

PCB Board Handling Catalogue

ADOPT^{SMT}
Board Handling



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Genius PCB handling system

FlexLink offers a complete line of PCB handling units which incorporate standard assembly features throughout the product range. All modules are CE marked.

The PCB product line incorporates modular stand-alone units that are truly independent from other modules in the system. Each module has an on-board control system which allows the unit to function independently. Each module is able to be linked to other modules in the system by utilizing their up line and down line SMEMA communication. The modules can also be linked to a higher level monitoring or routing system by utilizing a host control system.

A complete range

These high throughput modules provide transport, product buffering/accumulation and a full range of handling and routing alternatives.

The “open transfer” belt driver system eliminates shafts and bellows by incorporating a dual motor, ESD safe belt system. The motorized jog width adjust system serves as the base platform for all products.

Optional platform available, dual lane configuration and large board format 24”/609.6 mm.

The flexibility and quality of this system allows FlexLink to offer one of the most technically advanced conveyor platforms in the business.

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Patents

Essential parts of the FlexLink product range are protected by patents and design regulations. Drawings are made to European standards.

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Genius PCB handling system

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GENIUS 1-SL



Single magazine line loader

The GENIUS 1-SL Single Magazine Line Loader is the ideal solution for streamlined and reliable PCB magazine loading in low-volume applications or bottom-side processes. Designed with simplicity and efficiency in mind, this compact unit accommodates a single magazine, which is easily accessible from the front for quick operation and setup.

Equipped with advanced features like a user-friendly touchscreen interface and programmable settings, the 1-SL ensures optimal flexibility and control in your SMT line. Whether you're handling specialty products or short runs, this loader delivers consistent performance and ease of use.

Optimize your PCB loading process with the GENIUS 1-SL — where simplicity meets smart automation.

STANDARD FEATURES

- Intuitive Touchscreen Display: Simplifies operation and provides real-time function and alarm feedback.
- Programmable Motorized Width Adjustment: Ensures precise setup with minimal effort.
- Automatic PCB Ejection: An electrical pusher slides boards from the magazine efficiently.
- Secure Magazine Clamping: Manual upper and lower clamps lock the magazine in place for stable loading.
- Programmable Pitch Setting: Customize pitch intervals to match production needs.
- Tower Light & Alarm Indicators: Instantly communicate machine status to operators.
- SMEMA Interface: Seamless integration with other SMT line equipment.
- ESD-Safe Design: Transparent windows and a hinged cover with safety interlock protect sensitive components and operators.

GENIUS 1-SL

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	460mm (Depending on magazine model)
Interface	SMEMA
Transfer direction	Left to Right/Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 460mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	50 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine specification

Buffer capacity	1 magazine
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each (including PCBs)	Max 60 kg (132 lbs)
Other sizes and types available upon request.	

Installation

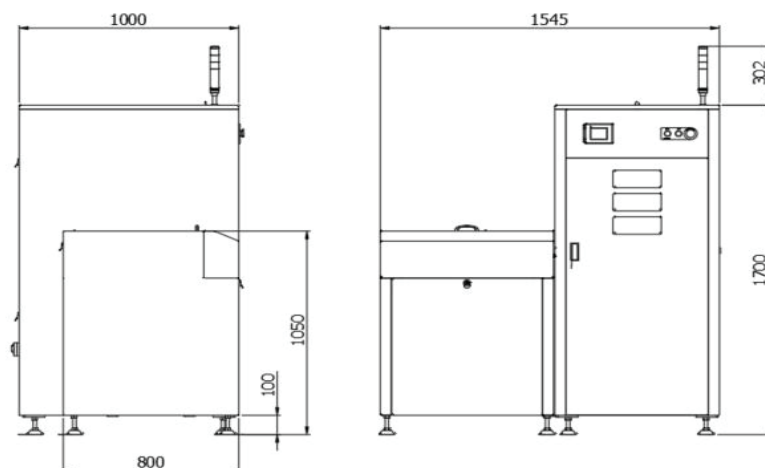
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.6 kW
Air pressure	N/A

Machine dimension

Length x Width x Height	1545 x 1000 x 1700mm
Nett weight	265kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available
- Combined Loader/Unloader function with outfeed conveyor. For unloading and loading PCBs from and into same slot
- AMR (Autonomous Mobile Robots) integration for loading/unloading magazine



GENIUS 1-ML



Multi magazine line loader

GENIUS 1-ML Multi Magazine Line Loader is engineered for high-volume SMT production environments where efficient, continuous PCB loading is critical. Designed to accommodate up to five magazines, this robust unit offers increased storage capacity and minimizes line interruptions, making it ideal for demanding applications.

Magazines are easily accessed from the side of the machine, enabling quick reloads and seamless operation. With automated features and user-friendly controls, the GENIUS 1-ML enhances productivity while maintaining precise and reliable board handling.

Maximize throughput and reduce manual intervention with the GENIUS 1-ML — the smart solution for high-volume PCB magazine loading.

STANDARD FEATURES

- Large Magazine Capacity: Handles up to 5 magazines for extended operation and reduced downtime.
- Automated PCB Ejection: An integrated electrical pusher reliably slides PCBs from the magazine into the production line.
- Secure Rack Locking: Pneumatic upper and lower clamps ensure stable and accurate magazine positioning.
- Programmable Pitch Settings: Easily adjust for various board sizes and process requirements.
- Intuitive Touchscreen Interface: Provides clear operational control and real-time alarm notifications.
- Tower Light & Alarm System: Keeps operators informed of machine status at a glance.
- SMEMA-Compatible: Ensures seamless integration with other automated line equipment.
- ESD-Safe Construction: Includes transparent ESD windows to protect sensitive electronic components.

GENIUS 1-ML

Machine configuration

	1-ML-3	1-ML-5
Transport height	950mm $\pm$ 50mm	950mm $\pm$ 50mm
Max. transport width	460mm (Depending on magazine model)	460mm (Depending on magazine model)
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Fixed rail	Front of machine	Front of machine
Colour	RAL 9016	RAL 9016

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 460mm	50- 460mm
Panel thickness	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm
Panel weight	up to 3kg	up to 3kg

PCB handling

Buffer capacity	50 PCBs (pitch 10 mm) per magazine	50 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec	Approx. 7 sec
Magazine changeover time	Approx. 20 sec	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	3 magazines	5 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg including PCBs	Max 60 kg including PCBs
Notes	Other sizes and types available upon request.	

Installation

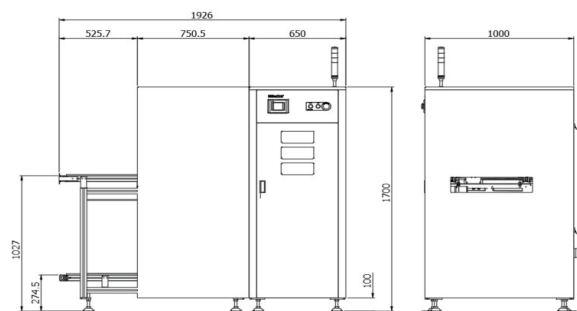
Power supply	110V 50Hz / 230V 60Hz $\pm$ 10%	110V 50Hz / 230V 60Hz $\pm$ 10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.7 kW	0.7 kW
Air pressure	5 Bar	5 Bar

Machine dimesions

Length x Width x Height	1565 x 1000 x 1700mm	1926 x 1000 x 1700mm
Nett weight	265kg	280kg
Noise Level	< 75dB	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available
- Combined Loader/Unloader function with outfeed conveyor.
For unloading and loading PCBs from and into same slot



GENIUS 1-DL



Dual magazine line loader

The GENIUS 1-DL Dual Magazine Line Loader is designed to streamline the loading of PCBs into your SMT production line. Engineered for low to medium volume applications, this robust unit provides medium-capacity storage with a dual-magazine setup, enhancing productivity while saving floor space.

Magazines can be easily accessed from the side of the machine, allowing for efficient changeover and minimal downtime. Whether your operation involves batch loading or continuous line integration, the GENIUS 1-DL delivers reliable performance with intelligent automation.

STANDARD FEATURES

- Dual magazine configuration for increased capacity
- Programmable motorized width adjustment for fast, precise setup
- Adjustable conveyor speed for flexible line integration
- Intuitive touchscreen interface with function and alarm messages
- Dual servo-driven mechanism for accurate PCB alignment and slot insertion
- Automatic electrical puller system for smooth and accurate PCB extraction from magazines
- SMEMA-compatible for standardized line communication
- ESD-safe sliding cover with safety interlock for operator protection
- Configurable pitch setting for various PCB component heights
- Tower light with alarm for clear machine status indication
- Safety light curtain sensor at magazine load/unload area for enhanced workplace safety

GENIUS 1-DL

Module configuration

Transport height	950mm ± 50mm
Max. transport width	510mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	45 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec
Conveyor speed	Max. 15 m/min adjust

Magazine specifications

Buffer capacity	2 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg including PCBs
Notes	Min. 3 bottom slots in magazine need to be left empty for puller arm mechanism movement

PCB Installation

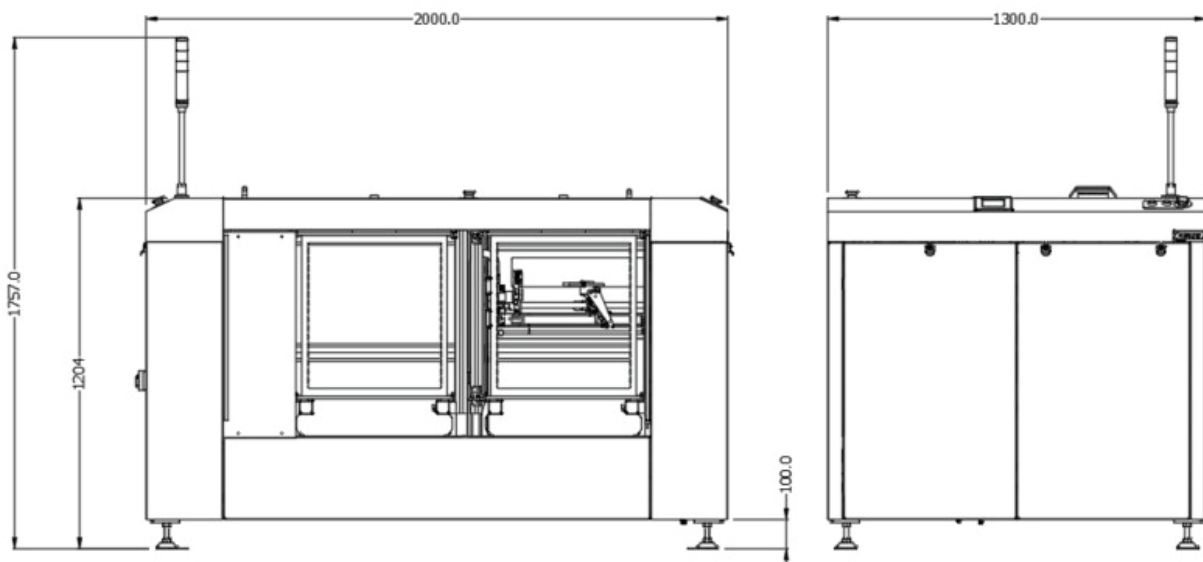
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	1.2 kW
Air pressure	5 Bar

Machine dimension

Length x Width x Height	1300 x 2000 x 1205mm
Nett weight	430kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available
- Additional magazines capacity (small size magazine application)
- Auto magazine clamp for different size magazines simultaneously
- Combined Loader/Unloader function with PCB pusher assembly. For unloading and loading PCBs from and into same slot
- AMR (Autonomous Mobile Robots) integration for loading/unloading magazine



GENIUS 1-TL



Triple magazine line loader

GENIUS 1-TL Triple Magazine Line Loader is designed to streamline the loading of PCBs into your SMT production line. Engineered for medium to high volume applications, this robust unit provides large capacity storage with three magazine setup, enhancing productivity while saving floor space.

Magazines can be easily accessed from the side of the machine, allowing for efficient changeover and minimal downtime. Whether your operation involves batch loading or continuous line integration, the GENIUS 1-TL delivers reliable performance with intelligent automation.

STANDARD FEATURES

- Triple magazine configuration for increased capacity
- Programmable motorized width adjustment for fast, precise setup
- Adjustable conveyor speed for flexible line integration
- Intuitive touchscreen interface with function and alarm messages
- Dual servo-driven mechanism for accurate PCB alignment and slot insertion
- Automatic electrical puller system for smooth and accurate PCB extraction from magazines
- SMEMA-compatible for standardized line communication
- ESD-safe sliding cover with safety interlock for operator protection
- Configurable pitch setting for various PCB component heights
- Tower light with alarm for clear machine status indication
- Safety light curtain sensor at magazine load/unload area for enhanced workplace safety

GENIUS 1-TL

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	510mm
Interface	SMEMA
Transfer direction	Left to Right/Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm
Panel thickness	0.6- 6mm

PCB handling

Buffer capacity	45 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	3 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg including PCBs
Notes	Min. 3 bottom slots in magazine need to be left empty for puller arm mechanism movement

Panel dimensions

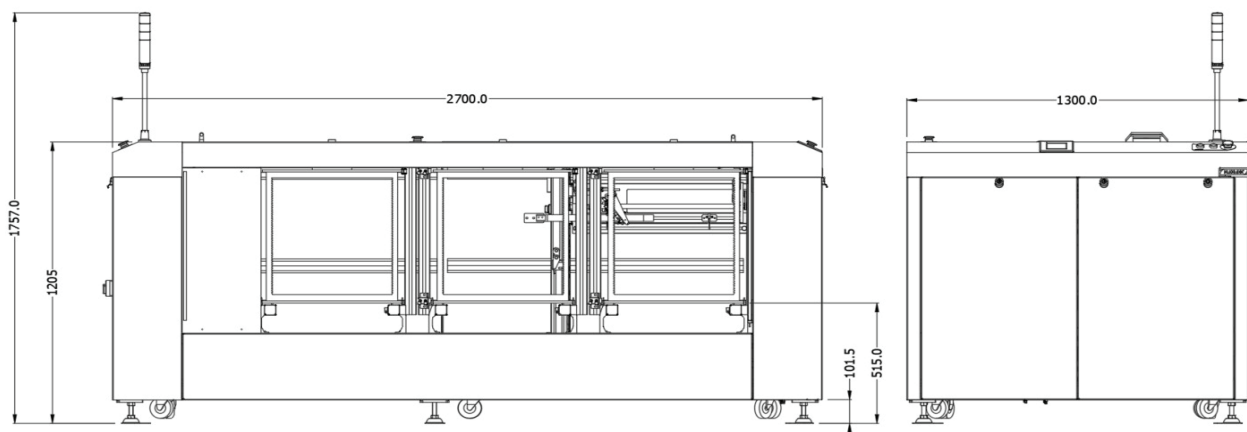
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	1.2 kW
Air pressure	5 Bar

Machine dimensions

Length x Width x Height	1300 x 2700 x 1205mm
Nett weight	480kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available
- Additional magazines capacity (small size magazine application)
- Auto magazine clamp for different size magazines simultaneously
- Combined Loader/Unloader function with PCB pusher assembly. For unloading and loading PCBs from and into same slot
- AMR (Autonomous Mobile Robots) integration for loading/unloading magazine



GENIUS 1-DK



Destacker

Optimizes your production line with the GENIUS 1-DK Destacker, engineered for the reliable introduction of unpopulated PCBs into your manufacturing process. Designed to handle a stack height of up to 200 mm and a load capacity of 15 kg. Stack of PCBs are loaded between the towers. The last PCB at the bottom of the stack is separated using pneumatic blade. The PCB then drop onto the conveyor belt. This robust separation design ensures smooth, efficient operation with a cycle time of approximately 10 seconds per board.

Using a precision-engineered, advanced releasing mechanism, the GENIUS 1-DK Destacker is perfect for all boards which have stable rigidity (0.6 - 6mm thickness).

STANDARD FEATURES

- Quick and easy PCB thickness adjustment for versatile board handling
- Pre-warning alarm before stack went completely empty
- Continuous, uninterrupted loading to minimize downtime
- Motorized jog width adjustment for fast, accurate setup
- Adjustable conveyor speed to match line requirements
- Antistatic edge belts for safe PCB transport
- Full SMEMA compatibility for seamless line integration

GENIUS 1-DK

Machine configuration

	1-DK (STD)	1-DK-HC
Transport height	950mm ± 50mm	950mm ± 50mm
Max. transport width	510mm	510mm
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Fixed rail	Front of machine	Front of machine
Colour	RAL 9016 RAL 9016	

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 510mm	50- 510mm
Panel thickness	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm
Panel weight	up to 3kg	up to 3kg

PCB handling

Stack capacity	200mm	300mm
Max stack weight	30kg	40kg
Cycle time	Approx. 10 sec	Approx. 10 sec
Conveyor speed	Max. 15 m/min adjustable	Max. 15 m/min adjustable

Installation

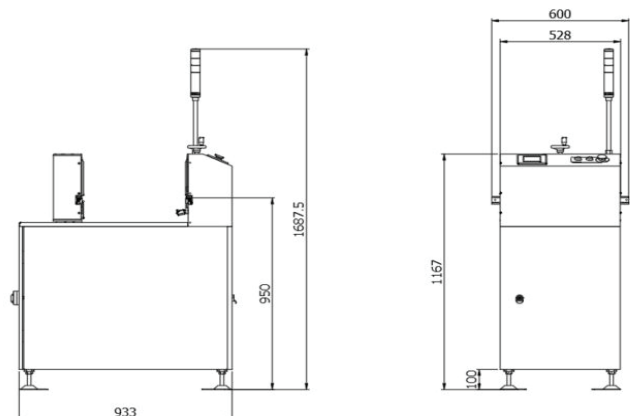
Power supply	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.3 kW	0.3 kW
Air pressure	5 Bar	5 Bar

Machine dimensions

Length x Width x Height	600 x 933 x 1250mm	600 x 933 x 1350mm
Nett weight	150kg	150kg
Noise Level	< 75dB	< 75dB

OPTIONS

- Touchscreen interface
- Individual programmable width adjust
- Network width adjust
- High-Capacity Tower upgrade
- Heavy duty belt & motor for PCB weight up to 10kg
- Large PCB width 610mm available
- HERMES & CFX communication available



GENIUS 1-EB



Edge belt conveyor

Maximize productivity and flawless handling with PCB Edge Belt Conveyor, engineered for seamless integration into SMT production line. These modules transport PCBs accurately between process stations in sync with the production cycle and can hold multiple boards simultaneously, depending on the number of transport segments.

For even higher productivity, all transport modules are also available in a dual-track version to further increase your line capacity.

STANDARD FEATURES

- Edge Belt Conveyor System: ESD belt transfer with adjustable (3 -10mm) contact edges, reducing the risk of damage
- Adjustable Width: Motorized width adjustment accommodates a wide range of PCB sizes for flexible operation.
- Adjustable speed: Conveyor driven by individual motor for each rail with controller card for speed adjustment.
- Belt segments: Multiple drive segment available
- Conveyor length: Custom segment length available
- Inspect function: Operator inspect feature "0/1", "0" means no inspection, "1" means that the module will stop every board at the sensor position.
- Modular Design: Easily integrated into existing SMT lines with standard SMEMA-compatible interfaces.
- Smart Control Options: PLC control & membrane buttons interface for robust, reliable, and precise control.
- Robust Construction: The sturdy, enclosed base frame with an integrated control cabinet that is easily accessible from the rear.

GENIUS 1-EB

Machine configuration

	1-EB-500	1-EB-1000	1-EB-1500
Transport height	950mm ± 50mm	950mm ± 50mm	950mm ± 50mm
Max. transport width	510mm	510mm	510mm
Interface	SMEMA	SMEMA	SMEMA
Transfer direction	Left to Right/Right to Left	Left to Right/Right to Left	Left to Right/Right to Left
Operating side	Front of machine	Front of machine	Front of machine
Fixed rail	Front of machine	Front of machine	Front of machine

Panel dimensions

Panel length	75- 460mm	75- 510mm	75- 510mm
Panel width	50- 510mm	50- 510mm	50- 510mm
Panel thickness	0.6- 6mm	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm	50mm
Panel weight	up to 3kg	up to 3kg	up to 3kg

Installation

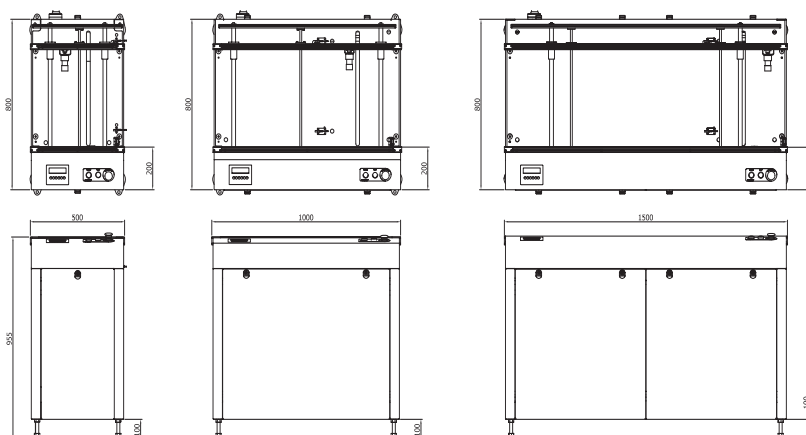
Power supply	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE	L1 + N + PE	L1 + N + PE
Power consumption	0.2 kW	0.2 kW	0.2 kW

Machine dimensions

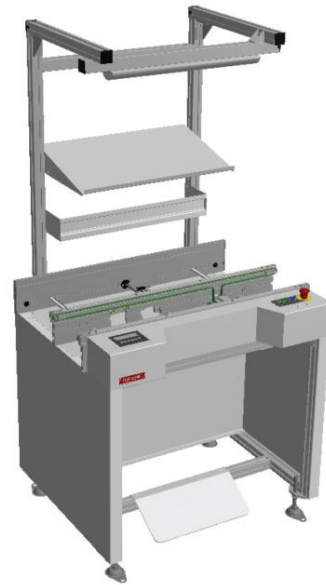
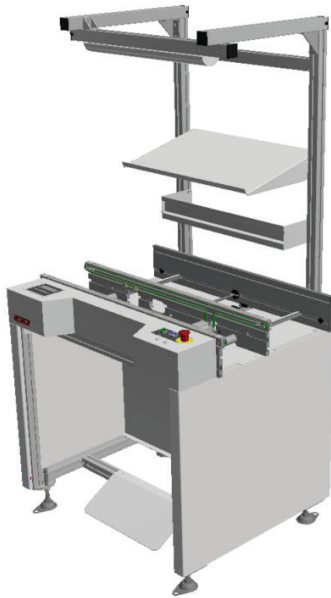
Length x Width x Height	500 x 800 x 955mm	1000 x 800 x 955mm	1500 x 800 x 955mm
Nett weight	80kg	135kg	160kg
Noise Level	< 75dB	< 75dB	< 75dB

OPTIONS

- Touchscreen HMI
- Programmable width adjusts
- Network width adjust
- Programmable inspection interval (0/999) thru HMI
- ESD cover with safety interlock
- Heavy duty belt & motor for PCB weight up to 10kg
- Good/Bad signal sorting function
- Special rails for thin PCB < 0.6mm
- Roller/pin chain upgrade available
- Large PCB width 610mm available
- Cooling fans top/bottom
- Ultrasonic sensors instead of diffuse reflective sensor
- Temperature resistant conveyor belts <150°C
- Various workstation equipment/accessories
- HERMES & CFX communication available



GENIUS 1-WS



Inline workstation

GENIUS 1-WS Inline Workstation is a versatile, configurable solution designed to meet a wide range of workstation needs within your SMT production line. Whether used for operator inspection or fully outfitted with workstation accessories, the 1-WS delivers both functionality and ergonomic design in a compact, inline form.

Built with an ESD-safe work surface and a standard inspection feature, this workstation supports a variety of modular components—giving you the freedom to tailor the station to your exact requirements. It can be deployed as a single-position workstation or expanded with buffer sections for greater line flexibility. For even higher productivity, all transport modules are also available in a dual-track version to further increase your line capacity.

STANDARD FEATURES

- Edge Belt Conveyor System: ESD belt transfer with adjustable (3 -10mm) contact edges, reducing the risk of damage
- Motorized Jog Width Adjustment: Quick and precise width changes for fast line setup.
- Stepper Motor Speed Adjustment: Matches conveyor speed with reflow ovens or upstream/downstream equipment.
- Integrated Inspection Feature: Supports manual visual checks and rework processes.
- Ergonomic Workstation Design: Built-in footrest, adjustable shelves, lighting, and tool rack keep everything within easy reach, improving productivity and operator comfort.
- Modular Design: Easily integrated into existing SMT lines with standard SMEMA-compatible interfaces.
- Smart Control Options: PLC control & membrane buttons interface for robust, reliable, and precise control.
- Robust Construction: The sturdy, enclosed base frame with an integrated control cabinet that is easily accessible from the rear.

GENIUS 1-WS

Machine configuration

	1-WS-1000	1-WS-1500
Transport height	950mm ± 50mm	950mm ± 50mm
Max. transport width	510mm	510mm
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Operating side	Front of machine	Front of machine
Fixed rail	Front of machine	Front of machine

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 510mm	50- 510mm
Panel thickness	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm
Panel weight	up to 3kg	up to 3kg

Installation

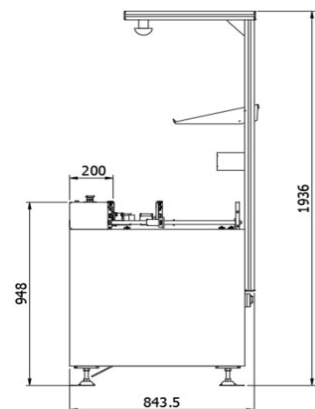
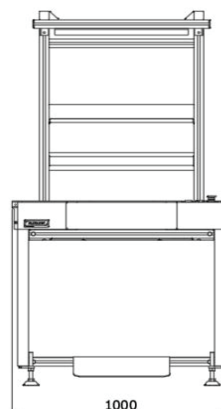
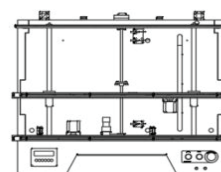
Power supply	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.2 kW	0.2 kW

Machine dimensions

Length x Width x Height	1000 x 850 x 1950mm	1500 x 850 x 1950mm
Nett weight	142kg	160kg
Noise Level	< 75dB	< 75dB

OPTIONS

- Multiple drive segment available
- Custom segment length available
- Touchscreen HMI
- Individual programmable width adjusts
- Network width adjust
- Programmable inspection interval
- ESD cover with safety interlock
- Heavy duty belt & motor for PCB weight up to 10kg
- Good/Bad signal sorting function
- Special rails for thin PCB < 0.6mm
- Roller/pin chain upgrade available
- Large PCB width 610mm available
- Movable bin mounting frame, improve ergonomic when using large PCB format
- Monitor arm and keyboard tray
- HERMES & CFX communication available



GENIUS 1-SC



Scanner conveyor

The GENIUS 1-SC Scanner Conveyor is purpose-built to integrate barcode scanning into your SMT production line with precision and reliability. Designed to accommodate optional barcode scanners on either a manually adjustable X-Y axis or an electrically controlled servo-driven X-Y axis, the 1-SC ensures flexible and accurate scanning performance.

As the PCB travels along the conveyor and is positioned against an optional stopper, the scanner is triggered automatically, capturing barcode data and transferring it to an external system. Once scanning is complete, the PCB continues smoothly to the next stage of production.

Streamline traceability and quality assurance with the GENIUS 1-SC — your intelligent inline barcode scanning solution.

STANDARD FEATURES

- Flexible Scanner Mounting Options: Supports manual or servo-driven X-Y axis for scanner positioning.
- Integrated Conveyor Transport: Ensures consistent PCB positioning for accurate scanning.
- User-Friendly Operation: Intuitive touchscreen panel for mode selection, scanner settings, and diagnostics.
- Inspection Mode: Allows operators to manually verify or recheck scanned data.
- ESD-Safe Design: Protective cover with safety interlock to ensure product and operator safety.
- Optimized Scanning Distance: 100 mm sensing clearance supports efficient inline scanning for most barcode types.

GENIUS 1-SC

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 460mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

PCB loading time	Approx. 12 sec
Conveyor speed	Max. 15 m/min adjustable

Installation

Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.4 kW
Air pressure	5 Bar (If equipped with pneumatic stopper)

Machine dimensions

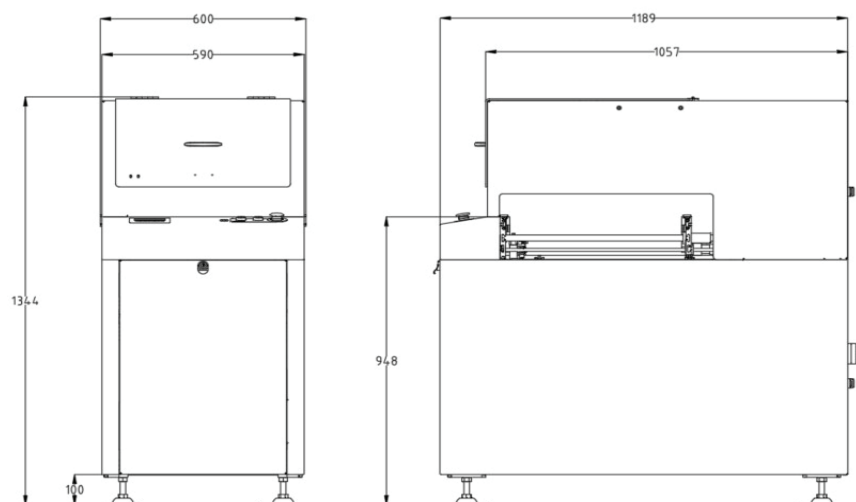
Length x Width x Height	600 x 1190 x 1345mm
Nett weight	200kg
Noise Level	< 75dB

OPTIONS

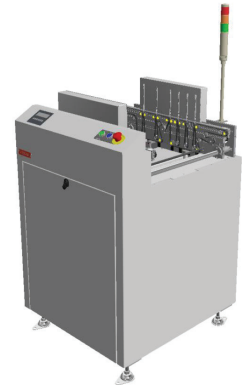
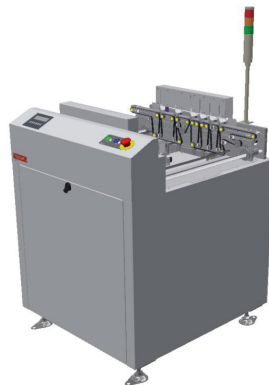
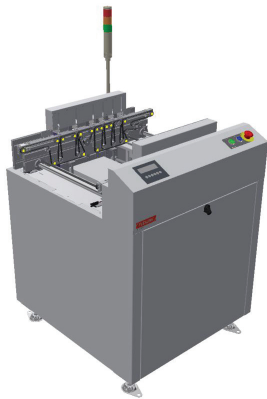
- Manual adjust X-Y Top scanner axis
- Manual adjust X-Y Bottom scanner axis
- Motorized X-Y Top scanner axis
- Motorized X-Y Bottom scanner axis
- Pneumatic stopper cylinder
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Network width adjust
- HERMES & CFX communication available

NOTE

Able to integrate with multiple scanner brands, supplied by user or by FlexLink.



GENIUS 1-RJ



Reject conveyor

GENIUS 1-RJ Reject Conveyor is a smart, space-saving solution designed to isolate and buffer failed PCBs without disrupting the production flow. Connected to inspection systems such as SPI or AOI, it automatically receives good/no-good signals. When a fail signal is detected, the unit's finger lift mechanism raises the rejected board to an inspection tier—allowing operators to quickly review or remove the board while the rest of the line continues operating efficiently. If the operator decides the boards are good, tiers with the boards will be lowered down bringing the boards back into the line.

Available with single tier and three-tier buffer design, the GENIUS 1-RJ maximizes board handling capacity within a compact footprint. It supports network width adjustment for enhanced flexibility in high-mix environments.

Ensure consistent throughput while managing inspection rejects with the GENIUS 1-RJ—an essential module for any high-performance SMT line.

STANDARD FEATURES

- Single & Three-tier buffer capacity
- Finger lift system for fast operator access and inspection
- Automatic good/no-good signal handling from SPI/AOI
- Motorized jog width adjustment for efficient board alignment
- Adjustable conveyor speed for seamless line integration
- Antistatic edge belts to safeguard sensitive assemblies
- SMEMA-compatible for universal connectivity
- Operator-friendly interface and fail-safe operation

GENIUS 1-RJ

Machine configuration

	1-RJ-S1	1-RJ-S3
Transport height	950mm ± 50mm	950mm ± 50mm
Max. transport width	510mm	510mm
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Operating side	Front of machine	Front of machine
Fixed rail	Front of machine	Front of machine

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 510mm	50- 510mm
Panel thickness	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm
Panel weight	up to 3kg	up to 3kg

PCB Handling

Buffer capacity	1 PCB	3 PCBs
Cycle time	Approx. 12 sec	Approx. 12 sec
Conveyor speed	Max. 15 m/min adjustable	Max. 15 m/min adjustable

Installation

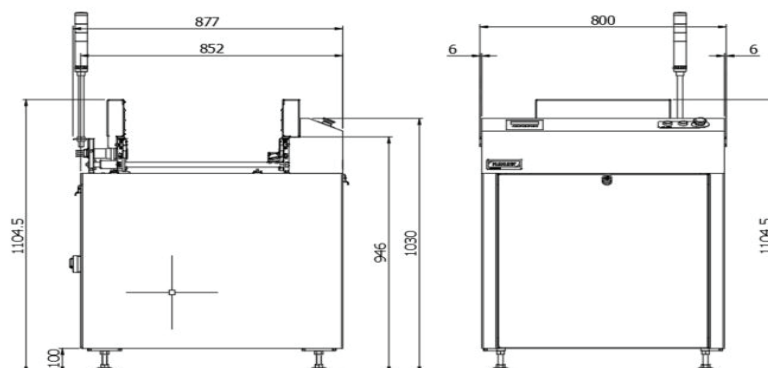
Power supply	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.2 kW	0.25 kW
Air pressure	5 Bar	N/A

Machine dimensions

Length x Width x Height	800 x 880 x 1073mm	1000 x 880 x 1105mm
Nett weight	140kg	160kg
Noise Level	< 75dB	< 75dB

OPTIONS

- Touchscreen HMI
- Individual programmable width adjust
- Network width adjust
- Custom conveyor length >800mm available
- ESD cover with safety interlock
- Large PCB width 610mm available
- HERMES & CFX communication available



GENIUS 1-RB



Reject Buffer

The GENIUS 1-RB Reject Slot-Type Buffer is a next-generation solution designed to streamline the rejection and handling of non-conforming PCBs. The typical place for 1-RB is after the AOI system. The main task is to store bad boards with all relevant information so the AOI operator can rate the inspection result from the AOI on his evaluation/rework station (PC from the AOI supplier, connected to the AOI system). Operator can decide if it was a pseudo error, he can change the board status and mark the board as good and let it continue in the process. Operator also can send it to the dual outlet conveyor for manually inspection or he marks the board as a real bad board and the board will drive to the bad board magazine in the line unloader.

Utilizing an advanced servo-controlled lift and belt-driven slot transport system, the 1-RB delivers precise free board handling with accuracy and smooth board handling. Capable of storing up to 25 rejected boards. Ideal for production lines focused on precision, efficiency, and traceability, the GENIUS 1-RB offers a compact and intelligent solution for managing rejected boards without disrupting line flow.

STANDARD FEATURES

- High-speed servo-controlled lift for accurate positioning
- Belt-driven slot transport system —no pushers, or pullers
- Dual-mode operation: reject buffer and pass-through
- Intelligent good/no-good board sorting with dual outlet levels
- Lower-level transfer for good boards; upper-level reject slot for inspection/removal
- SMEMA-compliant
- Touchscreen interface for intuitive operation and alarm messaging
- Tower light for real-time status display
- ESD-safe design for sensitive electronics environments

GENIUS 1-RB

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	510mm
Interface	SMEMA
Transfer direction	Left to Right/Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	25 PCBs
Buffer Pitch	26 mm
Cycle time	Approx. 10 sec
Conveyor speed	Max. 12 m/min adjust

Installation

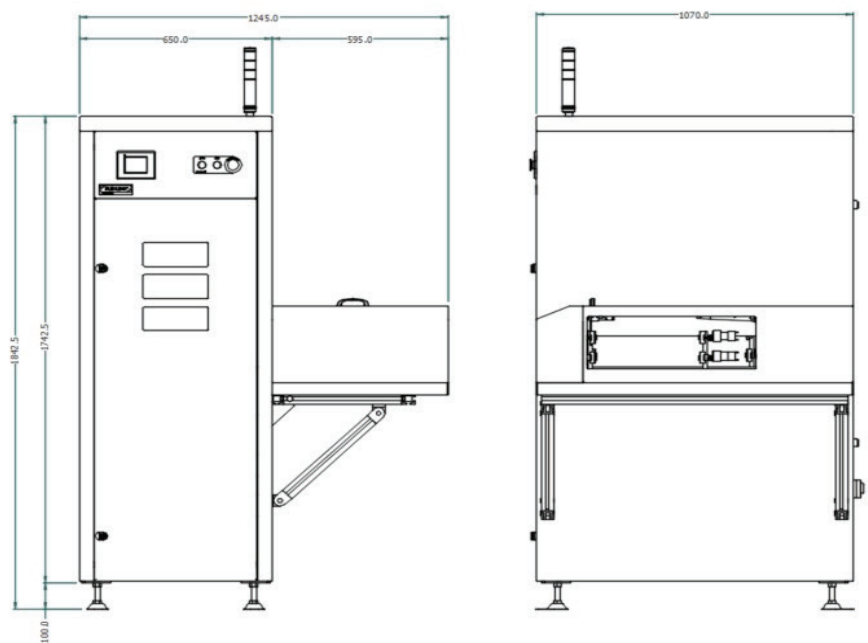
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.9 kW
Air pressure	5 Bar

Machine dimensions

Length x Width x Height	1245 x 1070 x 1845mm
Nett weight	280kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- HERMES & CFX communication available



GENIUS 1-LB



LIFO buffer

GENIUS 1-LB LIFO Buffer is purpose-built to optimize production flow by providing temporary storage for PCBs in Last-In, First-Out (LIFO) order. Whether used to absorb downstream slowdowns or to create a controlled buffer zone, this compact and efficient unit can store up to 25 PCBs ranging in size from 50mm W × 75mm L to 510mm W × 510mm L.

PCBs are received from the upstream conveyor and stored vertically using a precision-driven toothed chain system. On request from downstream equipment, the boards are accurately lowered back onto the conveyor, ready for seamless re-entry into the production line.

The GENIUS 1-LB is an ideal solution for lines requiring intelligent buffering and flexible board handling—keeping your production flow steady and efficient.

STANDARD FEATURES

- LIFO operation for effective buffering of in-process boards
- Holds up to 25 PCBs with configurable pitch selection
- Supports PCB sizes from 50mm W × 75mm L to 510mm W × 510mm L
- Toothed chain lift mechanism ensures smooth and secure vertical transfer
- User-friendly touchscreen for status monitoring and alarm messaging
- Programmable motorized width adjust for fast changeovers
- Adjustable conveyor speed to match production requirements
- SMEMA-compatible for easy line integration
- Tower light and audible alarms for clear machine status indication
- ESD-safe transparent windows for process visibility and protection

GENIUS 1-LB

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimension

Panel length	75- 510mm
Panel width	50- 510mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	25 PCBs
PCB loading time	Approx. 15 sec
Conveyor speed	Max. 12 m/min adjustable
Max. PCB thickness	8 mm at edge contact area

Installation

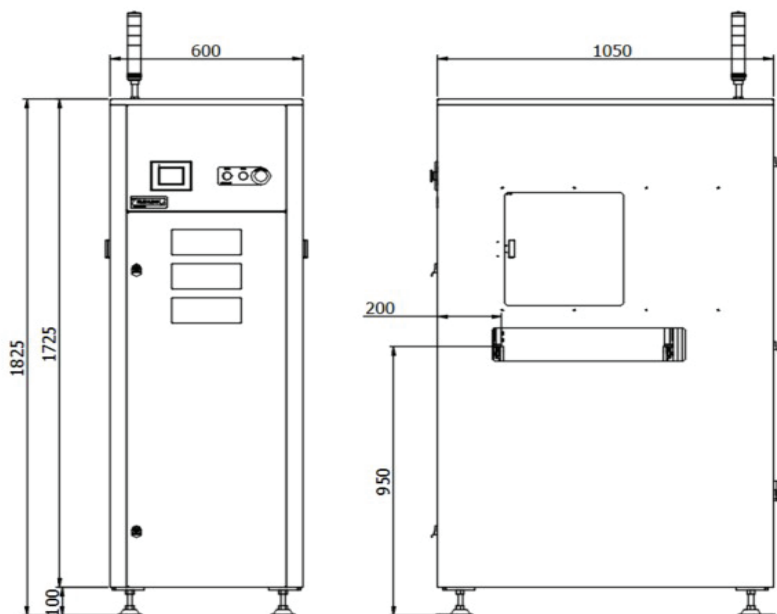
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.8 kW
Air pressure	N/A

Machine dimensions

Length x Width x Height	600 x 1050 x 1825mm
Nett weight	200kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Cooling fan bank
- Infeed conveyor platform
- Outfeed conveyor platform
- Open tower design
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-FB



FIFO/LIFO buffer slot style

GENIUS 1-FB FIFO/LIFO Buffer delivers advanced board handling performance with a high-speed servo-controlled slot transport system that ensures fast and precise PCB movement. Designed to optimize line balancing, cooling, and inspection processes, this module supports FIFO, LIFO, reject buffer, and pass-through modes—all in a compact, maintenance-friendly design.

Unlike traditional systems, the 1-FB eliminates the need for belts, pushers, or pullers, leveraging an innovative slot-based roller transfer system that is both anti-static and magazine-free. With the ability to buffer up to 25 PCBs at 26 mm pitch, it ensures efficient and reliable handling for high-mix, high-speed production environments.

Ideal for SMT lines seeking intelligent buffering with minimal mechanical complexity, the GENIUS 1-FB sets a new benchmark in performance, reliability, and line integration.

STANDARD FEATURES

- Revolutionary slot-style buffer: No magazines, no belts and no mechanical pushers needed
- Antistatic safe transfer rollers for ESD protection
- Servo-controlled lift and programmable motorized width adjust for precision handling
- Multiple operating modes: FIFO, LIFO, reject buffer, and pass-through
- Adjustable conveyor speed and cooling slot timer delay for heat-sensitive assemblies
- ESD-safe transparent covers with built-in cooling fan bank
- Touchscreen interface with tower light and alarm indicators for real-time status
- SMEMA-compatible with upline inhibit signaling
- Configurable pitch settings for flexible PCB storage
- Upline inhibit feature to make sure that no PCB is burning if downstream machines are in trouble OR to ensure that the oven can be

GENIUS 1-FB

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	25 PCBs (pitch 26mm)
PCB loading time	Approx. 12 sec
Conveyor speed	Max. 12 m/min adjustable

Installation

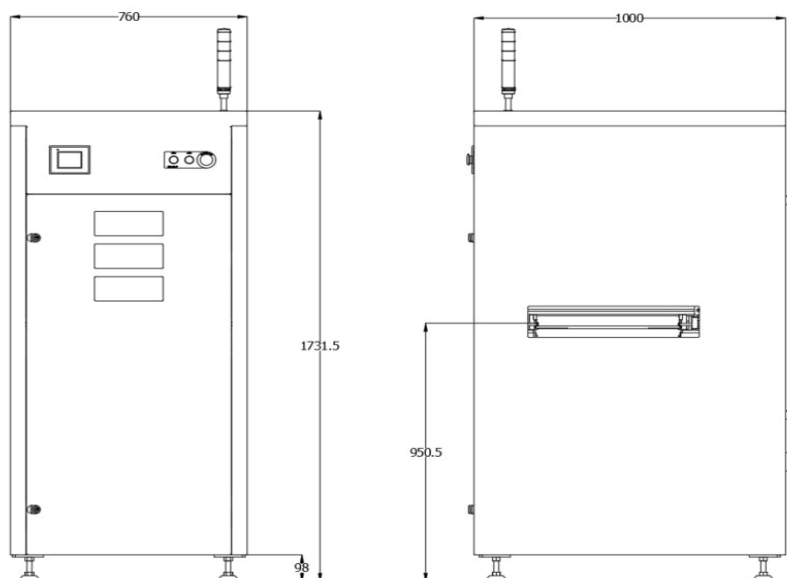
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.9 kW
Air pressure	N/A

Machine dimensions

Length x Width x Height	760 x 1070 x 1733mm
Nett weight	220kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Infeed and/or outfeed conveyor platform
- Shutter doors at inlet or outlet side
- HERMES & CFX communication available



GENIUS 1-FD



FIFO/LIFO buffer belt style

GENIUS 1-FD FIFO Buffer offers advanced inline PCB buffering with a belt-driven slot transport system ideal for handling delicate or warped PCBs. Featuring a high-speed servo-controlled carriage, this module ensures accurate and smooth board positioning across all modes: FIFO, LIFO, reject buffer, and pass-through.

With no magazines, pushers, or pullers required, the GENIUS 1-FD simplifies your production line setup while maintaining exceptional flexibility and reliability. Each of the 25 buffer slots is equipped with an independent driven belt conveyor at 26mm pitch, ensuring stable support and consistent transport—especially for sensitive board types.

Engineered for high-performance SMT environments, the GENIUS 1-FD delivers reliable buffering with enhanced board protection—making it the smart choice for modern electronics manufacturing.

STANDARD FEATURES

- Belt-driven slot system ideal for warped or fragile PCBs
- No magazine required—streamlined operation with minimal mechanical components
- Servo-controlled lift system for fast and precise vertical movement
- Programmable motorized width adjustment for quick product changeovers
- Adjustable conveyor speed and configurable pitch settings for process optimization
- Supports FIFO, LIFO, reject buffer, and pass-through modes
- Cooling delay timers at each slot for thermal management
- Touchscreen interface with real-time tower light and alarm display
- SMEMA-compatible with upline inhibit signal
- ESD-safe transparent windows and integrated cooling fan bank
- Upline inhibit feature to make sure that no PCB is burning if downstream machines are in trouble OR to ensure that the oven can be unloaded under all circumstances

GENIUS 1-FD

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	25 PCBs (pitch 26mm)
PCB loading time	Approx. 12 sec
Conveyor speed	Max. 12 m/min adjustable

Installation

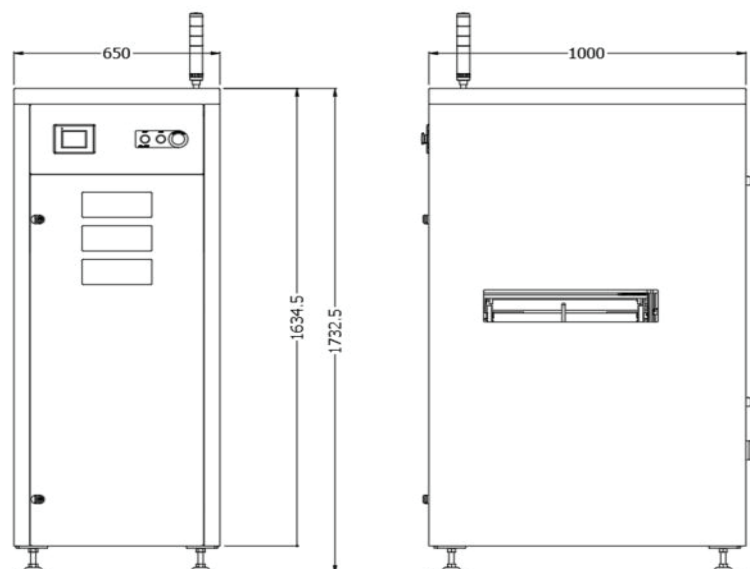
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.9 kW
Air pressure	5 Bar

Machine dimensions

Length x Width x Height	650 x 1070 x 1733mm
Nett weight	230kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Infeed and/or outfeed conveyor platform
- Shutter doors at inlet or outlet side
- HERMES & CFX communication available



GENIUS 1-CB



Single magazine combo buffer pass-through

GENIUS 1-CB Single Magazine Combo Buffer is a highly adaptable inline solution designed to optimize PCB flow within your SMT production line. Whether used for FIFO, LIFO, reject buffering, or simple pass-through operation, this module provides smart, space-efficient buffering with minimal operator intervention.

Capable of handling a single magazine, easily accessed from the front of the machine, the 1-CB is ideal for managing board flow between critical processes—while maintaining flexibility, ESD protection, and automated operation in a compact footprint.

Streamline your board flow with the GENIUS 1-CB — the intelligent, all-in-one buffer and pass-through solution for dynamic production environments.

STANDARD FEATURES

- Multi-Mode Operation: Supports FIFO, LIFO, reject buffer, and pass-through modes for ultimate line flexibility.
- Automatic PCB Handling: An electrical pusher enables smooth insertion into the magazine or back into the line.
- Manual Magazine Clamping: Upper and lower clamps provide secure magazine positioning.
- Programmable Pitch Control: Customize pitch settings for varying board sizes and spacing needs.
- Motorized Width Adjustment: Ensures quick adaptation to different PCB widths.
- Adjustable Conveyor Speed: Synchronizes with upstream and downstream equipment.
- Touchscreen Interface: Intuitive display offers easy control and instant alarm messaging.
- Tower Light & Alarm System: Clearly indicates machine status to operators.
- ESD-Safe Design: Features antistatic edge belts, transparent ESD windows, and a hinged cover with safety interlock.
- SMEMA Interface: Provides seamless integration into existing SMT lines.

GENIUS 1-CB

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	460mm (Depending on magazine model)
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 460mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity per magazine	50 PCBs (pitch 10 mm)
PCB loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	1 magazine
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg (132 lbs) including PCBs
Notes	Other sizes and types available upon request.

Installation

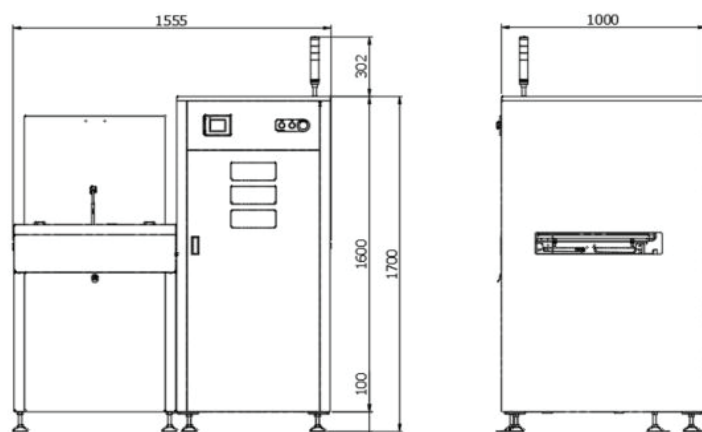
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.8 kW
Air pressure	N/A

Machine dimensions

Length x Width x Height	1555 x 1000 x 1700mm
Nett weight	300kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-MB



Multi magazine combo buffer pass through

GENIUS 1-MB Multi Magazine Combo Buffer is a powerful inline solution designed to manage PCB flow efficiently in high-volume SMT production environments. With the capability to handle up to five magazines, this flexible module supports FIFO, LIFO, reject buffering, and pass-through modes—making it the ultimate tool for optimizing process flow and maximizing uptime.

Magazines are conveniently accessed from the front of the machine, while robust automation and intuitive controls ensure consistent, hands-free operation. Designed for scalability, speed, and safety, the 1-MB is an ideal choice for demanding lines that require intelligent board buffering with high storage capacity.

Empower your production line with the GENIUS 1-MB — the smart, scalable buffer solution for efficient, uninterrupted PCB handling in complex manufacturing environments.

STANDARD FEATURES

- High-Capacity Magazine Handling: Accommodates up to 5 magazines for extended buffering capability.
- Flexible Buffering Modes: Supports FIFO, LIFO, reject, and pass-through to match a wide range of production scenarios.
- Automated PCB Insertion: Electrical pusher seamlessly loads PCBs into magazines or back into the line.
- Pneumatic Rack Locking: Upper and lower clamps provide secure, stable magazine positioning.
- Programmable Pitch Control: Easily adjusts for different PCB sizes and spacing requirements.
- Motorized Width Adjustment: Rapid setup changes to accommodate a variety of board widths.
- Adjustable Conveyor Speed: Enables smooth, synchronized operation with other line equipment.
- User-Friendly Touchscreen: Offers intuitive control, real-time machine status, and alarm notifications.
- ESD-Safe Construction: Includes antistatic edge belts, ESD-safe materials, and a hinged safety-interlocked cover.

GENIUS 1-MB

Machine configuration

	1-MB-3	1-MB-5
Transport height	950mm $\pm$ 50mm	950mm $\pm$ 50mm
Max. transport width	460mm (Depending on magazine model)	460mm (Depending on magazine model)
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Fixed rail	Front of machine	Front of machine
Colour	RAL 9016	RAL 9016

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 460mm	50- 460mm
Panel thickness	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm
Panel weight	up to 3kg	up to 3kg

PCB Handling

Buffer capacity	50 PCBs (pitch 10 mm) per magazine	50 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec	Approx. 7 sec
Magazine changeover time	Approx. 20 sec	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	3 magazines	5 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg including PCBs	Max 60 kg including PCBs
Notes	Other sizes and types available upon request.	

Installation

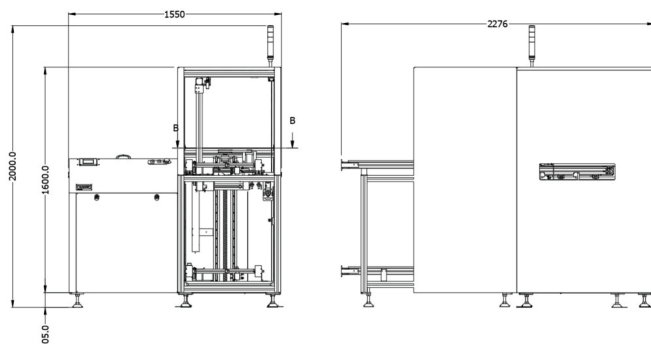
Power supply	110V 50Hz / 230V 60Hz $\pm$ 10%	110V 50Hz / 230V 60Hz $\pm$ 10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.95 kW	0.95 kW
Air pressure	5 Bar	5 Bar

Machine dimensions

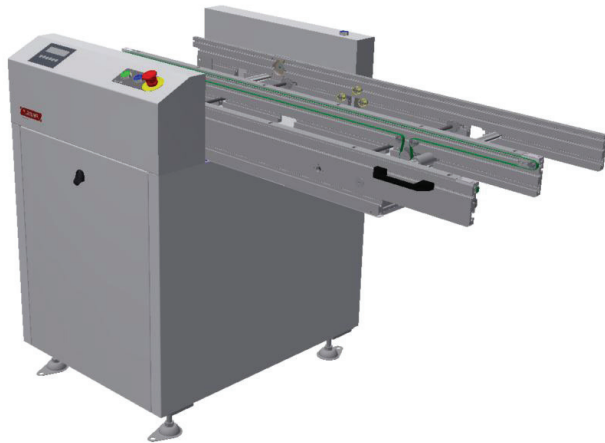
Length x Width x Height	1550 x 1776 x 1700mm	1550 x 2276 x 1700mm
Nett weight	350kg	380kg
Noise Level	< 75dB	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-LG



Lift gate conveyor

GENIUS 1-LG Lift Gate is a practical and cost-effective solution designed to create a seamless opening in your SMT production line, allowing operator access without disrupting workflow.

Engineered with a smooth, counterbalanced lift mechanism supported by a dual gas strut assembly, the gate opens effortlessly for manual pass-through. Equipped with motorized jog width adjustment, adjustable conveyor speed, and a smart locking system where the locking mechanism will not be released until the board is cleared from the conveyor. This ensures board safety during transport and prevent accidental opening of the lift gate. The GENIUS 1-LG enhances both safety and convenience. Its wireless communication and SMEMA compatibility ensure easy integration into any modern SMT line.

Ideal for production lines requiring occasional operator access while maintaining flow efficiency and process integrity.

STANDARD FEATURES

- Manual operator pass-through gate
- Motorized jog width adjustment
- Adjustable conveyor speed for process control
- Counterbalanced lift with gas strut for effortless opening
- Inspect function - Operator inspect feature
- Integrated locking system for board security
- Wireless SMEMA operation for flexible connectivity

GENIUS 1-LG

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Cycle time	Approx. 12 sec
Conveyor speed	Max. 15 m/min adjustable
Opening method	Manual counterbalance with gas spring assist

Installation

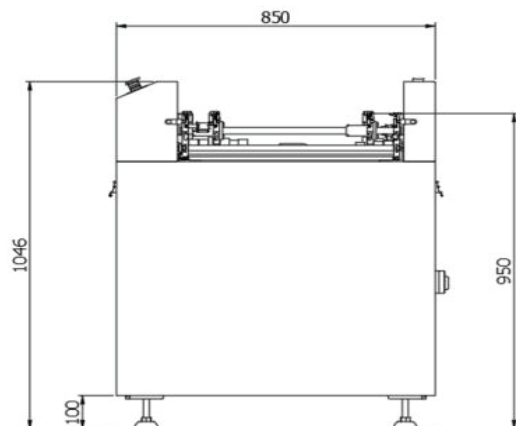
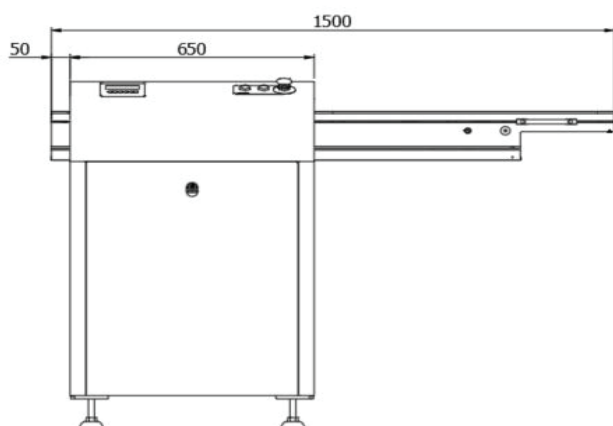
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.2 kW
Air pressure	5 Bar

Machine dimensions

Length x Width x Height	1500 x 850 x 1050mm
Nett weight	180kg
Noise Level	< 75dB

OPTIONS

- Touchscreen interface
- Individual programmable width adjusts
- Network width adjust
- ESD sliding cover with interlock for conveyor segment
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-SG



Shuttle gate

GENIUS 1-SG Shuttle Gate is an advanced automation solution designed to create a safe and efficient aisle opening within a production line.

1-SG default in retracted position, the servo-controlled shuttle mechanism will extend and transfer the PCB when downstream machine ready to receive the board. It will retract upon transfer completion giving aisle access, allowing personnel to pass through. Built with intelligent safety systems, including aisle detection sensors and interlocked ESD-safe sliding covers, the GENIUS 1-SG ensures smooth operation without compromising operator safety.

The GENIUS 1-SG delivers a perfect balance of safety, automation, and functionality, making it the ideal choice for production lines that require both personnel access and reliable board handling.

STANDARD FEATURES

- Normally closed configuration for uninterrupted production flow
- Servo-controlled shuttle movement ensures smooth and precise extension
- Programmable extension stroke for flexible line integration
- Aisle detection sensors for continuous safety monitoring
- Motorized programmable width adjustment for multi-product handling
- Adjustable conveyor speed with antistatic edge belts
- Touch screen interface for user-friendly operation
- ESD-safe sliding covers with safety interlock
- Wireless communication and full SMEMA compatibility

GENIUS 1-SG

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Cycle time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable
Opening method	Motorized servo – Programmable extension stroke

Installation

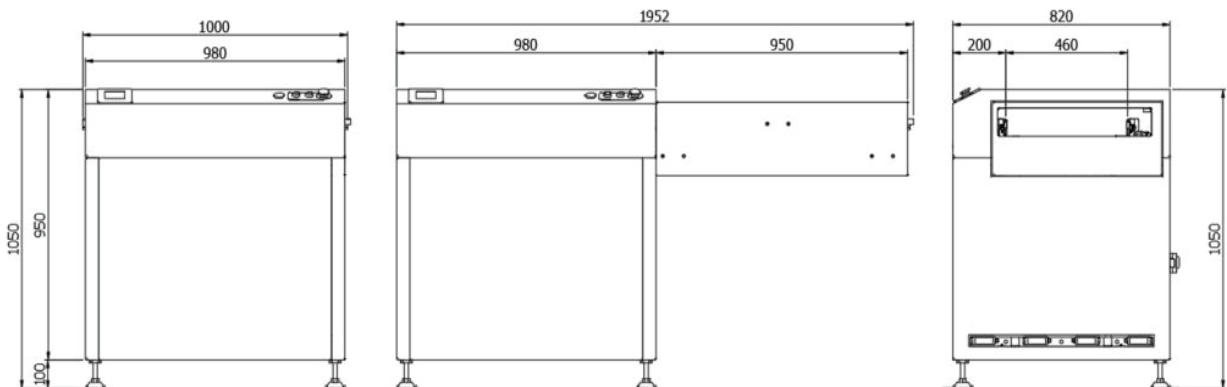
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.5 kW
Air pressure	N/A

Machine dimensions

Length x Width x Height	1000 x 850 x 1050mm (1950 x 850 x 1050mm – Fully extended)
Nett weight	200kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-TG



Telescopic shuttle gate

GENIUS 1-TG Telescopic Shuttle Gate provides a smart and space-efficient solution for creating operator access in high-density SMT production lines. In its normal (extended) position, it acts as a continuous conveyor, transferring PCBs between processes. Upon receiving an open request, the motorized telescopic mechanism retracts smoothly to form a clear aisle for operator passage. With integrated safety sensors and interlocked ESD covers, the GENIUS 1-TG ensures safe and reliable operation at all times.

Designed for advanced production environments, the GENIUS 1-TG offers precision, safety, and flexibility, making it the ideal choice for automation lines requiring smart aisle access without sacrificing performance.

STANDARD FEATURES

- Normally extended for uninterrupted PCB transfer
- Motorized telescopic retraction for efficient aisle creation
- Aisle detection sensors for continuous traffic safety monitoring
- Programmable motorized width adjustment
- Adjustable conveyor speed with antistatic edge belts
- ESD-safe sliding covers with safety interlock
- Wireless operation and SMEMA-compatible interface
- Intuitive touch screen control panel

GENIUS 1-TG

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Cycle time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable
Opening method	Motorized servo

Installation

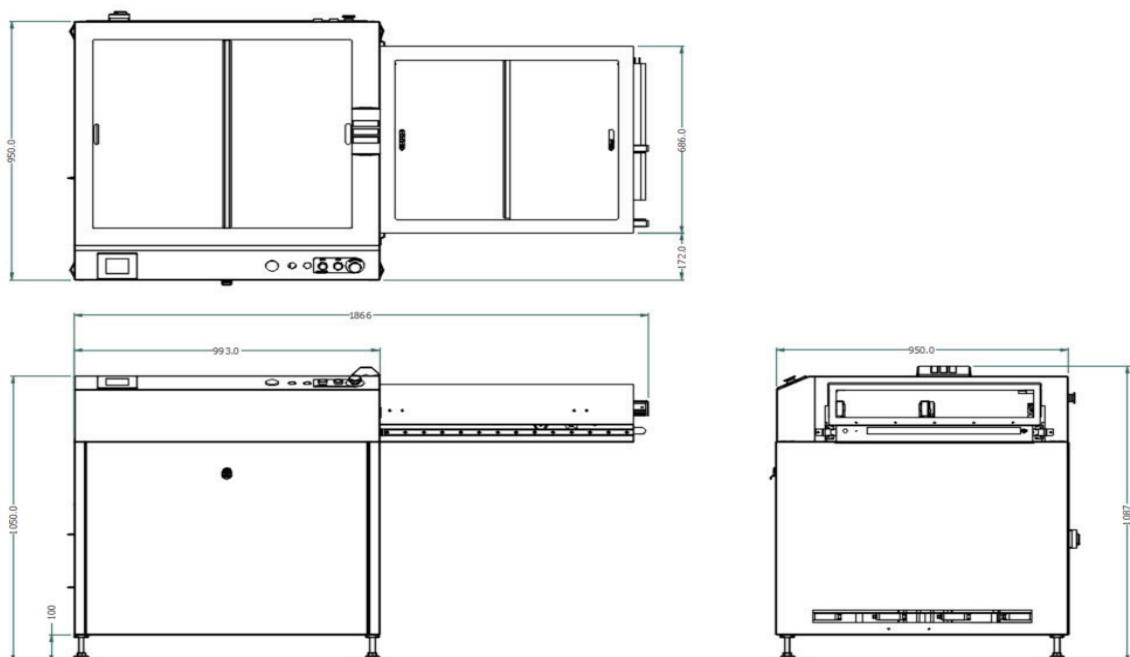
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.6 kW
Air pressure	N/A

Machine dimensions

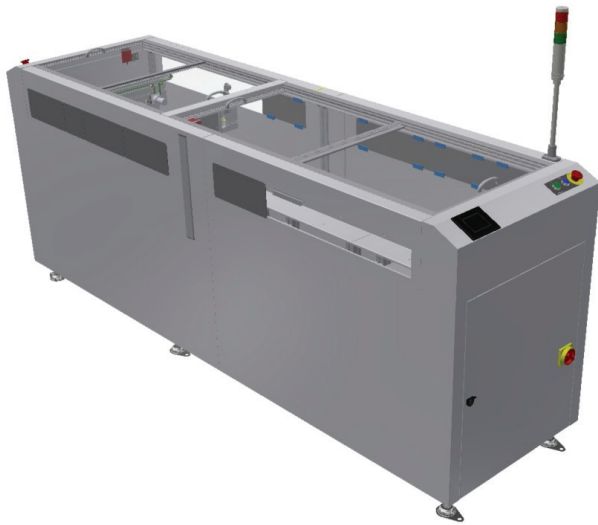
Length x Width x Height	1866 x 950 x 1088mm
Nett weight	220kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-SH



Side shuttle

GENIUS 1-SH Side Shuttle is designed to seamlessly connect production lines that are offset or require flexible routing between multiple downstream processes. With its precision servo-controlled rail-set movement, the 1-SH ensures smooth, accurate, and repeatable board transfers. The unit can buffer one PCB and deliver it to a variety of output positions, making it an ideal solution for dynamic and space-optimized SMT production layouts.

STANDARD FEATURES

- Servo-controlled rail-set movement for smooth and precise positioning
- Programmable shuttle stroke for flexible line configurations
- Programmable motorized width adjustment to accommodate different board sizes
- Adjustable conveyor speed for process optimization
- Antistatic edge belts to ensure ESD-safe handling
- Good/Bad board sorting capability for efficient production flow
- SMEMA interface for easy line integration
- Touch screen interface for intuitive operation and setup
- ESD-safe hinged cover with safety interlock for enhanced operator protection

GENIUS 1-SH

Machine configuration

	1-SH-1000	1-SH-1500	1-SH-Custom
Transport height	950mm ± 50mm	950mm ± 50mm	950mm ± 50mm
Max. transport width	510mm	510mm	510mm
Interface	SMEMA	SMEMA	SMEMA
Transfer direction	Left to Right/Right to Left	Left to Right/Right to Left	Left to Right/Right to Left
Operating side	Front of machine	Front of machine	Front of machine
Fixed rail	Front of machine	Front of machine	Front of machine

Panel dimensions

Panel length	75- 510mm	75- 510mm	75- 510mm
Panel width	50- 510mm	50- 510mm	50- 510mm
Panel thickness	0.6- 6mm	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm	50mm
Panel weight	up to 3kg	up to 3kg	up to 3kg

Installation

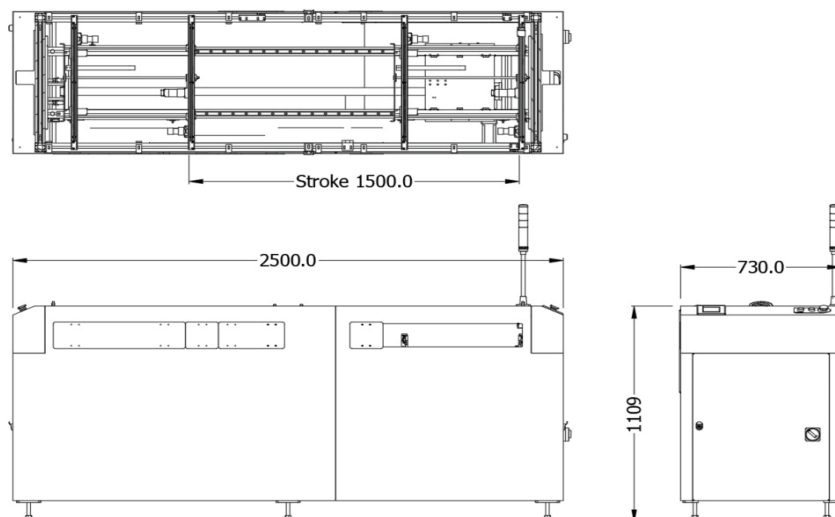
Power supply	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE	L1 + N + PE	L1 + N + PE
Power consumption	0.8 kW	0.8 kW	0.8 kW

Machine dimensions

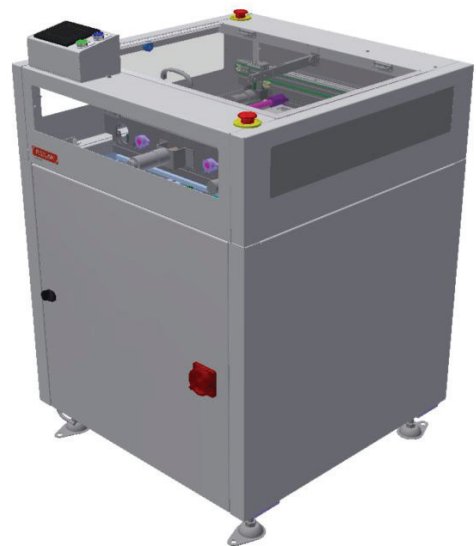
Length x Width x Height	730 x 1920 x 1110mm	730 x 2500 x 1110mm	730 x (Stroke+920) x 1110mm
Nett weight	300kg	350kg	___ kg
Noise Level	< 75dB	< 75dB <	75dB

OPTIONS

- Network width adjust
- Custom shuttle stroke available
- Heavy duty belt & motor for PCB weight up to 10kg
- Special rails for thin PCB < 0.6mm
- Roller/pin chain upgrade available
- Large PCB width 610mm option available
- HERMES & CFX communication available



GENIUS 1-TN



Turn unit

GENIUS 1-TN Turn Unit is a high-speed rotation module designed to redirect PCBs at precise angles, enabling seamless transitions between different segments of your production line. Whether your layout requires a 90° turn, 270°, or straight pass-through, the GENIUS 1-TN adapts effortlessly with programmable, servo-driven rotation and multiple configuration options.

Engineered for maximum flexibility, this unit supports various line flow directions—ideal for space-constrained environments or when implementing good/bad board sorting. With rotation cycle times of less than 15 seconds and a touch-screen interface for intuitive control, the GENIUS 1-TN enhances production agility without compromising speed or accuracy.

Whether used for redirection, sorting, or layout optimization, the GENIUS 1-TN Turn Unit offers the precision and flexibility required in modern SMT production environments.

STANDARD FEATURES

- Fast, servo-controlled board rotation with high positional accuracy
- Supports 0°, 90°, and 270° clockwise/anti-clockwise rotation
- Configurable for 1-in/1-out, 1-in/2-out, or 2-in/1-out line flows
- Enables good/bad board sorting for downstream processing
- Multiple layout options for custom line integration
- Programmable motorized width adjustment
- Adjustable conveyor speed for smooth handoffs
- SMEMA-compatible for easy line communication
- Antistatic edge belts to protect sensitive PCBs
- ESD-safe hinged cover with safety interlock for operator protection
- User-friendly touch-screen control panel

GENIUS 1-TN

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

PCB loading time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable
Rotation	0°, 90°, and 270° clockwise/anticlockwise rotation
Configuration	1-in/1-out, 1-in/2-out, or 2-in/1-out line flows

Installation

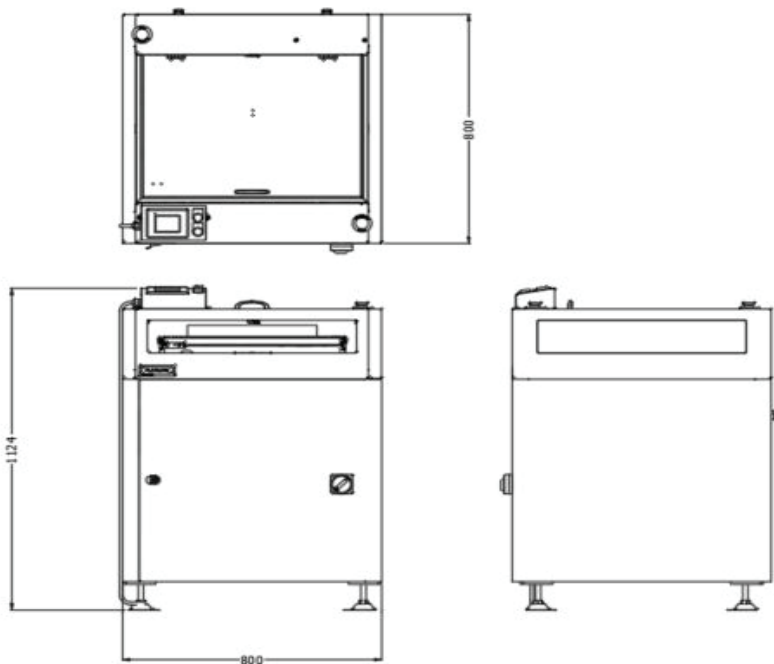
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.8 kW
Air pressure	N/A

Machine dimensions

Length x Width x Height	800 x 800 x 1150mm
Nett weight	180kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Pin chain option for conformal coating application
- HERMES & CFX communication available
- Infeed/outfeed conveyor segment



GENIUS 1-IN



Inverter

GENIUS 1-IN Inverter is a high-performance solution designed for top-side and bottom-side PCB processing in advanced SMT production lines. This intelligent module seamlessly flips PCBs with exceptional speed and precision, thanks to its servo-controlled rotation system and dual-belt support mechanism that cradles the board securely throughout the cycle.

With a cycle time of less than 15 seconds per board, the GENIUS 1-IN maximizes line efficiency while ensuring delicate handling of your valuable assemblies. Its innovative “flip-flip” software control enhances operational flexibility, making it ideal for lines requiring fast, repeatable inversion with minimal mechanical stress.

Whether integrated into a high-mix or high-volume line, the GENIUS 1-IN Inverter delivers the reliability, precision, and speed required for modern electronics manufacturing.

STANDARD FEATURES

- High-speed, servo-controlled board inversion
- “Flip-flip” software for optimized cycle timing
- Active mode selector with pass-through capability
- Dual-belt cradle for secure board handling
- Programmable motorized width adjustment
- Adjustable conveyor speed for line integration
- SMEMA-compatible for plug-and-play connectivity
- Touchscreen user interface for easy operation
- ESD-safe hinged clam shell safety cover design with interlock for easy maintenance access
- Antistatic edge belts to protect sensitive components

GENIUS 1-IN

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

PCB loading time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable

Installation

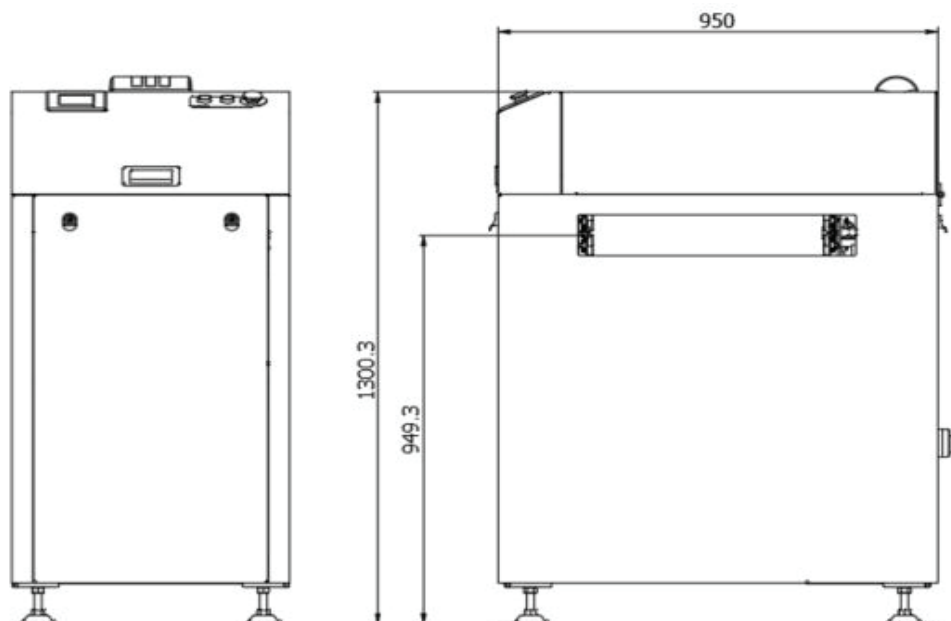
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.8 kW
Air pressure	5 Bar

Machine dimensions

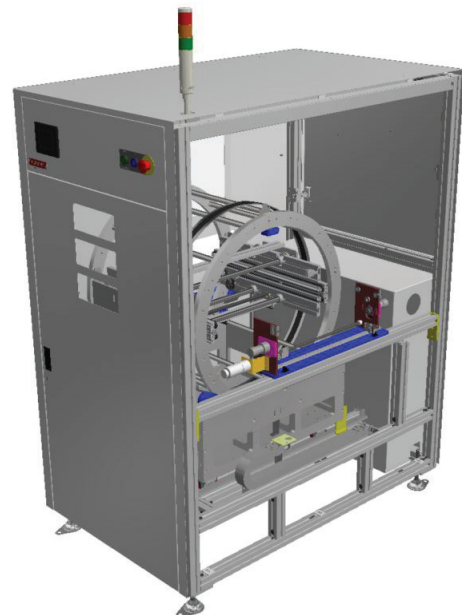
Length x Width x Height	600 x 950 x 1350mm
Nett weight	160kg
Noise Level	< 75dB

OPTIONS

- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Pin chain option for conformal coating application
- HERMES & CFX communication available



GENIUS 1-BR



Barrel Roll Inverter

GENIUS 1-BR Barrel Roll Inverter is purpose-built for applications where leading-edge consistency is critical. Engineered with a high-speed, servo-controlled barrel roll mechanism, this innovative module inverts PCBs while maintaining the leading edge using a servo-driven shuttle system. The two-sided belt support cradles the board during rotation, ensuring smooth handling and protecting delicate assemblies throughout the cycle.

With intelligent motion control and a cycle time of less than 15 seconds per board, the GENIUS 1-BR delivers high-speed performance with unmatched accuracy. Its teachable input/output positions and pass-through mode make it ideal for integration into both standard and complex SMT line configurations.

When leading-edge control, inversion precision, and operational efficiency matter, the GENIUS 1-BR Barrel Roll Inverter is your trusted solution for next-generation PCB handling.

STANDARD FEATURES

- High-speed, servo-controlled barrel roll inversion
- Leading-edge preservation through precision rail matching
- Teachable input/output positions for flexible integration
- Pass-through mode for standard conveyor use
- Programmable motorized width adjustment
- Adjustable conveyor speed for line optimization
- Dual antistatic edge belt system for gentle PCB handling
- ESD-safe covers with safety interlock for operator protection
- SMEMA-compatible for seamless line communication
- Intuitive touch-screen interface
- Patent pending

GENIUS 1-BR

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

PCB loading time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable
Rotation	Invert PCB while keeping the leading edges

Installation

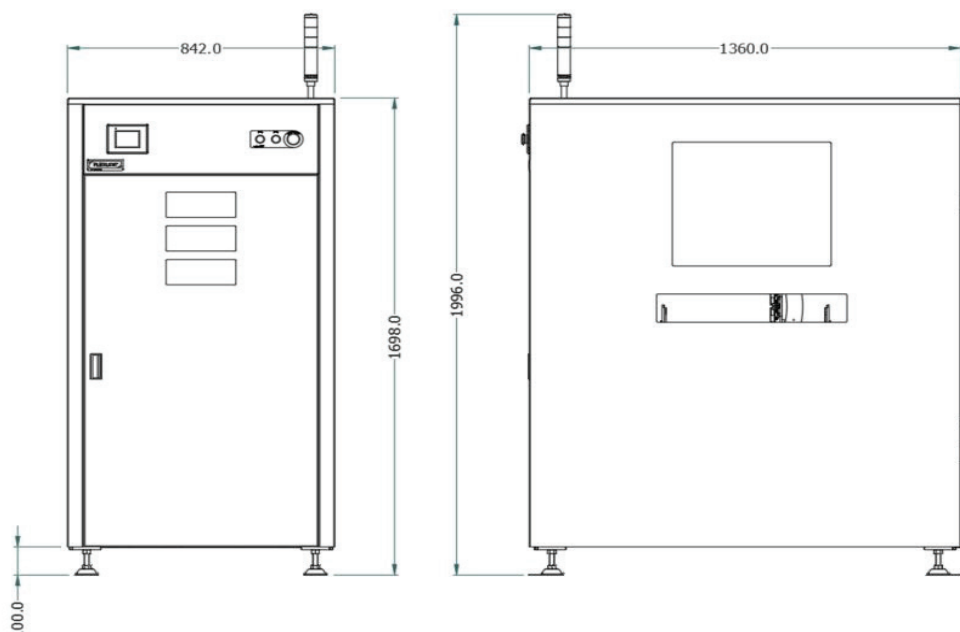
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	1.2 kW
Air pressure	N/A

Machine dimensions

Length x Width x Height	842 x 1360 x 1700mm
Nett weight	240kg
Noise Level	< 75dB

OPTIONS

- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Pin chain option for conformal coating application
- HERMES & CFX communication available



GENIUS 1-RC



Rotation Conveyor

The GENIUS 1-RC Rotation Conveyor is specifically engineered to change the orientation of printed circuit boards (PCBs) by 90°, either clockwise or counterclockwise, ensuring seamless transitions between production processes with differing board flow requirements. 1-RC equipped with precision vacuum/locating pins which will securely hold the board during rotating process. The pins position are adjustable so can also be used for populated boards without additional carrier/specific board mounting.

Utilizing a motorized lifter and rotation system, the unit gently lifts the PCB from the conveyor surface, rotates it in the programmed direction, and precisely places it back onto the conveyor track—all while maintaining strict positional accuracy and handling safety.

Ideal for lines that require flexible orientation changes, the GENIUS 1-RC enhances production efficiency without compromising PCB integrity.

STANDARD FEATURES

- Accurate PCB Rotation: Smooth and precise 90° rotation using a motorized lifter and rotor.
- Servo-Controlled Width Adjustment: Ensures fast setup and reliable board handling for various PCB sizes.
- Pneumatic PCB Stopper: Securely halts the PCB before lift and rotation.
- User-Friendly Interface: Intuitive touchscreen for easy operation, recipe setup, and diagnostics.
- Accessible Design: Hinged top cover for quick maintenance and internal access.
- Visual and Audible Alerts: Equipped with a three-tier beacon with integrated alarm system.
- Wide Board Compatibility:
 - PCB Width: 200 mm to 460 mm
 - PCB Length: 200 mm to 510 mm

GENIUS 1-RC

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	200- 510mm
Panel width	200- 460mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

PCB loading time	Approx. 12 sec
Conveyor speed	Max. 15 m/min adjustable
Configuration	90° clockwise/ anticlockwise rotation, Pass thru

Installation

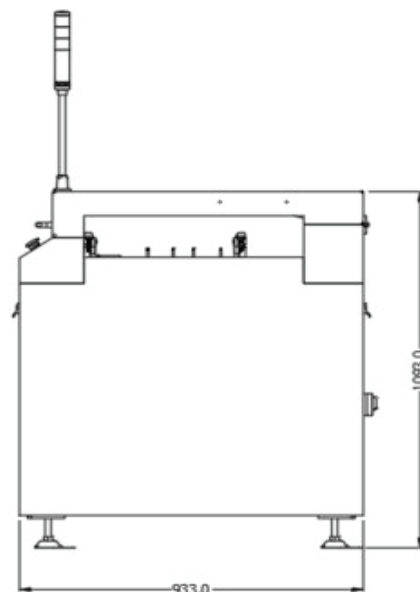
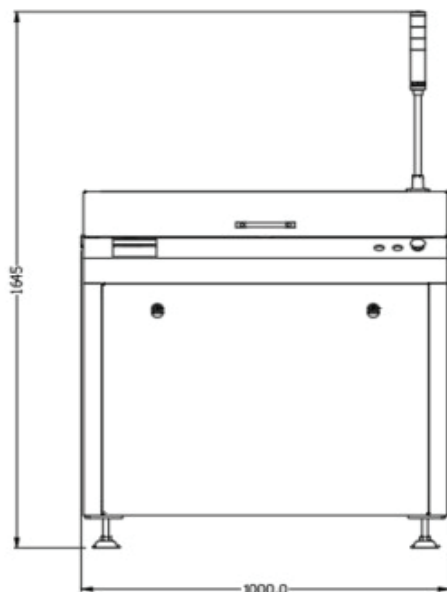
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.8 kW
Air pressure	5 Bar

Machine dimensions

Length x Width x Height	1000 x 933 x 1100mm
Nett weight	200kg
Noise Level	< 75dB

OPTIONS

- Inspection feature
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Network width adjust
- HERMES & CFX communication available



GENIUS 1-RK



Restacker

GENIUS 1-RK Restacker – Fast, Reliable PCB Stacking for Line-End Efficiency
Streamline your production flow with the GENIUS 1-RK Restacker, purpose-built to stack unpopulated/ bare boards efficiently at the end of your manufacturing line.

Designed to accommodate up to a 200 mm stack and a load capacity of 15 kg, this high-performance unit ensures reliable and precise stacking with cycle times of less than 6 seconds per board.

Pneumatic blade lift the board from the transfer belt, finger mechanism will hold the stack. Using the advanced stacking mechanism, the GENIUS 1-RK minimizes handling time while maximizing throughput, making it the ideal solution for high-volume environments.

The GENIUS 1-RK Restacker is well suited for restacking bare boards application example after laser marking in an off-line laser island.

STANDARD FEATURES

- Stack full sensor for automated workflow control
- Continuous, uninterrupted stacking to maintain productivity
- Motorized jog width adjustment for easy setup and versatility
- Adjustable conveyor speed for smooth integration into any line
- Antistatic edge belts to protect sensitive PCBs
- SMEMA interface for plug-and-play compatibility

GENIUS 1-RK

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	510mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.2 kW
Air pressure	5 Bar

Installation

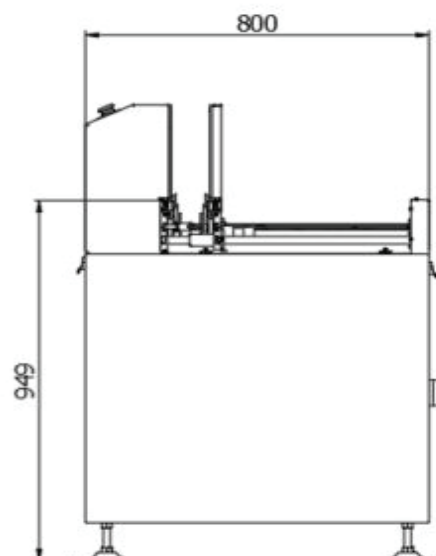
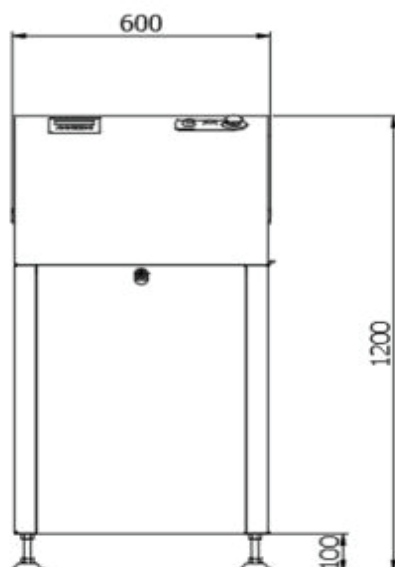
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.2 kW
Air pressure	5 Bar

Machine dimensions

Length x Width x Height	600 x 800 x 1200mm
Nett weight	140kg
Noise Level	< 75dB

OPTIONS

- Touchscreen interface
- Individual programmable width adjust
- Network width adjust
- High-Capacity Tower upgrade (300mm stack height)
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-SU



Single magazine line unloader

GENIUS 1-SU Single Magazine Line Unloader is the ideal solution for efficiently offloading PCBs into a magazine at the end of your SMT production line. Designed for low-volume applications, this compact and budget-friendly unit supports a single magazine, easily accessible from the front for simple operation and quick changeovers.

Despite its small footprint, the 1-SU is packed with smart features that promote ease of use, consistent performance, and operator safety. With automated PCB insertion, programmable settings, and ESD protection, it ensures reliable board handling while maintaining the integrity of sensitive components.

Maximize efficiency in low-volume production with the GENIUS 1-SU — the smart, space-saving solution for reliable PCB unloading.

STANDARD FEATURES

- Intuitive Touchscreen Display: Simplifies operation and provides real-time function and alarm feedback.
- Programmable Motorized Width Adjustment: Ensures precise setup with minimal effort.
- Electrical Pusher: Automatically inserts PCBs into the magazine for hands-free operation.
- Secure Magazine Clamping: Manual upper and lower clamps lock the magazine in place for stable loading.
- Programmable Pitch Setting: Customize pitch intervals to match production needs.
- Tower Light & Alarm Indicators: Instantly communicate machine status to operators.
- SMEMA Interface: Seamless integration with other SMT line equipment.
- ESD-Safe Design: Transparent windows and a hinged cover with safety interlock protect sensitive components and operators.

GENIUS 1-SU

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	460mm (Depending on magazine model)
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 460mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	50 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	1 magazine
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg (132 lbs) including PCBs
Notes	Other sizes and types available upon request.

Installation

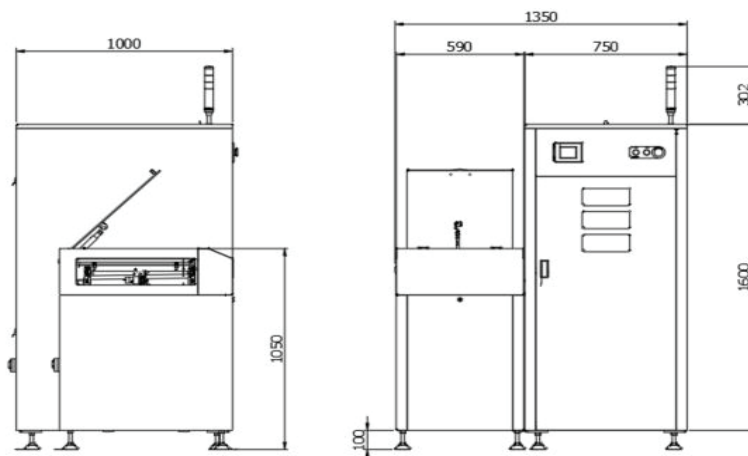
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.6 kW
Air pressure	N/A

Machine dimensions

Length x Width x Height	1350 x 1000 x 1700mm
Nett weight	280kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available
- AMR (Autonomous Mobile Robots) integration for loading/unloading magazine



GENIUS 1-MU



Multi magazine line unloader

GENIUS 1-MU Multi Magazine Line Unloader is designed for efficient end-of-line PCB unloading in high-volume production environments. Engineered for maximum capacity and performance, this robust unit accommodates up to five magazines, which are easily accessible from the side of the machine—offering both convenience and operational efficiency.

With advanced automation and intelligent design, the 1-MU delivers consistent, hands-free board handling, making it a cost-effective solution for manufacturers seeking to scale output without compromising on reliability or board protection.

Boost productivity and reduce manual handling with the GENIUS 1-MU — the smart, scalable solution for high-capacity PCB magazine unloading.

STANDARD FEATURES

- Large Magazine Capacity: Handles up to 5 magazines for extended operation and reduced downtime.
- Automatic PCB Insertion: An electrical pusher ensures precise and efficient board loading into magazines.
- Secure Rack Locking: Pneumatic upper and lower clamps ensure stable and accurate magazine positioning.
- Programmable Pitch Settings: Easily adjust for various board sizes and process requirements.
- Intuitive Touchscreen Interface: Provides clear operational control and real-time alarm notifications.
- Tower Light & Alarm System: Keeps operators informed of machine status at a glance.
- SMEMA-Compatible: Ensures seamless integration with other automated line equipment.
- ESD-Safe Construction: Includes transparent ESD windows to protect sensitive electronic components.

GENIUS 1-MU

Machine configuration

	1-MU-3	1-MU-5
Transport height	950mm $\pm$ 50mm	950mm $\pm$ 50mm
Max. transport width	460mm (Depending on magazine model)	460mm (Depending on magazine model)
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Fixed rail	Front of machine	Front of machine
Colour	RAL 9016	RAL 9016

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 460mm	50- 460mm
Panel thickness	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm
Panel weight	up to 3kg	up to 3kg

PCB handling

Buffer capacity	50 PCBs (pitch 10 mm) per magazine	50 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec	Approx. 7 sec
Magazine changeover time	Approx. 20 sec	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	3 magazines	5 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg including PCBs	Max 60 kg including PCBs
Notes	Other sizes and types available upon request.	

Installation

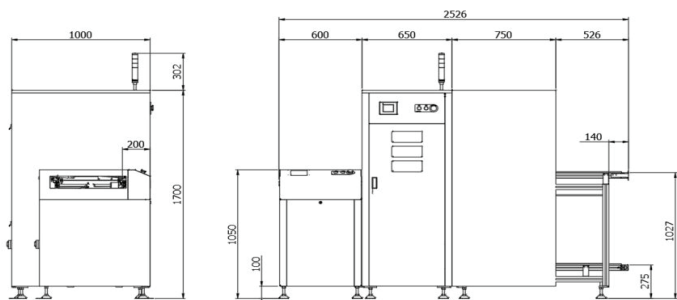
Power supply	110V 50Hz / 230V 60Hz $\pm$ 10%	110V 50Hz / 230V 60Hz $\pm$ 10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.7 kW	0.7 kW
Air pressure	5 Bar	5 Bar

Machine dimesions

Power supply	110V 50Hz / 230V 60Hz $\pm$ 10%	110V 50Hz / 230V 60Hz $\pm$ 10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.7 kW	0.7 kW
Air pressure	5 Bar	5 Bar

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available



GENIUS 1-DU



Dual magazine line unloader

GENIUS 1-DU Dual Magazine Line Unloader is designed for efficient end-of-line PCB handling, offering reliable buffering into two magazines with seamless access from the side of the unit. Ideal for low to medium-high volume production environments, this cost-effective solution provides increased capacity and flexibility while optimizing space and throughput.

Engineered to support advanced inspection processes, the GENIUS 1-DU can be integrated with good/no good sorting functionality for SPI or AOI systems, ensuring that failed PCBs are automatically directed to a designated reject magazine without disrupting the production flow.

STANDARD FEATURES

- Dual magazine configuration for increased capacity
- Programmable motorized width adjustment for fast, precise setup
- Adjustable conveyor speed for flexible line integration
- Intuitive touchscreen interface with function and alarm messages
- Dual servo-driven mechanism for accurate PCB alignment and slot insertion
- Automatic electrical pusher system for smooth magazine loading
- SMEMA-compatible for standardized line communication
- ESD-safe sliding cover with safety interlock for operator protection
- Built-in good/bad board sorting capability
- Configurable pitch setting for various PCB component heights
- Tower light with alarm for clear machine status indication
- Safety light curtain sensor at magazine load/unload area for enhanced workplace safety

GENIUS 1-DU

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	510mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	50 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	2 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg including PCBs

Installation

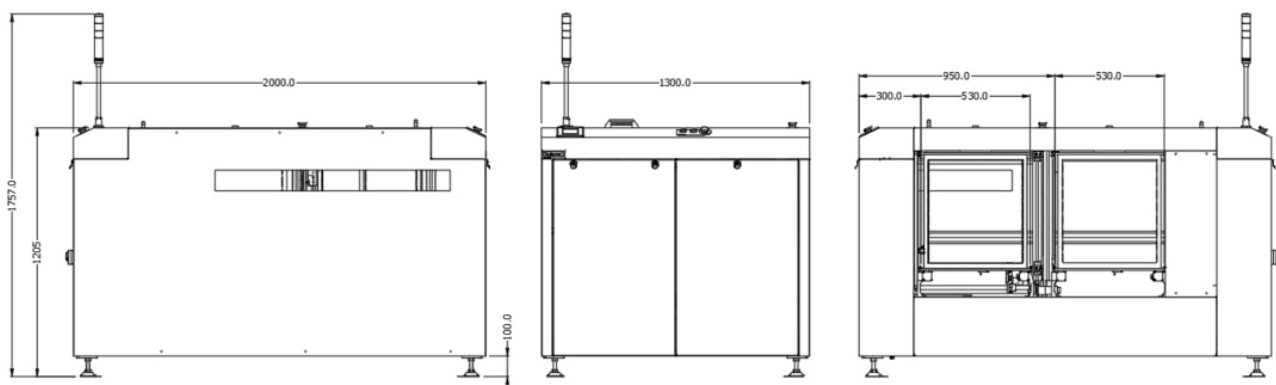
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	1.2 kW
Air pressure	5 Bar

Machine dimensions

Length x Width x Height	1300 x 2000 x 1205mm
Nett weight	430kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available
- Additional magazines capacity (small size magazine application)
- Auto magazine clamp for different size magazines simultaneously
- AMR (Autonomous Mobile Robots) integration for loading/unloading magazine



GENIUS 1-TU



Triple magazine line unloader

GENIUS 1-TU Triple Magazine Line Unloader is designed for efficient end-of-line PCB handling, offering reliable buffering into three magazines with seamless access from the side of the unit. Ideal for medium to high volume production environments, this cost-effective solution provides increased capacity and flexibility while optimizing space and throughput.

Engineered to support advanced inspection processes, the GENIUS 1-TU also integrated with good/no good sorting functionality for SPI or AOI systems, ensuring that failed PCBs are automatically directed to a designated reject magazine without disrupting the production flow.

STANDARD FEATURES

- Triple magazine configuration for increased capacity
- Programmable motorized width adjustment for fast, precise setup
- Adjustable conveyor speed for flexible line integration
- Intuitive touchscreen interface with function and alarm messages
- Dual servo-driven mechanism for accurate PCB alignment and slot insertion
- Automatic electrical pusher system for smooth magazine loading
- SMEMA-compatible for standardized line communication
- ESD-safe sliding cover with safety interlock for operator protection
- Built-in good/bad board sorting capability
- Configurable pitch setting for various PCB component heights
- Tower light with alarm for clear machine status indication
- Safety light curtain sensor at magazine load/unload area for enhanced workplace safety

GENIUS 1-TU

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	510mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Buffer capacity	50 PCBs (pitch 10 mm) per magazine
PCB loading time	Approx. 7 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine specifications

Buffer capacity	3 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Magazine weight each	Max 60 kg including PCBs

Installation

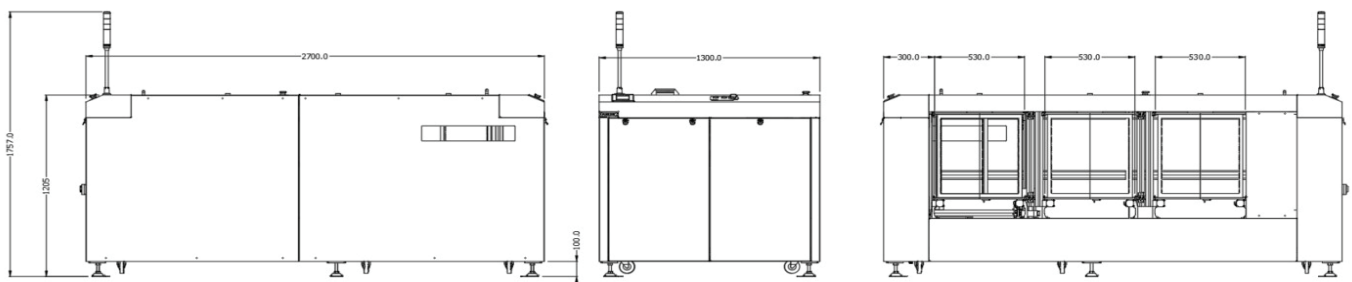
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	1.2 kW
Air pressure	5 Bar

Machine dimensions

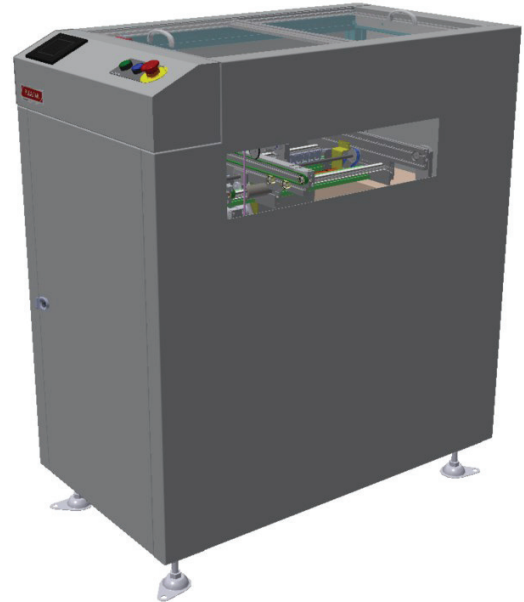
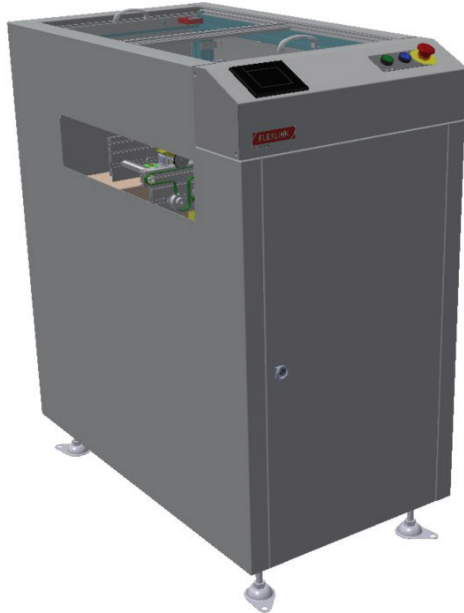
Length x Width x Height	1300 x 2700 x 1205mm
Nett weight	480kg
Noise Level	< 75dB

OPTIONS

- Network width adjust
- Heavy duty belt & motor for PCB weight up to 10kg
- HERMES & CFX communication available
- Additional magazines capacity (small size magazine application)
- Auto magazine clamp for different size magazines simultaneously
- AMR (Autonomous Mobile Robots) integration for loading/unloading magazine



GENIUS 1-EL



Elevator

GENIUS 1-EL Elevator is a precision-engineered solution designed for production lines where elevation changes or angled transfers are required. Commonly positioned before or after a wave solder machine, this versatile module ensures smooth, accurate, and reliable product handling.

Featuring a servo-driven guided slide assembly, the GENIUS 1-EL delivers consistent lifting performance with exceptional repeatability. Its robust construction and configurable design make it ideal for a wide range of applications, enhancing workflow flexibility while maintaining high throughput.

STANDARD FEATURES

- Servo controlled lift motion for smooth elevation changes
- Customizable in/out position at the time of order (300 mm to 950 mm)
- Programmable motorized width adjusts for precision handling
- Adjustable conveyor speed to match line requirement
- Touchscreen interface with tower light and alarm indicators for real-time status
- SMEMA-compatible with down-line inhibit signal reception
- ESD safe cover package with safety interlock

GENIUS 1-EL

Machine configuration

Standard transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 508mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

PCB handling

Min infeed height	300mm
Max transfer height	3000mm (configured at time of order for customized system)
Conveyor speed	Max. 15 m/min adjustable

Installation

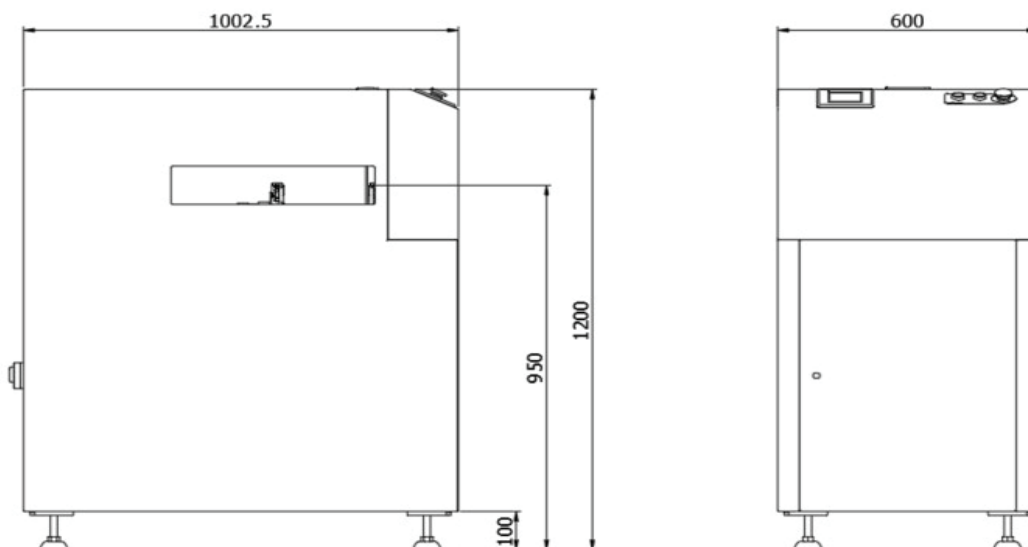
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.9 kW
Air pressure	5 Bar (If required)

Machine dimensions

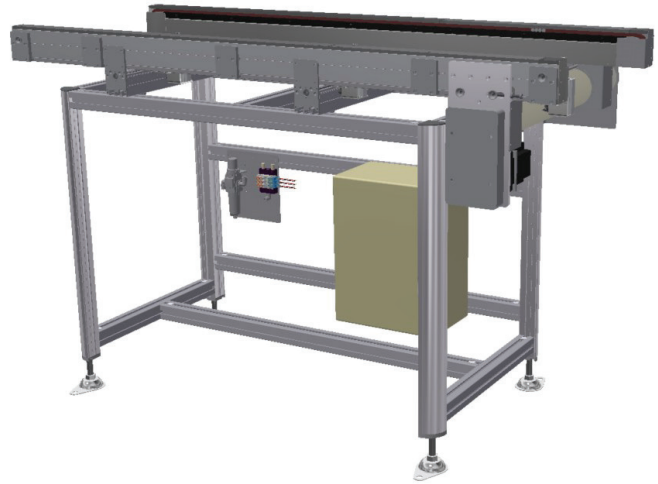
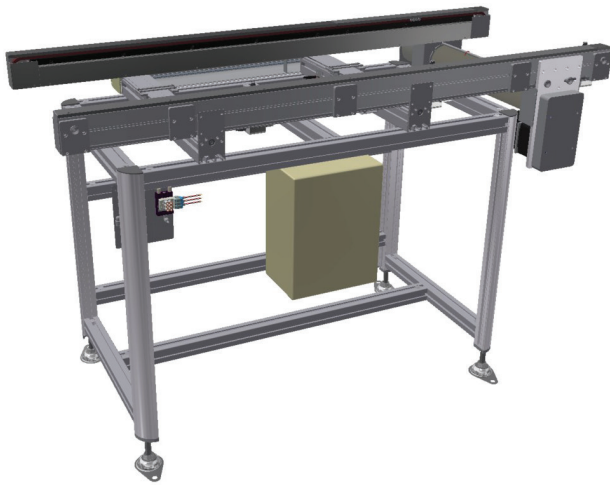
Length x Width x Height	600 x 1070 x 1200mm
Nett weight	200kg
Noise Level	< 75dB

OPTIONS

- Custom elevation stroke available
- Carriage conveyor pneumatic tilt – for matching wave & work angle
- Network width adjust
- Large PCB width 610mm available
- Heavy duty motor for PCB weight up to 10kg
- Stepper motor for oven speed matching
- Infeed and/or outfeed conveyor platform
- Shutter doors at inlet or outlet side
- HERMES & CFX communication available



GENIUS 1-CC



Chain conveyor

GENIUS 1-CC Roller Chain Conveyor is a modular transport system designed to handle a wide range of production line requirements with maximum efficiency. Featuring ESD-safe free-spinning roller chains, this conveyor is ideal for buffering multiple products across extended lengths without creating excessive back pressure.

Whether you're transporting PC boards, pallets, or integrating ergonomic workstation options, the GENIUS 1-CC offers a cost-effective and flexible solution. Its robust, ball-bearing idler design and fully captured chain return system ensure long-lasting performance in demanding environments.

Perfect for both standalone and inline applications, the 1-CC can be customized to serve as a simple transport module or a complete operator workstation—making it a smart investment for low to medium volume production lines.

STANDARD FEATURES

- ESD-safe free-spinning roller chains – Gentle and safe transport of sensitive electronics
- Durable ball-bearing end idlers – Ensures smooth, long-lasting operation
- Fully captured chain returns – Provides clean, reliable chain management
- Manual tooled width adjustment – Accommodates varying board and pallet sizes
- Speed control system (non-PLC version) – Simple, cost-effective conveyor speed adjustment
- Workstation-ready design – Easily outfitted with accessories for ergonomic operator use

GENIUS 1-CC

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	510mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Operating side	Front of machine
Fixed rail	Front of machine

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm
Panel thickness	0.6- 6mm
Component clearance	50mm
Panel weight	up to 3kg

Installation

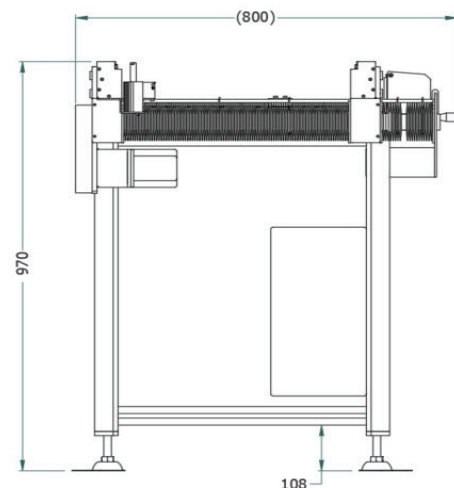
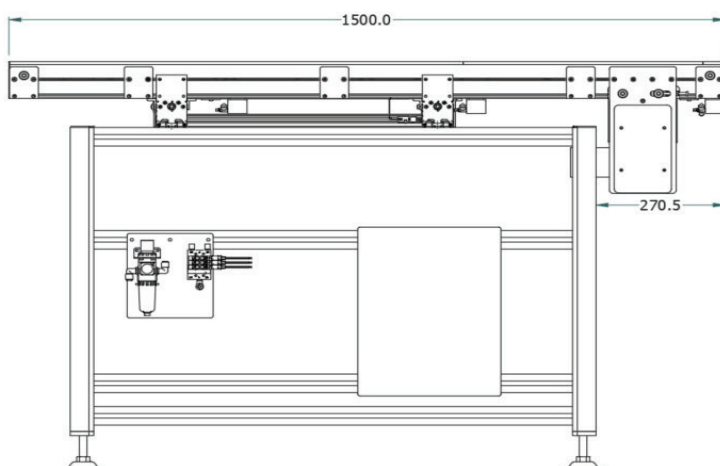
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.5 kW

Machine dimensions

Length x Width x Height	Length x 800 x 970mm
Nett weight	130kg
Noise Level	< 75dB

OPTIONS

- Custom length available
- Large PCB width 610mm available
- Hand crank width adjust
- Programmable width adjusts
- Network width adjust
- PLC control
- Touchscreen HMI
- Fixed end stopper
- Pneumatic board stop kit
- Pneumatic singulator kit – release 1 PCB at a time
- Pin chain option available
- Ultrasonic sensors instead of diffuse reflective sensor
- Various workstation equipment/accessories
- HERMES & CFX communication available



GENIUS 1-FC



Flat belt conveyor

GENIUS 1-FC Flat Belt Conveyor is a versatile, modular transport solution designed to adapt seamlessly to your production needs. Equipped with an ESD-safe belt capable of withstanding temperatures up to 80 °C (176 °F), it ensures safe and reliable transfer of both PC boards and pallets.

Its flexible design allows for incline or decline configurations, making it ideal for moving products to and from Wave Solder systems. The conveyor can also be integrated with a wide range of ergonomic workstation options, creating an efficient and comfortable working environment.

STANDARD FEATURES

- ESD-safe belt design, heat-resistant to 80 °C (176 °F)
- Adjustable conveyor speed
- Durable ball-bearing end idlers for long service life
- Adjustable belt tension to compensate for wear and ambient conditions
- Non-PLC version with speed control functionality
- Available module lengths from 600 mm up to 4000 m
- Available belt widths: 300 mm, 400 mm, 500 mm, 600 mm

GENIUS 1-FC

Machine configuration

Transport height	950mm ± 50mm
Belt width	300 mm, 400 mm, 500 mm, 600 mm
Interface	SMEMA (for PLC control option)
Transfer direction	Left to Right / Right to Left
Operating side	Front of machine
Conveyor speed	25–150 mm/s (1–6"/s)

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm

Installation

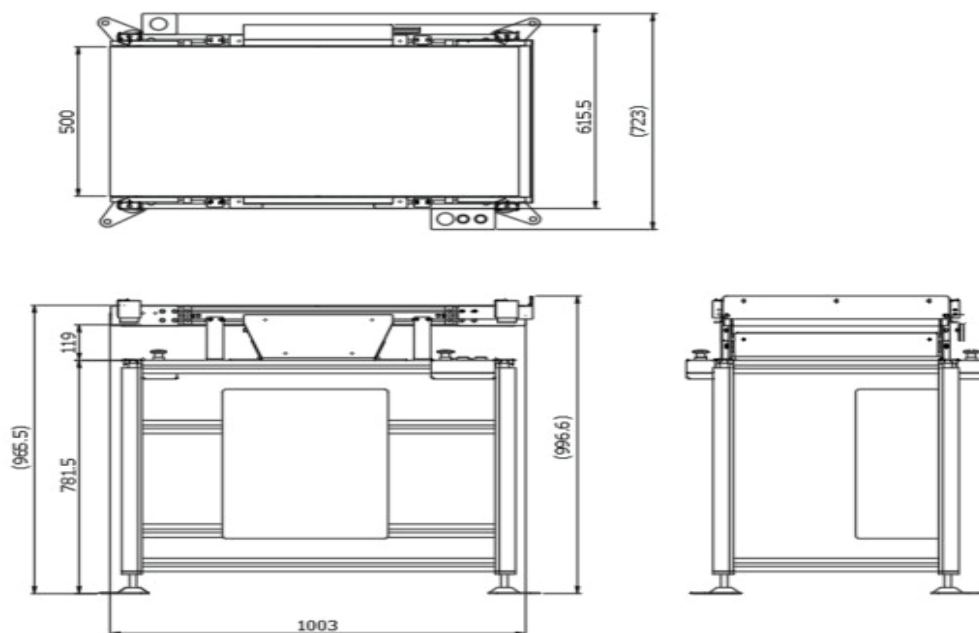
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.5 kW

Machine dimensions

Length x Width x Height	Conveyor Length x 800 x 970mm
Nett weight	120kg
Noise Level	< 75dB

OPTIONS

- Incline / decline configuration
- High temperature ESD belts up to 120 °C (248 °F)
- Cooling fans
- LED signal tower with alarm
- PLC control with SMEMA interface
- Indexing mode
- Touchscreen HMI
- Fixed end stopper
- Consult factory for non-standard belt widths
- Various workstation equipment/accessories
- Consult factory for additional options not listed
- HERMES & CFX communication



GENIUS 1-BA



Board aligner

The GENIUS 1-BA Board Aligner is engineered to precisely align pallets or printed circuit boards (PCBs) to the front fixed rail before they proceed to the next production stage. Ideal for receiving flat bottom pallet or PCB from upstream systems using flat belt or mesh chain conveyors, this unit transfers the pallet or PCB onto anti-static rollers. A servo-driven pusher then accurately aligns the item, ensuring consistent positioning and smooth downstream processing.

STANDARD FEATURES

- Servo-driven alignment: Precise and repeatable pushing mechanism for accurate board positioning
- Antistatic plastic rollers: Safely handle sensitive PCBs and pallets
- User-friendly touchscreen: Intuitive interface for easy operation and monitoring
- Configurable width setting: Adjustable to suit various board widths and applications
- Jam sensor: For jam or crash detection
- SMEMA compatible: Seamless integration into standard SMT production lines
- No air supply required: Fully electric system minimizes infrastructure needs

GENIUS 1-BA

Machine configuration

Transport height	950mm ± 50mm
Max. transport width	508mm
Interface	SMEMA
Transfer direction	Left to Right / Right to Left
Fixed rail	Front of machine
Colour	RAL 9016

Panel dimensions

Panel length	75- 510mm
Panel width	50- 510mm
Panel weight	up to 10kg

PCB handling

PCB loading time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable

Installation

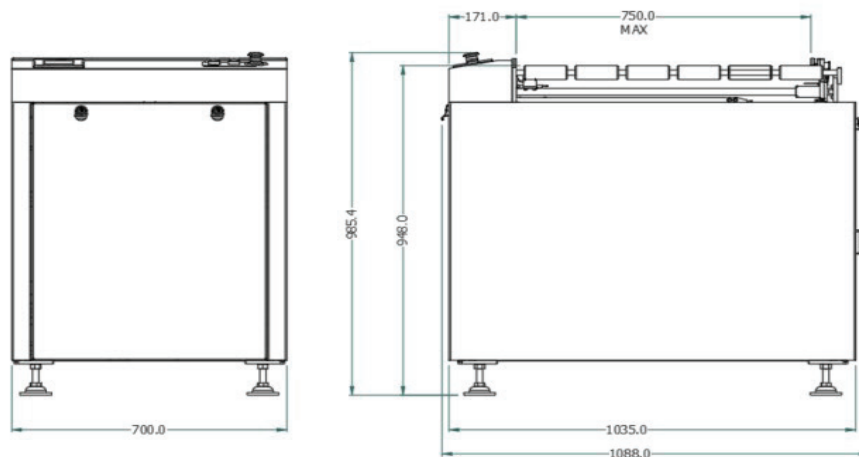
Power supply	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE
Power consumption	0.8 kW
Air pressure	N/A

Machine dimensions

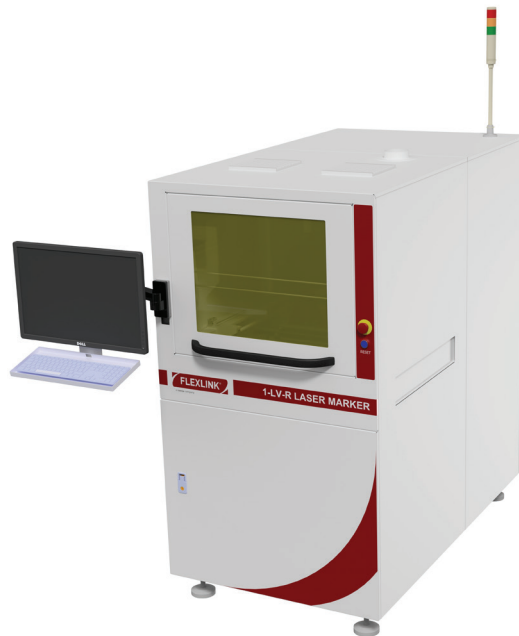
Length x Width x Height	700 x 1100 x 1000mm
Nett weight	150kg
Noise Level	< 75dB

OPTIONS

- Large PCB width 610mm available
- HERMES & CFX communication available



GENIUS 1-LV



Laser marker single-sided marking

GENIUS 1-LV-R Laser Marker Inverter is engineered for high speed, non-contact marking on PCB and SMT components. Designed for high-performance traceability and identification, this system utilizes the 3-axis control CO₂ laser marker, offering a large programmable marking area of 508mm x 508mm.

The laser head is mounted on X-Y servo axis above the PCB transport system. The PCB is transferred on the inverter conveyor, located and hold in position by integrated clamp mechanism. The laser will move to predefined marking position and marks the programmed content. The content will be verified by high resolution vision system.

STANDARD FEATURES

- High resolution vision camera system for OCR and code verification
- Fiducial recognition for accurate board alignment and compensation
- 1D/2D barcode and character verification
- Single / dual sided marking

- Marking Versatility: Fonts, barcodes (1D/2D), QR codes, logos, and images
- Edge belt conveyor with antistatic belts
- Automatic width adjustment for various board sizes
- Pneumatic board stop and locate system for accurate positioning
- Welded frame construction with Class 1 laser safety covers
- PC-based control system with Windows 11 and Touchscreen display
- 100mm connection for connection to external fume extraction system *edge belt*

OPTIONS

- MES software integration
- External fume extractor (Min. 400CFM required for proper operation & longevity)
- HERMES & CFX communication available
- X-Out / Bad mark recognition
- RGB lighting for vision camera

GENIUS 1-LV

Machine configuration

	1-LV-S	1-LV-R
Marking	Single side (top)	Double sided (integrated inverter)
Transport height	950mm ± 50mm	950mm ± 50mm
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Fixed rail	Front of machine	Front of machine
Colour	RAL 9016	RAL 9016
Operating system	Windows 11 IoT Enterprise LTSC	

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 510mm	50- 510mm
Panel thickness	0.6- 6mm	0.6- 6mm
Component clearance	50mm	50mm
Panel weight	up to 3kg	up to 3kg

Laser head

Laser type	Keyence CO2, 30W (Hybrid & UV Laser head available upon request)	
Wavelength	10.6µm	
Marking resolution	2µm (min. cell size of 0.15mm)	
Marking field	120mm x 120mm x 42mm	
Working distance	189mm (±21mm)	
Guide laser	Class 2 Laser, 655nm, wavelength	
Scan speed	12000mm/s max.	
Cooling method	Forced air cooling	

Marking type

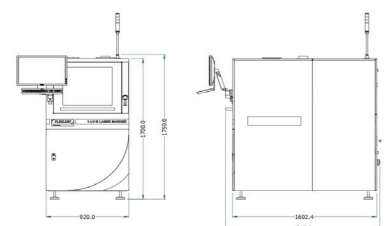
Font	Numerical value, alphabet / user font / TrueType font / OpenType font
Barcode	CODE39/CODE93/CODE128/ITF/2of5/NW7/JAN/EAN/UPC-A/UPC-E
2D Barcode	QR code / micro QR code / DataMatrix (ECC200 / GS1 DataMatrix)
Data Bar	(GS1 Data Bar Truncated, Stacked and Limited)
Logo image	Custom font, logo (DXF) data BMP/JPEG/PNG/TIF

Installation

Power supply	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	1.4 kW	1.8 kW
Air pressure	5 Bar	5 Bar

Machine dimesions

Length x Width x Height	920 x 1720 x 1750mm	920 x 1720 x 1750mm
Nett weight	700kg	730kg
Noise Level/	< 75dB	< 75dB



GENIUS 1-BC



Brush cleaner

GENIUS 1-BC Brush Cleaner is engineered to deliver superior cleaning performance for bare PCBs before solder paste or adhesive application and post-laser marking. Designed with a focus on high-efficiency contamination control, the 1-BC utilizes a specialized conductive brush system with lateral oscillation, ensuring consistent and thorough removal of dust, debris, and other foreign particles.

Its integrated dust collection system and antistatic features make it the ideal solution for improving yield and maintaining cleanliness across production environments. Whether integrated before printing or post-marking, the GENIUS 1-BC delivers the precision and reliability required for high-quality PCB manufacturing.

Ensure production purity and reduce contamination-related defects with the GENIUS 1-BC – your front-line solution for cleaner boards and better performance.

STANDARD FEATURES

- Effective Contaminant Removal: Conductive brush with lateral oscillation ensures high-performance surface cleaning.
- Single-Sided Top Cleaning: Ideal for top-side-only processes, preserving board integrity.
- Internal Dust Collector: Maintains clean operation and minimizes airborne particles.
- Programmable Width Adjustment: Motorized and programmable for quick, accurate setup.
- Adjustable Conveyor Speed: Tailors to varying line requirements.
- Antistatic Edge Belts: Protect sensitive PCBs from electrostatic discharge.
- SMEMA Interface: Seamless integration into SMT production lines.
- ESD-Safe Design: ESD covers with safety interlocks ensure operator safety and product protection.
- User-Friendly Interface: Intuitive touchscreen control panel for easy operation and parameter setting.

GENIUS 1-BC

Machine configuration

	1-BC	1-BC-DS
Transport height	950mm ± 50mm	950mm ± 50mm
Max. transport width	250mm (M size) 460mm (XL size)	250mm (M size) 460mm (XL size)
Interface	SMEMA	SMEMA
Transfer direction	Left to Right / Right to Left	Left to Right / Right to Left
Operating side	Front of machine	Front of machine
Fixed rail	Front of machine	Front of machine

Panel dimensions

Panel length	75- 510mm	75- 510mm
Panel width	50- 250mm (M size) 50- 460mm (XL size)	50- 250mm (M size) 50- 460mm (XL size)
Panel thickness	0.6- 6mm	0.6- 6mm
Panel weight	up to 3kg	up to 3kg

Installation

Power supply	110V 50Hz / 230V 60Hz ±10%	110V 50Hz / 230V 60Hz ±10%
Power supply system	L1 + N + PE	L1 + N + PE
Power consumption	0.8 kW	0.8 kW

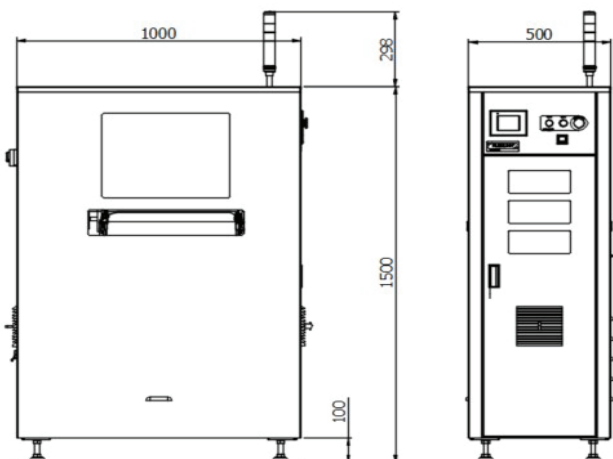
Machine dimesions

Length x Width x Height	500 x 1000 x 1500mm	650 x 1000 x 1500mm
Nett weight	180kg	200kg
Noise Level	< 75dB	< 75dB

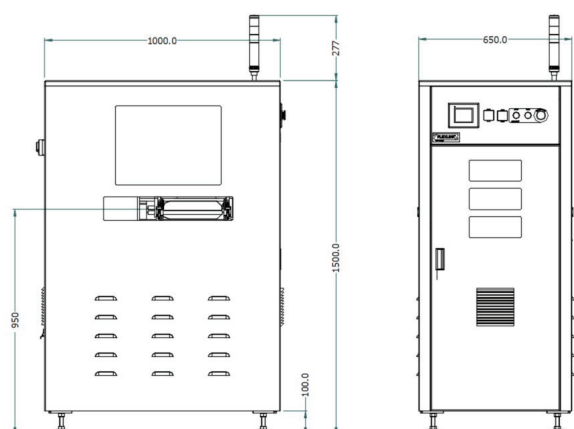
OPTIONS

- Air ionizer
- Available in M size (width <250mm) & XL size (width <460mm)
- Dual sided (top & bottom) cleaning
- Heavy duty belt & motor for PCB weight up to 10kg
- Network width adjust
- HERMES & CFX communication available

1-BC



1-BC-DS



Coesia Group in the world



COESIA is a group of innovation-based industrial and packaging solutions companies operating globally, headquartered in Bologna, Italy.

Coesia's companies are leaders in the sectors of:

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- **Industrial process solutions**
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