



N-8 High-Speed Gable Top Packaging Machines



Models N-8, N-8S, N-8ESL

The Shelf Life People

A Connection to Performance and Reliability



Today's consumer is always on the lookout for taste, convenience and - more than ever - food safety.

You, the processor, put in the taste. Delivering it takes speed, "bulletproof" sanitation and reliable performance. That's us.

Evergreen N-8 Makes the Connection

Designed to form, fill and seal Eco-Pak® cross-section gable top cartons (single-serve or multi-pack), there is an N-8 packaging machine ideal for your markets - whether juice, milk, soup, drinkable yogurt, liquid eggs or other convenience foods. And our GT Series Eco-Pak machines offer Evergreen quality in slow speed applications and entry-level markets.

You can provide safe, easy-open/easy-close solutions for retail, schools, food service or vending machines with maximum in-line productivity.

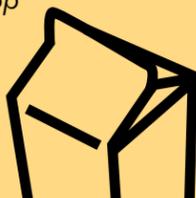
Bottom line?
You'll have a machine that captures freshness.



ISO 9001
CERTIFIED

Go ahead and speed.

N-8 machines form, fill and seal 4-10 ounce (120-300 ml), mini cross-section gable top cartons at speeds up to 340 per minute (20,400 per hour).



Maintain Product Quality

The N-8 features air quality control within standard enclosures at critical areas of packaging. This forms a more sanitary environment for the fill section. When used in conjunction with the optional laminar flow HEPA (High Efficiency Particulate Air) filtration, it helps to maintain product quality and improve sanitation.

Increase Operator Productivity

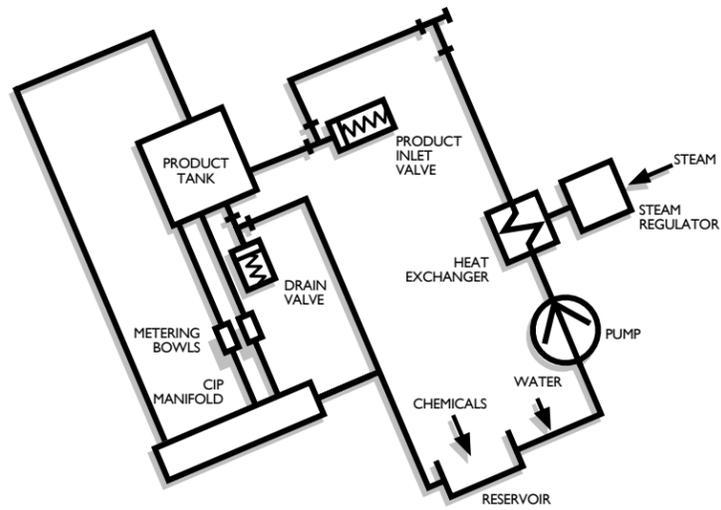
N-8's touch-screen, computerized controls and monitors are straightforward, easy to use and conveniently located. In most cases, one operator can load, run and monitor more than one machine at a time.

- **Simple** - menu-based, multilingual operator panel
- **Information-rich** - diagnostic messages, input options, internal troubleshooting on-screen
- **Flexible** - change fill weights via touch-screen; modify timing values without interrupting operation

During startup and shutdown, the top and bottom ovens, top and bottom sealers, top folder and fill stations operate only when a carton is present. Sealing functions for each line are controlled independently. You'll further minimize product loss and carton scrap with advanced controls and automatic restart sequencing.

The N-8 makes it easy to find an operating speed that suits your operation. A variable frequency drive is standard, with four operating speeds programmed. When it comes to safety, "Machine Stop" controls are located all around the machine.





Fresh, Easy Clean-In-Place (CIP)

The only parts that cycle during N-8 Clean-In-Place (CIP) are the ones that you want to clean. Less wear on parts.

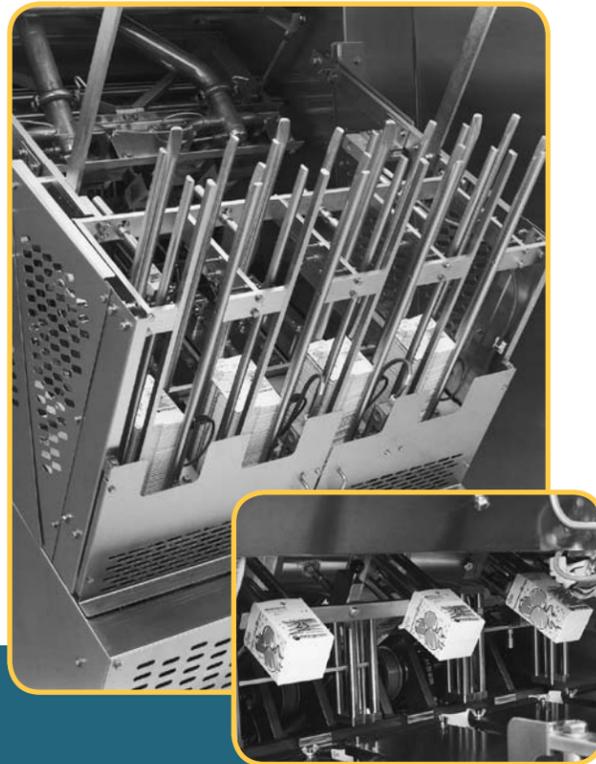
To make things even easier, the entire CIP process can be automated. N-8's optional, self-contained CIP can be programmed to cycle on a variable-time basis. Everything from chemical injection, fresh water flush and thorough CIP system draining occurs automatically according to your pre-defined need.

Fast, Flexible Carton Infeed

Special magazines make feeding carton blanks fast and easy. Each holds up to 600 blanks for maximum workflow. All N-8 controls and monitors are within easy reach, making it easy for the operator to oversee machine performance.

Photoeye sensors automatically stop feeding when a carton jams or a pre-set low carton level is reached. This minimizes product loss and carton waste.

Need to switch carton size? Not a problem. Mandrel carton stops and conveyor rails adjust easily in minutes - and no hands ever have to touch the mandrels. For maximum flexibility, the N-8 can be set up to run two different carton sizes simultaneously. It's even possible to run two different products at the same time with an optional Evergreen twin product tank system.



The N-8 pulls carton blanks from the magazine, opens and squares them, and then positions them onto the mandrels for bottom forming.



Durable, Sanitary Carton Forming

Stand up to caustic cleaning solutions and sanitizers - the N-8 design incorporates stainless steel, including the mandrels. To prevent potential contamination from condensation forming on the mandrels, a semi-automatic system adjusts the temperature of the circulating cooling solution to above the ambient air dew point.

In addition, a programmed controller sprays sanitizing solution on product-contact surfaces, protecting both the form and fill sections from contamination. This automatic sanitizing system helps maintain a clean machine - and product quality. An optional machine-mounted automatic sanitizing tank is also available.

Energy Efficient Bottom Sealing

To save energy costs, maintain product temperature and reduce carton distortion, N-8 bottom ovens heat carton flaps in a selective pattern that permits a proper seal and increases carton strength.

To complete the seal, low pressure retracts the sealers; high pressure then extends and seals the heated flaps. Ceramic-coated skis allow easy carton movement and prevent poly build-up.

During sealing, oven temperatures are monitored. Should an oven fail, the machine automatically stops infeeding cartons until the correct temperature is restored and the infeed switch is manually reset.

If the machine stops, the ovens automatically retract from cartons and a “knife” of air is blown between them, eliminating the risk of fire.



Pneumatic pressure assures consistent bottom seals. “Dams” apply extra pressure to potential leak paths. Machine “reliefs” allow for the folded layers of paper.

Accurate, Automatic Carton Filling

Everything about the N-8 is designed to deliver sanitary, foamless, accurate fills, minimizing product loss and carton waste.

- Auto-sanitized breaker stations pre-form top flaps before filling
- Positive displacement metering system produces accurate, foamless fill
- No carton/no fill
- Fill size and volume automatically changed when new selection is made on touch-screen panel; easy PLC adjustment, no manual pins to change
- Product tank automatically kept at operating capacity; if level falls below normal, carton feed is suspended until product is replenished and operator initiates safe restart
- Standard N-8 includes fluid milk fill valves and juice nozzles; special fill valve for pulpy or viscous products (some juices, eggs, liquid yogurt) also available
- Twin fill tanks optional; run two different products at the same time



Leak-Proof Top Sealing

Evergreen packaging machines are famous for leak-free, easy-open top seals. The N8 also saves energy, enhances safety and simplifies top-sealer cleaning.

Cartons are held securely in conveyor pockets as ovens quickly heat and activate the polyethylene seal coating on the flaps, using a selective pattern to save energy.

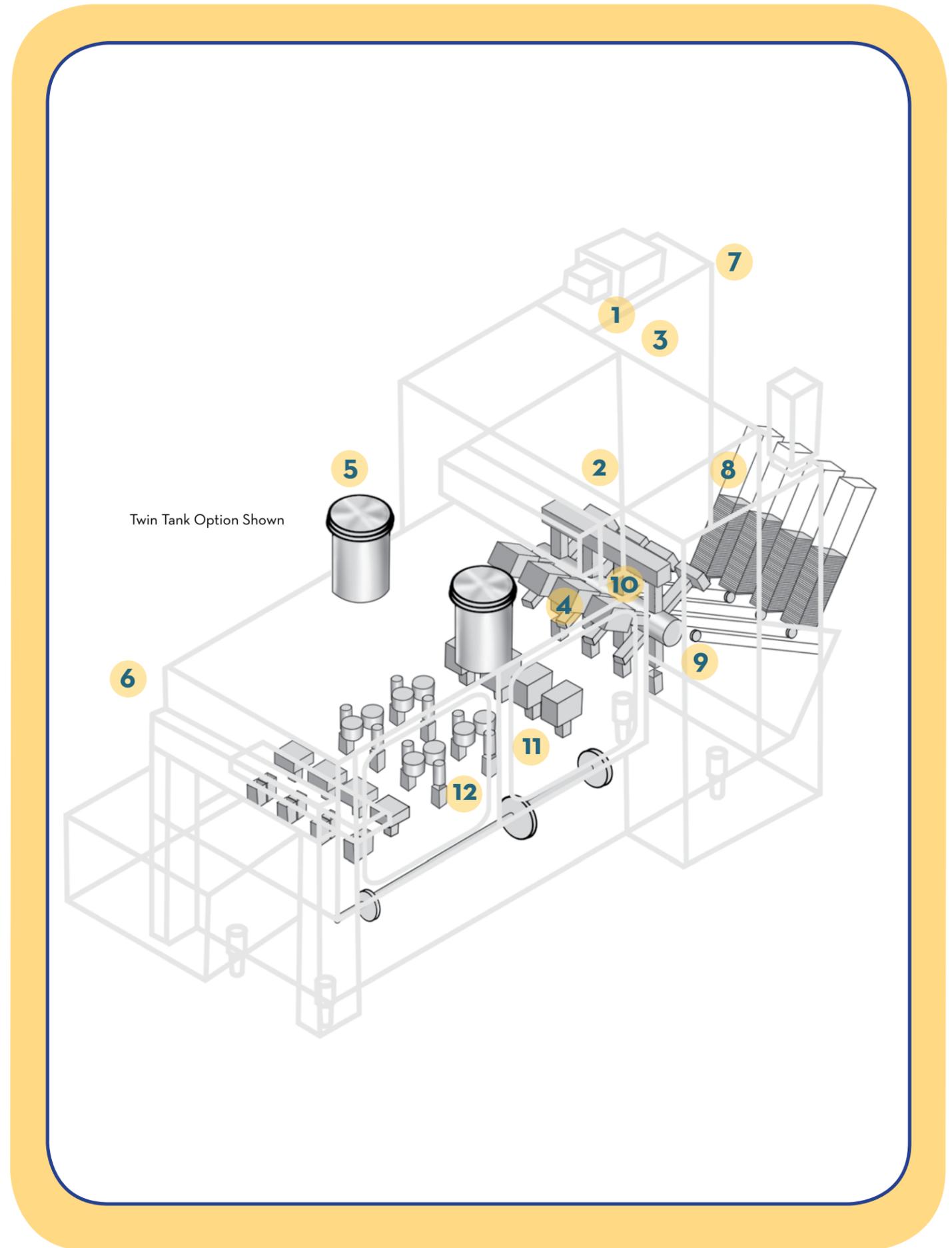
To eliminate fire hazard during stoppage, the ovens are automatically retracted from cartons and a “knife” of air blown between them. Cleanability is made easier by placing the sealer’s air cylinder and other mechanical components under the fill table – also protecting them from product and cleaning solution.

Top seal quality improves by passing cartons through two sealing stations. Each station utilizes high-compression sealing jaws. The second set of jaws facilitates embossed pull dates or alphanumeric coding.



Operational Benefit Summary

- 1 Regulate CIP cycling automatically** with a programmable controller.
- 2 Cut maintenance time.** The N-8's stainless steel mandrels and hubs resist caustics, sanitizers, citric acid and lactic acid.
 - **Cut maintenance time and extend machine life** with automatic lubrication and sequential startup and shutdown. Functions operate only when a carton is present.
- 3 Eliminate operator guesswork.** Built-in 24-volt-safe, programmable controller governs filler functions, automates CIP cycles, senses low carton level and detects carton jams at the infeed station and throughout the conveyor. Overall operation of the machine is made easier thanks to a touch-screen interface that indicates machine status at all times.
- 4 Save machine wear during CIP.** Only those parts to be cleaned are cycled.
- 5 Fill two different products at one time** with optional twin product tank system.
- 6 Save on energy, cut paper waste and get better seals** with Evergreen's selective heat system and quiet, pneumatic sealing.
- 7 More precise volume setting** at operating speeds. Convenient PLC control means there's no need to shut down.
- 8 Reload less often.** Infeed magazines hold up to 600 carton blanks for each line or a total of 2,400 blanks.
- 9 Control mandrel condensate** with a semiautomatic system that adjusts the captive cooling solution temperature above the ambient air dew point.
- 10 Minimize poly build-up** with ceramic-coated skis.
- 11 Less product waste.** Sensors assure you there's no fill when there's no carton.
- 12 More accurate fills**, thanks to a new generation positive displacement metering system.



New Length, New Abilities

N-8S (Stretch) and N-8ESL

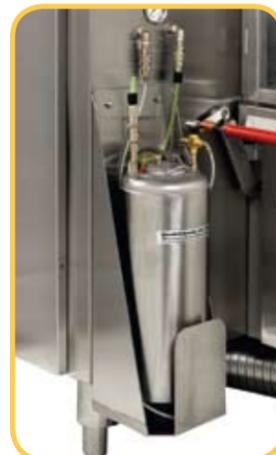
The latest additions to the N-8 family provide **all the proven benefits** of Evergreen's original – the difference comes with extended shelf life (ESL®) features and added length.

Look for these variations in both **N-8S** and **N-8ESL** machines:

- Longer machine frame (see table on page 11)
- Added window on Line 4 former door for extra visibility into bottom forming section
- Added space between mandrels and top folders for optimal access
- Added visibility on filler frame doors
- Additional legs for minimized vibration and increased durability
- Adjustable independent control valves for gentle, uniform heat to top and bottom sealers
- Water-cooled, ceramic-coated skis for easy carton movement and prevention of poly build-up

N-8ESL includes:

- Single Class 100 HEPA system
 - high volume, low pressure laminar flow with UV treatment
 - low volume, high pressure ducted to carton treatment system
- 35% hydrogen peroxide spray with HEPA drying station
- Auto-sanitizing (optional tank on machine)
- Self-contained CIP system



Utility Requirements	N-8	NL-8	N-8S (stretch)	N-8ESL
Electrical				
Gas Heat	14.4 KVA 3-60-230 (standard)	14.4 KVA 3-60-230 (standard)	N/A	N/A
Electric Heat (Transformers available for other voltages at additional cost)	78.4 KVA 3-60-230 (optional)	78.4 KVA 3-60-230 (optional)	78.4 KVA 3-60-230 (standard)	109.8 KVA 3-60-230 (standard)
Compressed Air	70 SCFM @ 90 psi	1.99 M ³ /min @ 6.3 kg/cm ³	70 SCFM @ 90 psi	90 SCFM @ 90 psi (includes H ₂ O ₂ nozzles)
Natural Gas (Not needed with electric heat)	150 CFH 1000 BTU/ft ³ 15-27" H ₂ O	4.25 M ³ /hr 8900KCAL/m ³ 28-50 MM/HG	N/A	N/A
City Water	Required for self-contained CIP option	Required for self-contained CIP option	Required for self-contained CIP option	Required
Cooling Water	11 GPM 34°F 40 psi minimum	42 L/min 1°C 2.8kg/cm ³ minimum	11 GPM 34°F 40 psi minimum	11 GPM 34°F 40 psi minimum
Conveyor Soap	6 GPH continuous	23 L/hr continuous	6 GPH continuous	6 GPH continuous
Sanitizing Solution	3 GPM @ 40 psi intermittent	12 L/min @ 2.86 kg/cm ² intermittent	3 GPM @ 40 psi intermittent	3 GPM @ 40 psi intermittent

Dimensions	N-8	NL-8	N-8S (stretch)	N-8ESL
Length – Includes 28" (71 cm) for Discharge Extension	200 in	508 cm	248 in (629 cm)	252 in (639 cm) (includes CIP skid)
Width doors open doors closed	155 in 87 in	394 cm 221 cm	155 in (394 cm) 87 in (221 cm)	155 in (394 cm) 87 in (221 cm)
Height	103 in (with or without HEPA)	262 cm (with or without HEPA)	109 in (277 cm) (without HEPA)	132 in (335 cm) (with HEPA)
Total Floor Space	121 ft ²	11.2 M ²	150 ft ² (13.9 m ²)	153 ft ² (14.1 m ²)

Immediate Attention.

Evergreen Packaging has a network of fully trained, experienced technicians, and genuine Evergreen parts manufactured to OEM specifications to maximize your production and efficiency. We look forward to working with you to deliver high-quality, safe and convenient product for your customers.

Call us at 319-399-3200.



Because of the constant improvement program at Evergreen Packaging, specifications are subject to change without notice.

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