



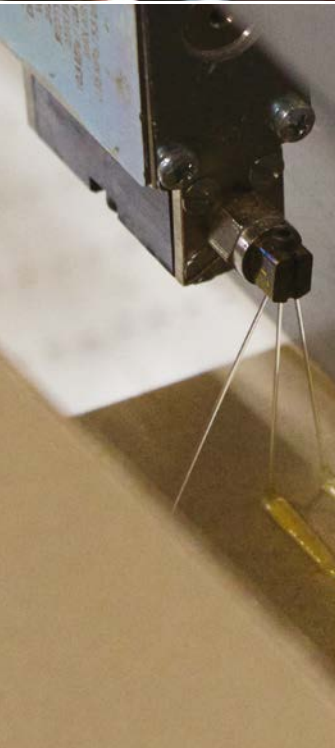
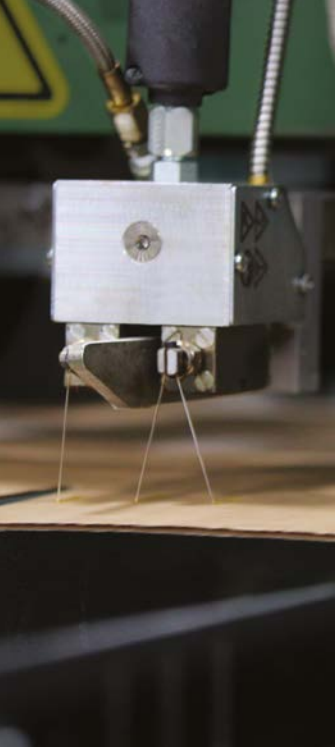
InvisiPac™

Tank-Free™ Hot Melt Delivery system
For Case and Carton Packaging



+30 2111984600 www.analysis.com

PROVEN QUALITY. LEADING TECHNOLOGY.



Confidence is a reliable seal.

Pop-opens, clogged nozzles, unplanned downtime, increasing adhesive costs. If you're using tank-based hot melt delivery systems for your case & carton packaging line, it's likely that you've lost productivity – and a good amount of sleep – from these common problems.

At Graco, we understand that continued downtime, or the smallest defect in a case or carton sealing application can result in added costs or returned goods - leading to significant loss in profit. However, our experience of developing fluid dispense systems over the last 90 years has enabled us to create the most reliable hot melt glue systems available today, which ensure that you have consistent sealing and more uptime - thus protecting your bottom line.

Make more.

Eliminate Downtime

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

Parts Last Longer

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

Improved Operator Safety

- Design eliminates burn hazard risks and keeps employees safe



The most reliable, most profitable Hot Melt system



Save more.

Guaranteed Savings

- Use less material
- Reduce maintenance and spare parts

Better Seal

- Reduces costly pop-opens by having glue do what it's supposed to - not cooking away and producing char

Use Less Energy

- Heats up in < 10 minutes and has an auto shut off after 1 hour idle time

Know more.

Know Your Glue Usage

- Measures the right amount of glue, controls a consistent bead and tracks your usage grams per case, so you can put exactly what you need, where you need it

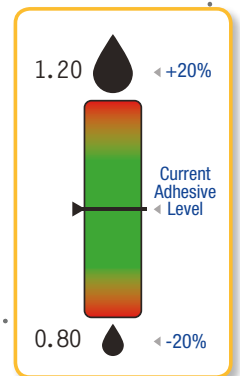
Real Time Feedback

- Gives you out-of-range material usage alerts and receives performance notifications on your lines anywhere and at any time, so you save on additional costs



InvisiPac Dashboard				
Machine Name	Status	Adhesive Today	Units Today	Events
Line 604	Inactive	2.27 lb	2304	⚠️ 🔔 🗑️
Line 608	Active	13.68 lb	14242	⚠️ 🔔 🗑️
Line 610	Active	4.73 lb	6078	⚠️ 🔔 🗑️
Line 615	Active	0.11 lb	73	⚠️ 🔔 🗑️
Line 686	Active	6.25 lb	81173	⚠️ 🔔 🗑️
Line 687	Active	8.88 lb	106679	⚠️ 🔔 🗑️
Line 688	Active	2.92 lb	34086	⚠️ 🔔 🗑️

ADHESIVE USAGE LINE REPORT



How Invisipac works for you

1

Automatic Feed System with patented technology has a self-learning feed algorithm that takes the guesswork out of filling your hot melt system.

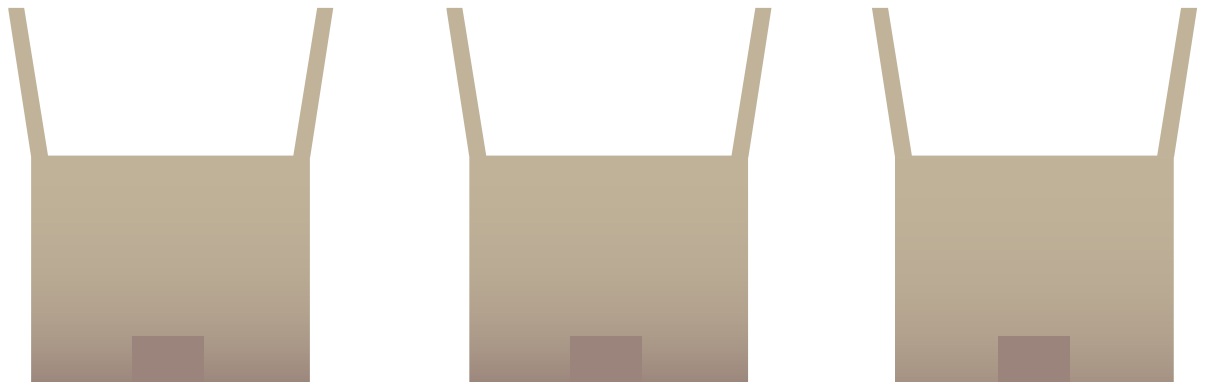
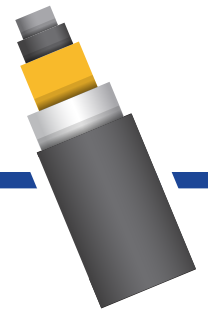
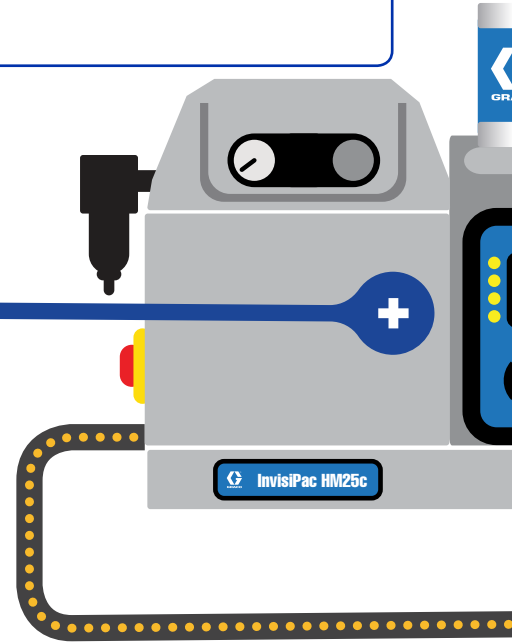
No more tuning or calibrating your fill, hoping you get the right frequency.

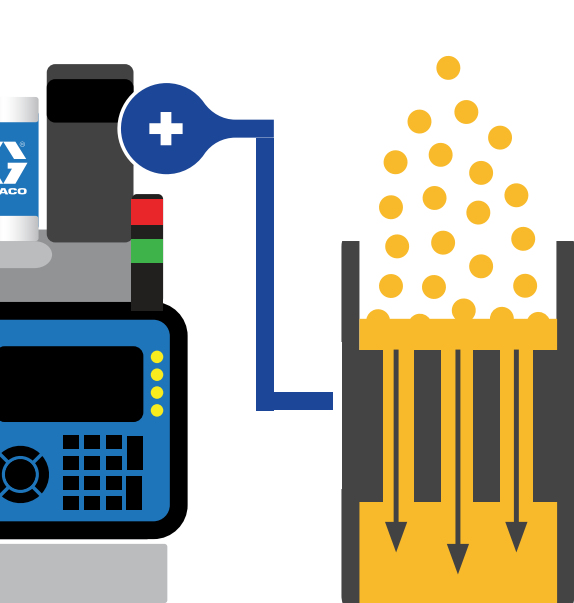
3

Advanced Display Module controls the entire process (temperature, adhesive usage, shot sizes, performance).

4

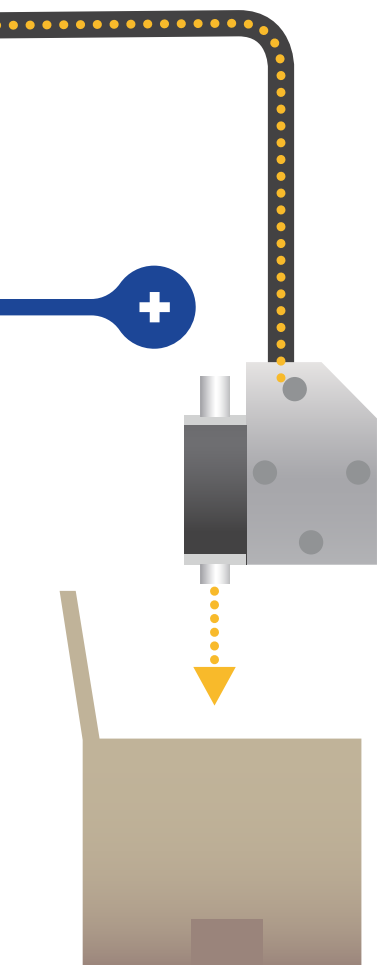
Superior heated hose design is char resistant, reducing char buildup, resulting in more uptime and lower maintenance costs.





2

Adhesive Melter has innovative melting chambers that melt and dispense the adhesive quickly - thus eliminating char build-up - so that the integrity of the adhesive is maintained by not letting it sit at high temperatures for long periods of time.



5

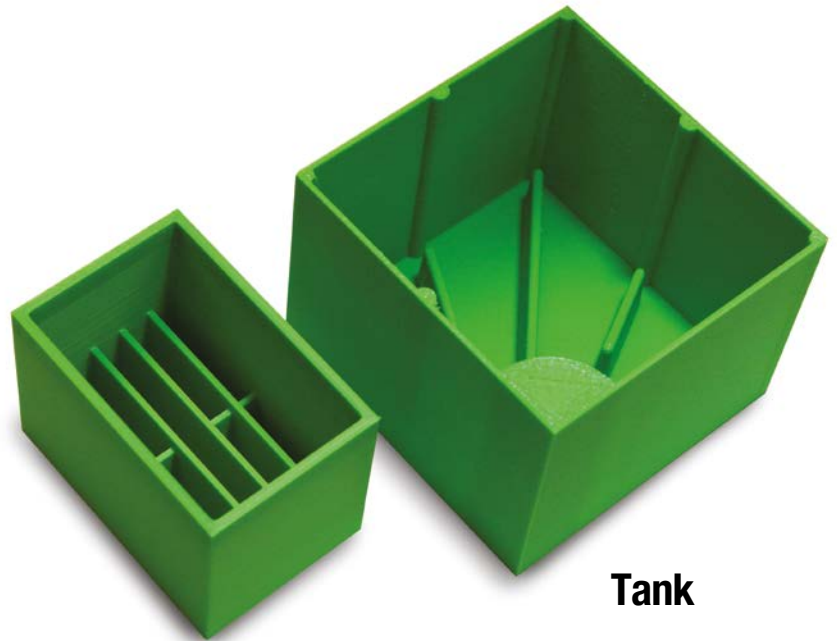
Plug-Free Applicators have a free-flow manifold design and integrated module filtering that eliminate nozzle plugs and can operate up to 10,000 cycles per minute.

The Tank-Free™ difference

Tank & “Tank-Less” Systems from other manufacturers

- 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

“Tank-Less”



Tank

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-Free

Why InvisiPac is different... and better

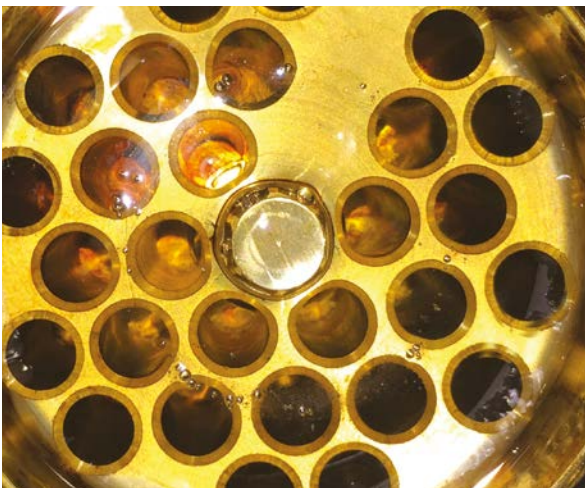
Tank-based systems have long heat-up times, which cause operators to leave systems on, and do expose the adhesive to extended periods of heat. This degrades material quality and produces time-consuming, plug-forming char. Tank-based systems are also prone to thermal shock from large amounts of adhesive being dumped into the tank during refill. This causes temperature fluctuation and changes glue viscosity, thus wasting glue through dispensing inconsistencies.

With InvisiPac:

- 1** An ultrasonic sensor monitors the glue level in the melting chamber, automatically adding glue when needed.
- 2** With its efficient heat transfer design, glue melts quickly and maintains a consistent temperature.
- 3** The less time your glue sits at high temperature means less char and maintenance.

More choices

You can use low-grade adhesives when it makes sense, or high-grade adhesives to ensure premium performance.



Hassle-free operation

Eliminate downtime due to plugged nozzles

With the InvisiPac Plug-Free™ Hot Melt Adhesive Applicators, you'll experience a new era in hassle-free operation. With their innovative free-flow manifold design and integrated module filtering, you can eliminate nozzle plugs.

Solenoid

- Graco-engineered for optimal control
- Designed to withstand high speed, high temperature operation
- Lasts over 5 times longer

Configurable

- Design options easily configure to meet application needs
- Can hook up to any existing hot melt systems for better control

Module Filter

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

Manifold

- Manifold filter traps debris and char, so it's removed when you replace the filter
- Manifold filter is included in a heated zone, eliminating cold spots and ensuring consistent adhesive application
- Reaches operating temperature in less than 10 minutes

Free-Flow Path

- Designed to eliminate dead zones where char will build up



Drive efficiencies with data



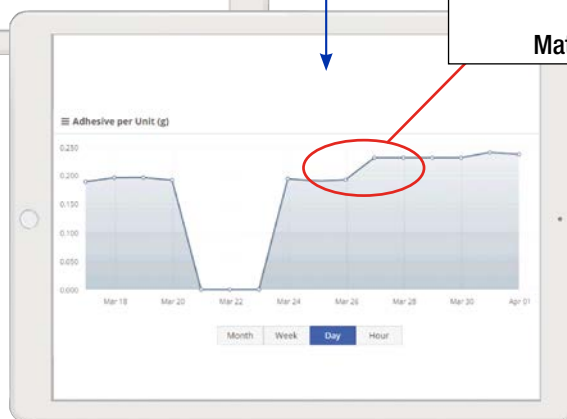
With InvisiPac, you can track material usage and other production events

- USB download of operating data, errors and event history
- Easily graph your adhesive consumption to track cost per unit, saving you money and ensuring quality
- Quantitatively analyze machine performance to improve preventative maintenance and reduce downtime
- Receive alerts when material usage is out of desired range and performance notifications on your lines

Machine Name	Status	Adhesive Today	Units Today	Events
Line 604	Inactive	2.27 lb	2304	
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Know how much adhesive was used in each line and compare with line production

Know how your adhesive per unit is tracking to project out adhesive costs



Result

- Less adhesive usage
- Less rework
- Less product returns due to pop-opens
- Equals **more** to your bottom line

Maintain consistent temperature

Superior heated hose design

Graco's char-resistant hose is designed to reduce 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 rated to IPX6, an international standard for performance in waterwash applications



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

Specifications

InvisiPac Tank-Free Hot Melt Delivery System



	HM25C	HM50
Electrical Service	200-240 Vac, 1-ph, 50/60HZ, 32A 200-240 Vac, 3-ph, Δ, 50/60HZ, 32A 350-415 Vac, 3-ph, Y, 50/60HZ, 32A 400-480 Vac, 3-ph, Δ, 50/60HZ, 14A	200-240 Vac, 1-ph, 50/60HZ, 32A 200-240 Vac, 3-ph, Δ, 50/60HZ, 32A 350-415 Vac, 3-ph, Y, 50/60HZ, 32A 400-480 Vac, 3-ph, Δ, 50/60HZ, 14A
Time to Temperature	Less than 10 minutes*	Less than 15 minutes*
Melt Rate / Constant Throughput*	11.3 kg/hr (25 lb/hr)	22.6 kg/hr (50 lb/hr)
Pump	Pneumatic Piston, 12:1	Pneumatic Piston, 12:1
Operating Pneumatic Pressure Range	1.4-7 bar / 0.14-0.69 MPa / 20-100 psi	1.4-7 bar / 0.14-0.69 MPa / 20-100 psi
Operating Fluid Pressure Range	16-83 bar / 1.6-8 MPa / 240-1200 psi	16-83 bar / 1.6-8 MPa / 240-1200 psi
Temperature Range	38-204°C (100-400°F)	38-204°C (100-400°F)
Ambient Temperature Range	0-50°C (32-122°F)	0-50°C (32-120°F)
Channels	Up to 8	Up to 6
Maximum Gun Wattage Per Channel	400 W	400 W
Input Capability	6 inputs (0-30Vdc)	4 inputs (0-30Vdc)
Output Capability	2 outputs (240Vac, 24Vdc, 2A)	4 outputs (240Vac, 24Vdc, 2A)
Glue shape	Pellets	Pellets
Max. Vacuum Transfer Hose Length (horizontal x vertical)	9.1 m (30 ft) 6.1 m x 3.0 m (20 ft x 10 ft)	9.1 m (30 ft) 6.1 m x 3.0 m (20 ft x 10 ft)
Vacuum Operating Pneumatic Pressure Range	2.8-7 bar / 0.28-0.55 MPa / 40-100 psi	2.8-7 bar / 0.28-0.55 MPa / 40-100 psi
Vacuum Air Consumption at 40 psi	0.26 m ³ /min. (intermittent duty; 4% @ 11.3 kg/hr)	0.26 m ³ /min. (intermittent duty; 4% @ 11.3 kg/hr)
Vacuum Air Consumption at 80 psi	0.48 m ³ /min. (intermittent duty; 4% @ 11.3 kg/hr)	0.48 m ³ /min. (intermittent duty; 4% @ 11.3 kg/hr)
Approvals and Standards	UL499, CSA88, CE, ISO 9001	UL499, CSA88, CE, ISO 9001

* Melt rates typical for packaging grade adhesives. Actual melt rates may vary due to chemistry and other factors.

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

For detailed dimensions and configurations, see instruction manuals 3A2347, 333347, 3A4938 and 3A2805 available on www.graco.com.

Accessories



DESCRIPTION	GS35 AIR OPEN / SPRING CLOSE, BALL AND SEAT	GM100 AIR OPEN / AIR CLOSE
Speed	Greater than 3.500 cycles/min	Greater than 10.000 cycles/min
Time to Temperature	Less than 10 minutes**	Less than 10 minutes**
Maximum Fluid Pressure	103 bar / 10.3 MPa / 1500 psi	103 bar / 10.3 MPa / 1500 psi
Operating Pressure Range	2.8-5.5 bar / 0.28-0.55 MPa / 40-80 psi	4.4-5.5 bar / 0.28-0.55 MPa / 40-80 psi
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 or 110 Vac
Electrical Service	200-240 Vac, 50/60 Hz	200-240 Vac, 50/60 Hz
Approvals and Standards	UL499, CSA88, CE, ISO 9001	UL499, CSA88, CE, ISO 9001



AUTOMATIC FEED SYSTEM

Fully enclosed automatic material feeding system for hot melt pellets with vibrating arms to break up clumps of pellets.



ADVANCED FEED SYSTEM

Fully enclosed automatic material feeding system for hot melt pellets, cushions & tablets.



FEEDING WAND

Automatic feeding system for hot melt pellets without material container.

DESCRIPTION	PC-8	PC-8e	SPECIFICATIONS
Gun Outputs		8	24VDC, 1A max
Trigger Inputs		4	NPN or PNP
Encoder	-	✓	Differential Line Driver
Line Speed Compensation	-	✓	I/P (4-20mA) or V/P (0-10V)
PLC Enable / Disable	✓	✓	0-30VDC
PLC Program Select Bits		4	Select up to 15 unique programs
PLC Alarm Output	✓	✓	0-250VAC (dry contact output)
Integrated Power Supply	✓	✓	150W, 24VDC
Program Storage		50	
Beads per output		24	Each bead can be independently stitched
Distance Accuracy		1mm	
Time Accuracy		1 ms	
Enclosure Environmental Rating		IP54	
Approvals		CE, ETL, cETL	

APPLICATORS

FEEDING SYSTEMS

PATTERN CONTROL



ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

GRACO LOCATIONS

MAILING ADDRESS

P.O. Box 1441
Minneapolis, MN 55440-1441
Tel: 612-623-6000
Fax: 612-623-6777

AMERICAS

MINNESOTA
Worldwide Headquarters
Graco Inc.
88-11th Avenue N.E.
Minneapolis, MN 55413

EUROPE

BELGIUM
European Distribution Center
Graco Distribution BVBA
Industrieterrein-Oude Bunders
Slakweidestraat 31
3630 Maasmechelen,
Belgium
Tel: 32 89 770 700
Fax: 32 89 770 777

ASIA PACIFIC

AUSTRALIA
Graco Australia Pty Ltd.
Suite 17, 2 Enterprise Drive
Bundoora, Victoria 3083
Australia
Tel: 61 3 9468 8500
Fax: 61 3 9468 8599

CHINA
Graco Hong Kong Ltd.
Shanghai Representative Office
Building 7
1029 Zhongshan Road South
Huangpu District
Shanghai 200011
The People's Republic of China
Tel: 86 21 649 50088
Fax: 86 21 649 50077

INDIA

Graco Hong Kong Ltd.
India Liaison Office
Room 432, Augusta Point
Regus Business Centre 53
Golf Course Road
Gurgaon, Haryana
India 122001
Tel: 91 124 435 4208
Fax: 91 124 435 4001

JAPAN
Graco K.K.
1-27-12 Hayabuchi
Tsuzuki-ku
Yokohama City, Japan 2240025
Tel: 81 45 593 7300
Fax: 81 45 593 7301

KOREA
Graco Korea Inc.
38, Samsung 1-ro 1-gil
Hwaseong-si, Gyeonggi-do, 18449
Republic of Korea
Tel: 82 31 8015 0961
Fax: 82 31 613 9801

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Graco is certified ISO 9001.



Europe
+32 89 770 700
FAX +32 89 770 777
WWW.GRACO.COM