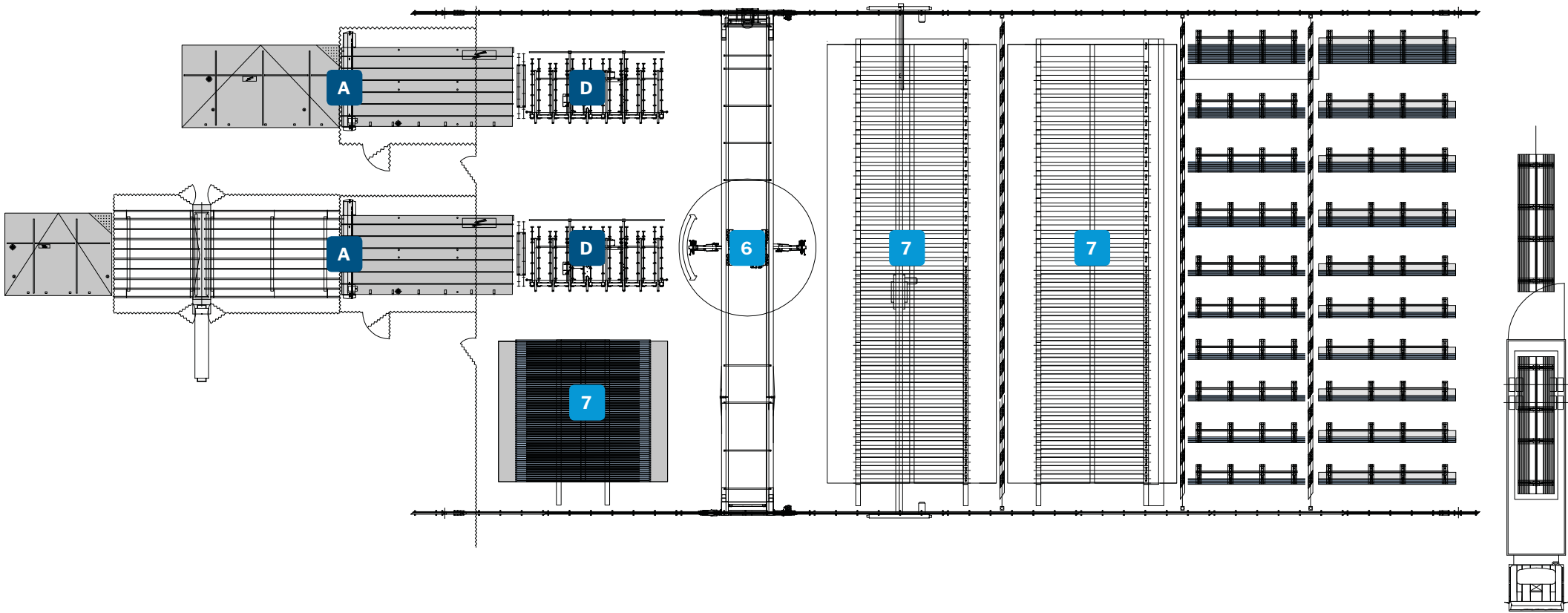
Layout

680 STS Sistema di gestione sfridi	8
620 Movable single side loader	4a
605 MR Movable racks	2
Dual line	E

C

4a

B

2

2
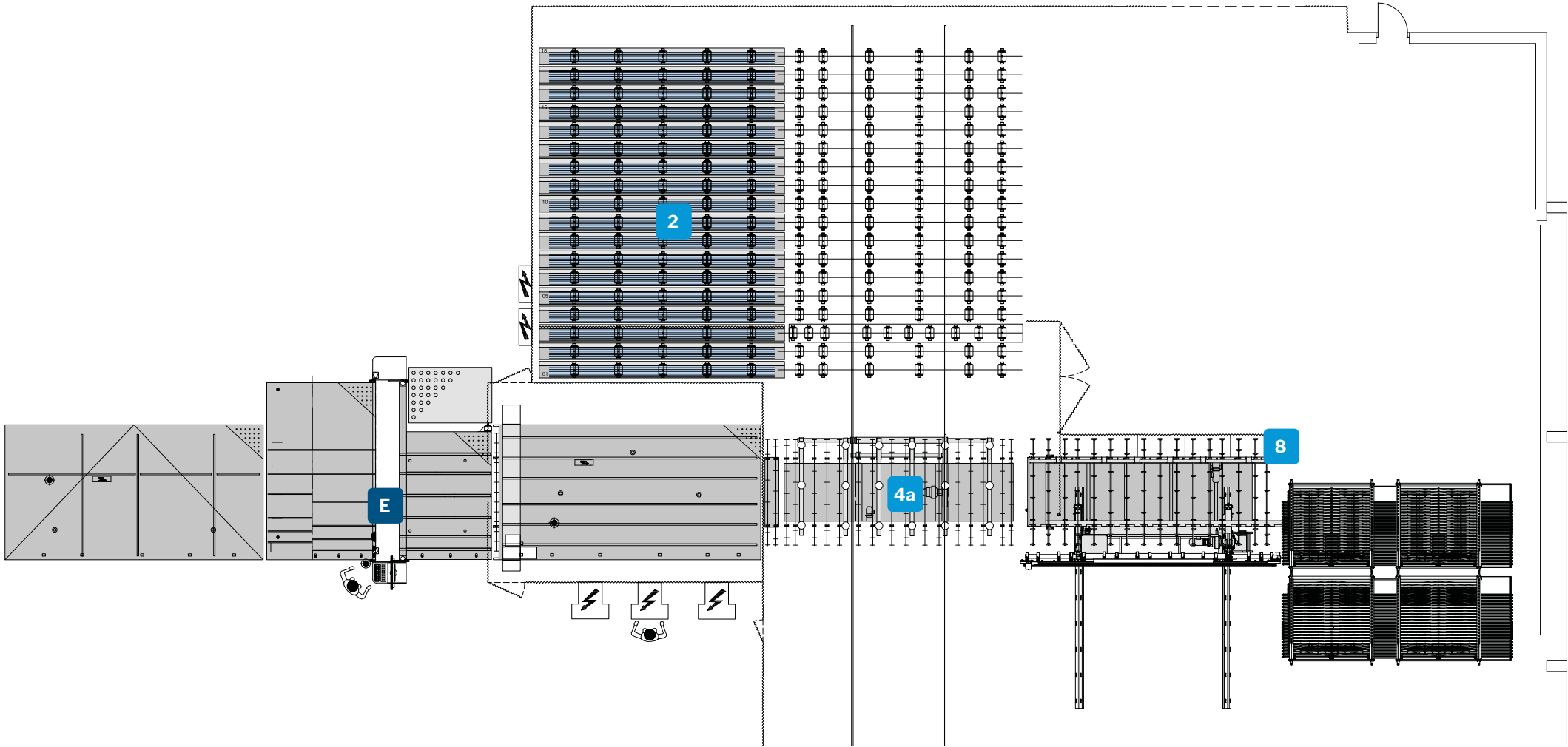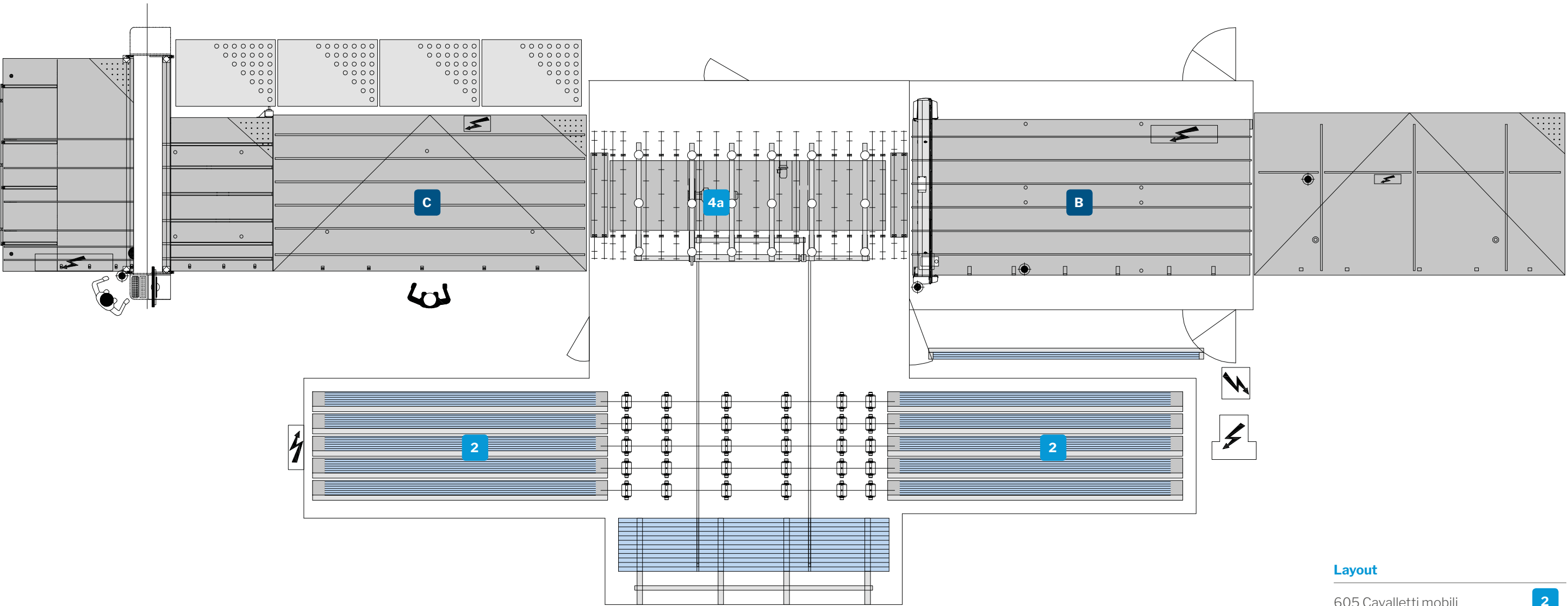
Layout

605 Cavalletti mobili	**2**
620 Single-sided fixed loader	**4a**
Float cutting line	**B**
Laminated cutting line	**C**
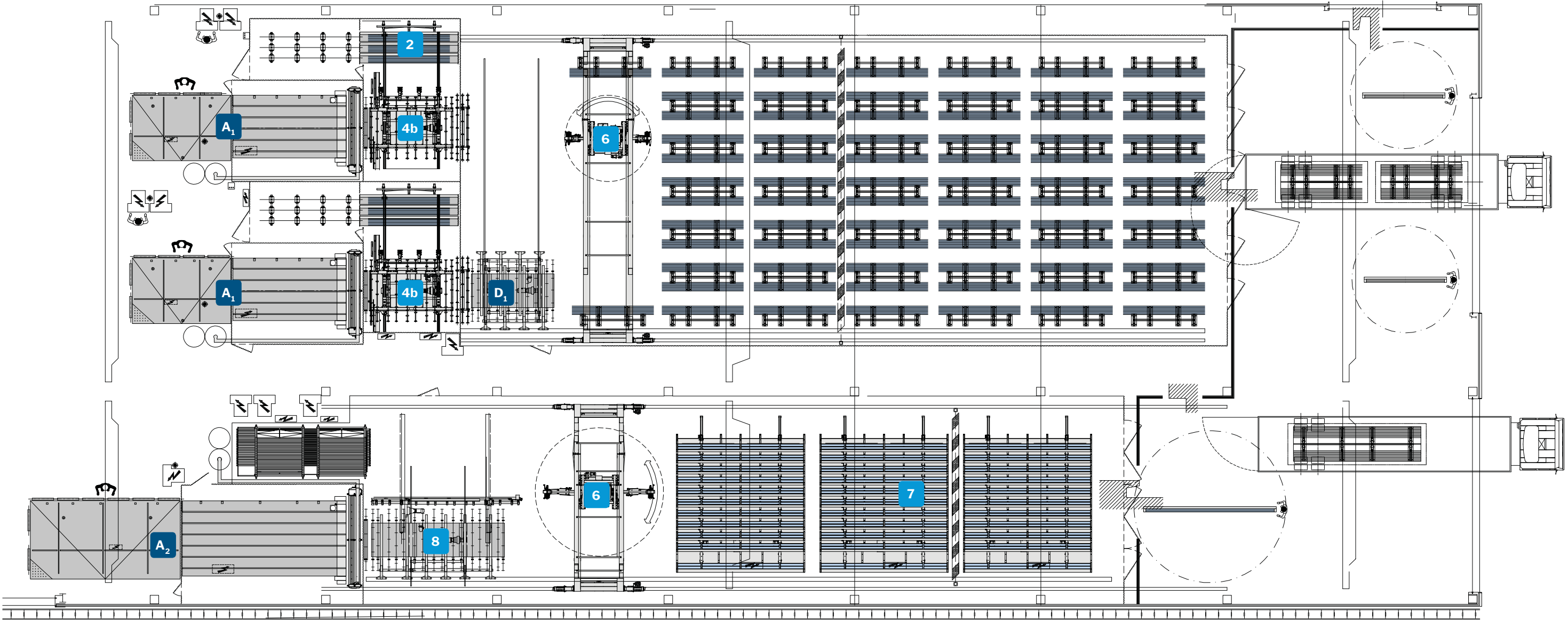
Layout

695 HPS Gantry system	**6**
636 Rack system	**7**
Movable overturning	**D₁**
620 Fixed single side loader	**4b**
680 STS Sub-plates management system	**8**
605 MR Movable racks	**2**
Float cutting line jumbo size	**A₂**
Float cutting line regular size	**A₁**

Bottero, the choice of the greatest

With us, you have all the experience and technology that we use to serve the largest industries

With Bottero, you don't simply buy products but the entire experience, the technology and the organisational skills of a company that can provide very high productivity glass processing plants, and the selected supplier of some of the most important companies in the world.

more than
50.000 installations
all over the world

With thousands of installations spread all over the world, Bottero guarantees first-class technical and commercial assistance.

Bottero S.p.A. - Headquarters
via Genova 82 - 12100 Cuneo - Italy

Bottero S.p.A. - Trana
Trana - Italy

Bottero S.p.A. - Pesaro
Pesaro - Italy

Revimac S.r.l.
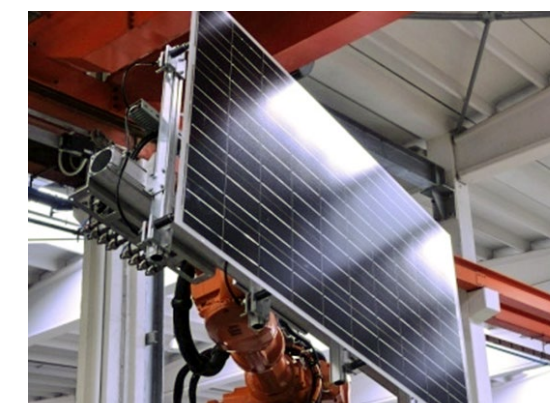Vicenza - Italy

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Rochdale - Great Britain

Bottero France SA
Nice – France

Bottero do Brasil
S.Paolo – Brasil

Bottero Flat Glass Inc.
Kernersville - North Carolina - USA

Bottero Glass Industry Co. Ltd
Shangai – China

Above and to the side: some high-productivity lines manufactured by Bottero.

The images and data in this catalogue are only
indicative and never override the contract
engagement of Bottero S.p.A.
For photographic reasons the products is often
shown complete with accessories that are not
part of the standard equipment of the machine.

Discover the Bottero
technology for **Flat Glass**

Float Cutting	Coating Lines
Glass Stock Management	Float Lines
Straight Line Edgers & Bevellers	Laminated Lines
Double Edgers	Mirror Lines
Drilling	Off line Cutting
CNC	Packing Lines
Laminated Lines	Solar Lines