

Fastener Insertion System Versatility and Ease of Setup

The 824[™] WindowTouch® 5e brings you:

- 1. Easier and faster tooling setup combined with the most reliable fastener feeding
- 2. Best workpiece accessibility
- 3. Easier and faster programming
- 4. Best Operator Ergonomics
- 5. Energy Saving

Learn how Haeger's mission can become your profitability

• Are you still handling your parts multiple times?

• Are you still manually feeding the majority of your fasteners?

 Are you still experiencing substantial setup times on both new and repeat jobs?

 Are you still under the assumption that setting up automatic tooling is too complicated or too time consuming?

Are you still experiencing:

- Missing fasteners?
- Fasteners inserted in the wrong location?
- Fasteners inserting on the wrong side of the part?
- Wrong length stud or standoff inserted?
- Parts scratched due to manual feeding in combination with multiple handlings?

We have taken your feedback seriously for many years and have developed multiple solutions to address the challenges you are facing. The integration of all these solutions are found in the 824™ WindowTouch® 5e.





Easier and Faster Tooling Setup

MAS 350 - New Modular Autofeed System.

A unique new drive system in combination with a complete new bowl design incorporating all the latest bowl feeding technologies. A long list of advantages, but what does this mean to you?

- Tool Change reduced from 3 minutes to 3 seconds through a one piece tool module.
- No more manual bowl settings required. Software automatically sets the proper vibration rate, air eject time and required air pressure to allow for failure free fastener feed. From a full bowl down to the last one out. Reliable Feeding. Faster Changeover. No Training Required.



MAS 350 - new modular autofeed system.

- Larger bowl design in combination with new drive allowing for fastener sizes M1.5 through M10 all to be fed in the same bowl.
- Deeper Bowl design in combination with new bowl tooling design allowing for fastener lengths up to 30mm all to be fed in the same bowl.
- New drive design allows for a 1 single tool piece, resulting in faster and easier tool changes.
- Change in bowl material resulting in fasteners becoming less dirty from "airdust" or individual rubbing
- Lower mounting position allowing for easier filling and emptying.

New T-Bracket and Shuttle with integrated Connectors eliminating alignment challenges.

Fastest and easiest setup in the industry. Reduced from 2 minutes to 10 seconds without having to think about which connector goes where. On traditional machines, an operator had to change multiple air-lines and sensor cables, unnecessarily delaying changeover times. In addition, operators required training for alignment of the T-Bracket and shuttle, which has been eliminated with this new system. New re-designed Shuttle Plate Jaw Pins, eliminating breakage and saving cost for replacement and downtime.



New T-bracket and shuttle with integrated connectors.

Pre-aligned Base Plate.

A pre-aligned base plate allows for easy tool holder changeover. No alignment of tools required. Where a tooling re-alignment after tool holder replacement used to take up to 5 minutes, this setup time has now been completely eliminated.



Pre-aligned lower tool holders.



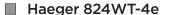
Fastener Insertion System - Best Workpiece Accessibility

Lower Support Arm. 200mm more access on lower support arm.

Through the use of built-in reinforcements and a change in frame design, the 824™ WindowTouch 5e™ now offers more accessibility on the lower support arm.

The "Star Design" Turret Insertion System (TIS) allows for access in "U-Shaped profiles". Compared to a round Turret Design, the Star Design offers maximum accessibility for a variety of pre-formed workpieces. The Turret Insertion System clamps the tools in position while providing Position Feedback, eliminating the famous "missing fastener" error.

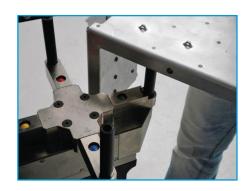






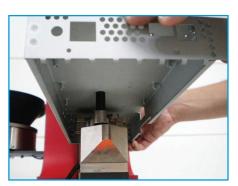








"Star Design" turret Insertion System (TIS).



Turret arms removed.

The turret arms are individually removable, allowing for even more access while the position feedback (and process control) remains present.



Manual J-Frame with 24" (610mm) throat depth. Changeover from Automatic Top Feeding to using a J-Frame is now done within seconds. This makes it a more attractive to use feature for a variety of pre-formed workpieces. The Haeger J-Frame solution allows for insertion under flanges up to 1mm from the bending line.

J-Frame in combination with ABFT (Automatic Bottom Feed Tool). Unique in the industry is the Automatic Bottom Feeding of Nuts in combination with a J-Frame to maximize productivity and increase ergonomics for those workpieces requiring installation under return flanges.

Automatic Tooling:

Upper Tools, Lower Tools and Shuttle Plates are compatible with previous Haeger machine models. The One-Piece Multi-module for the MAS-350 Autofeed System reduces total components per set from 5 to 4.



Manual J-Frame in combination with 24" (610mm) throat depth.



J-Frame in combination with ABFT (Automatic Bottom Feed Tool).





Shuttle Nut Set.



ABFT (Automatic Bottom Feed) Set.





Best Operator Ergonomics:

Operator control pendant can be adjusted in 6 directions, allowing for easy access and a great view of screen instructions while standing up or sitting down.

Energy Saving:

New variable speed hydraulics reduce energy consumption up to 30% compared to conventional hydraulic systems.

Easier and Faster Programming:

The ALL NEW intuitive Insertion Logic® Software with Insertion Graphics and Integrated Statistic Process Control allows for more functionality while reducing programming time.

Insertion Logic® provides you with the recommended operating time for the part programmed and monitors and stores any corrected errors during the insertion process, allowing you to provide this data with your deliveries to your customers.





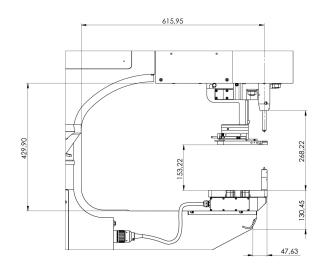
Easier and faster programming.

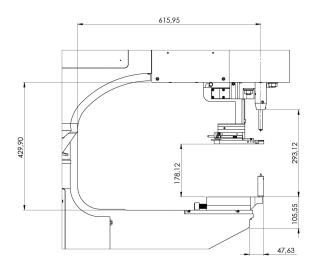


64" / 1626 mm









Specifications	
Fastener Range	#2-56 to 1/2" (M2 to M12)
Force Range	Adjustable 800 lbs to 16,000 lbs (3.6-72 kN)
Drive System Type	Hydraulic
Insertions per Hour	Up to 1,400
Control System	Insertion Logic
Auto-Feed	Optional
Batch Counter	Standard
Fastener Database	Standard
Insertion Graphics	Standard
Fastener Length Detection	Standard
Positive Stop	Standard
Screen Size	15"
Robot Ready	N/A
Remote Connection	Standard
Repeatability	+- 2%
Throat Depth	24" (610 mm)
Stroke Length	0 to 8.5" (0 to 220 mm)
Up Travel %	10-100%
Electrical Requirements	3 Phase Low 16 A 208-240 V or High 9.6 A 380-480 V
Air Requirements	90 to 100 PSI (6 to 7 BAR) 1/2" (12mm) dia. minimum line flow
Oil Reservoir Capacity	22 gallons (83 liters)
Weight	3,000 lbs (1,361 kg)
Footprint	64"L x 41"W x 99"H (1626 mm x 1041 mm x 2515 mm)

For more information on the 824^{TM} WindowTouch* 5e and other Haeger* products, visit our website at <u>www.haeger.com</u> or contact your authorized Haeger* distributor.