



MOVING MATERIALS THAT MATTER™

InvisiPac®

TANK-FREE™ HOT MELT DELIVERY SYSTEM



InvisiPac – a reliable seal every application, every time



Improve production by reducing... problems?



**Unplanned
downtime**



Pop-opens



**Clogged
nozzles**



**High adhesive
costs**

Guaranteed Savings

- Use less material.
- Reduce maintenance and spare parts.

Better Seal

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

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.

Parts Last Longer

- Less plastic and built to last.
- 10+ years pump lifetime.
- 500 million + gun cycles.

Eliminate Downtime

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

Improved Operator Safety

- Design eliminates burn hazard risks and keeps your employees safe.



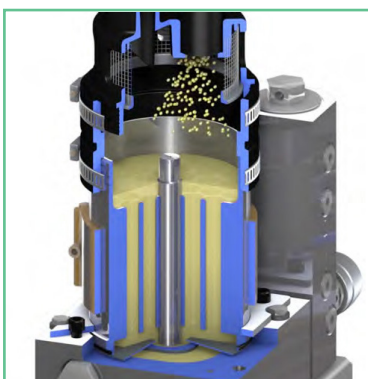
The Tank-Free™ difference

InvisiPac's Tank-Free System

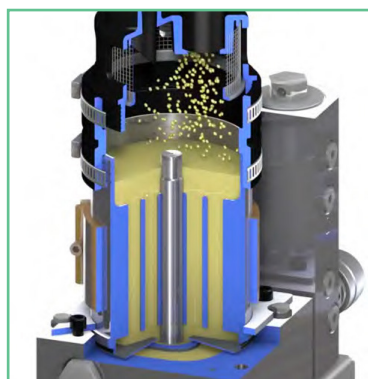
- Heats to operating temperature quickly due to high melting surface area
- Maintains continuous flow of heated-on-demand adhesive
- Safeguards adhesive integrity
- Eliminates plugged nozzles by eliminating adhesive char
- Eliminates exposure to burn hazards

Tank & Tank-Less Systems

- Heat to operating temperature slowly due to low melting surface area
- Keep large quantities of adhesive at high temperatures
- Allow degradation of adhesive integrity
- Create char and cause plugged nozzle
- Exposure to burn hazards



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



With its efficient heat transfer design, glue melts quickly and maintains a consistent temperature.



Less time your glue cooks at high temperature means less char, less maintenance, less degradation and more uptime.

How InvisiPac works

Automatic Feed System with patented technology has a self-learning feed algorithm that takes the guess work out of filling your hot melt system. No more tuning or calibrating your fill hoping you get the right frequency.

Tank-Free, melt-on-demand system runs reliably and boosts productivity

1.

Advanced Display Module provides an accurate control of the complete process (temperature, adhesive usage, dispense shot sizes, performance notifications).

2.

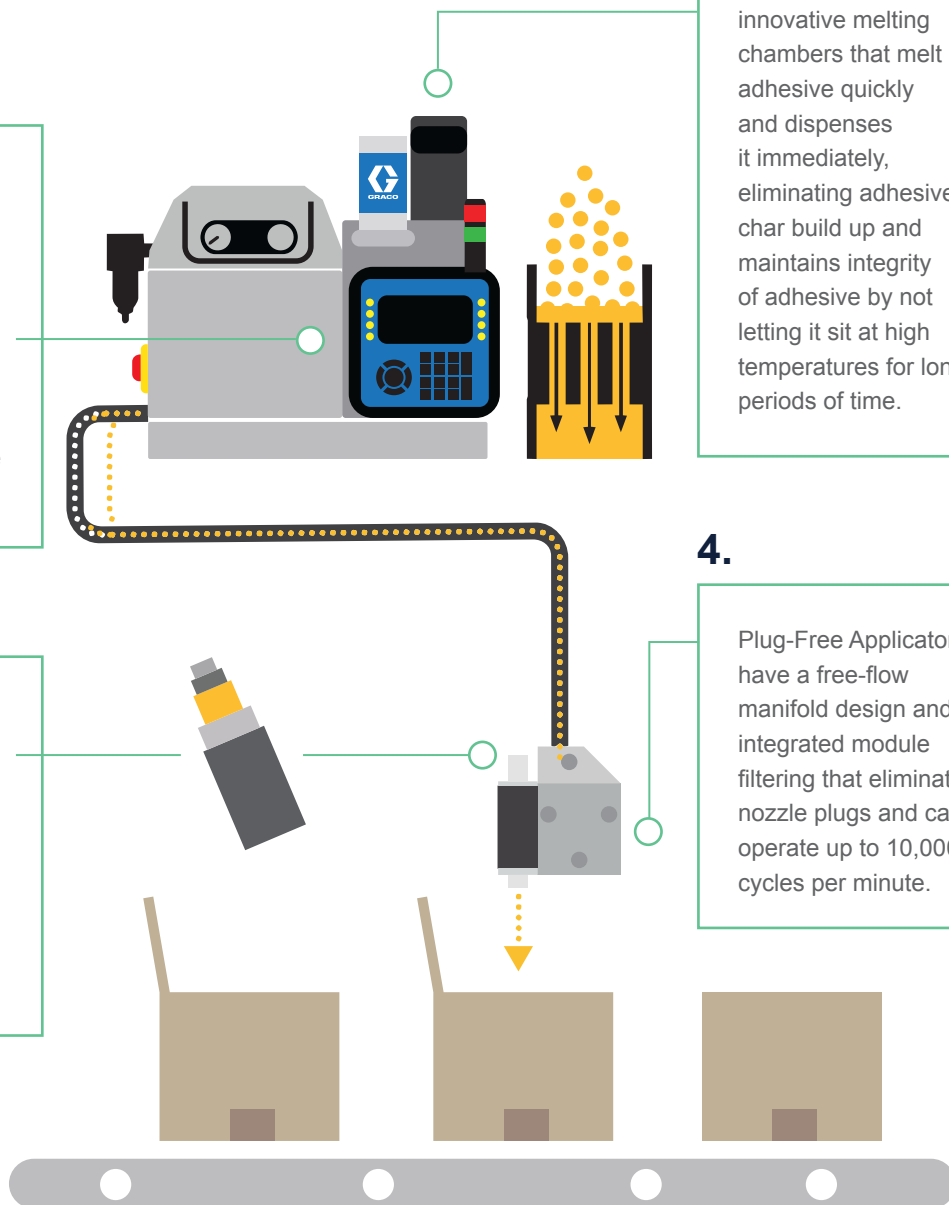
Adhesive Melter has innovative melting chambers that melt adhesive quickly and dispenses it immediately, eliminating adhesive char build up and maintains integrity of adhesive by not letting it sit at high temperatures for long periods of time.

3.

Superior heated hose design is char resistant, reducing char buildup, resulting in more uptime and lower maintenance costs.

4.

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



Tank-Free hot melt Technology comparison

**InvisiPac boosts end-of-line
productivity at any speed**



HM10

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



HM10

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



HM10

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
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 HM10

– Low flow, low volume innovation at 10 lbs/hour

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



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

Mounting

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

Intuitive User Interface and Feedback

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

InvisiPac HM25c

– Compact reliability and profitability at 25 lbs/hr

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

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 efficiency

System Inlet Air Filter

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

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

Optional Light Tower

- Indicates system status at a glance

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

InvisiPac GS35 or GM100

- Patented module filter design
- provides plug-free operation

Filter

- Large surface area for months of maintenance free operation

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

Superior Heated Hoses

- Engineered to virtually eliminate char buildup



Heated Hose - Maintain consistent temperature

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

Breaks 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

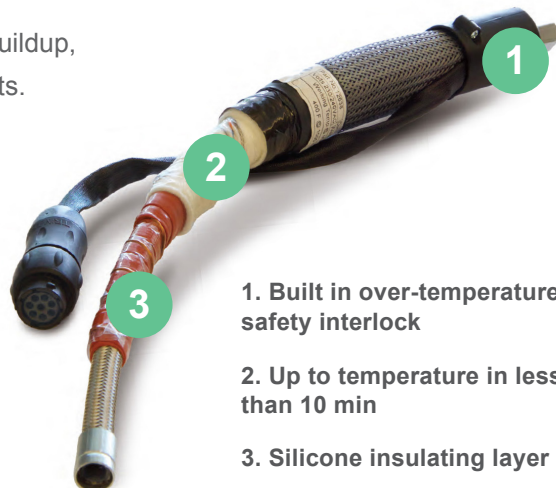


Superior heated hose design maintains consistent temperature

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. Up to temperature in less than 10 min

3. Silicone insulating layer

GM100 and GS35 plug-free applicators and pattern control

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

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

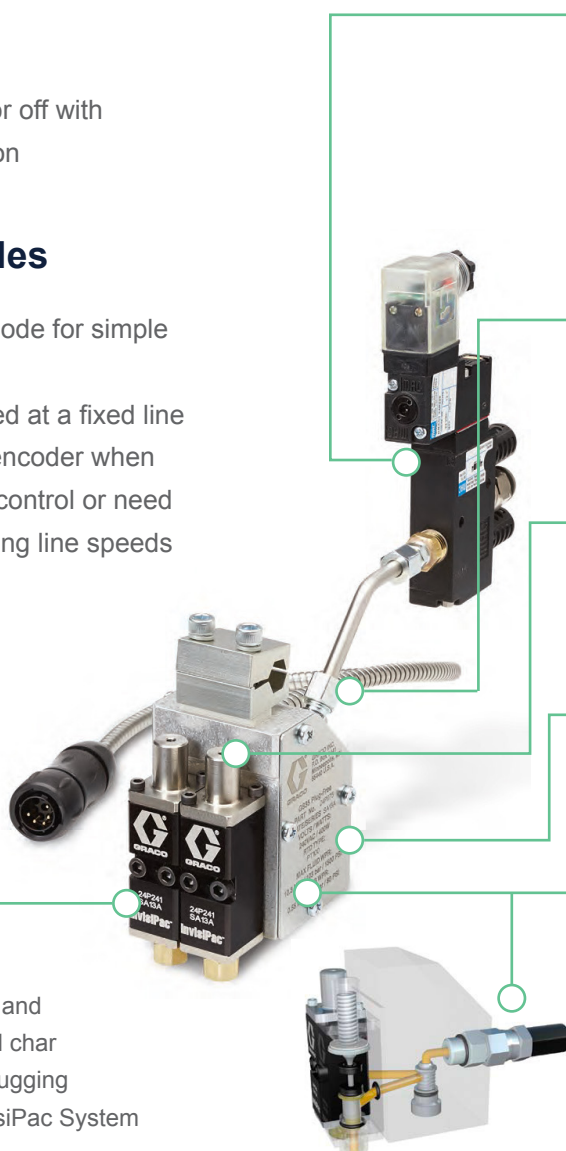
- Eliminates dead zones where char can build up

Manifold

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

Module Filter

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



InvisiPac®

THE HOT MELT SYSTEM THAT RUNS RELIABLY, UNNOTICED AND INVISIBLE.

Specifications

InvisiPac Feeder System		InvisiPac Hoses	
Material size:	1/2" x 1/2" x 1/4"	Length:	4 – 25 ft (in 2 foot increments)
Maximum Feed Distance:	(12mm x 12mm x 6mm)	Maximum Operating Temperature:	204°C (400°F)
Vertical Height:	30 ft 10 ft	Maximum Working Fluid Pressure:	1500 psi / 103 bar / 10.3 MPa
Vacuum Transfer Operating Pressure Range:	40-100 psi	Time to Temperature:	Less than 10 minutes*
Vacuum Air Consumption:	9.5 scfm@40 psi 17.2 scfm @80 psi (4% duty cycle)	<i>Available for dry or wash-down environments</i>	<i>Built in over-temperature safety interlock</i>

InvisiPac Plug-Free Hot Melt Adhesive Applicator	GS35	GM100
Description:	Air Open / Spring Close, Ball and Seat	Air Open / Air Closed, Ball and Seat
Speed:	Greater than 3,500 cycles/min	10,000 cycles/min
Time to Temperature	Less than 10 minutes* *	Less than 10 minutes* *
Maximum Working Fluid Pressure:	1500 psi / 103 bar / 10.3 MPa	1500 psi / 103 bar / 10.3 MPa
Operating Pneumatic Pressure Range:	40-80 psi / 2.8-5.5 bar / 0.28-0.55 MPa	40-80 psi / 2.8-5.5 bar / 0.28-0.55 MPa
Maximum Operating Temperature:	204°C (400°F)	204°C (400°F)
Ambient Temperature Range	0-50°C (32-122°F)	0-50°C (32-122°F)
Solenoid Valve:	24 Vac or 110 Vac	24 Vac
Electrical Service:	200-240 Vac, 50/60 Hz, 400 W	200-240 Vac, 50/60 Hz, 400 W
Approvals and Standards:	UL499, CSA88, CE, ISO 9001	UL499, CSA88, CE, ISO 9001

InvisiPac Pattern Controller			
Description:	PC-8:	PC-8e:	Specifications:
Gun Outputs:	8	8	24VDC, 1A max
Trigger Inputs:	4	4	NPN or PNP
Encoder:	N/A	2	Differential Line Driver
Line Speed Compensation:	N/A	2	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:	20	50	Each bead can be independently stitched
Beads per Output:	24	24	
Distance Accuracy:	1mm, 0.1"	1mm, 0.1"	
Time Accuracy:	1ms	1ms	
Enclosure Environmental Rating:	IP54	IP54	
Approvals:	CE, ETL, cETL	CE, ETL, cETL	

At E.S.I Solutions, we are committed to providing unparalleled service and quality to help your business thrive.

Reach out to discover how we can support your operational needs.



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