Machinery for Insulating Glass Production

LiSEC

best in glass processing

Facts and figures:

- 1961 founding year
- 1 strong brand
- 1,300 employees
- 25 sites
- 230 million Euros turnover (2017)
- 95 % export rate
- 7 % of turnover for R&D
- more than 330 patents

Reliable processes, good quality, solid profit: LiSEC solutions provide flat glass processors around the world with security and drive in a challenging environment.

For the last 50 years, we have been working hard to enable you to sustainably boost the efficiency, the system availability and the quality output of your flat glass production process. Thanks to forward-looking thinking, continuously striving to find the best solution and a great deal of personal commitment from our employees, we have grown from a one-man company to a technology leader.

Our advanced solutions generate a great cost-to-benefit ratio throughout the entire lifecycle of your machines and systems.

Customers around the world can benefit from this: be they experienced manufacturers or newcomers to the industry; from family businesses to industrial glass processors. Three main factors are essential for long-term success:

1. Turn Key Solutions

Everything from a single source including software. Customers benefit from the only company in the flat glass machine industry that can comprehensively plan and develop large projects - also thanks to the widest product range in the industry.

2. Excellent Service

Investment security and the highest availability and productivity enable the large, global LiSEC service network. A contact person familiar with the local language and customs is available close to you.

3. Performance through software integration

Integration of the production management software and the machinery control (digitalization/Industry 4.0) allows top operation and optimization of all integrated machines or whole glass factories.

The benefits:

- Over 50 years of partnership, pioneering spirit and stability
- Investment security due to the size of our company
- Leading technology with a high resale value
- Great cost-to-benefit ratio throughout the entire system lifecycle

Machinery for Insulating Glass Production

Table of Contents

Lines

Insulating glass line for rigid spacer frames

Insulating glass line for flexible spacers

Insulating Glass Line for Thermoplastic Spacers

Stand-Alone Machines

Decoating

Wash

Frame Processing

Machinery for Insulating Glass Production

Table of Contents

Machinery for Insulating Glass Production

Table of Contents

Pressing

Sealing

Software

Service

Competence Center

LINES

We tailor the LiSEC lines individually to your production requirements. Combine innovative systems from the areas of glass processing, glass cutting, tempering and logistics into one complete line system. Our colleagues will be delighted to advise you and, together with you, configure a line solution tailored to your needs. Cross-line software solutions are available in order to utilise the full efficiency of your production.

base IG | DELETE

Insulating Glass Line for industry start-ups

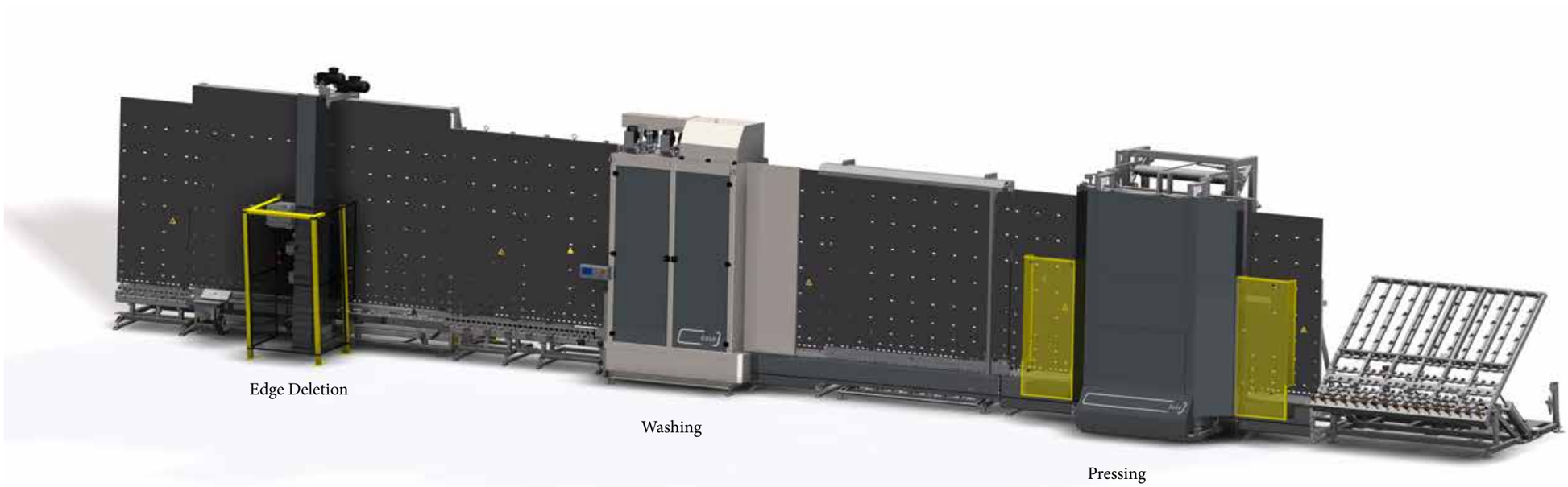
The base IG | DELETE insulating glass line allows automatic edge deletion and easy assembly for double or triple insulating glass units. The loading zone at the inlet is perfectly designed to easily feed the production line in a timely manner. Using a 6 brushes washer including a drying zone ensures perfect cleanness of the single sheets before frame mounting and insulating glass assembly. Final visual quality checks can be done at the frame mounting station. The press finalizes this automated process before tilting the glass to horizontal for manual take off and secondary sealing.

Highlights

- Automatic edge deletion
- 6 brushes washer
- 0.12 mm brushes
- Inspection zone
- Control cabinet climatisation
- Assembly press
- Choice of running direction

Options

- 3 sided steps
- 4 sided steps
- Tilting table
- 1000l tank



Edge Deletion

Washing

Pressing

Technical Data

	IG | DELETE 25/20	IG | DELETE 40/27
Glass thickness	2.3 - 16 mm (with edge deletion)	
Minimum size	350 x 180 mm	
Maximum size	2,500 x 2,000 mm	4,000 x 2,700 mm
Glass transport height	520 mm (+/- 20 mm)	
Maximum load	150 kg/lm	
Max unit thickness	12 - 60 mm	
IG types	2 - 3-fold	
Stepped units	3-side stepped unit: UK = 0 mm, VK + HK + OK = 0 - 140 mm 4-side stepped unit: UK = 0 - 50 mm, VK + HK + OK = 0 - 140 mm	
Output/shift	up to 800 units	
Assembly station	inspection zone, 500 mm recessed back wall, light sources excluded	
Geometries	rectangle, optional Shapes according to LiSEC shape catalogue	
Edge deletion for rectangles		

	Line length (mm)	Line depth (mm)
IG | DELETE 25/20	21,620 mm	3,000 mm
IG | DELETE 40/27	27,943 mm	3,500 mm

FitLine

Standardized insulating glass lines for fixed/flexible spacer frames

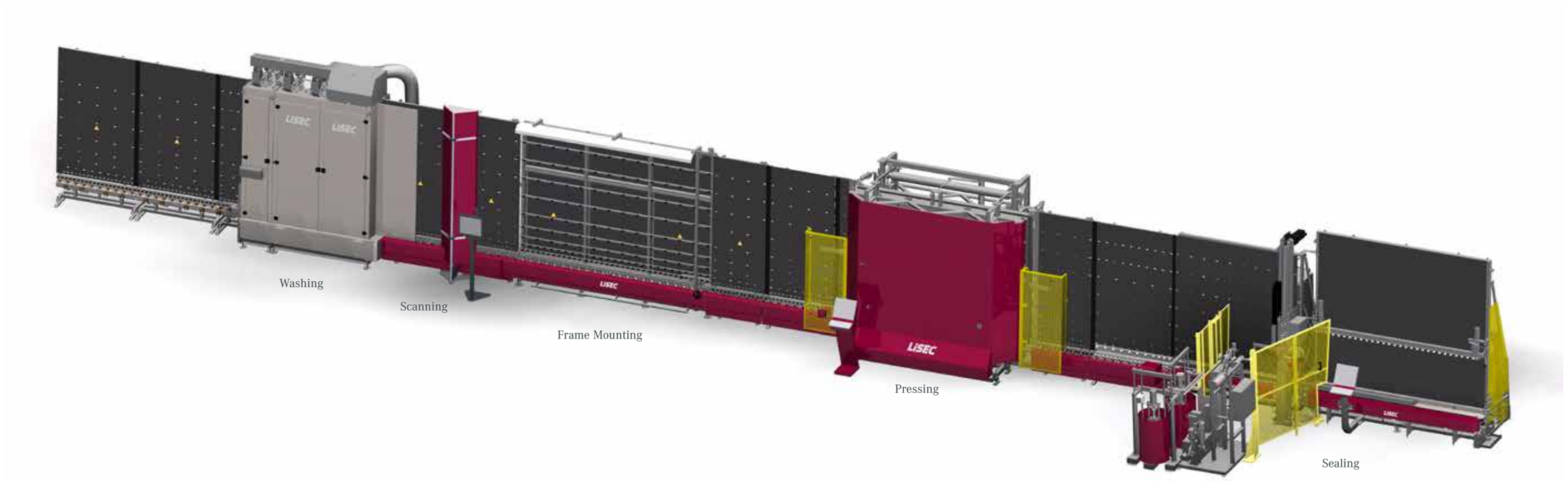
Both the LiSEC FIT.Line basic configuration and its catalog of supplementary options convince with a wide variety of choices for different production requirements. For both spacer frames three elaborate line configurations are available. The standardized inter-connection of proven individual machines guarantees on optimum and reliable quality of the produced insulating glass units. The secondary sealing can be performed fully automatically or manually, depending on the customer‘s requirements.

Highlights

- Assembly with gas filling
- 6-brush washing machine including pre-washing zone
- Automatic glass thickness detection
- Inspection zone
- Automatic sealing
- Choice of the running direction

Options

- 3-side steps
- 4-side steps
- Automatic speed control
- Automatic coating detection
- Glass scanner
- Manual or automatic tilting table



Technical Data

	FitLine 25/20	FitLine 35/25
Spacers	Fixed and flexible spacer(s)	
Glass thicknesses	2.3 - 16 mm	
Minimum size	350 x 180 mm	
Maximum size	2,500 x 2,000 mm	3,500 x 2,500 mm
Glass transport height	520 mm (+/- 20 mm)	
Maximum load	250 (150) kg/lm	
Max unit thickness	12 - 60 mm	
IG types	2 - 3-fold	
Step unit	Optional: 3-side stepped unit: UK = 0 mm, VK + HK + OK = 0 - 200 mm 4-side stepped unit: UK = 0 - 100 mm, VK + HK + OK = 0 - 200 mm	
Frame setting station	Inspection zone, back wall positioned 500 mm to the rear	
Geometries	rectangle, optional Shapes according to LiSEC shape catalogue	

Insulating Glass Line

for Rigid Spacer Frames

Proven quality meeting wide-ranging requirements. This insulating glass line is especially equipped for the production of coated insulating glass units with various kinds of rigid spacers (aluminum, steel, stainless steel, plastic, hybrid). The assembly and gas filling press keeps both gas loss and cycle times low. At the end of the line, the sealing station ensures stability and above all perfect corners.

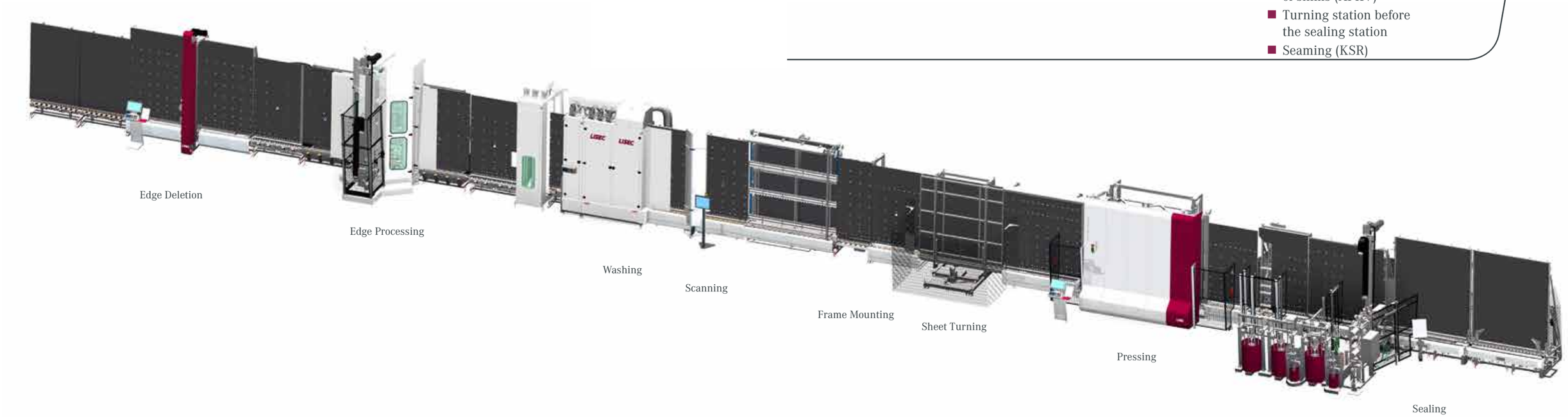
Highlights

- All common rigid spacer types can be processed
- Included pre-wash zone
- Highest corner quality due to CleanSeal technology
- Expandable due to the modular line construction

lineserver prod assetcheck pack ident perfectscan

Options & Software

- 8 brushes (VHW-D)
- Shapes
- 4-sheet insulating glass
- Unit thickness up to 100 mm
- Edge deletion (AKL or AKL-S)
- Steps on 3 or all 4 sides
- Frame mounting & inspection zone
- Turning station before the assembly press
- Scanner (GSL-S)
- Optimized assembly cycle time for 50/27 & 60/33
- Second metering unit for PU/SI/PS
- Automatic application of shims (APKV)
- Turning station before the sealing station
- Seaming (KSR)



Technical Data

	LiSEC Iso 25/20	LiSEC Iso 35/20	LiSEC Iso 50/27	LiSEC Iso 60/33
Glass thickness	2.3 - 19 mm, optional 2.3 - 32 mm Edge Deletion: 2,3 - 15 mm (AKL), 2,3 - 34 mm (AKL-S) Seaming: 2,3 - 19 mm (KSR)			
Minimum size	350 x 180 mm			
Maximum size	2,500 x 2,000 mm	3,500 x 2,000 mm	5,000 x 2,700 mm	6,000 x 3,300 mm
Glass transport height	520 mm (+/- 20 mm)			
Maximum load	250 (150) kg/lm			
Max unit thickness	16 - 60 mm, optional 16 - 100 mm			
IG types	2 - 3-fold , optional 4-fold			
Geometries	rectangle, optional Shapes according to LiSEC shape catalogue			

	LiSEC Iso 25/20	LiSEC Iso 35/20	LiSEC Iso 50/27	LiSEC Iso 60/33
Basic Line	29,180 mm	34,568 mm	44,420 mm	53,554 mm
Edge Deletion (AKL)	8,450 mm	7,586 mm	11,683 mm	13,300 mm
Edge Deletion (AKL-S)	8,477 mm	10,099 mm	12,371 mm	13,993 mm
Seaming (KSR)	5,522 mm	8,117 mm	7,146 mm	7,145 mm
Seaming (KSR + KSV)	6,660 mm	9,787 mm	8,816 mm	8,815 mm
Frame setting and inspection zone (RSV-B)	1,185 mm	1,185 mm	1,683 mm	1,165 mm
Turning Station before Assembly Press	3,922 mm	4,922 mm	3,780 mm	3,529 mm
Turning Station before Sealing station	3,922 mm	4,922 mm	3,780 mm	3,529 mm

Express Insulating Glass Line

for Rigid Spacer Frames especially for window construction

Quality and quantity are the guiding principles of this insulating glass line. It is particularly suited for the fast, high-quality production of coated insulating glass units, e.g. for window construction. Highest quality insulating glass units can be produced with various types of rigid spacers (aluminum, steel, stainless steel, plastic, hybrid). The double frame mounting station as well as the assembly and gas filling press reduce cycle times to a minimum. At the end of the line, the sealing station ensures a perfect finish.

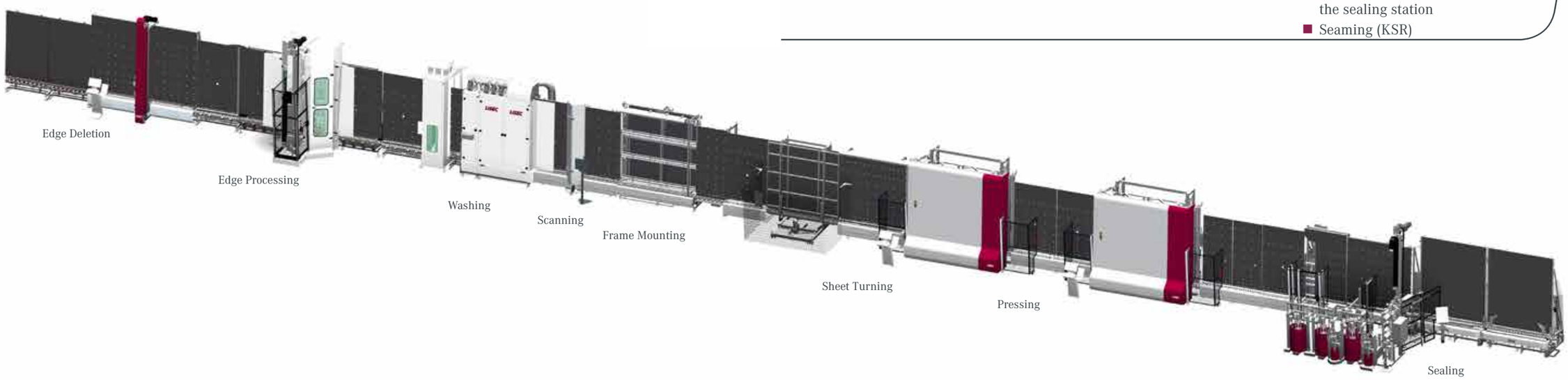
Highlights

- Low cycle times due to doubled frame mounting station and assembly and gas filling press
- All common rigid spacer types can be processed
- Included pre-wash zone
- Highest corner quality due to CleanSeal technology
- Expandable due to the modular line construction

lineserver prod assetcheck pack ident perfectscan

Options & Software

- 8 brushes (VHW-D)
- Shapes
- 4 sheet insulating glass
- Unit thickness of up to 100 mm
- Edge deletion (AKL or AKL-S)
- Steps on 3 or all 4 sides
- Frame mounting & inspection zone
- Turning station before the assembly press
- Scanner (GSL-S)
- Optimized assembly cycle times for 50/27 & 60/33
- Second metering unit for PU/SI/PS
- Automatic application of shims (APKV)
- Turning station before the sealing station
- Seaming (KSR)



Technical Data

	LiSEC IsoFast 25/20	LiSEC IsoFast 35/20
Glass thickness	2.3 - 19 mm, optional 2.3 - 32 mm Edge Deletion: 2.3 - 15 mm (AKL), 2.3 - 34 mm (AKL-S) Seaming: 2.3 - 19 mm (KSR)	
Minimum size	350 x 180 mm	
Maximum size	2,500 x 2,000 mm	3,500 x 2,000 mm
Glass transport height	520 mm (+/- 20 mm)	
Maximum load	250 (150) kg/lm	
Max unit thickness	16 - 60 mm, optional 16 - 100 mm	
IG types	2 - 3-fold, optional 4-fold	
Geometries	rectangle, optional Shapes according to LiSEC shape catalogue	

	LiSEC IsoFast 25/20	LiSEC IsoFast 35/20
Basic Line	45,798 mm	48,420 mm
Edge Deletion (AKL)	8,450 mm	8,936 mm
Edge Deletion (AKL-S)	8,477 mm	10,099 mm
Seaming (KSR + KSV)	8,328 mm	9,300 mm
Frame setting and inspection zone (RSV-B)	1,185 mm	1,185 mm
Turning Station before Assembly Press	1,166 mm	3,302 mm
Turning Station before Sealing station	3,922 mm	6,028 mm

Velocity & Velocity plus

Insulating glass production with highest possible speed

With the „Velocity Plus“ you are manufacturing with the fastest system currently available on the market. This high-speed line achieves lightning-fast production of double insulated glass units of 900x600 mm with a cycle time of just 16 seconds and using hot melt sealing. With triple units, the cycle time is just 24 seconds. This rapid production with low investment costs arises in part thanks to the parallel assembly of two insulating glass units with different sizes as well as the two spacer applicators. In the standard version “Velocity”, the insulating glass line is available with one applicator unit.

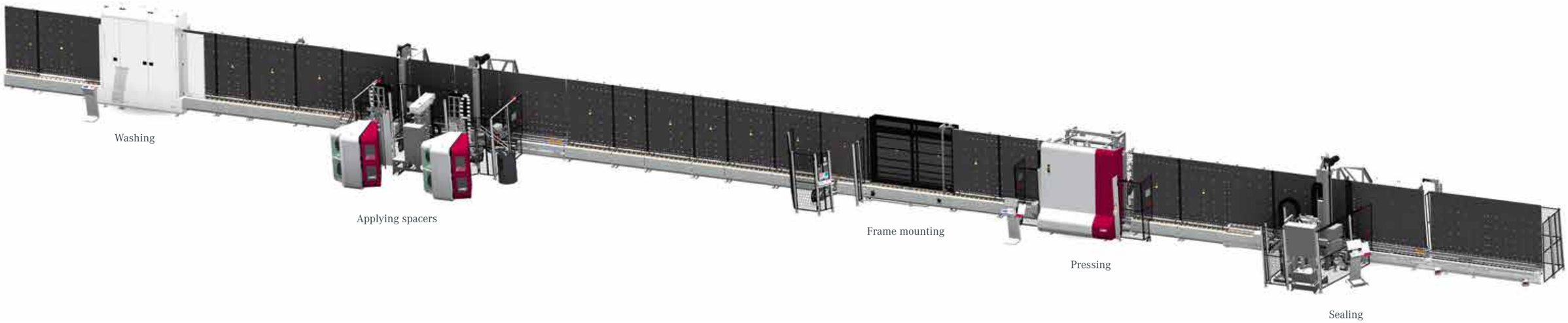
Highlights

- 16 seconds cycle time (double IG-units, 900x600 mm, hot melt sealing)
- 24 seconds cycle time (triple IG-units, 900x600 mm, hot melt sealing)
- Universally applicable for serial insulated glass production and mixed insulated glass production
- Two spacer applicators - simultaneous application with maximum precision and quality
- Paired operation of gas filling press for paired operation - simultaneous assembly of two differently sized insulating glass units
- Spacer applicator applies draught-free without interruptions
- User-friendly Cockpit concept
- Processing of special shapes is likewise possible
- Data transfer interface to superordinate ERP system

Options & Software

- Automatic coating recognition
- Inspection station with offset back wall
- Frame mounting station with grid back wall
- Shapes

lineserver prod assetcheck pack ident perfectscan



Washing

Applying spacers

Frame mounting

Pressing

Sealing

Technical Data

	Velocity & Velocity plus 25/20
Glass thickness	2.3 - 19 mm
Minimum size	350 x 180 mm
Maximum size	2,500 x 2,000 mm
Glass transport height	520 mm (+/- 20 mm)
Maximum load	250 kg/lm
Max. unit thickness	12 - 60 mm
IG types	2 - 3-fold
Geometries	rectangle, optional Shapes according to LiSEC shape catalogue

	Velocity 25/20	Velocity plus 25/20
Basic Line	47.905 mm	50.809 mm

GigaIG

Thicker | Heavier | Larger - XXXL Units

GigaIG

Thicker, heavier, larger

These lines set new standards in the production of insulating glass and are designed for the toughest demands. They are able to manufacture the largest and heaviest XXXL insulating glass units in the world and are already able to fulfil the demands of tomorrow today. All current fixed (aluminium, steel, stainless steel, plastic, hybrid) and flexible spacer frames can be processed with the highest quality. LiSEC designed the complete line in a unique, modular construction style.

Highlights

- Mechanical edge deletion for all stepped insulating glass units and shapes that can be produced
- Excellent washing results thanks to 8 brushes
- Excellent cleaning options through accessible inspection station with side access
- Production of asymmetrical IG units without interruption through two-track feeding to the applicator head
- Processing of highest loads in the assembly and gas filling press
- Production of 3/4-sided steps and special shapes

Options & Software

- Water circuit handling and osmosis
- Lift platform for simple cleaning of larger glass sheets
- Precise positioning and mounting of the top frame leg with frame mounting aid
- Metering with up to three sealants with extremely short changeover times

lineserver prod assetcheck pack ident perfectscan

Technical Data

	GigaIG 1	GigaIG 2	GigaIG 3
Glass thickness max.	60 mm	100 mm	52 mm
Unit thickness max.	100 mm	150 mm	102 mm
Loading up to press	250 kg/lm	350 kg/lm	350 kg/lm
Loading from press	500 kg/lm	650 kg/lm	450 kg/lm
Step units (LE + RE + UE)	0 - 700 mm / 0 - 300 mm	0 - 700 mm / 0 - 300 mm	0 - 300 mm
Step units (BE)	0 - 150 mm / 0 - 300 mm	0 - 150 mm / 0 - 300 mm	0 - 300 mm / 0 - 700 mm
Maximum size	6,500 x 3,300 mm / 7,500 x 3,300 mm / 10,000 x 3,300 mm / 12,500 x 3,300 mm / 15,000 x 3,300 mm / 17,500 x 3,300 mm	6,500 x 3,300 mm / 7,500 x 3,300 mm / 10,000 x 3,300 mm / 12,500 x 3,300 mm / 15,000 x 3,300 mm / 17,500 x 3,300 mm	6,000 x 3,300 mm / 9,000 x 3,300 mm / 12,000 x 3,300 mm / 15,000 x 3,300 mm / 18,000 x 3,300 mm
IG types	2 - 3-fold, optional 4-fold	2 - 3-fold, optional 4-fold	2 - 3-fold, optional 4-fold
Geometries	rectangle, optional Shapes according to LiSEC shape catalogue	rectangle, optional Shapes according to LiSEC shape catalogue	rectangle, optional Shapes according to LiSEC shape catalogue

Insulating Glass Line

for Thermoplastic Spacers (TPA)

This line is the result of consistent advancement under the headings quality and flexibility. As a result, it sets new standards in the processing of thermoplastic spacers. Ensuring absolute gas tightness of the units while simultaneously observing minimum production tolerances, it is perfectly suited to meet the constantly increasing requirements of insulating glass manufacturers. Moreover, this line allows diverse unit thicknesses with shorter lead times. Even rendering production steps redundant (e.g. frame production, logistics and storage for frames etc.), the end result is a fully optimized production.

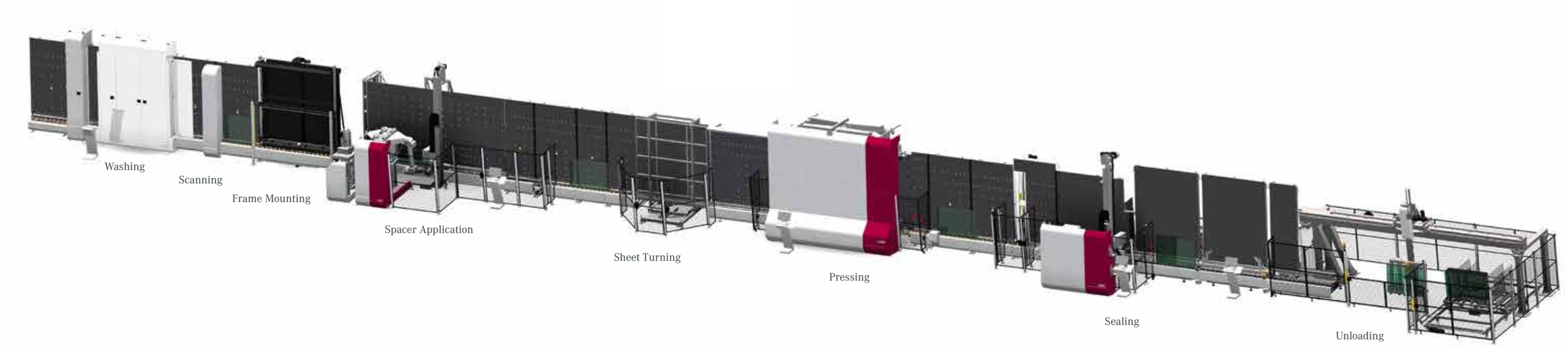
Highlights

- High process reliability due to a unique continuous closure
- Gas-tight units with minimum production tolerances
- Different unit thicknesses without manual intervention
- High flexibility of the end products due to solid and thermoplastic spacer capability
- Included pre-wash zone
- Highest corner quality due to CleanSeal technology
- Expandable due to the modular line construction

lineserver prod assetcheck pack ident perfectscan

Options & Software

- 8 brushes (VHW-D)
- Edge deletion (AKL or AKL-S)
- Steps on 3 sides
- Inspection zone
- Turning station before the assembling press
- Scanner (GSL-S)
- Automatic application of shims (APKV)
- Seaming (KSR)
- Automatic destacking system (UTS)



Technical Data

	LiSEC TPA 25/20	LiSEC TPA 40/27
Glass thickness	2.3 - 19 mm	
Minimum size	350 x 180 mm	
Maximum size	2,500 x 2,000 mm	4,000 x 2,700 mm
Glass transport height	520 mm (+/- 20 mm)	
Maximum load	250 kg/lm	
Max unit thickness	12 - 80 mm (100 mm optional)	
IG types	2 - 3-fach	
Step units	3-sided stepped units: UK = 0 mm, VK + HK + OK = 0 - 200 mm	
Data line	GPS.lineserver	
Geometries	rectangle, optional Shapes according to LiSEC shape catalogue	

	LiSEC TPA 25/20	LiSEC TPA 40/27
Basic Line	41,606 mm	53,551 mm
Edge Deletion (AKL)	8,450 mm	9,566 mm
Edge Deletion (AKL-S)	8,477 mm	10,099 mm
Seaming (KSR)	6,660 mm	7,145 mm
Seaming (KSR + KSV)	8,330 mm	8,815 mm
Frame setting and inspection zone (RSV-B)	2,777 mm	3,305 mm
Turning Station before Assembly Press	3,922 mm	3,780 mm
Turning Station before Sealing station	11,781 mm	11,781 mm

FastLane

for Thermoplastic Spacers (TPA)

The LiSEC FastLane for TPA processing sets new standards for the production of insulating glass units. Innovative approaches to glass transport and the possibility to assemble two insulating glass units in parallel make as of yet unmatched cycle times possible. The spacer material supports a highly flexible, automated production; almost no set-up times are required. Dispensing with external frame manufacturing helps to reduce machine, staff and warehousing costs. With the newly conceived Control Center Concept one single employee can supervise the entire production. End products with maximum precision are guaranteed by a large number of innovations along the line. We regard a permanent and continuous support of the individual glass sheets of the IG unit up to the transport rack as a matter of course.

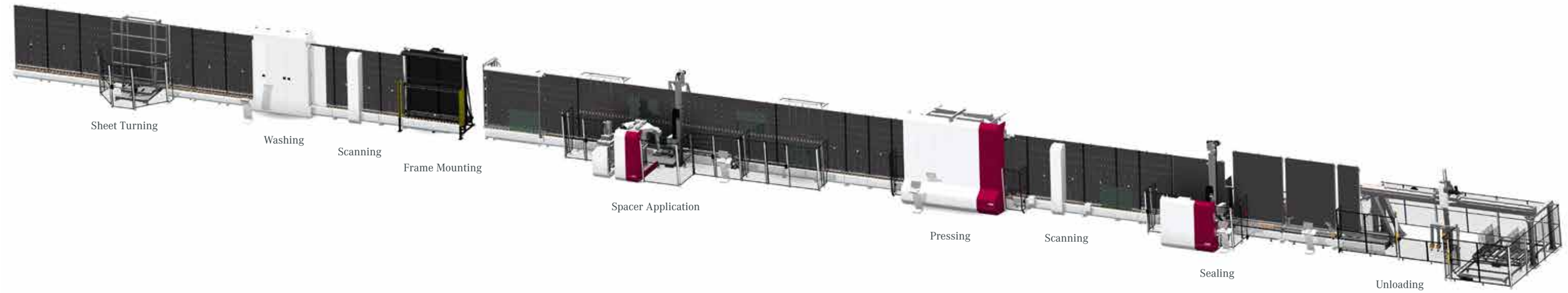
Highlights

- Cycle time of up to 35 seconds at a low investment level
- Only one operator required for the entire line
- High process reliability due to a unique continuous closure
- Gas-tight units with minimum manufacturing tolerances
- Different unit thicknesses without manual intervention
- High corner quality due to CleanSeal technology

Options & Software

- 8 brushes (VHW-E)
- Inspection zone
- Glass sheet support before the press
- Scanner (GSL-S)
- Automatic application of shims (APKV)
- Seaming (KSR)

lineserver prod assetcheck pack ident perfectscan



Technical Data

	LiSEC TPA FastLane 40/27
Glass thickness	2-19 mm / 2-8 für VLO
Minimum size	350 x 180 mm / 450 x 250 mm for VLO
Maximum size	4,000 x 2,700 mm / 1,900 x 1,200 mm for VLO
Glass transport height	520 mm (+/- 20 mm)
Maximum load	250 kg/lm
Max unit thickness	12 - 80 mm (100 mm optional)
IG types	2 - 3-fold
Stepped unit	3-sided stepped units: UK = 0 mm, VK + HK + OK = 0 - 200 mm
Data line	GPS.lineserver
Geometries	Optimized for rectangles for window production

STAND-ALONE MACHINES

With LiSEC standalone machines you have a seamless production. We support you not only in the area of insulated glass manufacturing, but also with machines for glass cutting or glass processing, logistic systems as well as with tempering furnaces.

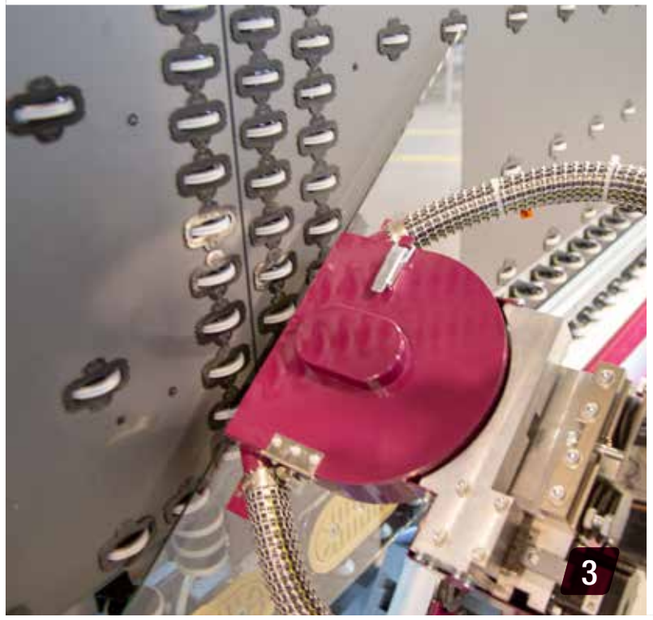
Overview Edge Deletion

Line pass-through values

	base GRIND/M	AKL-V	AKL-VS	AKL-S
Tilt angle	-	6° / 8° (1.6 m)	6° / 8° (1.6 m)	6° / 8° (1.6 m)
Transport height	-	520 mm / 720 mm / 770 mm / special	520 mm / 720 mm / 770 mm / special	520 mm / 720 mm / 770 mm / special
Maximum length	-	variable	variable	variable
Maximum height	-	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Minimum size	-	230 x 180 mm / 350 x 180 mm	230 x 180 mm / 350 x 180 mm	350 x 180 mm
Glass thickness	variable	2.3 - 15 mm	2.3 - 15 mm	2.3 - 34 mm
Max. through-transport width	-	15 mm	15 mm	34 mm
Maximum load	-	150 kg/m	150 kg/m	250 kg/m
Transport speed	-	24 m/min	36 m/min	36 m/min
3-sided / 4-sided steps	variable	variable	variable	variable
Special shapes per LiSEC shape catalogue	yes	no	no	yes
Data connection	no	no	Lineserver	Lineserver
Glass transport system	-	belt	belt	belt

Machine-specific data

	base GRIND/M	AKL-V	AKL-VS	AKL-S
Standard grinding width	variable	10 mm	10 mm	10 - 26 mm
Grinding wheel speed	fixed	2 levels	2 levels	variable



Highlights Edge Deletion

1 Grinding of cone pulleys

The edge stripping plant only grinds in one direction which leads to a consistent grinding pattern.#

2 Grinding head infinitely pivotable

The grinding head may be infinitely pivoted 470°. This enables automatic stripping (de-coating) of edge zones on special shapes in one cycle run.

3 Constant grinding speed of the grinding wheel

The grinding wheel becomes smaller and smaller by the abrading of coatings. The machine automatically corrects the speed of the grinding wheel, ensuring an absolutely immaculate grinding pattern.

AKL-S

Edge Deletion for rectangles and shapes

This vertical edge deletion machine is used with surface-coated glass sheets and has been especially designed for glass shapes. The newly developed model sets a high standard with regard to processing options. The innovative technology used (grinding head can be continuously swivelled 470°) for the first time allows automatic edge deletion of shapes – the only requirement on the glass is a straight bottom edge of at least 350 mm length.

Highlights

- Processing of both rectangles and shapes in one cycle
- Easy integration into insulating glass lines
- Automatic measurement and dressing of grinding wheels
- Grinding wheel widths up to 26 mm

Options

- Line server connection
- Grinding of stepped sheets

Technical Data

	AKL-S
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2.3 - 34 mm
Minimum size	350 x 180 mm, optional 250 x 180 mm
Maximum size	6,000 x 3,300 mm
Grinding wheel width	10 - 26 mm
Maximum load	250 kg/lm

AKL-V / AKL-VS

Vertical Edge Deletion System for rectangles

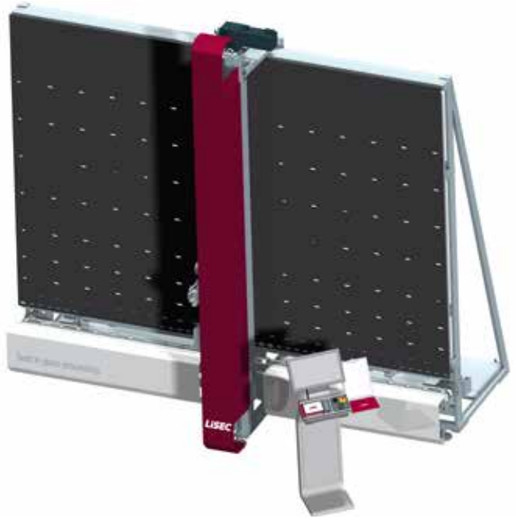
The AKL-V / AKL-VS can be fully integrated into an insulating glass line, and is designed to reliably remove the metal coatings from the edge areas of surface-coated glass sheets to ensure the adhesion of the butyl string. The transport unit is equipped with suction cups, which ensure that even small glass sheets can be positioned precisely. The standard grinding width is 10 mm. By selecting the corresponding option the grinding width can be continuously adjusted.

Highlights

- Easy integration into an insulating glass line
- Automatic alignment of the grinding wheel
- Integrated grinding dust extraction device

Options

- Grinding of stepped sheets, variable grinding width



Technical Data

	AKL-V / AKL-VS
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m
Glass thickness	2.3 - 15 mm
Minimum size	350 x 180 mm, optional 230 x 180 mm (1.6 m)
Maximum size	6,000 x 3,300 mm
Grinding width	10 mm
Maximum load	150 kg/lm

Overview Washing

Line pass-through values

	base WASH	WTL	VHW-D	VHW-E
Tilt angle	6°	6°	6°	6°
Transport height	520 mm	520 mm	520 mm / 720 mm / 770 mm / special	520 mm / 720 mm / 770 mm / special
Maximum length	2.5 m / 4 m	2.5 m / 3.5 m	variable	variable
Maximum height	2 m / 2.7 m	2 m / 2.5 m	2 m / 2.5 m / 2.7 m / 3.3 m	2 m / 2.5 m / 2.7 m / 3.3 m
Minimum size	350 x 180 mm	350 x 180 mm	250 x 180 mm (2 m / 2.5 m) / 350 x 180 mm	250 x 180 mm (2 m / 2.5 m) / 350 x 180 mm
Glass thickness	2.3 - 40 mm	2.3 - 15 mm	2 - 60 mm	2 - 60 mm
Max. through-transport width	40 mm	15 mm	60 mm	60 mm
Maximum load	150 kg/m	150 kg/m	250 kg/m	250 kg/m
Transport speed	3 - 12 m/min variable	4 - 8 m/min	3 - 8 m/min / 3 - 12 m/min / 3-15 m/min	3 - 8 m/min / 3 - 12 m/min / 3-15 m/min
Special shapes per LiSEC shape catalogue	yes	yes	yes	yes
Data connection	no	no	LMS / Lineserver / Cockpit	LMS / Lineserver / Cockpit
Glass transport system	Rollers	Rollers	Rollers	Rollers

Machine-specific data

	base WASH	WTL	VHW-D	VHW-E
Pre-washing station	no	no	yes / no	yes / no
Variable brush speed	yes	no	yes	yes
Pairs of brushes	3	2	2 / 3 / 4	2 / 3 / 4
Filter system (hot water zone)	Automatic back washing	Filter mats	Automatic back washing	Automatic back washing
Zone setting	automatic	fixed	automatic	automatic

Highlights Washing

1 Optimum cleaning effect for a perfect result

The brushes, in combination with the laser coat recognition, can be automatically and continuously adjusted, ensuring that they are always applied to the glass sheets with the same contact pressure and speed. This also prevents scratches on the glass sheets, especially with the applied coatings. This gentle operation extends the service life of the brushes, while also providing the optimum cleaning results.

2 Residue-free Quick & efficient

Because the water used in the final washing station exhibits the maximum degree of purity, almost no residues are left on the glass surface. It is optionally possible to operate the machine with a closed water circuit. Furthermore, the considerably faster and more efficient drying process also makes it possible to integrate a quality scanner immediately after the drying station.

3 Compact modular construction for simple integration

By consolidating the main washing section and drying station - previously designed as individual modules - into one single module, the complete glass washing machine is 700 mm shorter and the two zones no longer need to be sealed during installation. The simplified construction also makes the integration of a pre-washing station easier.

base WASH

Washing plant for start-ups

The base WASH allows easy cleaning of glass sheets. The loading zone at the inlet is perfectly designed to easily feed the washer in a timely manner. Using a 4 brushes washer including a drying zone ensures perfect cleanness of each single sheet.

Highlights

- 4 brushes washer
- 0.12 mm brushes
- Choice of running direction
- Control cabinet climatisation

Options

- 1000l tank

Technical Data

	WASH 25/20	WASH 40/27
Glass thickness	2.3 - 40 mm	
Minimum size	350 x 180 mm	
Maximum size	2,500 x 2,000 mm	4,000 x 2,700 mm
Glass transport height	520 mm (+/- 20mm)	
Transport speed	3 - 12 m/min variabel	
Geometries	rectangles and shapes	

VHW-E

Automatic washing and drying plant for flat glass

Our newly developed washing and drying plant offers our customers the possibility to start with a washing machine for basic requirements and to gradually (even over years) adjust and upgrade this machine to meet their growing needs. But not only its flexible upgradability, also the extreme revision of the functional and technical facilities of this plant offer significant benefits.

Highlights

- No scratching of glass sheets or coating (infinitely adjustable brushes)
- Faster and more efficient drying process
- More compact construction
- Saving up to 50% energy with hot water generator

Options

- Shapes according to the LiSEC shape catalog
- Speed control for rolling brushes front/rear
- Automatic coating detection
- 1000l tank and sand filter
- Additional pair of brushes for the main washing zone
- Additional heating element for the integrated heating tank
- Brushes with denser bristles
- Water temperature and conductance monitoring

Technical Data

	VHW-E
Glass height	2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 60 mm
Minimum size	350 x 180 mm
Heating unit for the washer	Integrated hot water generation
Number of brushes	4 brushes (VHW-D/4), 6 brushes (VHW-D/V6), 8 brushes (VHW-D/V8)
Transport speed	8 m/min (4 brushes), 12 m/min (6 brushes), 15 m/min (8 brushes)
Maximum load	250 kg/lm

A1RL

Automated Desiccant Filling Machine for Bent Spacer Frames

Multifunctional system for drilling, filling and closing two holes drilled in two adjacent frame legs. The machine automatically adjusts to the width of the respective spacer frame. The height of the single filling head can be continuously adjusted to different frame sizes. An electronic control device is fitted for reliable and optimal filling. Spacer frames are loaded manually. By simply turning the spacer frame 180 degrees, all four frame legs can be filled with desiccant.

Highlights

- Process-controlled filling with desiccant
- Suitable for steel and aluminum spacers
- Time-controlled filling possible
- Filling of a single frame leg is also possible

Options

- Shapes according to LiSEC shape catalog

Technical Data

	A1RL
Profile width	6 - 24 mm
Profile height	6 - 8,5 m
Minimum size	150 x 150 mm
Max. size depending on the aspect ratio of the frame	2,000 x 2,000 mm, 2,500 x 1,500 mm, 3,000 x 1,000 mm
Possible materials	aluminum, optional: steel, stainless steel

A2RL-R

Fully Automated Tandem Desiccant Filling Machine for Bent Spacer Frames

Drilling, filling and closing of two opposite vertical frame legs by means of two multifunctional devices with automatic adjustment to suit the size and width of the spacer frames. The holes are then closed with sealant, and in the next step a butyl string is applied to the frame. An electronic control device is fitted for reliable and optimal filling. Loading and unloading are carried out fully automatically.

Highlights

- Short cycle times due to tandem filling devices
- Process-controlled filling with desiccant
- Manual loading possible
- Can be easily combined with an automatic butyl coating machine for its modular design

Technical Data

	A2RL-R
Profile width	6 - 24 mm
Profile height	6 - 8.5 mm
Minimum size	340 x 340 mm
Maximum size	2,500 x 2,500 mm
Profile types	aluminum, optional: steel, stainless steel

A4AL

Desiccant Filling Machine for Bent Spacer Frames

The special design of the multiple filling head allows filled profiles to be removed, and empty profiles to be inserted during the filling process while preventing desiccant spills. The spacer support, which is at 45 degrees and has a spring clamp, enables the simultaneous filling of several profile bars of varying widths.

Highlights

- Material supply via gravity-vibration system
- Sight glass to monitor filling volume
- Closed filling system
- Also available with suction supply system that supplies desiccant directly from 200-liter drums

Technical Data

	A4AL
Profile width	6 - 24 mm
Profile height	6 - 8.5 m
Profile length	50 - 2,500 mm
Profile types	aluminum, steel, stainless steel, plastic

ARL-B45F

Automated desiccant filling machine for bent spacers

With the new ARL-B45F filling system, LiSEC sets a new standard in the area of semi-automatic desiccant filling machines. The design and the existing operational processes of the multi-functional device (drilling, filling and sealing process with butyl) are optimised with this generation of filling system. The result is a shorter-cycle, reproducible and controllable filling process, whereby the actual quantity to target quantity of desiccant filling is reported visually to the operator on the display and simultaneously saved in a database.

A further highlight is the new design of the granulate flow process. With the help of flow-channel analysis it is now possible for us to optimise the interacting variables such as pressure, flow quantity and flow speed to the cross section of the profile. The sensor-controlled monitoring of the required desiccant quantity now enables a minor deviation between the actual quantity and target quantity. The geometric data of the profile can now be manually transferred to the system via an input screen on the display or via a sensor-based spacer detection system.

The stepless height adjustment of the mono-filling head can be adjusted to suit the respective frame dimensions. Furthermore, the ARL-B45F is particularly well suited for processing composite spacers as the processing is implemented on the rear side of the profile.

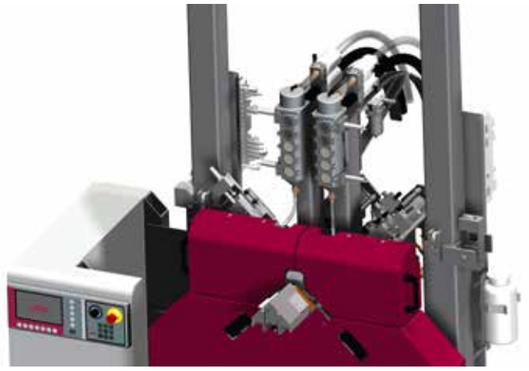
Profiles with traceable actual quantity of desiccant are a quality feature for insulating glass. If the actual quantity deviates from the target quantity in the profile or if a desiccant that is already heavily saturated is used, the prevailing humidity in the chamber cannot be fully removed without leaving some residue. This phenomenon can be seen by a misting of the interior side of the glass in the insulating chamber.

Highlights

- Desiccant quantity checking
- Simple operation and universally applicable
- For aluminium, stainless steel, hybrid and plastic profiles
- Shapes per LiSEC shape catalogue

Options

- Filling of fibreglass reinforced profiles



Technical Data

	ARL-45F
Profile width	6 - 24 mm
Profile height	6 - 8.5 mm
Minimum size	150 x 150 mm
Max. size depending on the aspect ratio of the frame	2,000 x 2,000 mm, 2,500 x 1,500 mm, 3,000 x 1,000 mm
Possible materials	aluminum, optional: steel, stainless steel, plastic

ARL-45F

Automated Desiccant Filling Machine for Bent Spacer Frames

Machine for drilling, filling and closing (with sealant) two frame legs, with automatic adjustment to suit the width of the spacer frames. By drilling the holes in the back of the profile, different shapes and materials can be processed. An electronic control device is fitted for reliable and optimal filling. The height of the filling head can be continuously adjusted to different frame sizes. By simply turning the spacer frame 180 degrees, all four frame legs can be filled with desiccant.

Highlights

- Easy to use and universally applicable
- Suitable for aluminum, stainless steel and plastic profiles
- Special shapes according to LiSEC shape catalog

Options

- Filling of Swisspacer

Technical Data

	ARL-45F
Profile width	6 - 24 mm
Profile height	6 - 8.5 mm
Minimum size	150 x 150 mm
Max. size depending on the aspect ratio of the frame	2,000 x 2,000 mm, 2,500 x 1,500 mm, 3,000 x 1,000 mm
Possible materials	aluminum, optional: steel, stainless steel, plastic

BMS-1

Stationary Drilling Device for Spacer Frames

Stand-alone system designed to drill gas-filling holes into spacer frames which are not yet filled with desiccant. The frames are positioned manually. The double spindle drills the gas-filling holes from the outside into both sides of the profile. The hole on the visible side, which is about 0.5 mm smaller than the other, facilitates the insertion of the plastic plugs, which prevent the desiccant from entering the space between the glass sheets.

Highlights

- Solid, simple, and well-thought-out design

Options

- Automatic frame transport

Technical Data

	BMS-1
Profile width	10 - 24 mm
Profile height	6 - 8.5 m
Minimum size	250 x 180 mm
Possible materials	aluminum, optional: steel

BSV-45NK

Automatic bending machine for all common spacer frames

The BSV-45NK is a fully automatic spacer profile bending machine for processing all conventional, synthetic and composite spacer frames for the production of insulating glass.

The system is equipped as a standard for processing aluminium, steel, stainless steel, synthetic and composite profiles. The profile magazine can be equipped with 4, 6, 8 and 15 profile storage slots.

Highlights

- Processing of aluminium, steel, stainless steel, synthetic and composite profiles
- 4, 6, 8 or 15-slot profile magazine
- Shape capability according to the LiSEC shape catalogue
- Easy operation via touchscreen
- Swisspacers can also be processed

Options

- 6, 8 or 15-slot profile storage magazine
- Shapes according to the LiSEC shape catalogue
- Processing of Swisspacer
- Automatic bending for aluminium, plastic und Swisspacer
- Printer control for inkjet printers
- Multiple frame labelling

Technical Data

	BSV-45NK
Profile width	6 - 24 mm adjustable in increments (aluminum, steel, stainless steel), 8 - 24 mm adjustable in increments (plastic), optional 8 - 24 mm adjustable in increments (Swisspacer)
Profile height	6 - 8.5 mm
Profile magazine	4-slot
Minimum size	250 x 100 mm
Maximum size	6,600 x 3,300 mm

BSV-45ANK

Automatic bending machine for all common spacer frames

The BSV-45ANK is a fully automatic spacer profile bending machine for processing all conventional, synthetic and composite spacer frames for the production of insulating glass. The measuring and cutting system is arranged parallel to the bending device, so that two operation steps are carried out simultaneously. Measuring, cutting and the endless connection are performed at the same time as the bending process, which substantially reduces the cycle time. The system is equipped as a standard for processing aluminium, steel, stainless steel, synthetic and composite profiles.

Highlights

- Processing of aluminium, steel, stainless steel, synthetic and composite profiles
- Shape capability according to the LiSEC shape catalogue
- 4, 6, 8 or 15-slot profile magazine
- Swisspacers can also be processed
- Automatically adjustable bending die for aluminium, synthetic and Swisspacer profiles

Options

- 6, 8 or 15-slot profile storage magazine
- Shapes according to the LiSEC shape catalogue
- Processing of Swisspacer
- Automatic bending for aluminium, plastic und Swisspacer
- Printer control for inkjet printers
- Multiple frame labelling

Technical Data

	BSV-45ANK
Profile width	6 - 24 mm adjustable in increments (aluminum, steel, stainless steel), 8 - 24 mm adjustable in increments (plastic), optional 8 - 24 mm adjustable in increments (Swisspacer)
Profile height	6 - 8.5 m
Profile magazine	4-slot
Minimum size	250 x 100 mm
Maximum size	6,600 x 3,300 mm

BSV-B45NK

Automatic bending machine for all conventional spacer frames

The spacer materials are constantly undergoing further development and changes, for example to further optimise the psi values. These improvements also have an effect on the processing of the bending machine.

For this reason, LiSEC has completely reworked the well-proven BSV-B45NK. The system now takes the further developments of the new spacer materials into account. The previously used technology for bending spacers has been further refined so that both the old familiar spacers and the newly developed ones can be bent with the well-proven top quality.

The integration of the zero-radius corner (ZRC) technology is new. Alongside the usual bent corners, now spacers can also be processed with the ZRC. Thanks to a new patented process, we were able to develop and bring to serial maturity, a tension-free and material-displacement manufacturing process for 90 degree bending.

The highlight of this ZRC technology, which we have developed specially for fibre-reinforced spacers, is the self-stiffening corner. The result is a dimensionally stable and perfectly formed 90° corner. The challenge here was to be able to reproducibly manufacture high-quality corners with different proportions of glass fibre and associated profile brittleness. Furthermore, the technology also offers the maximum butyl application area in the corner. In combination with our likewise new LBH-B 25 ARS butyl coating machine, we speak of a Perfect Edge System.

1 Frame corner with pinched fold

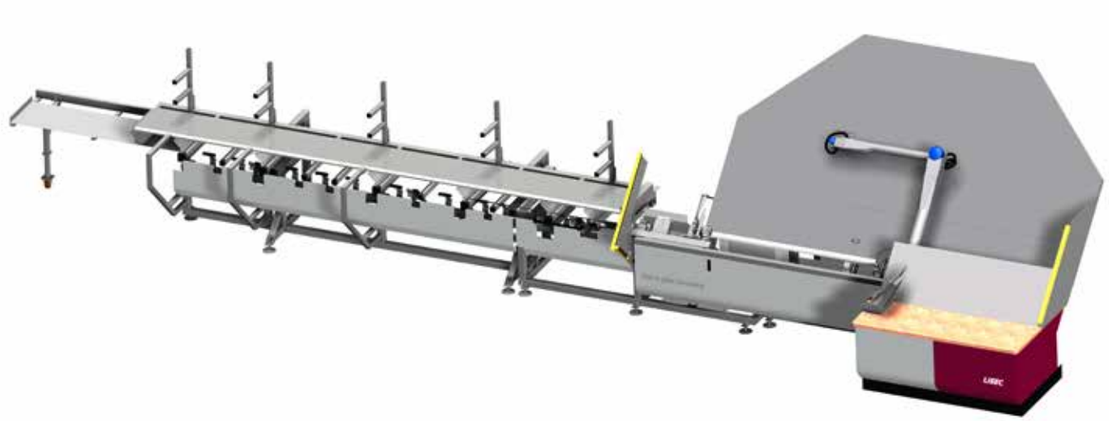
2 Frame corner with zero-radius corner

Highlights

- Zero-radius corner with fibreglass-reinforced plastic spacers
- Bending process supported by means of robotic arm
- Processing of aluminium, steel, stainless steel, hybrid and fibreglass-reinforced profiles
- Simple operation via touchscreen

Options

- Shapes per LiSEC shape catalogue
- 6, 8 or 15 slot profile magazine
- TSD control system for ink jet printers
- Frame multiple labelling



Technical Data

	BSV-B45NK
Profile width	6 - 24 mm increments (aluminium, steel, stainless steel), 8 - 24 mm increments (plastic) 8 - 24 mm increments (Swisspacer)
Profile height	6 - 8,5 mm
Profile magazine	15-fold
Minimum size	250 x 100 mm 300 x 200 mm for Swisspacer
Maximum size	6,600 x 3,300 mm

LBH-25V

Automated Butyl Coating Machine for Spacer Frames

Butyl extruder for precision butyl coating on both sides of spacers. Sensor-controlled guide rollers ensure optimal stabilisation of the frame and thus enable even coating. Opening and closing of the coating nozzles for each frame side are controlled automatically. The integrated measurement device for frame widths ensures continuous nozzle adjustment from 6 to 24 mm. The coating speed can be set individually.

Highlights

- Continuously adjustable working height
- Processing of spacer frames with or without georgian bars / muntins
- Round arches and special shapes can be coated without any problem
- Frame widths up to 42 mm are possible

Technical Data

	LBH-25V
Profile width	4 - 22 mm, 5 - 23 mm, 6 - 24 mm optional 22 - 40 mm, 23 - 41 mm, 24 - 42 mm
Profile height	6 - 8.5 mm
Minimum size	120 x 120 mm
Transport height	540 - 940 mm variable
Butyl nozzle	3 x 2.2 mm, 4.2 x 1.5 mm
Butyl supply	14 l butyl reservoir

LBH-60M

Semi-Automatic Butyl Coating Machine

The LBH-60M high-precision butyl coating machine is designed to evenly coat both sides of spacer frames with butyl. An integrated measuring device measures the frame widths and ensures that the nozzles are continuously adjusted from 4 to 60 mm.

Highlights

- Even coating on both sides of the frame
- Continuously adjustable working height
- Easy operation
- Processing of spacer frames with Georgian bars / muntins
- Easy coating of round arches and shapes

Technical Data

	LBH-60M
Profile width	4 - 60 mm
Profile height	6 - 8.5 m
Minimum size	120 x 120 mm
Transport height	540 - 940 mm variable
Butyl nozzle	3 x 2.2 mm, 4.2 x 1.5 mm
Butyl supply	14 l butyl reservoir

LBH-B25ARS

Automatic butyl extruder for solid spacers

The butyl extruder (LBH-B25ARS) combines the latest metering technology with well-proven principles and decades of LiSEC expertise in the automatic butyl coating of rigid spacer frames.

How is the butyl extruder constructed and what frame sizes are possible?

The butyl extruder (LBH-B25ARS) is subdivided into inlet, coating and outlet zones for processing spacer frames up to a max. size of 2500 x 2500 mm.

How does the butyl extruder work with fixed spacers?

After the measurement of the spacer frame in the inlet area, both sides are evenly coated with butyl using a combination of horizontal and rotating movements. The butyl is applied in a CNC-controlled, high-precision, dynamic metering process. This ensures that the desired g/m quantity of butyl is applied to each section of the spacer frame with an application accuracy of ± 5% without interruption to the application of the butyl.

How exactly is the butyl applied?

The butyl quantity can be set for both the straight areas and the corner areas of the frame independently from one another. In doing so, the movement dynamics can be adapted to the frame size and frame material. This guarantees an exact application of the butyl, particularly in the corners, even with unstable frame types. The seamless and automatic nozzle height adjustment enables precise positioning of the butyl on the side surfaces of the spacers. In addition, the glass contact surface is increased through the unique nozzle geometry which in turn also improves the effectiveness of the primary seal of the insulating glass.

Is processing of Georgian bar frames possible?

Georgian bar frames can also be processed with the help of special retaining rollers and adaptive grippers. In addition, an extra swivel can be activated to adapt the frame alignment at the outlet before the coating process.

Highlights

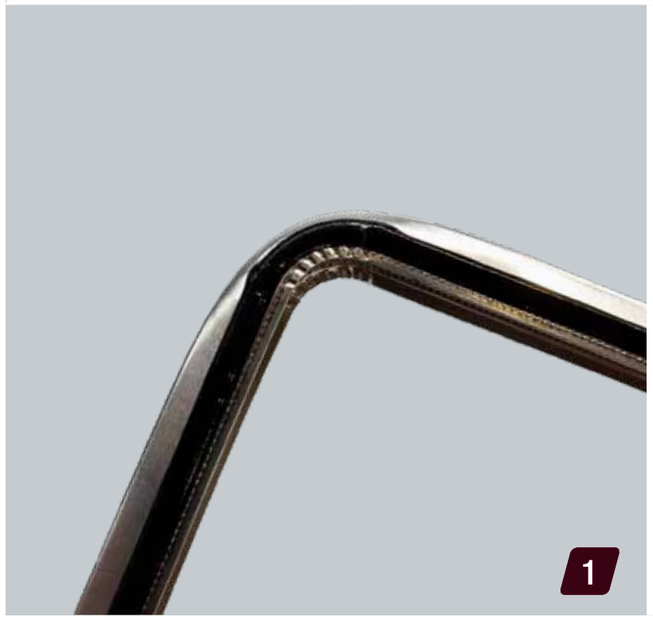
- Precise and uninterrupted application of the butyl
- Automatic height adjustment
- Adaptive control
- No shut down for material filling required and easy accessibility

Options

- Nozzle width adjustment for spacers - 5 to 34 mm
- Stepless radius adjustment
- 200 litre barrel pump
- Additional swivel aid
- Selection between mechanical and CNC-controlled, stepless radius adjustment

Technical Data

	LBH-B25ARS
Maximum size	2,500 x 2,500 mm
Minimum size	285 x 285 mm
Profile width	5 – 24 mm
Profile radius	Profile radius: different radii adjustable
Nozzle height adjustment	2 – 8 mm
Application quantity, straight/corner	1.5 – 4,5 g/m
Metering accuracy	± 5 %



1 Precise and interruption-free application of the butyl

A butyl application of 1.5 to 4.5 g/m is possible with an accuracy of ± 5% with no interruption of the butyl application, thanks to the precise, volumetric metering. The application quantity can be separately set for the straight sections of the frame and for the corner areas. The glass contact area of the butyl and thus also the effectiveness of the primary seal are increased through the unique nozzle geometry.

2 Automatic height adjustment

The butyl extruder has a stepless and automatic nozzle height adjustment integrated as standard, enabling the position of the butyl application to be precisely defined. This enables the butyl application to be positioned such that air inclusions between the butyl and the edge seal can be avoided and such that butyl application in the visible area of the insulating glass unit can also be avoided. With an adjustment range of 2 - 8 mm, all of the most common spacers on the market are accommodated by the automatic nozzle height adjustment system.

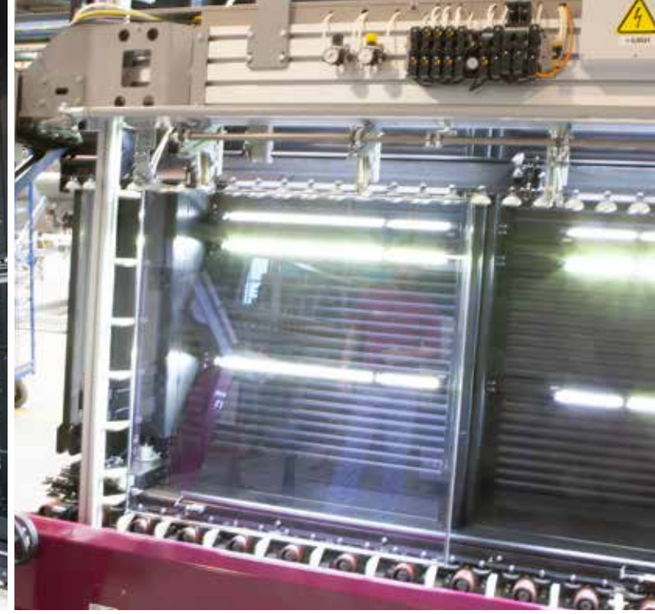
Overview of frame mounting station

Line pass-through values

	RSVN-U	RSVN-S	RSVN+MH(S)	RSV-B	RSV-MH(S)-B	RSV-A
Tilt angle	6° / 8°	6° / 8°	6° / 8°	6° / 8°	6° / 8°	6° / 8°
Transport height	520 mm / 720 mm	520 mm / 720 mm	520 mm / 720 mm	520 mm / 720 mm	520 mm / 720 mm	720 mm
Maximum length	2.5 m / 3.5 m / 5 m / 6 m	2.5 m / 3.5 m / 5 m / 6 m	5 m / 6 m	2.7 m / 3.8 m	3.8 m / 5 m / 6 m	7 m / 11 m / 15 m / 19 m
Maximum height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m	2.5 m / 2.7 m / 3 m / 3.3 m	2 m / 2.5 m / 2.7 m / 2.9 m / 3.3 m	2.5 m / 2.7 m / 3 m / 3.3 m	3.3 m
Minimum size	230 x 180 mm / 350 x 180 mm	230 x 180 mm / 350 x 180 mm	350 x 180 mm	230 x 180 mm / 350 x 180 mm	350 x 180 mm	350 x 180 mm
Max. through-transport	2.3 - 19 mm	2.3 - 19 mm / 2.3 - 42 mm	2.3 - 19 mm / 2.3 - 42 mm	2.3 - 19 mm / 2.3 - 42 mm	2.3 - 19 mm / 2.3 - 42 mm	3 - 52 mm
Maximum load	250 kg/m	250 kg/m	250 kg/m	250 kg/m	250 kg/m	350 kg/m
3-sided / 4-sided steps	-	0 - 140 mm / 0 - 50 mm / (0 - 200 mm / 0 - 100 mm)	0 - 140 mm / 0 - 50 mm / (0 - 200 mm / 0 - 100 mm)	0 - 140 mm / 0 - 50 mm / (0 - 200 mm / 0 - 100 mm)	0 - 140 mm / 0 - 50 mm / (0 - 200 mm / 0 - 100 mm)	0 - 200 mm / 0 - 150 mm / (0 - 200 mm / 0 - 300 mm)
Special shapes per LiSEC shape catalogue	yes	yes	yes	yes	yes	yes
Data connection	Lineserver / Cockpit	Lineserver / Cockpit	Lineserver / Cockpit	Lineserver / Cockpit	Lineserver / Cockpit	Lineserver / Cockpit
Glass transport system	Rollers	Rollers	Rollers	Rollers	Rollers	Belt

Machine-specific data

	RSVN-U	RSVN-S	RSVN+MH(S)	RSV-B	RSV-MH(S)-B	RSV-A
Frame inset measurement	0 - 30 mm	0 - 30 mm	0 - 30 mm	0 - 30 mm	0 - 30 mm	0 - 30 mm
Inspection zone (offset back wall)	0 - 500 mm	0 - 500 mm	-	0 - 500 mm	0 - 500 mm	0 - 1500 mm
Steps	-	yes	yes	yes	yes	yes
Assembly aid	-	-	yes	-	yes	-
Guide rail	-	-	-	yes	yes	yes
Step adjustment	-	Manual/ electric	Manual/ electric	Manual/ electric	Manual/ electric	-
Drive distribution (zones)	2 / 3 / 4 zones	2 / 3 / 4 zones	3 / 4 zones	2 zones	2 / 4 zones	4 / 6 / 8 / 10 zones
External lighting	yes	yes	-	yes	-	-
Back wall with rolling shutters	-	-	-	yes	yes	-
Grid back wall	yes	yes	-	-	-	-
LED lighting on the back wall	yes	yes	yes	yes	yes	yes
Lifting platform	-	-	-	-	-	yes
Side entrance (roller shutter)	-	-	-	-	-	yes



RSVN-U

Mounting Station for spacer frames

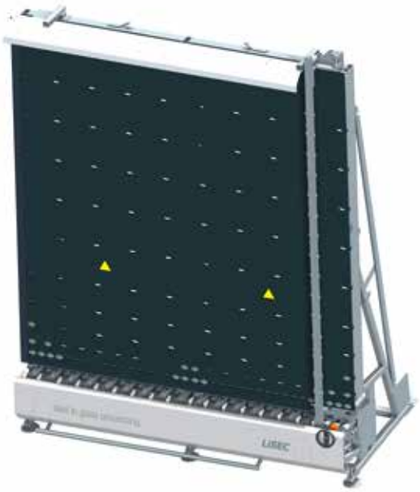
Vertical station for the manual application of spacer frames on glass sheets. After feeding in the glass sheet to the reference point, the auxiliary frame mounting stops automatically adjust to the bottom and front vertical glass edge. The frame inset can be centrally adjusted from 0 to 30 mm. Glass thickness adjustment is performed automatically.

Highlights

- Easy integration into any LiSEC insulating glass system and non-LiSEC systems
- Electronic control of the drive mechanism
- Available as a storing section for one or two glass sheets

Options

- Shapes according to LiSEC shape catalog
- Inspection station with displaced back panel



Technical Data

	RSVN-U
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m
Glass thickness	2.3 - 19 mm
Minimum size	350 x 180 mm, optional 230 x 180 mm
Maximum size	6,000 x 3,300 mm
Frame inset	0-30 mm continuously adjustable
Maximum load	250 kg/lm

RAL

Automatic frame mounting station

The RAL is a fully automatic mounting station for right-angled, rigid spacer frames. Thanks to automatic glass sheet measurement, spacer bars with different dimensions can be processed one after the other without additional adjustment work. The operating personnel place the coated spacers in a preliminary position. The spacers are then aligned automatically on three or four sides using clamping grippers, secured and placed on the glass sheet using needle cylinders.

Highlights

- Fully automatic mounting zone for right-angled, fixed profile frames
- Automatic glass sheet measurement
- Grippers can be switched out for Georgian bars

Options

- Progressively adjustable distance of 3 - 15 mm

Technical Data

	RAL-25/20	RAL-35/25
Profile width	6 - 24 mm	
Minimum size	350 x 350 mm	
Maximum size	2,500 x 2,000 mm	3,500 x 2,500 mm
Frame inset	3 mm fixed / 3,5 mm fixed / 4 mm fixed / 5 mm fixed	
Maximum load	150 kg/lm	

RSV-B

Mounting Station for spacer frames

Vertical station for the manual application of spacer frames on glass sheets. After feeding in the glass sheet to the reference point, the auxiliary frame mounting stops are either adjusted manually by a hand wheel (horizontal and vertical adjustment range 0 - 30 mm), or automatically, depending on the version of the machine.

Highlights

- Electronic control of the drive mechanism
- Easy sheet inspection
- Additional quality control
- If the machine is equipped with shutters (see options), anti-drop safety devices integrated in the horizontal beam will prevent large sheets from tilting forward

Options

- Shutters and anti-drop safety devices for easier cleaning of the sheet's back side
- Installation of additional luminaires for easier inspection and control of the sheets
- Shapes according to LiSEC shape catalog
- Automatic horizontal and vertical stops
- Frame inset measurement horizontal manual / automatic

Technical Data

	RSV-B
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m
Glass thickness	2.3 - 19 mm, optional 2.3 - 42 mm
Minimum size	350 x 180 mm, optional 230 x 180 mm
Maximum size	3,500 x 3,300 mm
Stops	horizontal + vertical, 1 hand wheel
Frame inset	0-30 mm continuously adjustable
Maximum load	150 kg/lm

HMLN

Semi-Automated Frame Mounting and Assembly System

Infeed and positioning of the first glass sheet are carried out fully automatically. After that, the back panel automatically moves out of the way so that the next glass sheet can enter the machine. Infeed of the second glass sheet is carried out by means of a roller drive and a manual guidance system of the upper edge. Next the glass sheets are precisely assembled. Integrated horizontal stops facilitate mounting of the spacer to the first glass sheet. The assembled glass unit is automatically fed out upon pressing the foot pedal.

Highlights

- The perfect solution for medium production capacity with a high percentage of manual manufacturing
- Also available for triple insulating glass units

Options

- Additional vertical frame mounting stop

Technical Data

	HMLN
Glass height	1.6 m / 2 m
Unit thickness	12 - 52 mm
Minimum size	250 x 180 mm (1.6 m), 350 x 180 mm
Maximum size	2,500 x 2,000 mm
Unit construction	3-fold
Frame inset measurement	3 mm fixed / 3.5 mm fixed / 4 mm fixed / 5 mm fixed
Maximum load	150 kg/lm

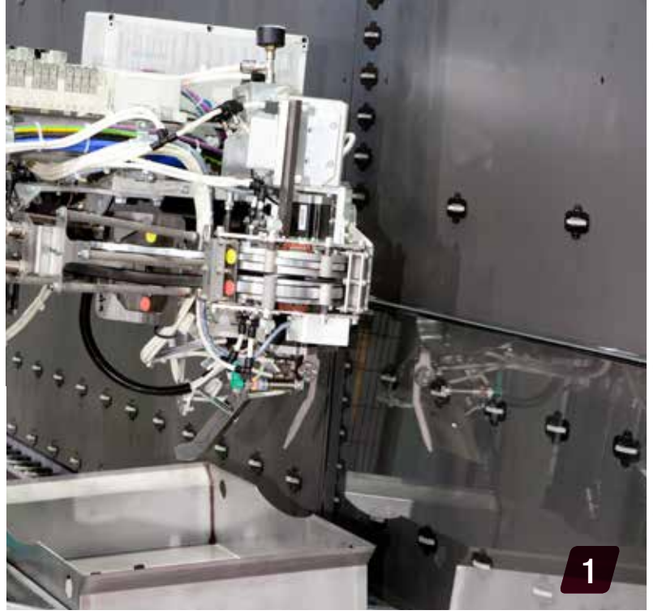
Overview of flexible spacers

Line pass-through values

	VSB	VSA	VSA-N	VSA-E33N1
Tilt angle	6° / 8°	6° / 8°	6° / 8°	6°
Transport height	520 mm / 720 mm	520 mm / 720 mm	520 mm / 720 mm	720 mm
Maximum length	2.5 m / 3.5 m / 5 m / 6 m	2.5 m / 3.5 m / 5 m / 6 m	2.5 m / 3.5 m / 5 m / 6 m	6 m
Maximum height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m	3.3 m
Minimum size	250 x 180 mm / 350 x 180 mm	250 x 180 mm / 350 x 180 mm	250 x 180 mm / 350 x 180 mm	350 x 180 mm
Glass thickness	2.3 - 19 mm	2.3 - 19 mm / 2.3 - 34 mm	2.3 - 19 mm	2 - 52 mm
Max. through-transport width	60 mm	60 mm	60 mm	70 mm
Maximum load	250 kg/m	250 kg/m	250 kg/m	350 kg/m
Transport speed	3 - 60 m/min	3 - 60 m/min	3 - 60 m/min	20 - 60 m/min
Special shapes per LiSEC shape catalogue	yes	yes	yes	yes
Data connection	no	Lineserver / Cockpit	Lineserver / Cockpit	Lineserver / Cockpit
Glass transport system	Belt	Belt	Belt	Belt

Machine-specific data

	VSB	VSA	VSA-N	VSA-E33N1
Processing of Georgian bars	yes	yes	yes	yes
Unit build-up	2/3/4-fold	2/3/4-fold	2/3/4-fold	2/3/4-fold
Spacer height	4.8 mm / 6.4 mm	4.8 mm /6.3 mm / 6.4 mm / 7.3 mm	6.3 mm / 7.3 mm	7.3 mm
Spacer width	6 - 20 mm / 8 - 20 mm / 8 - 25.4 mm	6 - 20 mm / 8 - 20 mm / 8 - 25.4 mm	6 - 20 mm / 8 - 20 mm / 8 - 25.4 mm	10 - 20 mm
Spacer feed	Single	Single / Double	Double	Double
Butyl feed	no	yes	yes	yes



HIGHLIGHTS
FLEXIBLE SPACERS

1 High quality with the application of flexible spacers

The patented application technology of the system guarantees high-precision positioning as well as low-friction and careful feeding of the flexible spacers. The result is a continuous application with perfect corner formation.

2 Automatic Georgian bar marking

Georgian bars can be quickly and precisely inserted, either by means of grid levelling or simply in the pre-stamped positioning slots in the downstream machine.

3 Asymmetrical spacer width in unit build-up

Thanks to the double material feed directly on the applicator head, it is possible to process different widths of spacer without losing time for a spacer change. This offers a major advantage particularly in production sequences with constantly changing unit set-ups, such as double, triple or quadruple-glazed insulating glass units.

VSA

Fully Automatic System for Applying Flexible Spacers to Glass Sheets

This fully automatic system is designed to apply flexible spacers to glass sheets. The system‘s patented application technique offers highly accurate application while retaining the spacer‘s shape, as well as low-friction and smooth feed of the spacer bars in unmatched cycle times.

Highlights

- Application of the most diverse flexible spacer types with a width between 6 and 20 mm
- Continuous application along the perimeter of the glass sheet with a perfect quality in the corners

Options

- Butyl coating of spacers
- Units with Georgian bars / muntins
- Frame labeling
- Shapes according to LiSEC shape catalog

Technical Data

	VSA
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 20 mm
Minimum size	350 x 180 mm, optional 250 x 180 mm
Maximum size	6,000 x 3,300 mm
Max. processing length	2,500 mm / 3,500 mm / 5,000 mm / 6,000 mm
Spacer widths *	6 - 20 mm (optional 8.2 - 25.4 mm)
Magazine	2-fold, optional 4-fold
Maximum load	150 kg/lm

* According to LiSEC catalog

VSA-D1

Fully Automatic System for Applying Flexible Spacers to Glass Sheets

The VSA-D1 is ideally suited for the manufacture of double or triple insulating glass units. Its full potential can be particularly seen in glass units with air gaps of different widths, as its applicator head can simultaneously feed two different spacer widths and apply them alternately. This ensures continuous production and extremely short cycle times. The time spent on setting up and changing the spacer is therefore no longer relevant.

Highlights

- Application of the most diverse flexible spacer types with a width between 6 and 20 mm
- Continuous application along the perimeter of the glass sheet, with a perfect quality in the corners
- Automatic disposal of punched corner pieces for a clean system and work area

Options

- Butyl coating of spacers
- Units with Georgian bars / muntins
- Frame labeling
- Shapes according to LiSEC shape catalog
- Spacer widths between 20 and 25 mm

Technical Data

	VSA-D1/D2
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 20 mm
Minimum size	350 x 180 mm, optional 250 x 180 mm
Maximum size	6,000 x 3,300 mm
Max. processing length	2,500 mm / 3,500 mm / 5,000 mm / 6,000 mm
Spacer widths *	6 - 20 mm (optional 8,2 - 25,4 mm)
Magazine	2-fold, optional 4-fold
Maximum load	150 kg/lm

* According to LiSEC catalog

VSA-N1

Fully Automatic System to Apply Flexible Spacers with Plastic Foils or Metal Back Foils

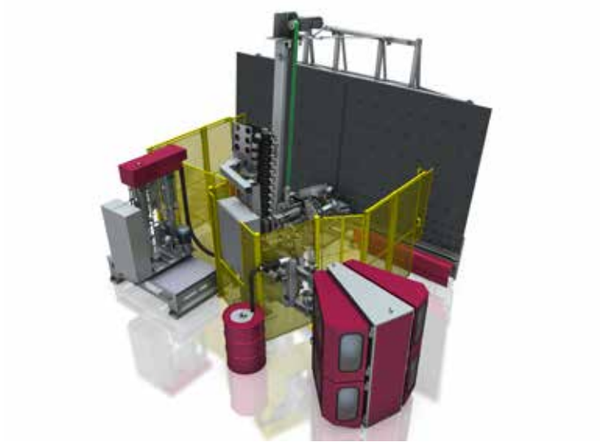
VSA-N1 is a fully automatic application system for attaching flexible spacers from reels onto glass sheets. The machine's double-feed applicator head which is mounted to the vertical axis, allows two different widths of spacers to be processed fully automatically without any interruption. This is especially useful in production runs with continuously changing and asymmetric triple unit set ups. Thus different widths do not require material changes, and the gain in cycle time is significant.

Highlights

- Continuous application with perfect corners
- Automatic disposal of punched corner pieces to ensure a clean machine and working environment
- No visible beginning and end marks of butyl strings

Options

- Shapes according to LiSEC shape catalog
- Automatic punching device for optimal positioning of Georgian bars / muntins
- Processing of flexible spacers with plastic foils or metal back foils
- Transport back panel with air cushion
- Frame labeling



Technical Data

	VSA-N1
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 20 mm
Minimum size	350 x 180 mm, optional 250 x 180 mm
Maximum size	6,000 x 3,300 mm
Max. processing length	2,500 mm / 3,500 mm / 5,000 mm / 6,000 mm
Spacer widths *	6 - 20 mm (optional 8.2 - 25.4 mm)
Magazine	2-fold, optional 4-fold
Maximum load	150 kg/lm

* According to LiSEC catalog

VSA-N2

Fully Automatic Machine with Two Application Systems to Apply Flexible Spacers

VSA-N2 is a fully automatic machine for attaching flexible spacers onto glass sheets. The twin system is equipped with two application systems and one double-feed applicator head per system. Thus four different widths may be applied one after another without requiring changes or set up work. This allows the shortest cycle times reached so far, in particular when processing asymmetric triple insulating glass units.

Highlights

- Two application systems with one double-feed applicator head per system to process four different widths
- Continuous application with perfect corners
- Automatic extraction of protective foils applied to three spacer sides

Options

- Shapes according to LiSEC shape catalog
- Automatic punching device for optimal positioning of Georgian bars / muntins
- Processing of flexible spacers with plastic foils or metal back foils
- Transport back panel with air cushion
- Frame labeling

Technical Data

	VSA-N2
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 20 mm
Minimum size	350 x 180 mm, optional 250 x 180 mm
Maximum size	6,000 x 3,300 mm
Max. processing length	2,500 mm / 3,500 mm / 5,000 mm / 6,000 mm
Spacer widths *	6 - 20 mm (optional 8.2 - 25.4 mm)
Magazine	2-fold, optional 4-fold
Maximum load	150 kg/lm

* According to LiSEC catalog

VSB

Fully Automatic System for Applying Flexible Spacers to Glass Sheets

The LiSEC VSB has been specially developed for non-butyled, standard Super Spacers. The system's patented application technique offers highly accurate application while retaining the spacer's shape, as well as low-friction and smooth feed of the spacer bars in short cycle times. Rectangular shapes are measured automatically, and special shapes, after manual input of their data at the terminal, can be easily processed, too.

Highlights

- Especially for non-butyled types of flexible spacers
- Application of the most diverse flexible spacer types with a width between 6 and 20 mm
- Clean work environment thanks to the new waste removal system

Options

- Units with Georgian bars / muntins
- Frame labeling
- Shapes according to LiSEC shape catalog

Technical Data

	VSB
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 12 mm, optional 2 - 20 mm
Minimum size	350 x 180 mm, optional 250 x 180 mm
Maximum size	6,000 x 3,300 mm
Max. processing length	2,500 mm / 3,500 mm / 5,000 mm / 6,000 mm
Spacer widths *	6 - 20 mm
Magazine	no magazine
Maximum load	150 kg/lm

* According to LiSEC catalog

SSV

Automated Corner Tape Application System for Flexible Spacers

System for sealing the final corner of automatically applied flexible spacers using a diffusion-proof, self-adhesive aluminum tape. This robot is fitted on two glass transport sections with split drive. Glass units are transported either on transport rollers or belts, both of which are provided with a wear-resistant cover.

Highlights

- Easy and risk-free transport of glass sheets
- Transport rollers or belts with a wear-resistant cover

Options

- Shapes according to LiSEC shape catalog

Technical Data

	SSV
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 12 mm
Minimum size	250 x 180 mm
Maximum load	150 kg/lm

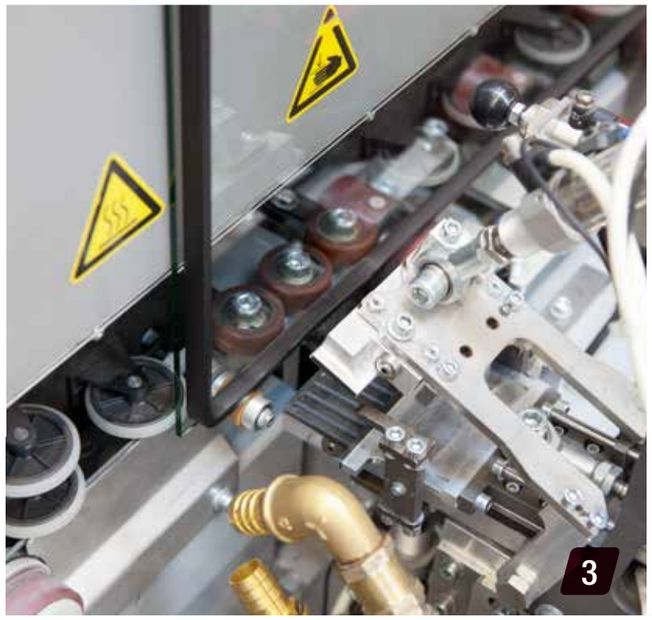
Overview of thermoplastic spacers

Line pass-through values

	TPA-A	TPA-A with VLO
Tilt angle	6°	6°
Transport height	520 mm / 720 mm	520 mm / 720 mm
Maximum length	2.5 m / 3.5 m / 5 m / 6 m	1.9 / 2.5 m / 3.5 m / 5 m / 6 m
Maximum height	2 m / 2.5 m / 2.7 m / 3.3 m	1.2 m / 2.7 m
Minimum size	350 x 180 mm	450 x 250 mm / 350 x 180 mm
Min./max. unit thickness	2 - 19 mm	2 - 8 mm / 2 - 19 mm
Max. through-transport width	34 mm / 44 mm	34 mm / 44 mm
Maximum load	150 kg/m	150 kg/m
Transport speed	3 - 60 m/min	3 - 60 m/min
Special shapes per LiSEC shape catalogue	yes	yes
Data connection	Lineserver / Cockpit	Cockpit
Glass transport system	Rollers / belts	Rollers / belts

Machine-specific data

	TPA	TPA-A with VLO
Processing of Georgian bars	no	no
Unit build-up	2/3-fold, 4-fold on request	2/3-fold, 4-fold on request
Spacer widths	6 - 20 mm	6 - 20 mm



HIGHLIGHTS
THERMOPLASTIC SPACERS

1 Frame width automatically adjustable

The thermal spacers are applied directly to the glass sheet. The frame width can be steplessly changed during on-going operation, to suit requirements and without any loss of time.

2 The solution for the insulating glass line

With the LiSEC line concept, the assembly, gas filling, and pressing process steps meet the special thermoplastic spacer bar requirements. The line principle also addresses the logistics aspects. The logistics system consists of an automatic unloading station and a special insulating glass buffer. This makes it possible to consistently ensure the quality produced during application.

3 The perfect seal

The application of thermoplastic spacer material enables a seal that is practically invisible when installed and that also ensures that the spacer bar is absolutely gas-tight. The spacer material is pressed carefully into a mould chamber at the sealing position. The result is unique and cannot be compared with conventional solutions in terms of the appearance and process reliability.

TPA

High-quality processing of thermoplastic spacers

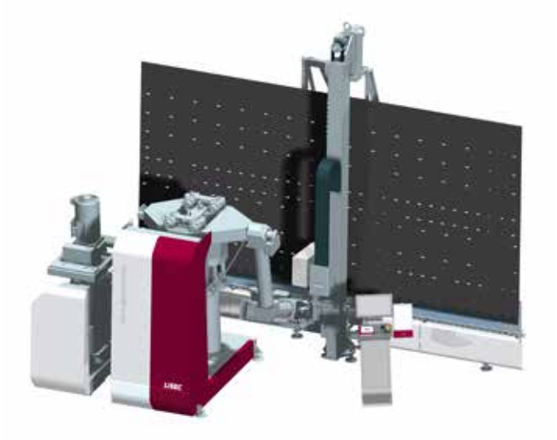
The LiSEC TPA is a fully automatic system for applying thermoplastic spacers directly to the glass sheet. LiSEC has developed a seal that is almost invisible when integrated and that also ensures that the spacer is applied absolutely gas-tight. In order to also perfectly bring this approach into practice, we offer the solution as a line concept.

Highlights

- High process assurance thanks to the pressed seal
- All frame widths are continuously adjustable
- External spacer frame production is no longer necessary

Options

- Support wall with air flotation system
- Shapes according to LiSEC shape catalog
- TSD-control for inkjet printers



Technical Data

	TPA
Glass height	2 m / 2.5 m / 2.7 m / 3.3 m
Glass thickness	2 - 19 mm
Minimum size	350 x 180 mm
Maximum size	6,000 x 3,300 mm
Max. processing length	2,500 mm / 3,500 mm / 5,000 mm / 6,000 mm
Spacer height	6.4 mm
Spacer widths	6 - 20 mm
Maximum load	150 kg/lm

TPA mit VLO

Fast processing of thermoplastic spacers

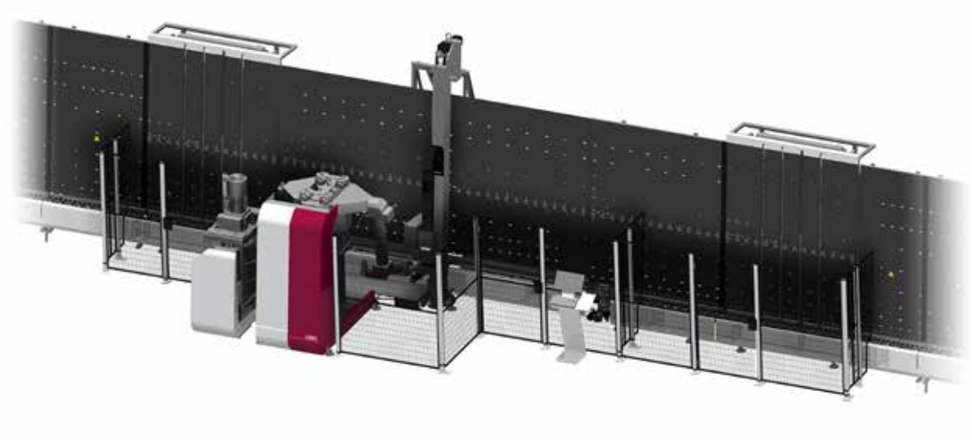
The vertical lift-over (VLO) for the TPA application is the perfect solution for customers with increased cycle time requirements. Glass sheets without TPA application are bypassing the applicator by means of a vertical lifting device – no time consuming transport through the applicator is required. The glass sheets are put at the beginning of the line in the usual order; the VLO automatically sorts them correctly for the paired or tandem operation of the press.

Highlights

- Vertical Lift-Over
- Automatic sorting for paired or tandem operation
- Very short cycle times possible

Options

- Shapes according to the LiSEC shape catalog
- TSD-control for inkjet printers



Technical Data

	TPA with VLO
Glass height	1,200 mm (with lift-over operation) 2,700 mm (without lift-over operation)
Glass thickness	2 – 8 mm (on the upper transport track) 2 – 19 mm (on the bottom transport track)
Minimum size	450 x 250 mm (with lift-over operation) 350 x 180 mm (without lift-over operation)
Maximum size	1,900 x 1,200 mm (with lift-over operation) 4,000 x 2,700 mm (without lift-over operation)
Maximum load	150 kg/lm

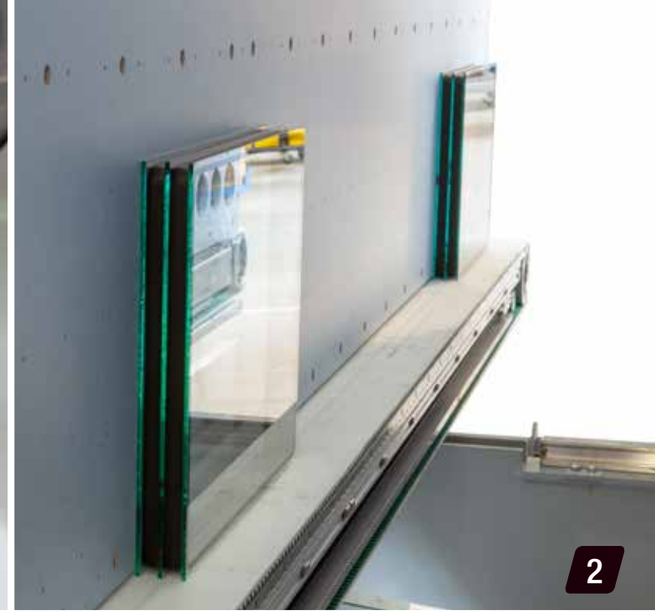
Overview of assembly presses and gas filling presses

Line pass-through values

	FPL	FPLN	FPS-U2(B)	FPS-US	AGP-A	FPS-T
Tilt angle	6°	6° / 8°	6° / 8°	6° / 8°	6°	6°
Transport height	520 mm / 720 mm	520 mm / 720 mm	520 mm / 720 mm	520 mm / 720 mm	520 mm / 720 mm	720 mm
Maximum length	2,5 m	2,5 m / 3,5 m	2,5 m / 3,5 m	2 m / 2,6 m / 3,6 m / 5 m / 6 m	2,5 m / 4 m / 5 m / 6,5 m / 8 m	6 m / 9 m / 12 m / 15 m / 18 m
Maximum height	1,6 m / 2 m / 2,5 m / 2,7 m	2 m / 2,5 m / 2,7 m / 3,3 m	2 m / 2,5 m / 2,7 m / 2,9 m / 3,3 m	2 m / 2,5 m / 2,9 m / 3,3 m	2 m / 2,5 m / 2,7 m / 2,9 m / 3,3 m	3,3 m
Minimum size	230 x 180 mm / 350 x 180 mm	250 x 180 mm	350 x 180 mm	350 x 180 mm	350 x 180 mm	500 x 800 mm
Min./max. unit thickness	10 - 55 mm	12 - 55 mm	10 - 80 mm (U2) / 10 - 60 mm (U2B)	24 - 100 mm	10 - 100 mm	16 / 29 - 102 mm
Max. through-transport width	55 mm / 60 mm	55 mm	100 mm (U2) / 80 mm (U2B)	100 mm	100 mm	100 mm
Maximum load	150 kg/m	150 kg/m	250 kg/m	250 kg/m	250 kg/m / 350 kg/m / 450 kg/m	450 kg/m
3-sided / 4-sided steps	no	0 - 140 mm / 0 - 50 mm	0 - 200 mm / 0 - 100 mm	0 - 200 mm / 0 - 100 mm	0 - 200 mm / 0 - 150 mm	0 - 1.000 mm / 0 - 300 mm
Special shapes per LiSEC shape catalogue	yes	yes	yes	yes	yes	yes
Data connection	no	no	LMS / Lineserver / Cockpit	Lineserver / Cockpit	Lineserver / Cockpit	Lineserver / Cockpit
Glass transport system	Rollers	Rollers	Belt	Belt	Belt	Belt

Machine-specific data

	FPL	FPLN	FPS-U2(B)	FPS-US	AGP-A	FPS-T
Glass thickness on fixed press plate	-	2.3 - 19 mm	2.3 - 19 mm / 2.3 - 26 mm / 2.3 - 32 mm	2.3 - 19 mm / 2.3 - 26 mm / 2.3 - 32 mm	2 - 26 mm / 2 - 45 mm	3 - 52 mm
Glass thickness on mobile press plate	-	2.3 - 12 mm	2.3 - 16 mm / 2.3 - 19 mm	2.3 - 16 mm / 2.3 - 19 mm	2 - 26 mm	3 - 30 mm
Loading on fixed press plate	75 kg/m	75 kg/m	150 kg/m	150 kg/m	200 kg/m	450 kg/m
Loading on mobile press plate	75 kg/m	75 kg/m	100 kg/m	100 kg/m	100 kg/m	250 kg/m
Unit build-up	2/3-fold	2/3-fold	2/3/4-fold	2/3/4-fold	2/3/4-fold	2/3-fold
Spacer types	rigid	rigid / flexible	rigid / flexible	rigid / flexible	rigid / flexible/ TPA	rigid / flexible/ TPA



Highlights
Assembly presses and Gas filling presses

1 Permanent support of all sheets

Permanent support of all lower edges of IG units with thermoplastic spacers, even the lower edges of stepped units, keeps the inner sheets stable and prevents sinking.

2 Parallel assembly of two insulating glass units

Paired operation and tandem operation enable simultaneous assembly of two insulating glass units for increased cycle time requirements. Naturally, in doing so, the operating mode can be dynamically adapted to your current production requirements.

3 Minimal gas consumption

Integrated precision controllers regulate the gas quantity and the gas mix ratio. Precise volume calculation in combination with mobile sealing strips enable the gas consumption to be minimised.

AGP

Gas filling, assembling and surface pressing of insulating glass units

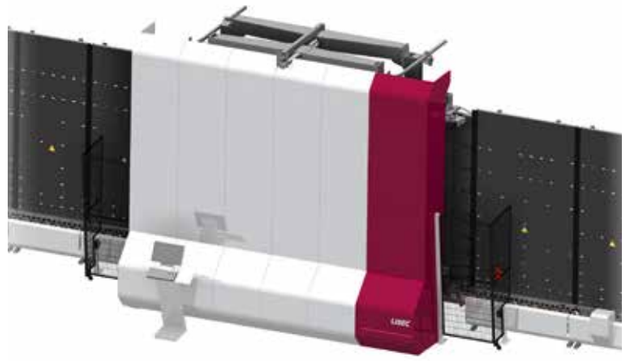
Its permanent support of all glasses of multi-sheet units makes the fully-automatic spindle press the best solution for thermoplastic spacer production. The paired or tandem operation makes it possible to reduce the cycle times even further, while the movable sealing strips combined with a precise volume calculation ensure minimum gas consumption.

Highlights

- Permanent support of all glass sheets (also for bottom edge steps)
- 3 and 4-side stepped units
- Highest dimensional accuracy (+/- 0.5mm)
- Suitable for 4-sheet units
- Paired or tandem operation possible

Options

- Processing of 4-sheet units
- Shapes according to the LiSEC shape catalog
- 4-side stepped units
- Maximum units thickness: 100 mm
- Use of several gas types



Technical Data

	AGP
Glass height	2 m / 2.5 m / 2.7 m / 3.3 m
Unit thickness	10 – 80 mm (optional 100 mm)
Minimum size	350 x 180 mm
Maximum size	8,000 x 3,300 mm
Glass thickness	2 - 25 mm
Operating modes	Normal mode, paired operation, tandem operation
Maximum load	250 kg/lm (350 kg/lm optional, 450 kg/lm upon request)

FPS-U2

Automated Gas-Filling Machine

This is a fully automated system for gas filling, assembly and pressing of insulating glass units. The tried and tested system of filling the sealed ‚chambers' with gas from the bottom up reduces turbulence to zero. Gas consumption is minimized using a system of ‚separate chambers' with sealing bars developed by LiSEC.

Highlights

- Unique gas-filling rate
- Gas filling without turbulence
- Cycle time is independent of the glass length (by filling gas from the bottom up)
- Special measuring system allows exact pressing of units with flexible spacers

Options

- Shapes according to LiSEC shape catalog
- 3-side stepped unit
- 4-side stepped unit

Technical Data

	FPS-U2
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m
Unit thickness	12 - 60 mm
Minimum size	250 x 180 mm (1.6 m), 350 x 180 mm (2 m / 2.5 m / 2.7 m / 3 m / 3.3 m)
Maximum size	2,500 x 2,500 mm / 3,500 x 3,300 mm, optional length up to max. 5,000 mm possible
Glass thickness - fixed press plate	2.3 - 19 mm
Glass thickness - movable press plate	2.3 - 15 mm, optional 2.3 - 19 mm
Maximum load	250 kg/lm

FPS-US

Automated Gas-Filling Machine

This is a fully automated system for gas filling, assembly and pressing of insulating glass units. The tried and tested system of filling the sealed ‚chambers' with gas from the bottom up reduces turbulence to zero. A system developed by LiSEC, with ‚separate chambers' and sealing bars that adjust to the length of the glass unit, precisely meters the amount of gas needed and minimizes gas consumption.

Highlights

- Suitable for filling argon, xenon and krypton
- Unique gas-filling rate
- Gas filling without turbulence
- Movable sealing bars significantly reduce the loss of gas

Options

- Shapes according to LiSEC shape catalog
- 3-side stepped unit
- 4-side stepped unit

Technical Data

	FPS-US
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m
Unit thickness	20 - 52 mm, optional 16 - 40 mm / 24 - 60 mm / 24 - 100 mm
Minimum size	250 x 180 mm (1.6 m), 350 x 180 mm (2 m / 2.5 m / 2.7 m / 3 m / 3.3 m)
Maximum size	2,500 x 2,500 mm / 3,500 x 3,300 mm / 6,000 x 3,300 mm
Glass thickness - fixed press plate	2.3 - 19mm, optional 2.3 - 32 mm / 2.3 - 26 mm (stepped units BE = 0 - 50 mm)
Glass thickness - movable press plate	2.3 - 15 mm, optional 2.3 - 19 mm
Maximum load	250 kg/lm

PSLN

Automatic Assembly System for Insulating Glass Units

Fully automatic assembly machine with the proven parallel guide system from LiSEC. The first glass sheet with spacer frame is automatically positioned on the outfeed side.

An electronic measuring device for the glass thickness and spacer frame width ensures that the support panel is moved backwards correctly. The automatic height measurement system then adjusts the guide beam to the height of the second sheet without spacer. Next the glass sheets are assembled as the back panel moves forward, and by means of a pressure cylinder mounted on the front side.

Highlights

- Precise assembly through parallel guide system

Options

- Assembly of quadruple units

Technical Data

	PSLN
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m
Unit thickness	10.6 - 52 mm
Minimum size	230 x 180 mm (PSLN-25/16), 350 x 180 mm
Maximum size	3,800 x 2,700 mm
Maximum load	150 kg/lm

PSLN-VK

Automatic Assembly Machine, Coupled System

There are two separate modes of operation, one for glass sheets up to 3000 mm, and another for sheets up to 6000 mm in length. For sheets up to 3000 mm, the first machine section serves as a frame mounting station, while the second one acts as an assembly station. In the case of sheets of up to 6000 mm, the two sections are coupled and function as a frame mounting as well as an assembly station.

Highlights

- Short cycle time for units of up to 3000 mm in length
- Frame mounting and automated assembly on one single machine

Options

- Assembly of quadruple units

Technical Data

	PSLN-VK
Glass height	2 m / 2.5 m / 2.7 m / 3 m / 3.3 m
Unit thickness	10.6 - 52 mm
Minimum size	350 x 180 mm
Maximum size	6,000 x 3,300 mm
Frame inset measurement	0-30 mm continuously and centrally adjustable
Maximum load	150 kg/lm

UKL

Tilting Table

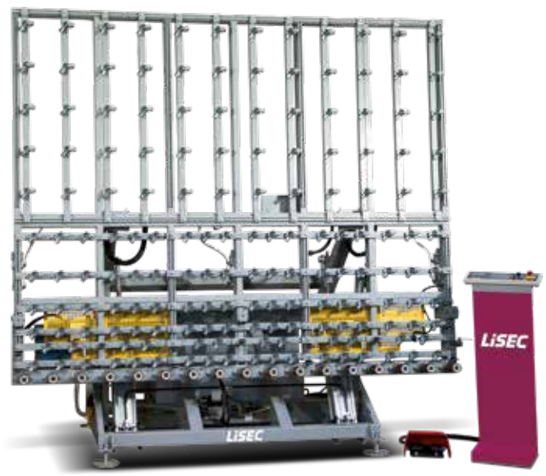
This machine is responsible for fast and safe tilting of glass sheets or insulating glass units. Tilting from the vertical to the horizontal position is carried out by means of a special toggle lever tilt system, which causes the reference edge to be positioned 800 mm ahead of the glass running track. Consequently, insulating glass lines can be installed in a space-saving manner. Counterweights on the support rollers ensure that their linear position is maintained when the table is in a vertical position.

Highlights

- Also available in special design for horizontal transport at a 90-degree angle to the line
- Manual outfeed possible when in horizontal position

Options

- Shapes according to LiSEC shape catalog



Technical Data

	UKL-25	UKL-35	UKL-40
Glass height	1.6 m / 2 m / 2.5 m	1.6 m / 2 m / 2.5 m / 2.7m	1.6 m / 2 m / 2.5 m / 2.7m / 3 m / 3.3 m
Glass thickness	2.3 - 19 mm		
Unit thickness	12 - 52 mm		
Minimum size	350 x 180 mm, optional 230 x 180 mm		
Maximum size	2,500 x 2,500 mm	3,500 x 2,700 mm	4,000 x 3,300 mm
Maximum load (tilt)	450 kg		

Overview of sealings

Line pass-through values

	LVL-HM	VL-1N	VFL-1E	VFL-1F	VFL-1EK
Tilt angle	6° / 8°	6° / 8°	6° / 8°	6° / 8°	6°
Transport height	520 mm / 720 mm / 770 mm / special	520 mm / 720 mm / 770 mm / special	520 mm / 720 mm / 770 mm / special	520 mm / 720 mm / 770 mm / special	720 mm
Maximum length	2.5 m / 4 m	2.5 m / 3.5 - 4.5 m	2.5 m / 3.5 m / 5 m / 6 m	2.5 m / 4 m / 5 m / 6.5 m / 8 m	6 m / 9 m / 12 m / 15 m / 18 m
Maximum height	2 m / 2.5 m	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m	2 m / 2.5 m / 2.7 m / 3.3 m	2 m / 2.5 m / 2.7 m / 2.9 m / 3.3 m	3.3 m
Minimum size	350 x 180 mm	250 x 180 mm	250 x 180 mm	350 x 180 mm	500 x 800 mm
Min./max. unit thickness	12 - 60 mm	12 - 100 mm	12 - 100 mm	10 - 100 mm	14 / 25 - 102 mm
Max. through-transport width	60 mm	100 mm	100 mm	100 mm	102 mm
Maximum load	150 kg/m	250 kg/m	250 kg/m	250 kg/m / 350 kg/m / 450 kg/m	450 kg/m
Transport speed	60 m/min	60 m/min	60 m/min	70 m/min	36 m/min
3-sided / 4-sided steps	0 - 200 mm / n.a.	0 - 200 mm / 0 - 100 mm	0 - 200 mm / 0 - 100 mm	0 - 200 mm / 0 - 150 mm	0 - 300 mm / 0 - 300 mm
Special shapes per LiSEC shape catalogue	yes	yes	yes	yes	yes
Data connection	LMS / Lineserver / Cockpit	LMS / Lineserver	LMS / Lineserver	LMS / Lineserver / Cockpit	Lineserver / Cockpit
Glass transport system	Belt	Chain	Chain	Belt	Trolleys

Machine-specific data

	LVL-HM	VL-1N	VFL-1E	VFL-1F	VFL-1EK
Metering	DOS-HM (hotmelt)	DOS-1 TH / PS / SI	DOS-E	DOS-E	DOS-1EK
Unit build-up	2/3-fold	2/3/4-fold	2/3/4-fold	2/3/4-fold	2/3-fold
Spacer types	Conv./flexible	Conv./flexible	Conv./flexible	Conv./flexible / TPA	Conv./flexible

Highlights Sealing

1 Permanent support of all glass sheets

Particularly with non-hardened spacer frames – as would be the case with the use of TPA – the permanent support of all glass sheets is a prerequisite for reliable compliance with process tolerances. Permanent support is also guaranteed with stepped lower edges.

2 Optimum sealing quality for corners

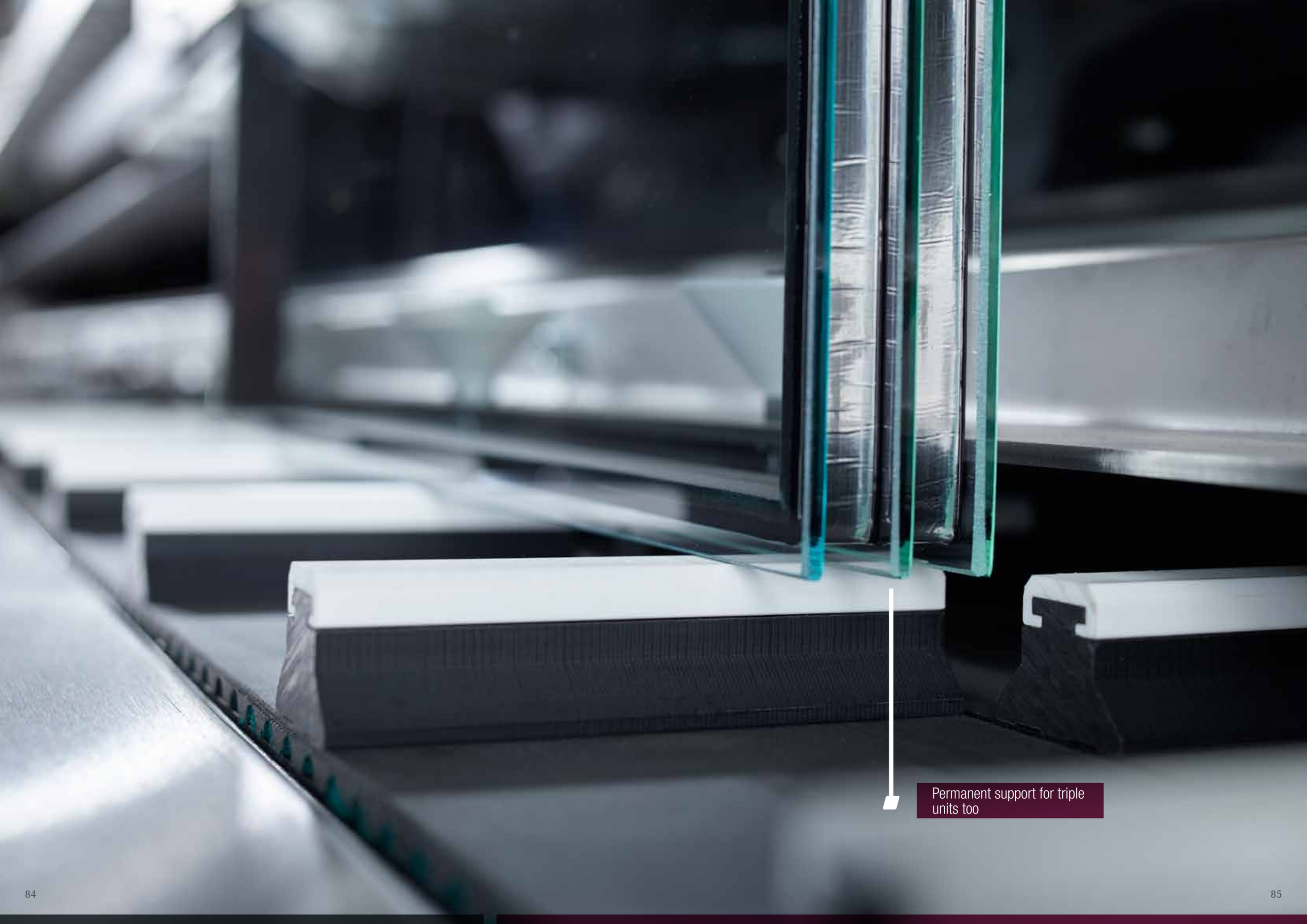
In combination with the patented Full-Support-Belt transport system, the CleanSeal technology enables optimum sealing quality for the corners of insulating glass units. The corner areas of the glass sheets do not come into contact with the support jaws. The highly-dynamic, self-regulating and servo-controlled metering system guarantees the best sealing quality.

3 Special vacuum lifting device to take off IG units with thermoplastic spacers

Option to use a vacuum lift for the unit unload process with simultaneous support of all glass sheets (triple units)

Tailored nozzle head for perfect sealing quality

Precise sensing device for the frame seal depth


Permanent support for triple units too

LVL-HM

Fastest hotmelt sealing in the world

The LVL-HM provides the fastest cycle times in the world and sets new technology standards. A fully-automatic, self-calibrating measurement system compensates for fluctuations in the viscosity of the sealant. The clearly organised visualisation and the self-teaching control logic simplify parameterisation of the system. Operational stability and quality assurance are the logical results.

Highlights

- A sophisticated control system automatically compensates for fluctuations in the viscosity of the sealant
- Thermal monitoring of the material-specific processing temperature
- Clearly organised visualisation
- Electronic pre-heating system for rapid operational readiness

Options

- Special shapes per LiSEC special shape catalogue
- 3-sided stepped units
- 4-sided stepped units

Technical Data

	LVL-25/20HM	LVL-40/20HM	LVL-40/27HM
Unit thickness	12 - 60 mm		
Minimum size	350 x 180 mm		
Maximum size	2,500 x 2,000 mm	4,000 x 2,000 mm	4,000 x 2,700 mm
Transport speed	2 - 60 m/min		
Frame inset	3 - 6 mm		
Maximum load	150 kg/lm		

VL-1N

Compact Automated Sealing System

Space-saving design with proven technology. The VL-1N is a stationary metering unit for one- or two-component sealants. Its electronic speed control ensures perfect sealing even in the corners where the sealing cavities may have varying depths. The sealed glass units are transported by chains in order to avoid contact with the sealant and the edges of the glass sheet. The transport chain has special support points preventing any kind of contamination.

Highlights

- Quantity- and speed-controlled precision metering system
- Homogeneous sealing of corners by means of spatulas or rollers
- Data for shapes can be input manually or transferred online

Options

- Leaving gas-filling holes unsealed
- Shapes according to LiSEC shape catalog
- 3-sided stepped units
- 4-sided stepped units

Technical Data

	VL-1N
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m
Unit thickness	12 - 80 mm, optional 12 - 60 mm , 12 - 100 mm
Minimum size	250 x 180 mm
Maximum size	5,000 x 3,000 mm
Maximum length	2,500 mm, 3,500 mm, 4,000 mm, 5,000 mm
Frame inset	0 - 15 mm continuously and centrally adjustable optional 0 - 30 mm continuously and centrally adjustable
Maximum load	250 kg/lm

CLEANSEAL (VFL-1F)

Sealing plant for highest corner quality and heavy weights

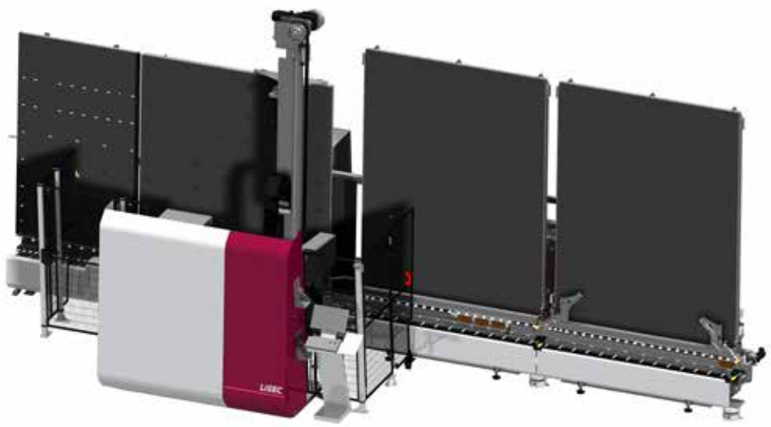
The patented Full-Support-Belt transport combined with the CleanSeal technology sets new standards for sealing quality of multi-sheet IG units. Permanent support of each individual sheet while avoiding all contact between the sheet corners and the support jaws makes it possible to produce even thermoplastic spacers with minimum tolerances. The highly dynamic, self-adjusting and servo-controlled dosing system ensures highest corner quality without any rework.

Highlights

- Patented Full-Support-Belt System
- Permanent support of all sheets
- Operator-friendly and easy maintenance
- Optimum corner sealing quality

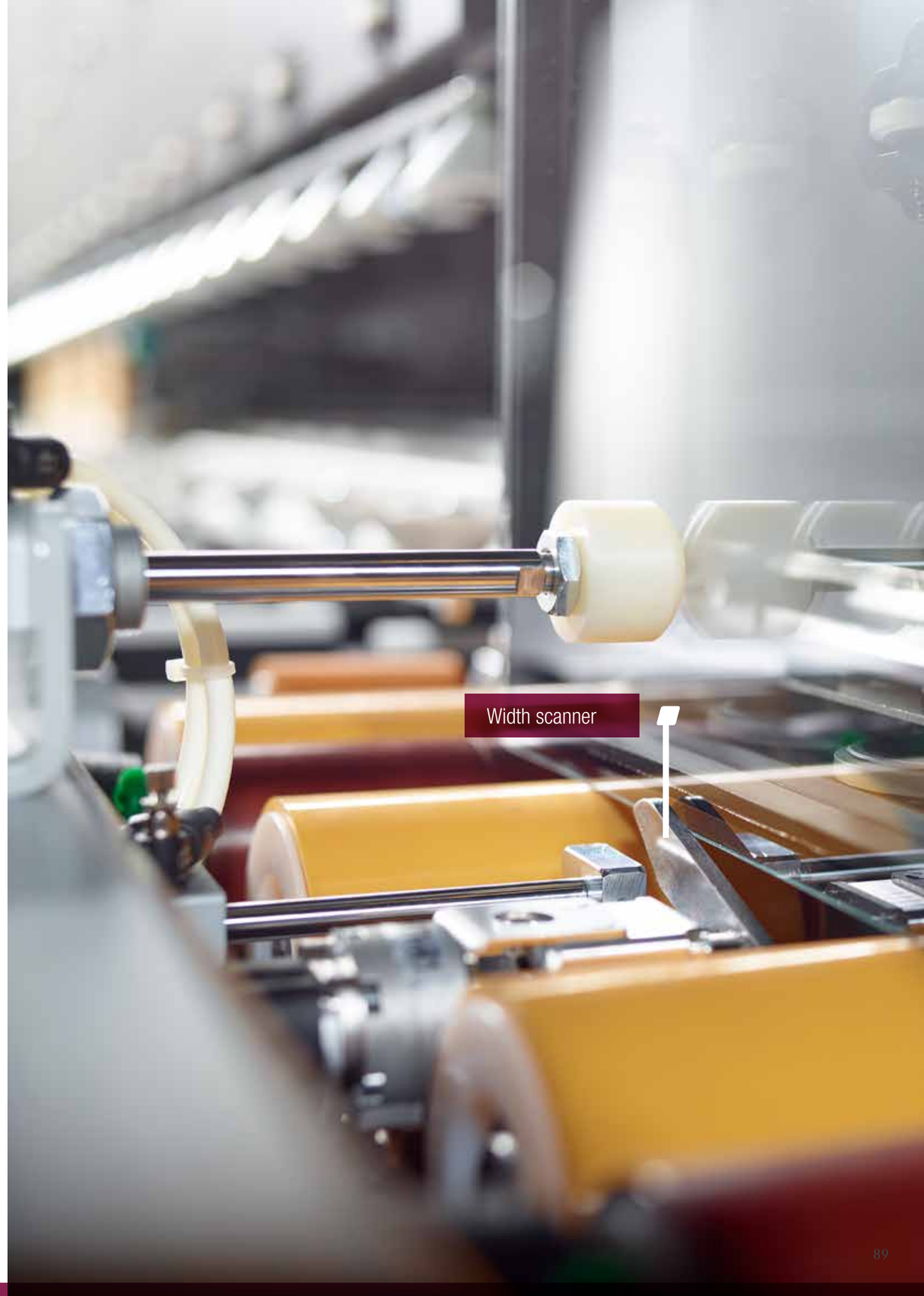
Options

- Shapes according to the LiSEC shape catalog
- 4-side stepped units
- Gaps for gas filling
- Unit thickness up to 100 mm
- Maximum load 350 kg/lm
- Maximum load 450 kg/lm upon request



Technical Data

	CLEANSEAL (VFL-1F)
Glass height	2 m / 2.5 m / 2.7 m / 3.3 m
Unit thickness	10 – 80 mm, optional up to 100 mm
Minimum size	350 x 180 mm
Maximum size	8,000 x 3,300 mm
Maximum length	2,500 mm, 4,000 mm, 5,000 mm, 6,500 mm, 8,000 mm
Frame inset	0 - 30 mm
Maximum load	250 kg/lm (optional 350 and 450 kg/lm; higher loads on request)



CleanSeal (VFL-1E)

Sealing machine for the best corner quality

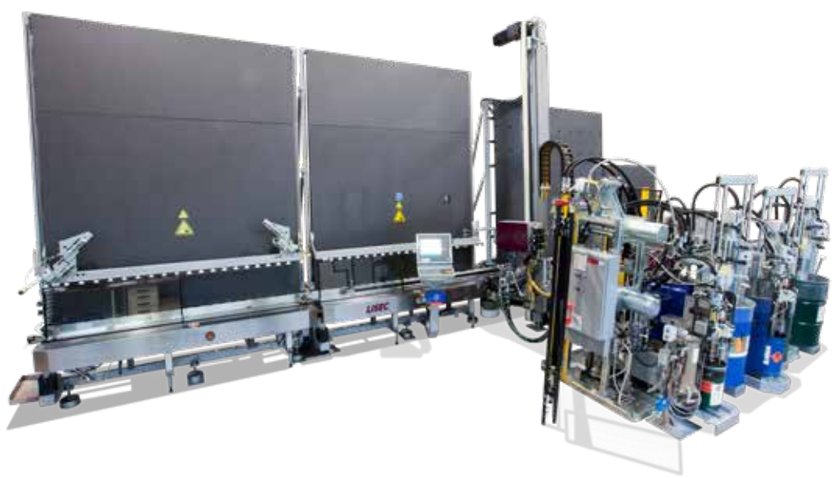
Automatic sealing machine with optimised sealant application, especially around corners. In order to increase the overall quality of the final product, we focused on the machine‘s degree of soiling when developing the CleanSeal. While the operator‘s skill plays a major role in determining the volume of material and how it is applied using conventional systems, LiSEC machines employ a highly dynamic, self-regulating and servo-controlled mixing system for this.

Highlights

- Simplified operation (reduced number of parameters, simplified recipe manager, clear setup procedures)
- Quicker and easier material changeover
- Reduction in material waste during flushing and restarting

Options

- Leaving gas-filling holes unsealed
- Shapes according to LiSEC shape catalog
- 3-sided stepped units
- 4-sided stepped units
- Special nozzles
- 2-part support beam for unloading units with a transport fork
- Manual/Automatic support of triple units by a set of rollers



Technical Data

	CleanSeal (VFL-1E)
Glass height	2 m / 2.5 m / 2.7 m / 3.3 m
Unit thickness	12 - 100 mm
Minimum size	250 x 180 mm
Maximum size	6,000 x 3,300 mm
Maximum length	2,500 mm, 3,500 mm, 5,000 mm, 6,000 mm
Transport speed	2 - 60 m/min
Frame inset	0 - 30 mm
Maximum load	250 kg/lm

APKV

Automatic Cork Pad Applicator

Fully automated application of cork pads to the back side of unsealed insulating glass units, making it easily possible for suction cups to grip the front glass surface and unload the glass units. The vertically movable applicator heads take off the cork pads from the continuous tapes and apply them to the glass. The number of cork pads applied and their distance depends on the sheet‘s size measured by the automatic program control, or can be individually set.

Highlights

- Easy integration into all automated sealing systems from LiSEC
- Application of cork pads from the back side
- Positioning of cork pads via automatic program control or individual settings
- Up to five rows of cork pads

Technical Data

	APKV
Glass height	1.6 m / 2 m / 2.5 m / 2.7 m / 3 m / 3.3 m
Unit thickness	12 - 80 mm, optional 12 - 60 mm , 12 - 100 mm
Minimum size	400 x 250 mm

UTS

Automatic portal system for unloading insulating glass units

The LiSEC UTS is an automatic station for unloading freshly sealed insulating glass units from the production line. The sealed unit is placed at the unloading table for the UTS to be picked-up. If required the UTS can transport the unit to an inspection position, where the operator can quality check the insulating glass unit. This system is particularly (although not exclusively) suited for insulating glass units with thermoplastic spacer bars.

Highlights

- Improving the production flow through automatic unloading
- Support fingers that prevent the front and middle sheet from slipping-off
- The physical load to the unit is reduced during unloading, which means no deformation
- Operator-friendly corner-finishing position

Technical Data

	UTS
Unit thickness	12 - 60 mm
Minimum size	500 x 250 mm
Maximum size	2,500 x 1,500 mm
Transport height	520 mm
Maximum load	100 kg/lm

ER-140, ER-100

Sealing Table with Integrated Turning Mechanism

A double suction plate firmly grips the glass units during the sealing process. As the sealing table and the conveyors have the same height, glass units can be easily positioned and moved on the sealing table. After sealing, the glass units are automatically lowered to the table level. The sealing table is fitted with four telescopic arms for large-sized insulating glass units.

Highlights

- Rotation can be set to 90°, 180° or 360°
- Potentiometer control for the rotating speed

Technical Data

	ER-140	ER-100
Minimum size	500 x 500 mm	230 x 180 mm
Maximum size	1,600 x 1,600 mm	1,600 x 500 mm
Maximum load	180 kg	30 kg
Transport height horizontal	865 mm	

TAL-60N

System for Manual Sealing of I.G. Units Using 1- and 2-Component Sealants

Pump and metering system for the manual application of one- or two-component sealants. Static precision mixers ensure optimal mixing of materials. The system is easy to use thanks to the automatic level control for maintaining the selected working height of the sealing gun. An automatic balance control makes the mixing unit seem almost weightless. The extended sealing bracket enables optimized and smooth sealing also of larger glass units.

Highlights

- Easy placement of sealant drums in the ram press by means of a pallet jack
- Low material loss thanks to small filling volume of the mixers
- Easy to use thanks to almost weightless mixing device
- Automatic metering of sealant volume

Technical Data

	TAL-60N
Profile width	6 - 24 mm
Bracket length	4,3 m, optional extension by 1 m
Catalyst drum	Ø 280 mm

TPD-A230

Thermal cleaning of sealant mixers

This semi-automatic flushing device is used to flush and clean sealing mixing sections with thermal cleaning fluids. It can also be used to clean mixing sections, which can no longer be cleaned in the conventional way, without a need for dismantling.

Highlights

- No dismantling of the mixing section is required
- Cleaning of difficult to access sealant exposed areas
- Entire cleaning process is much faster
- Good cleaning results due to precise temperature and high pressure
- Compact design

SOFTWARE

With our broad product portfolio we offer our customers a modular set-up, from single-user to complex group solutions with central administration and decentralized sales and production branches.

Out whole team supports the development and service of our products, with the goal of generating the greatest benefit for our customers.

perfectscan

Quality Scanner for Single Sheets and Insulating Glass

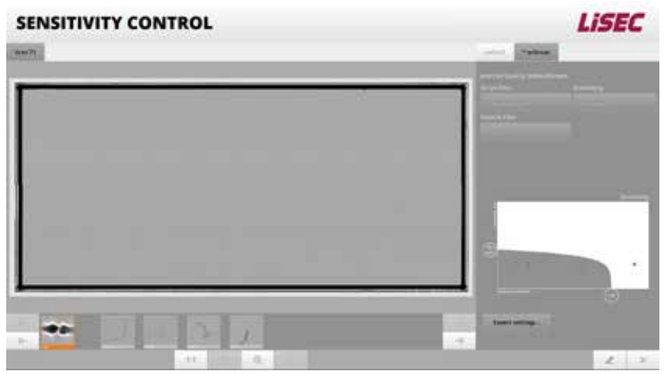
perfectscan makes it possible to check each single glass sheet and insulating glass unit for visual defects. This system allows you to prove the added value of your products, guarantee a higher product quality and significantly reduce customer complaints.

Highlights

- New release with optimized user interface
- New archiving solution with individual export options
- Optimised scan results via 16bit technology
- New, wizard guided, setting of quality criteria and filters
- Combined with lineserver, order data are connected with scan results
- Flexible application in all areas of your production
- Can be retrofitted on existing machine
- Quality scanner with Georgian bar recognition
- Quality and process improvements through error analyses e.g. for cutting optimisation

Functions

- No reflections and no blind spots thanks to telecentric light through scan technology without camera
- Stable recognition of coating defects because of infrared technology
- Screen printing controlling
- Glass type detection
- IG unit build-up recognition
- Dimension recognition (target/ actual comparison) at the line
- Detection of overall bending (in combination with glass type sensor)
- Data archiving
- Compact design compared to usual camera based systems
- One contact person for plant and scanner



Technical Data	
Glass height	200 - 3.400 mm
Maximum length	6,000 mm
Glass thickness	2 - 100 mm
Transport speed	48 m/min at 200 dpi (no interpolation)
Scan technology	16 bit Scanmodule (LIS – Lightning Imaging Sensor)
Light transmission	15 – 99 %

Individual setting options

Based on parameter and filter settings, perfectscan shows only relevant defects for quality assessment. The parameter settings and filter criteria can be adjusted by the operator at any time.

Flexible application in all areas of your production

Whether it is an insulating glass line, a tempering furnace or a laminated glass line, perfectscan can be used in any context and mounted within a very short time. The intelligent construction of the system allows you to ensure quality and efficiency quickly and easily in almost all areas of your production.

order

ERP covering quoting, purchasing, warehouse management up to invoicing

The LiSEC software solution order was developed with the particular needs of flat glass production in mind. order structures and supports your day to day business allowing you to focus on your customer and not on administration.

order already includes all main functionalities for order processing such as: direct customer interface, quote generation considering all relevant production costs and overheads (cover contribution calculation), automatic invoicing and printing of the delivery note, integration into company software system, harmonic integration of the production management, material management, order management, reports and analysis displaying the efficiency of your production in graphical form or export to excel, etc.

Extensions & Additional Products:

cadcam | 3D Online Product Configurator | scancam | bar

Highlights

- Increasing the speed and automation of the order management
- Automatic checks of production and delivery dates at order entry
- Customer retention due to automated customer communication and electronic data exchange
- System-supported and automated entry with product configurators
- Modern, intuitive order editor including intelligent quick input and 3D viewer
- Much faster order entry

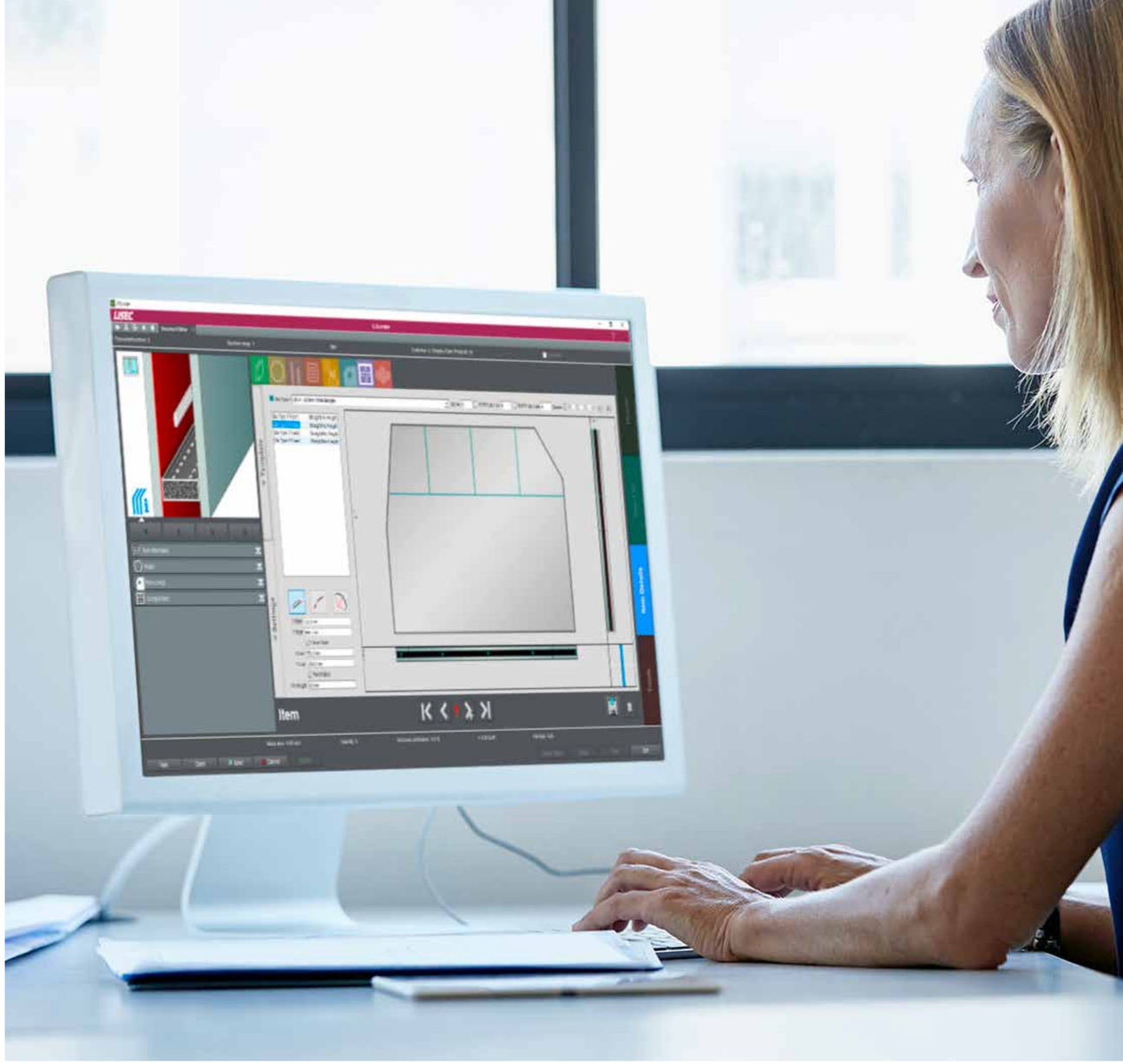
Window-/ Structural glazing | Smart/Builder | ERP | Transport-Mgmt.

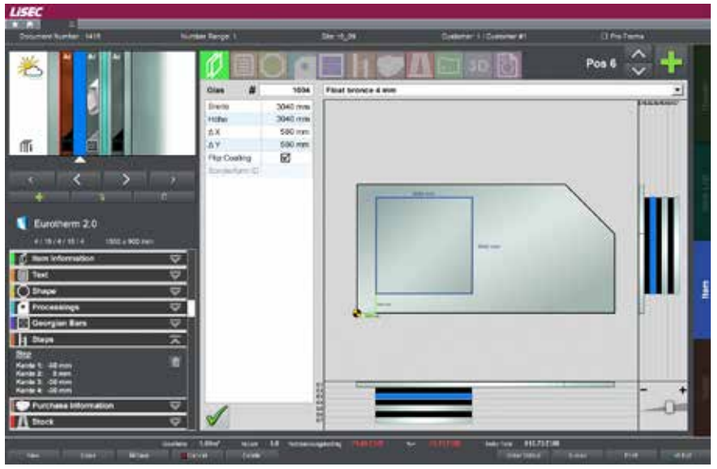
Functions

- Central, cross-program master file management
- Quotation entry and initial optimisation
- EDI Import
- Capacity check
- Accounting interface
- Cover contribution calculation
- Purchase and inventory management
- Windows / Linux
- Terminal-Server with Thin Clients
- Online Service (SaaS)

Data bases

- Oracle
- MS-SQL
- PostgreSQL (on request)





New Order Editor

Quick Input

The new quick input system integrates perfectly with the graphical editor. It adjusts to the user's needs and allows entering all order position details quickly and easily.

Templates

Use the latest template function to create units, processes, Georgian bars, and other details, which can be reused quickly and easily. A preview function supports the fast selection of the correct template. Created templates can be made available system-wide or for individual users.

Automatic Delivery Deadline and Production Checks at Order Entry

Capacity planning and delivery date management are fully integrated with the production. The moment order positions are entered the system will check the available capacities and provide up-to-date information about production and delivery dates.

cockpit/lineserver

Control and Monitoring of Insulated Glass Production

The LiSEC software solutions cockpit and lineserver provide the interface between the production planning and the IG line. The combined system at the line automatically receives the data from production planning in the predefined sequence and generates the required production data for each machine. For each insulating glass unit attributes like unit build-up, component information, text, steps and Georgian bar view as well as the current status are visualised. Additionally, individual sheets and batches can be entered by the operator via the order editor directly at the line.

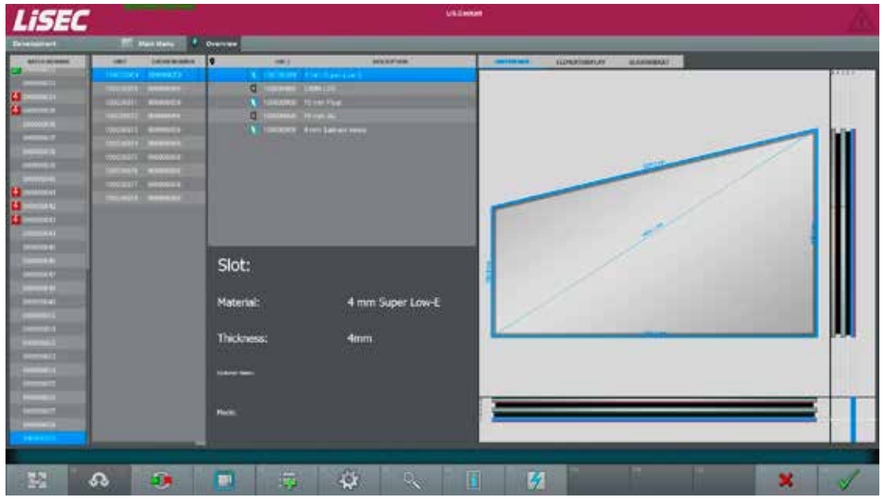
Highlights

- Facilitates automatic production of free shapes (DXF)
- Informing all affected stations if a glass sheet breaks
- Production control and monitoring supported by line overview
- Quality assurance through integration of LiSEC quality scanner
- Automatic switch between 2/3/4/5-times IG

Functions

- Import of production batches
- Input editor for manual entry of single productions
- Supplying CNC-data for the single plant parts
- Feedback of ready messages and remakes

prod



IG cockpit loading display

Loading Display for Correct Positioning

The loading display provides the operator an overview of all queued production batches and their current status. Graphic display of the unit build-up supports correct loading during manual positioning.

Simple Order Entry on the Line

New standardised LiSEC order editor for quick and simple input of orders, including graphic display of the unit, directly on the line.

Central Monitoring of Insulating Glass Line (Add-on)

The linemonitor as a control station supports the operator with a compact graphical display of the line. Both the current sheet positions and the live machine and production values are displayed. Each pane shows the IG-unit it belongs to, which simplifies sheet unloading in case of an error.

assetcheck

Machine Status Monitoring Software

assetcheck is an indispensable component of the LiSEC product range. Machine status data are collected in real time directly by the machine's control system and stored in a central place for displaying and analysing. If required, this information can be provided to the production manager, the quality manger, the board or everyone else, who needs them, everytime and everywhere on mobile devices (e.g. smartphones).

Through continuous determination of your performance data and the outcome awareness, you can promptly influence your production and therefore raise your machine availability and output.

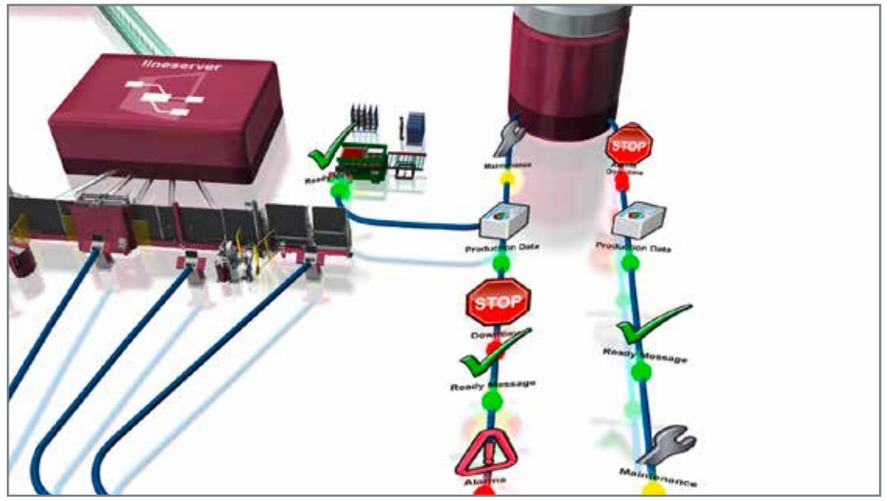
Highlights

- Proactive planning of maintenance for reducing downtimes
- Point out and analyse downtimes
- Individually configurable
- Machine data available everywhere and real-time as alarms, cycle time, status, recipes, tool information, consumption data, production figures

Functions

- Display of actual machine status
- Generate your own views
- Display of past machine status
- View and analyse of alarm data, exit messages, downtime data, maintenance data
- Generate your own reports
- Pre-defined hit lists
- Reporting / charts / graphics
- Pre-defined reports as cycle time calculation per machine

prod



Transparent Production: Data flow from machines to the server

Individually configurable

It is very simple to define different views with varying degrees of detail to meet the requirements of different users. It is possible to zoom in from a global overview down to detailed process parameters.

Analysis function

The collected data and messages can be analyzed using pre-defined hit lists as well as freely configurable reports. The creation of reports is supported by the integrated reporter module.

Current machine status display

The main indicator necessary for a quick overview of all machines is the machine status. At a glance, it is possible to see whether the machine is in automatic mode or if an error has been reported.

assetcheck

Live production data available on your smartphone

pack

Graphical Display of Packing Sequence

At the end of the insulating glass line, pack displays the storage position of the units on the delivery rack which before have been created with the 3D rack optimisation. Paperless rack and stack changes are displayed to guaranty the packing sequence required by the production planning.

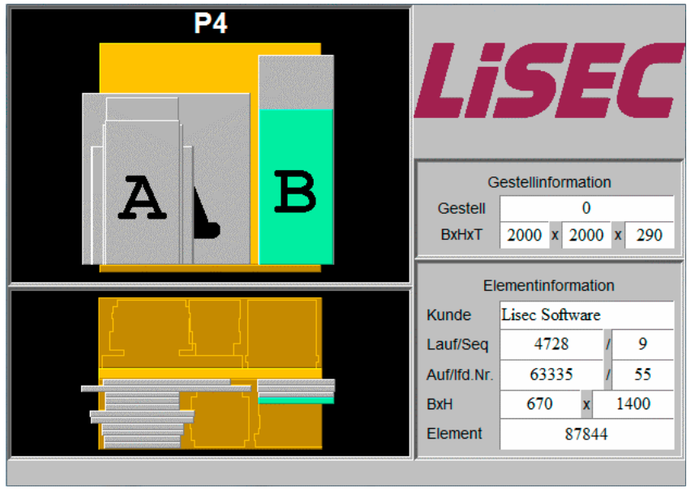
Highlights

- Preview of final rack content
- Graphical packing display
- Display of correct storage position sequence
- Robot control

Functions

- Rack information
- Unit information
- Record of quality defects

prod



Visualisation of storage position on rack

ident

Information and Ready Messaging Terminal at the Production

The main function of ident is to inform the user within the production about relevant details resp. to register remakes and ready messages and transfer the information to the ERP system. The program also supplies work step specific information (e.g. shape position) and generates control codes for machines from third-party suppliers.

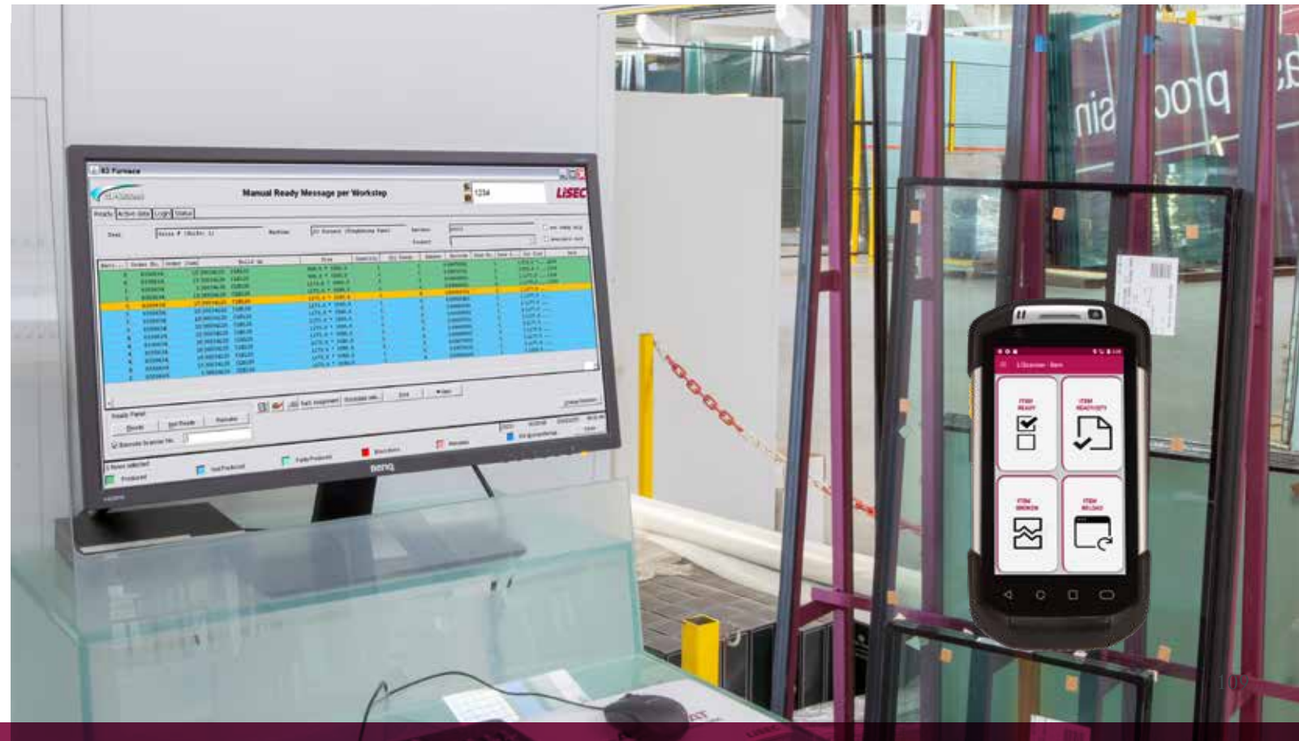
Highlights

- Paperless production list
- Ready messages to release capacities and actualization of the status e.g. for an order
- Remake messages for fast post-produciton
- Detail display for shapes and processings for error prevention
- Higher flexibility through real time adaptation at production planning

Functions

- Display of production drawings
- Entry of rack number and stock location
- Entry of remakes
- Online connection to processing machines
- Synchronising to other ident
- Material management
- Label printout (switching production / customer label)
- Status display

prod



SERVICE

Machines and systems for flat glass processing are in use for many years, sometimes even for decades. Ongoing maintenance and optimisation are essential to keep performance, efficiency and availability at a consistently high level and to ensure high-quality glass products.

Services

We offer you worldwide service and the fastest possible supply of spare parts.

From machine installations to modernization of existing systems, we offer a wide range of services, and stay on your side as a competent and reliable partner throughout the entire life cycle of your systems. Whether you need a customized training program, detailed machine inspections, online support, spare parts or upgrades – the LiSEC service team will take care of it for you.

Facts & figures:

- 160 service engineers worldwide
- 28 branch offices/representatives
- Service for around 390 different machine types
- Approx. 4,700 customer locations in over 100 countries worldwide
- The largest global service network in the glass industry
- One-of-a-kind in the industry: Competence through operators‘ know-how

Service Products

- Online Support
- Hotline
- Service / Maintenance
- Training
- Long Life
- Spare parts
- Installation
- Repairs

Hotline

LiSEC attributes great importance to customer efficiency from the very beginning.

The company is now taking it to a new level of quality.

Monday - Thursday	07:00 a.m. - 04:30 p.m. (CET)
Friday	07:00 a.m. - 12:00 a.m. (CET)
Phone:	+43-7477 405-5701
E-Mail:	aftersales@lisec.com

Online Support

Preventive check-ups and maintenance ensure high plant availability, keep production output at the desired level and prevent unexpected plant downtimes.

Sunday 10:00 p.m. – Friday 09:00 p.m. (CET)

Phone:	+43-7477 405-5701
E-Mail:	aftersales@lisec.com

Emergency contact for urgent issues outside our working hours:

Saturday	6:00 a.m. – 10:00 p.m. (CET)
Sunday	6:00 a.m. – 10:00 p.m. (CET)
Phone:	+43-7477 405-5701

LiSEC Glass Forum

Competence Center for research, production and training in the field of flat glass processing

Facts and figures:

- Opened October 2015
- Latest LiSEC technologies
- 70 employees
- Investment: 7 million € since 2015
- 15 million Euros turnover
- Approx. 100 customer visits per year
- Glass storage with 96 rack positions
- 3 insulating glass lines
- 3 cutting lines for float, laminated and special glass
- Two AEROFLAT tempering furnaces
- Automatic sorting/shuttle logistics
- Planned ahead maintenance schedule
- Automatic production planning and machine addressing

The new LiSEC Competence Center for research, production and training in the field of flat glass processing was opened in Hausmening at the end of 2015. It aligns completely with the LiSEC claim „Best in Glass Processing“. The Competence Center „Glass Forum“ makes LiSEC the only machine manufacturer on the market who profitably processes flat glass. This operator know-how allows LiSEC to share and therefore fully understand their customers‘ problems and challenges.

The „Glass Forum“, a LiSEC investment of approximately seven million Euros, accommodates the latest LiSEC technologies for each step of glass processing – from cutting and edge processing to a sophisticated sheet logistics system to the production of insulating glass units and laminated safety glass including tempering. In the Glass Forum, flat glass is processed under real life production conditions. The state-of-the-art plants and software applications are also used for research, testing and training.

LISEC Austria GmbH
Peter Lisec Straße 1
A-3353 Seitenstetten
Austria

+43-7477 405-0 Tel
+43-7477 405-40 Fax
sales@lisec.com Mail
www.lisec.com Web

12/18