

INVISIPAC[®]

Tank-Free[™] Hot Melt Delivery System For Case and Carton Packaging



M O V I N G M A T E R I A L S T H A T M A T T E R [™]

INVISIPAC – A RELIABLE SEAL EVERY APPLICATION, EVERY TIME



THE TANK-FREE™ DIFFERENCE



IMPROVE PRODUCTION BY REDUCING...



Unplanned downtime



Pop-opens adhesive costs



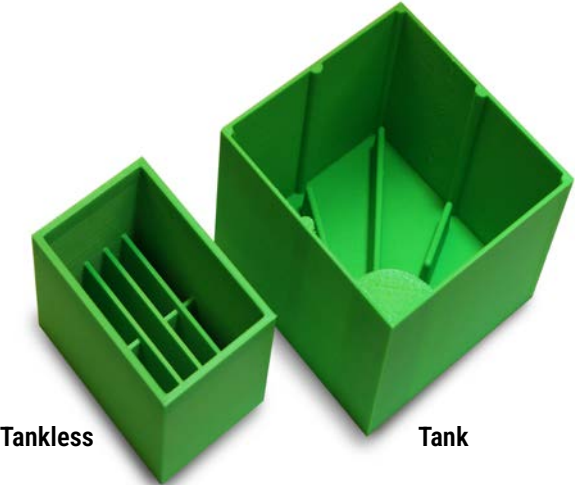
High adhesive costs



Clogged nozzles



Tank-Free



Tankless

Tank

InvisiPac's Tank-Free System

- Heats up in 10 minutes or less
- Maintains continuous flow of heated-on-demand adhesive
- Safeguards adhesive integrity
- Eliminates adhesive char and plugged nozzles
- Lessens exposure to burn hazards

Tank and Tankless Systems

- Heat slowly due to low melting surface area
- Keep large quantities of adhesive at high temperatures
- Allow degradation of adhesive integrity
- Create char and plug nozzle
- Expose operators to burn hazards

Guaranteed Savings

- Use less material
- Reduce maintenance and spare parts

Guaranteed Savings

- Measure the right amount of glue, control a consistent bead and track your usage grams per case, so you can put exactly what you need where you need it... and prove it.

Eliminate Downtime

- No char, no nozzle plugs
- No more time consuming tank scraping product maintenance

Better Seal

- Reduce costly pop-opens by having glue do what it is supposed to do

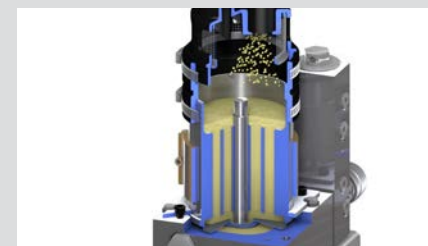
Parts Last Longer

- View your line's performance and receive alerts maintaining your desired, optimal settings anywhere, anytime.

Improve Operator Safety

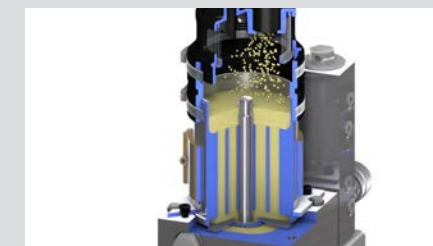
- Eliminate burn hazard risks

WITH INVISIPAC:



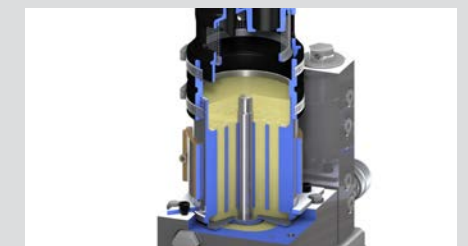
1.

An ultrasonic sensor monitors glue in the melting chamber, automatically adding glue.



2.

Efficient heat transfer design helps glue melt quickly and maintain a consistent temperature.



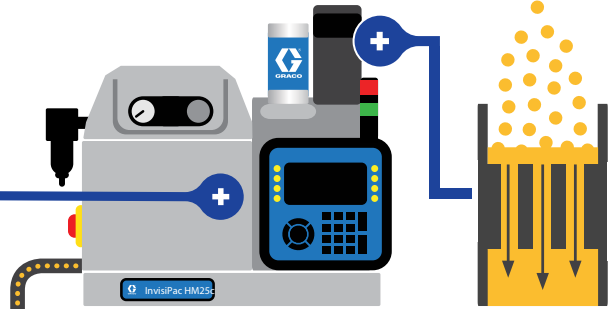
3.

First-in-first-out (FIFO) operation eliminates charring and thermal shock. Glue stays at the required temperature and viscosity as it moves to the point of dispense.

HOW INVISIPAC WORKS

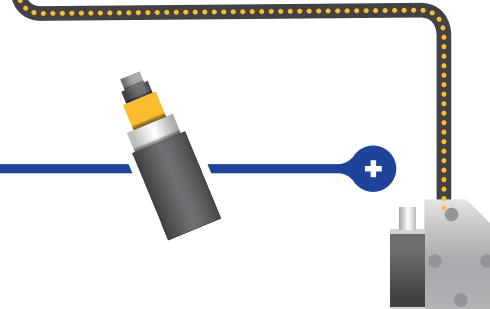
Automatic feed system with patented technology has a self-learning feed algorithm that takes the guesswork out of filling your hot melt system. This means no more tuning or calibrating your fill, hoping you get the right frequency.

Advanced display module shows accurate control of temperature, adhesive usage, dispense shot sizes and performance notifications.

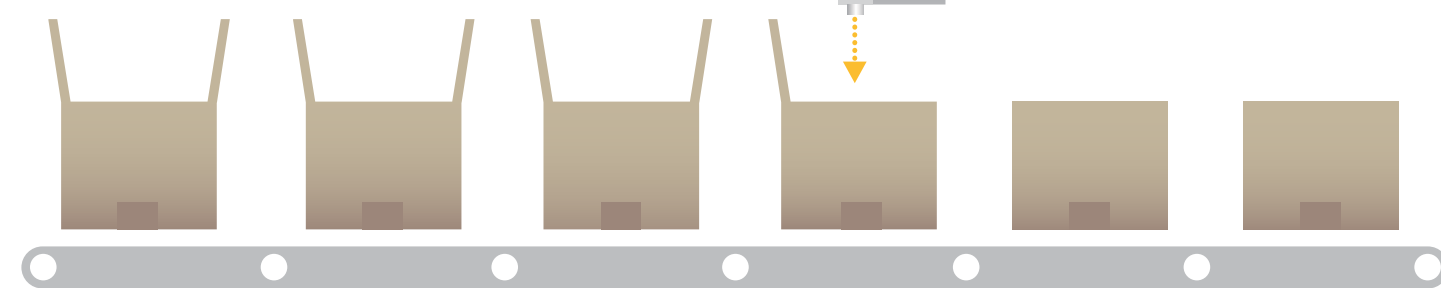


Adhesive melter has innovative chambers that quickly melt adhesive for immediate dispense, eliminating adhesive char buildup and maintaining adhesive integrity.

Char resistant heated hose design reduces char buildup, resulting in more uptime and lower maintenance costs.



Plug-Free™ applicators have a free-flow manifold design and integrated module filtering that eliminate nozzle plugs and can operate up to 10,000 cycles per minute.



TANK-FREE, MELT-ON-DEMAND SYSTEM RUNS RELIABLY AND BOOSTS PRODUCTIVITY

TANK-FREE HOT MELT TECHNOLOGY COMPARISON



HM10

Melter dispenses adhesive at low flow, low volume rates good for any application involving small packaging.



HM25c

Compact unit for middle to high volume case and carton sealing. Easily integrates into end-of-line packaging.



HM50

High volume, case and carton sealing benefits the most from the InvisiPac's highest flow model.

	InvisiPac HM10	InvisiPac HM25c	InvisiPac HM50
Melt rate: Pounds per hour (lbs/hr)	10	25	50
Melt rate: Kilograms per hour (kgs/hr)	4.5	11.3	22
Channels	2 or 4	4 or 8	2, 4 or 6
Pellet feed container	On-board hopper	External bin	External bin
Pellet delivery method	Venturi feed hose	Venturi feed hose	Venturi feed hose
Melt technology	Tank-free hot melt	Tank-free hot melt	Tank-free hot melt
Pattern controller	Available as a stand-alone accessory	Internal on select models or available as a stand-alone accessory	Internal on select models or available as a stand-alone accessory
Box controller	Available as an accessory	Standard feature	Standard feature
Voltage (V)	200-240 V 350-415 V 400-480 V	200-240 V 350-415 V 400-480 V	200-240 V 335-400 V 350-415 V 400-480 V

INVISIPAC BOOSTS END-OF-LINE PRODUCTIVITY AT ANY SPEED

InvisiPac HM10 – LOW FLOW, LOW VOLUME INNOVATION AT 10 LBS/HOUR

InvisiPac HM25c – COMPACT RELIABILITY AND PROFITABILITY AT 25 LBS/HR



SIZED FOR SYSTEM OPTIMIZATION

Tank-Free™ melter dispenses adhesive at low flow, low volume rates for case and carton sealing, labeling, side seaming and applications involving small packaging.

On-Board Hopper

- 20 lb (9 kg) capability for pellet storage
- Clear lid for easy filling and monitoring
- Pellet shaker for precise feed control
- Part of unit, saving space at the end of any packaging line

Air Venturi Feed

- Pellets supplied on-demand from hopper to melter
- Air control to adjust speed supplying only the amount of adhesive pellets needed
- Separate air flow control for further feeding efficiency

One to Four Channels

- Compatible with one to four Graco Plug-Free™ applicators and heated hoses

Mounting

- Same compact footprint as InvisiPac HM25c
- Easy installation and changeover from other units

Tank-Free Melter

- 10-minute start-up time for energy efficiency and waste reduction
- 10 lb (4.5 kg) per hour melt rate for low flow applications
- Safe operation with no access to heated components

Intuitive User Interface and Feedback

- Touchscreen with visibility and control of adhesive usage
- User interface display monitors and tracks system
- Easy installation integration



Tank-Free Melter

- Proprietary melt-on-demand technology for steady and immediate dispense
- Output dispense of 25 lbs (11.3 kg) or less per hour
- 10-minute start-up time
- First-in-first-out (FIFO) process that eliminates adhesive char and thermal shocking

System Inlet Air Filter

- Filters incoming air to prevent contamination
- Extends the lifespan of internal components
- Easy access for maintenance

Pump Air Pressure Gauge and Regulator

- Pressure relief valve for safety
- Real-time pressure reading for consistent pump operations
- Adjustable setting for different adhesive viscosities
- Ensures optimal performance for the pump system

Optional Light Tower

- Easily see system status from a distance
- Alerts when material usage is out of desired range



Electrical Enclosure

- Easily integrates with existing packaging lines
- Designed to withstand industrial environments

Advanced Display Module (ADM)

- Integrated material tracking
- Auto shut-off capability
- Easy to use interface for advanced control and monitoring

InvisiPac HM50 – HIGH VOLUME PRODUCTIVITY AND SAFETY AT 50 LBS/HOUR

InvisiPac – INTEGRATED VACUUM FEED AND HEATED HOSES



Optional Light Tower

- Indicates system status at a glance

Filter

- Large surface area for months of maintenance free operation

Pump

- Two-ball design leverages Graco's 100 years of fluid handling expertise
- NXT® Air Motor technology provides reliable shot consistency

Intuitive User Interface

- Graphics and text make operation simple
- Easy troubleshooting points you to the root of the problem
- Single screen view of all heat zone temperatures
- Tracks adhesive consumption
- USB downloadable operating data, errors and event history

In-line Melter

- Melt rate of 50 lbs/hr (22 kg/hr)
- Reduces char and improves uptime
- Reaches operating temperature in 10 minutes or less
- Allows first-in-first-out adhesive flow

Integrated Automatic Vacuum Feed System

- Saves labor automatically by pulling adhesive from a drum or bulk container



InvisiPac GS35 or GM100

- Patented module filter design provides plug-free operation

Superior Heated Hoses

- Engineered to virtually eliminate char buildup

1 Shaker built into vacuum

Reduces air consumption by eliminating the need for an external shaker

2 Feeds from center of hopper

Ensures adhesive does not build up on one side

3 Vibration arms

Break up clumps and reduces adhesive bridging

4 Fully enclosed hopper

Keeps adhesive free of debris and contaminants

5 Simple installation

Push to connect air line from InvisiPac system
Quick disconnect vacuum hose



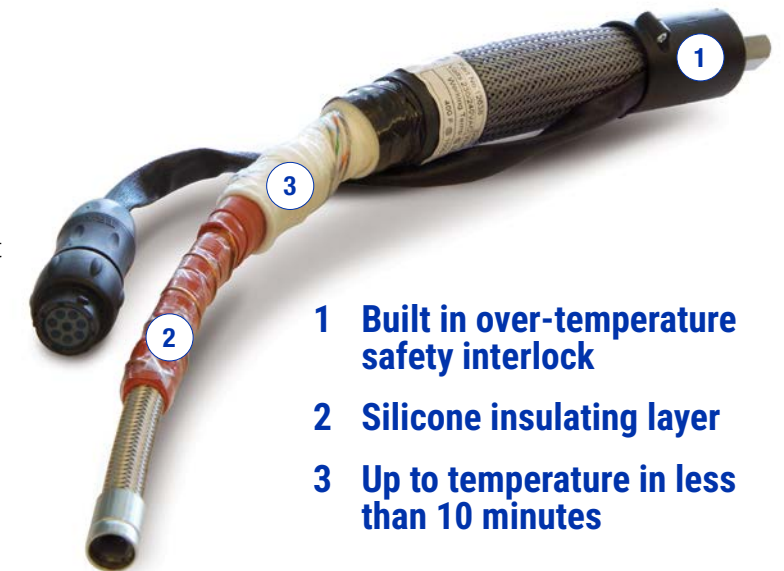
Superior heated hose design maintains consistent temperature

Char-resistant hose design reduces adhesive char buildup, resulting in more uptime and lower maintenance costs.

An additional silicone layer promotes even heating, eliminating hot and cold spots that cause char and skin formation.

- Available in many lengths for easy installation
- Available in waterwash or standard platforms

InvisiPac waterwash hoses for food-safe packaging operations are IPX6 rated, fulfilling international performance standards.



- 1 Built in over-temperature safety interlock**
- 2 Silicone insulating layer**
- 3 Up to temperature in less than 10 minutes**

GM100 AND GS35 PLUG-FREE APPLICATORS AND PATTERN CONTROL



SPECIFICATIONS

Easy pattern setup

- See pattern definitions all on one page for a comprehensive view
- Eliminate the guesswork of pattern setup with on-screen pattern preview
- Copy, delete or name patterns for quick changes that keep your line running
- Clone one gun sequence to another when all you need is to repeat the job
- Save time by inserting or deleting beads without editing the rest of the pattern

Variable line speed compensation

- Match adhesive output with line speed – less at slow speeds, more at high speeds
- Set the right amount when and where you want it

Stitching

- Save adhesive
- Turn stitching on or off with the push of a button

Operating modes

- Use time-based mode for simple pattern control
- Use distance-based at a fixed line speed or with an encoder when you need precise control or need to adjust to changing line speeds

“50% glue savings is awesome and programming patterns is unbelievably easy.”

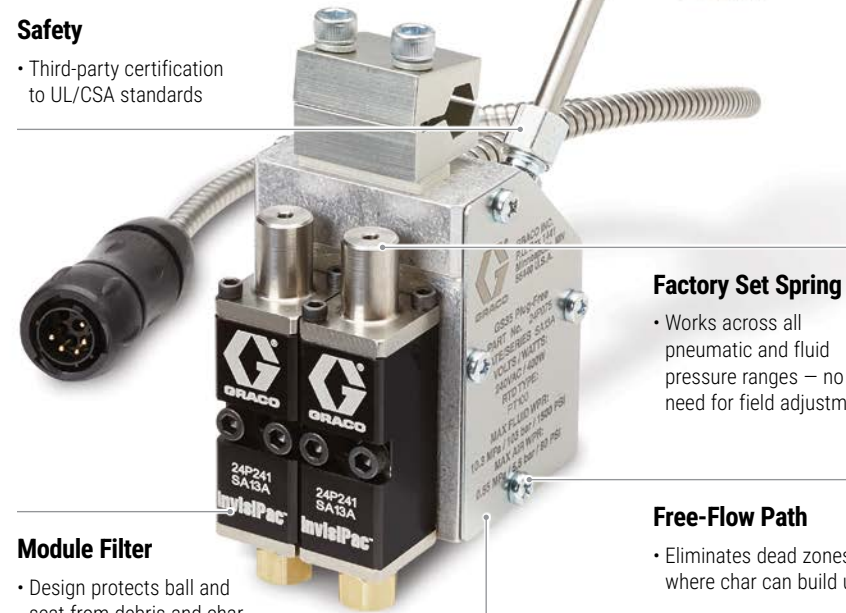
– North American kitted cabinet manufacturer

Solenoid GM100 and GS35

- Engineered for optimal control
- Able to perform at high speeds, high temperatures
- Lasts over 5 times longer than comparable solenoids

Safety

- Third-party certification to UL/CSA standards



Factory Set Spring

- Works across all pneumatic and fluid pressure ranges – no need for field adjustment

Free-Flow Path

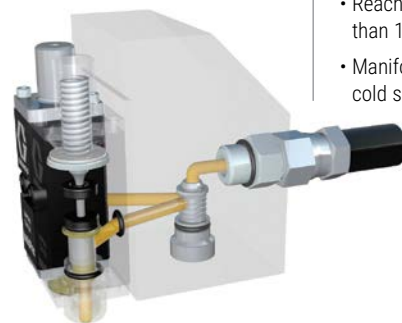
- Eliminates dead zones where char can build up

Module Filter

- Design protects ball and seat from debris and char
- Eliminates nozzle plugging when used with InvisiPac System

Manifold

- Reaches operating temperature in less than 10 minutes
- Manifold filter traps debris and eliminates cold spots, ensuring consistent application



INVISIPAC PATTERN CONTROLLER			
Description	PC-8	PC-8e	Specifications
Gun Outputs	8	8	24VDC, 1A max
Trigger Inputs	4	4	NPD or PNP
Encoder	N/A	2	Differential Line Driver
Line Speed Compensation	N/A	4	I/P (4-20mA) or V/P (0-10v)
PLC Enable/Disable	✓	✓	0-30VDC
PLC Program Select Bits	4	4	Select up to 15 unique programs
PLC Alarm Output	✓	✓	0-250VAC (dry contact output)
Integrated Power Supply	✓	✓	150W, 24VDC
Program Storage	50	50	
Beads per Output per Program	24	24	Each bead can be independantly stitched
Distance Accuracy	1mm, 0.1"	1mm, 0.1"	
Time Accuracy	1 ms	1 ms	
Enclosed Environment Rating	IP54	IP54	
Approvals	CE, ETL, cETL	CE, ETL, cETL	

INVISIPAC HOSES	
Length	4-25 ft
Maximum Operating Temperature	204°C (400°F)
Maximum Working Fluid Pressure	1500 psi/103 bar/10.3 MPa
Time to Temperature	Less than 10 minutes*
Available for dry or washdown environments	Built in overtemperature safety interlock

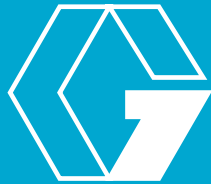
INVISIPAC FEED SYSTEM	
Material Size	1/2" x 1/2" x 1/4" (12 mm x 12 mm x 6mm)
Maximum Feed Distance	30 ft
Vertical Height	10 ft
Vacuum Transfer Operating Pressure Range	40-100 psi
Vacuum Air Consumption	9.5 scfm @ 40 psi 17.2 scfm @ 80 psi (4% duty cycle)



INVISIPAC PLUG-FREE HOT MELT APPLICATORS	GS35	GM100
Description	Air Open / Spring Close, Ball and Seat	Air Open / Air Close, Ball and Seat
Speed	Greater than 3,500 cycles/min	Greater than 10,000 cycles/min
Time to temperature	Less than 10 minutes*	
Maximum Working Fluid Pressure	1,500 psi / 103 bar / 10.3 MPa	
Operating Pneumatic Pressure Range	40-80 psi / 2.8-5.5 bar / 0.28-0.55 MPa	65-80 psi / 4.4-5.5 bar / 0.44 - 0.5 MPa
Maximum Operating Temperature	204°C (400°F)	
Ambient Temperature Range	0-50°C (32-122°F)	
Solenoid Valve	24 Vdc or 110 Vac	24 Vdc
Approvals and Standards	UL 499, CSA88, CE, ISO 9001	
Electrical Service	200-240 Vac, 50/60 Hz, 400 W	

*From 21°C to 177°C (70°F to 350°F). Dependent upon power supply, machine configuration and glue type.

MOVING MATERIALS THAT MATTER™



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