

FG-1500 Specialty Folder Gluer

System description

FG-1500 specialty folder gluer series are built to enable the production of unconventional and complex products based on corrugated materials fitted with add-ons such as clips, windows, RFIDs, labels, and reinforcement inserts. FG series specialty folder gluers process E, B, C flute and double wall corrugated board with 1500 mm maximum blank width. System utilizes a pick and place insert attachment, standard straight line and auto bottom functions, pre-fold and final fold sections, independently driven upper carriers with an extended final fold. Like all Pack-Smart high-performance finishing systems, the FG series are operator friendly with world class reliability and unmatched flexibility.

System performance

- Multiple product type: corrugated blanks (flute types?), folding cartons, RRP/SRP, POP displays.
- Additional attachments: Insert and apply plastic clips (male/female clips), PET rigid window, RFIDs, labels, velcro, magnet, reinforcement panel.
- Multiple applications: Feeding and Registration, Gluing (Hot/Wet), Multiple folds - Front, Back, Left/ Right side, angular folds, compressing.
- Product displacement: Friction conveyors, vacuum conveyors, lug and chain conveyor, flat-belt conveyor.
- Quick changeover: handles & knobs with measuring scale, rearrangement & relocation of fold tooling, compression and glue head position as per the product configuration.
- Touch Screen HMI: interface with recipes, report generation, ethernet ports and remote diagnostic feature?
- Easy to replace tooling:
- Consumables: Ink, compressor roller rubber,
- Optional: Variable printing and data tracking, visual inspection with rejection.

Modules

1. Standard:

Friction feeder
Glue head
Clip feeder (If clip attachment required)
Rigid window feeder (if window patching required)
Fold modules
Front / back fold modules
Insert feeder with ABM and auto loader (for panel inserts)
Vacuum transport
Delivery conveyor

2. Optional:

Inkjet printer
Camera Inspection
Rejection Bin

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System specifications:

- Speed - Up to 2,000 PPH
- Accuracy
 1. Sheet registration accuracy (corrugated blank) –
 2. Affixing accuracy (reinforcement panel) -
- Sheet / blank dimensions
 1. Min. Sheet length (In travel direction) - 5"
 2. Max. Sheet length (In travel Direction) - 60"
 3. Min. Sheet width - 4"
 4. Max. Sheet width - 60"
 5. Min. Sheet thickness - 0.015"
 6. Max. Sheet thickness - 0.25"
- Reinforcement panel dimensions
 1. Min. Prod. Length (In travel direction) - 2"
 2. Max. Prod. Length (In travel direction) - 20"
 3. Min. Prod. Width - 2"
 4. Max. Prod. Width - 30"
 5. Min. Prod. Thickness - 0.015"
 6. Max. Prod. Thickness - .25"
 7. Direction of panel placement: vertical, horizontal, inclined?
 8. Total no. of reinforcement panels inserted - More than one, distance between inserts **should be 5inchs apart.**
- Window dimensions:
 1. Min. Prod. Length (In travel direction) - 2"
 2. Max. Prod. Length (In travel direction) - 32"
 3. Min. Prod. Height - 2"
 4. Max. Prod. Height - 9"
 5. Min. window thickness - 0.02" (.05 mm)
 6. Max. window thickness - .25" (6mm)
- Total no. of clip attachment: Up to 4 clips. Clips can be maximum 32" (outside to outside of the clips) apart on outer two streams of the feeder, outside to outside of the clips
- Total no. of folds: 3 plow folds x left and right direction and 1-fold x front and back direction
- Direction of gluing: Left / Right side, front / back side and all 4 directions.
- Type of glue marking: Line and dots.
- **POWER REQUIREMENTS ELECTRICAL:**
 1. Electrical cabinet: 230VAC, 3 Ø, 60Hz, 120 AMP MAX
 2. Glue melt unit: 230VAC, 3Ø, 60HZ, 30AMP MAX,
 3. Cold glue system: 110VAC, 1Ø, 60HZ, 5AMP MAX
 4. Air drop: 50 CFM, @100PSI
 5. Vaccum: self contained

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Key value points: *How we solve problems should be the focus to communicate.*

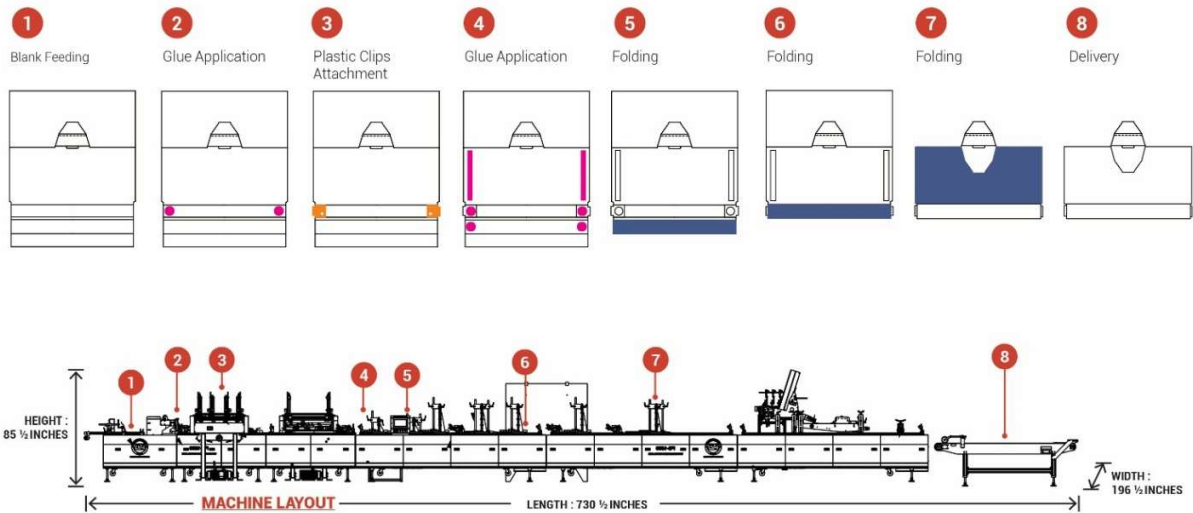
1. High speed: Produce finished parts with a throughput time of
High efficiency: Can run XXXX hrs for XXXX days continuously.
2. Multifunctionality: The only machine in industry to integrate several modules in one line.
From feeding, registration, affixing, gluing, and folding.
3. Quick change over with less tooling requirement, can add remove modules whenever product change
4. Robust material handling capability to insert and affix upto XX no. attachments at XX speeds with an accuracy of XXX through single applicator
5. Technologically advanced PLC unit > data stored, processed, and delivered. Offer predictive maintenance report with Easy to operate and trouble shoot, reliable system to integrate?
6. Only 1 labour required to operate, if integrated with upstream and downstream machines for loading and unloading. Otherwise, 2 extra labour manuals loading and unloading.
7. Wide variety of materials handled: Folding Cartons (Paperboard, PET-laminated), Corrugated containers & boards, PSA Labels Cards (Paper, PVC, Metal), PSA Labels (Velcro, Scratch-Off, Activation, RFID, Magstripe), Wet Labels
8. Easy plug-in / plug out: measures for system breakdown (if any power outage)
9. Excellent output quality of product due to synchronization of drives and product identification through fibre optic sensors.
10. Motion control devices are 100 % servo driven which ensures accuracy in product handling.
11. High quality bought out components from big brands like Emerald, Toshiba, gluing unit? sensors? Belts, fasteners, bearings? actuators? Electric components? etc.
12. In house manufactured components having fit to tolerances of +/- XXXX
13. Rust proofing, powder coating, hard anodised aluminium, and SS 316 / 304 for parts to avoid wear and tear.
14. Safety features: Safety cabinet / emergency stop / enclosed drives / covered wiring / less running noise.
15. Support and service: Operation manual / On-site visit / remote troubleshooting / manufacturers warranty.

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Direction of product flow - left to right & right to left (Layout)

1. LEFT TO RIGHT

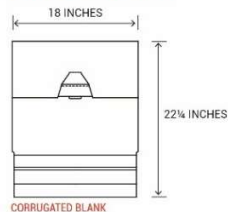
Product type: Shelf with 3 folds



PRODUCT IMAGE



MATERIAL DIMENSIONS



COLOUR GUIDE

- FOLDING
- SECURE GLUE POINT
- PLASTIC CLIP



Step 1: Corrugated blanks are stacked in a feeding unit and each blank is individually registered on the vacuum conveyor at a conveying speed of XXX m / min

Step 2: At the gluing station, two glue drops are applied in the travel direction of blank through nozzles. Having ability to drop glue only during presence of product

Step 3: Two plastic clips are loading in the feeding unit and affixed at the corner of blank through pick and place applicator. Right material selection and motion paths ensures that product is not damaged in quality while picking and placing.

Step 4: Another gluing station to apply two glue lines and drops, simultaneously in the travel direction through nozzles.

Step 5: Back fold the blank using a **rotating arm mechanism** driven by servo motor.

Step 6: Back fold the blank using same mechanism.

Step 7: Front fold the blank using a **lift and guide** mechanism

Step 8: The finished part is compressed by the roller and collected on the delivery conveyor.