

InvisiPac[®] GM100 Plug-Free[™] Hot Melt Applicator

334627S

EN

For dispensing hot melt adhesive. For professional use only.

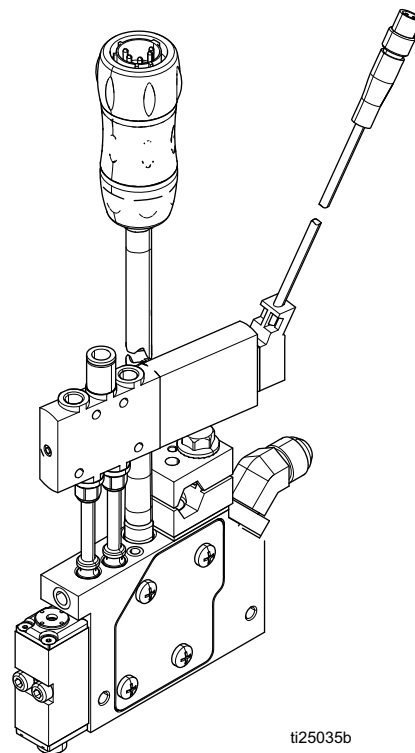
Not approved for use in explosive atmospheres or hazardous locations.

See page 3 for model information, including working pressures and approvals.



Important Safety Instructions

Read all warnings and instructions in this manual and in all related manuals before using the equipment. Save all instructions.



ti25035b



Intertek
4002346

Conforms to ANSI/UL Std.
499 Certified to CAN/CSA
st. C22.2 No 88

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Related Manuals

Manual	Description
332072	InvisiPac Heated Hose Instructions - Parts
333347	InvisiPac HM25 Tank-Free Hot Melt Delivery System

Models

All models use a 240 V heater.

Applicators with Ni 120 RTD types come with a 6-pin rectangular cordset (25E784 for slim, 24X761 for standard Dual, 25E788 for standard Quad, and 24W088 for all other models).

NOTE: Series B models are designed for use in wash down applications.

Slim

Part	Series	RTD Type	Solenoid Valve
25B021	B	Pt 100 (385)	24 VDC
25B024	B	Ni 120	24 VDC

Dual

Part	Series	RTD Type	Solenoid Valve
25B075	B	Pt 100 (385)	24 VDC
25B301	B	Ni 120	24 VDC

Quad

Part	Series	Module Spacing*	RTD Type	Solenoid Valve
25B077	B	I	Pt 100 (385)	24 VDC
GSC079	B	II	Pt 100 (385)	24 VDC
25B303	B	I	Ni 120	24 VDC
GSC080	B	II	Ni 120	24 VDC

* See *Quad Dimensions* on page 42.

Low Profile - Quad

Part	Series	RTD Type	Solenoid Valve
25B033	B	Pt 100 (385)	24 VDC
25B036	B	Ni 120	24 VDC

Low Profile - Dual

Part	Series	RTD Type	Solenoid Valve
25B027	B	Pt 100 (385)	24 VDC
25B030	B	Ni 120	24 VDC

Working Pressure

Maximum Working Fluid Pressure

1500 psi (10.3 MPa, 103 bar)

Maximum Working Air Pressure

80 psi (0.5 MPa, 5.5 bar)

Minimum Working Air Pressure

65 psi (0.44 MPa, 4.4 bar)

Model Approvals












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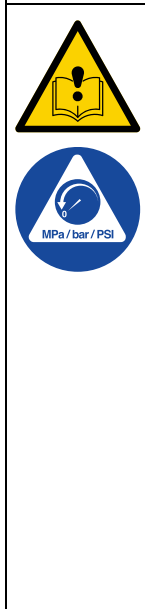
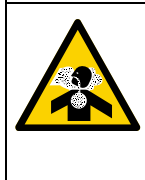
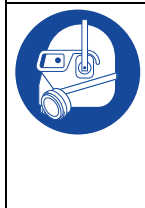
Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 <h1 style="margin: 0;">WARNING</h1>	
	<p>BURN HAZARD Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> • Do not touch hot fluid or equipment.
 	<p>ELECTRIC SHOCK HAZARD This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> • Turn off and disconnect power at main switch before disconnecting any cables and before servicing or installing equipment. • Connect only to grounded power source. • All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.
    	<p>SKIN INJECTION HAZARD High-pressure fluid from dispensing device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not point dispensing device at anyone or at any part of the body. • Do not put your hand over the fluid outlet. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses and couplings daily. Replace worn or damaged parts immediately.



WARNING

	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well-ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking). • Ground all equipment in the work area. See Grounding instructions. • Never spray or flush solvent at high pressure. • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive. • Stop operation immediately if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Specifications in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Specifications in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer. • Turn off all equipment and follow the Pressure Relief Procedure when equipment is not in use. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. • Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards. • Make sure all equipment is rated and approved for the environment in which you are using it. • Use equipment only for its intended purpose. Call your distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not kink or over bend hoses or use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> • Read Safety Data Sheets (SDSs) to know the specific hazards of the fluids you are using. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eyewear, and hearing protection. • Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Component Identification

Slim model shown on the left. Dual Low Profile model shown on the right.

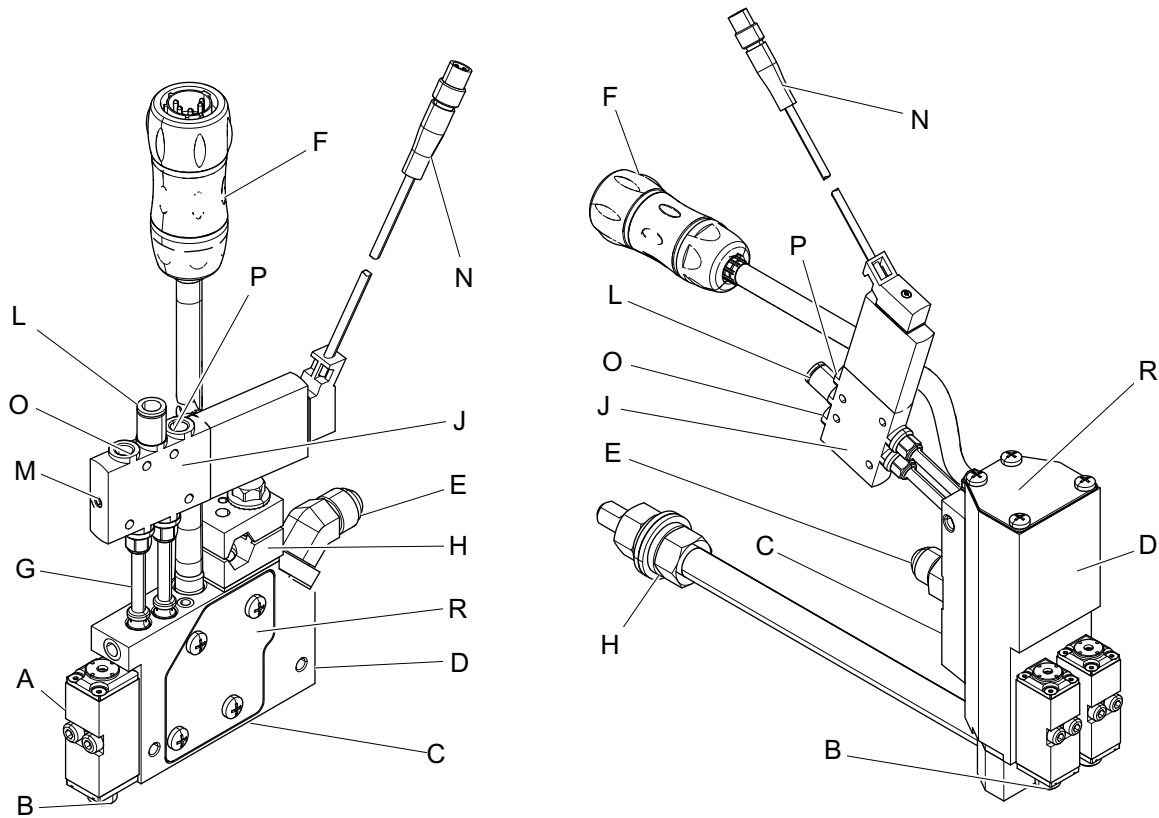


FIG. 1: Hot Melt Applicator Component Identification

Key:

- | | |
|--|--|
| A Module | H Mounting Clamp (1/2 in. diameter bar) |
| B Fluid Outlet | J Solenoid valve (24 VDC) |
| C Fluid Filter | L Air inlet (1/4 in. diameter tubing) |
| D Manifold | M Manual override switch |
| E Fluid Inlet (9/16-18, -6 JIC, 37° flare) | N M8 Solenoid valve electrical connector |
| F Cordset* | O Air close exhaust port |
| G Air tubes | P Air open exhaust port |
| | R Cover Plate |

* Cordsets on applicators designed to meet wash down requirements have a black rubberized jacket over the metal conduit.

Overview

The applicator uses the air-opened, air-closed mode of operation. It uses a five-way exhausting solenoid to control the piston inside the valve. Fluid is filtered through the manifold filter (C) before entering the valve fluid inlet port. Then the fluid is filtered one final time through the module filter, which is located in each module, directly before the ball and seat.

When air moves the piston and rod from its seat, it opens the fluid outlet. To turn off the fluid, the solenoid redirects air to the top of the piston. The air and spring work together to push the piston and rod into the seat.

The applicator should be rigidly mounted and remotely operated by a melter system and triggering device. The melter system provides pressurized fluid to the valve. The triggering device controls the fluid flow by opening and closing the solenoid valve.

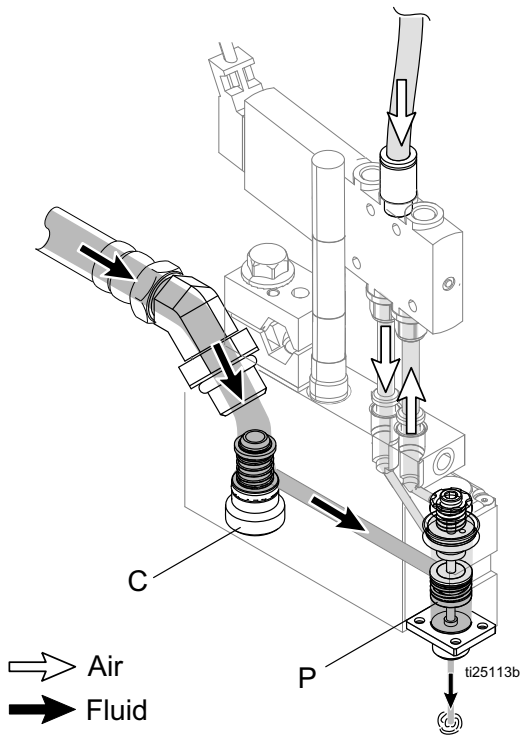


FIG. 2

Grounding



The equipment must be grounded to reduce the risk of static sparking and electric shock. Electric or static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Grounding provides an escape wire for the electric current.

Pump: follow manufacturer's recommendations.

Applicator: grounded through electrical connection.

Air compressor: follow manufacturer's recommendations.

Fluid supply container: follow local code.

Solvent pails used when flushing: follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

To maintain grounding continuity when flushing or relieving pressure: ensure mounting manifold and electrical power connector are grounded properly.

Installation

Mounting

NOTICE

To prevent heat transferring into other components of the packaging line, ensure that the insulator is installed

Low Profile Models: Use a 3/4 in. (19 mm) wrench to adjust the nuts that control the position of the applicator on the threaded rod.

All Other Models: See **Figure 3** and the following instructions. Mount the manifold on to a 1/2 in. (12 mm) diameter bar using the mounting clamp (H) to hold the applicator in place and ensure adhesive is applied properly. For optimal mounting strength of a slim model, use a 7/16 hex bar.

NOTE: Slim, standard dual, and standard quad models use a 5 mm Allen wrench.

1. Remove the solenoid. For removal and installation instructions, see **Replace Solenoid Valve** on page 23.

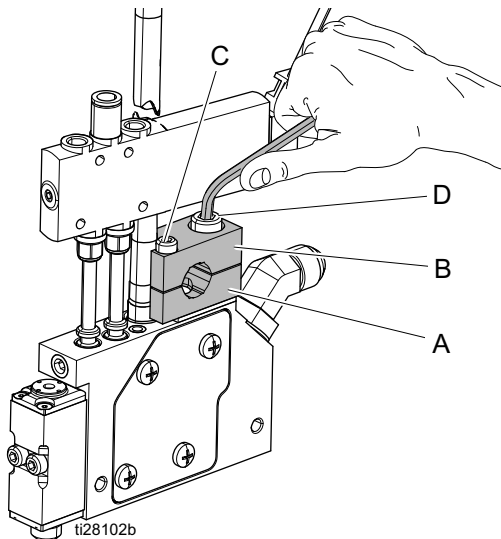


FIG. 3

2. Remove the existing clamp and replace the bottom part with the new clamp A.
3. Before mounting to the rod, loosely thread screw C into block A and thread screw D through block B into the assembly.
4. Hold the applicator up to the 1/2 in. diameter bar and rotate the top clamp B so that the screw C moves into the slot.
5. Use a 3 mm Allen wrench to torque screw C and a 5 mm Allen wrench to torque screw D.
6. Re-install the solenoid.

Connect Heated Hose

1. Connect the hose fluid outlet to the manifold fluid inlet (E). Use two 11/16 in. wrenches to tighten the hose fitting.

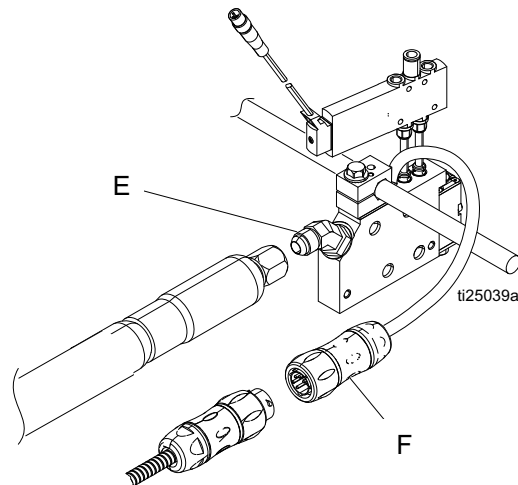


FIG. 4

2. Connect the cordset (F) to the hose.
3. Connect the hose inlet to the melter system outlet. Refer to the InvisiPac Heated Hose Instructions for installation guidelines. See **Related Manuals** on page 3.
4. Connect the hose cordset to the melter. Refer to the InvisiPac Heated Hose Instructions for installation guidelines. See **Related Manuals** on page 3.

Recommended Air Setup

1. Connect tubing from the air filter (Graco part no. 106148) to the air regulator.

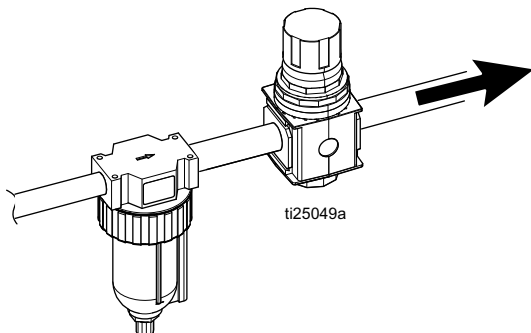


FIG. 5

2. Set the air regulator to 80 psi (0.5 MPa, 5.5 bar).
3. Connect the tubing from the air regulator to the applicator solenoid.

Connect Solenoid Valve

1. Connect 1/4 in. diameter air supply tubing to a clean, dry, and non-lubricated air supply and to the push-to-connect air inlet fitting (L).

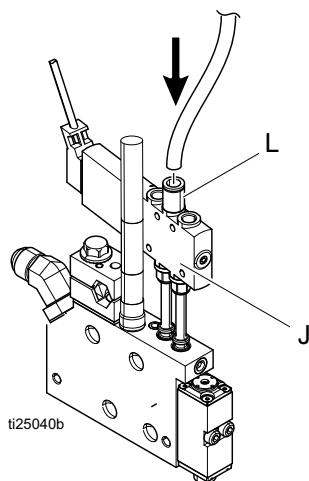


FIG. 6

2. Connect the solenoid (J) to the 24 VDC signal. See **Connect Triggering Device** on this page.

NOTE: A 6 mm tube fitting is included with the applicator. The fitting can be changed using a 5 mm Allen wrench. A 1/4 in. to 3/8 in. diameter tube adapter is included with the applicator.

Connect Triggering Device

All GM100 valves use a 24 VDC solenoid valve. If the voltage to the solenoid exceeds 24 VDC, premature failure will occur.

Improper electrical connection can result in electric shock. All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.				

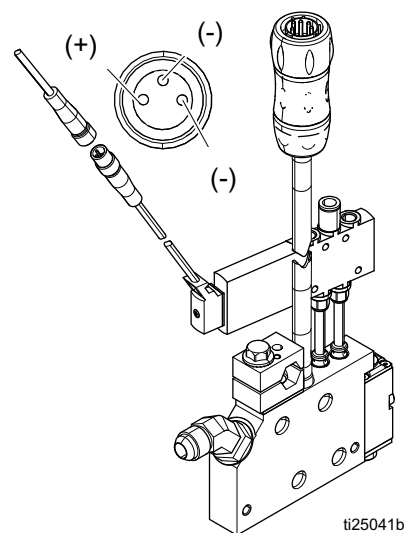


FIG. 7

Standard Wiring Colors		
Terminal Cable	Function	M8
Plus (+)	24 V Supply	Brown
Minus (-)	Return	Blue/Black

Before Using Equipment

The equipment was tested with canola oil, which is left in the fluid passages to protect parts. To avoid contaminating your fluid with oil, prime the equipment with hot melt until all of the oil is pushed out before using the equipment. See **Flush** on page 10.

Flush



NOTE: Do NOT cycle the module until the temperature setpoint has been achieved. Cycling the module below the temperature setpoint may cause premature seal leakage.

1. Disconnect or turn off the device, which triggers the solenoid valve.
2. Ensure the nozzle (Z) is removed. See **Figure 9**.
3. Heat the system to working temperature.
4. Place a waste container under the applicator to catch the adhesive.
5. Press the manual override switch (M) to manually trigger the solenoid valve.
6. Dispense hot melt (adhesive) until it is clean.

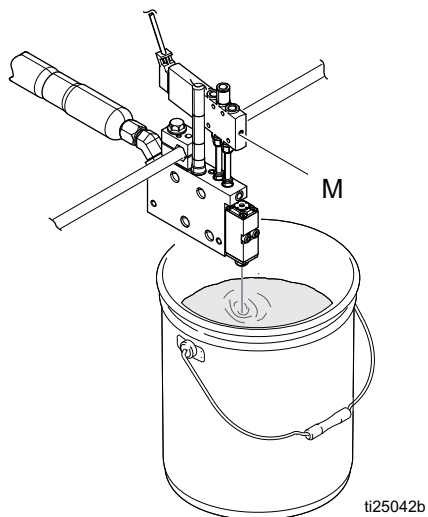


FIG. 8

Install Nozzle

Use a 1/2 in. wrench to install the nozzle. See **Kits and Accessories** on page 36.

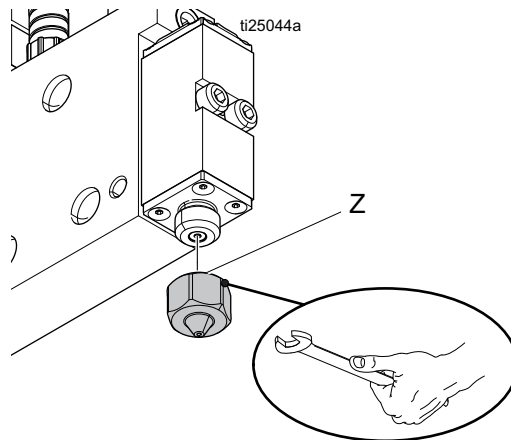


FIG. 9

Select RTD

NOTE: For InvisiPac system only.

Identify the RTD type used in the applicator on the system's Advanced Display Module (ADM). The RTD type is listed on the manifold cover plate.

NOTICE

An incorrect RTD setting will cause the system to be incapable of maintaining the temperature setting. The applicator may overheat and trip the thermal cutoff if the applicator uses a PT 100 (385) and NI 120 is selected on the ADM Setup screen. The applicator may under-heat if the applicator uses a NI 120 and PT 100 (385) is selected on the ADM Setup screen.

- If PT 100 (385) is listed, select PT 100 (385) on the ADM Setup screen.
- IF NI 120 is listed, select NI 120 on the ADM Setup screen.

Operation

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.

This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection and splashing fluid, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

1. Depressurize the hotmelt system.
2. Close the bleed-type master air valve.
3. Actuate the applicator repeatedly until no fluid flows.
4. If you suspect the module nozzle is clogged, remove the nozzle and then actuate the module to relieve pressure.
5. If you suspect the module or fluid hose is clogged or that pressure has not been fully relieved after following the steps above, very slowly loosen the inlet fitting, inlet filter, or hose end coupling to relieve pressure gradually, then loosen completely. Clear the hose or module obstruction.
6. Turn off air pressure to the solenoid valve.

Maintenance

				
Material inside the applicator can be near setpoint temperature. Wear protective clothing to avoid severe burns.				

Daily:

Clean hot melt from the exterior of the applicator.

Weekly:

Inspect the applicator, fluid lines, cordset, and solenoid cable for wear or damage. See **Repair** on page 19 for instructions.

Replace Inlet Filter

NOTICE
Remove the filter when the applicator is hot. If the applicator is cold, the adhesive will be hard and the filter may be difficult to remove or damaged.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Remove the dirty filter (C) from the manifold (D).

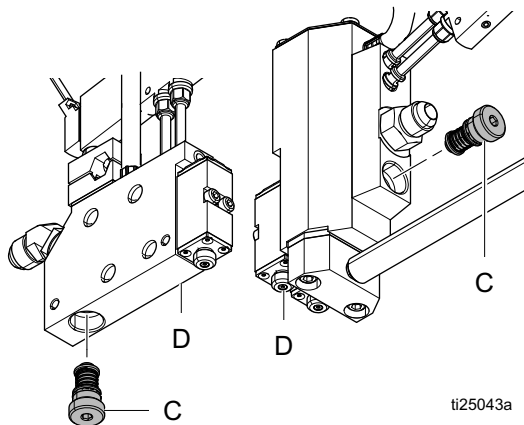


FIG. 10

3. Apply a thin coating of high-temperature lubricant to the seals on the filter (C) and install it in the manifold (D). Torque to 30 in-lb (3.4 N•m) using a 5/32 in (4 mm) Allen wrench.

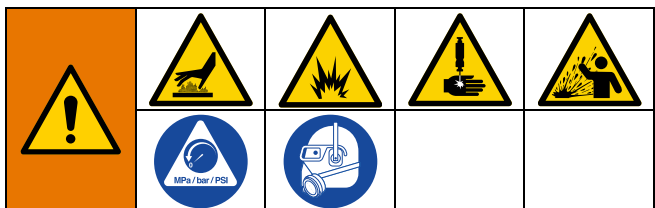
Filter Maintenance Guidelines

These recommendations are service level guidelines. Actual service levels required in your factory will vary based on environmental and operating conditions. High or low volume adhesive usage, as well as adhesives that contain a powered release agent or are otherwise dusty, will have an impact on the frequency of filter maintenance.

To establish a preventative maintenance cycle tailored to your environment, Graco recommends inspecting filters every 4 weeks after installation and replacing when necessary. Document replacement intervals and use this as your preventative maintenance schedule moving forward.

	Environment Classification		
	Clean	Moderate	Dusty
Manifold Filter	Replace filter every six months	Replace filter every four months	Replace filter every two months

Troubleshooting



1. Follow the **Pressure Relief Procedure** on page 11 before checking or repairing the applicator.
2. Check all possible problems and causes before disassembling the applicator.

Problem	Cause	Solution
No adhesive or incorrect amount of adhesive out of all modules when triggered	Plugged manifold filter	Replace the manifold filter. See Replace Inlet Filter on page 12.
	Clogged hose	Clean or replace the hose.
	Failed solenoid valve	Check for correct operation. Clean or replace.
	No signal to solenoid valve	Check the solenoid valve for correct operation.
	Incorrect solenoid valve wiring	Check the solenoid valve wiring.
	Incorrect signal to solenoid valve	Check if there is 24 VDC.
	Solenoid muffler plugged	Check and replace mufflers.
	No fluid pressure	Check the adhesive delivery system.
	Heater failure (cold applicator)	Check and replace the heater cartridge. See Replace Heater Cartridge on page 19.
	No air to solenoid valve	Check the air supply.
	Dirty or faulty triggering device	Check, clean, or replace the triggering device.
	Solenoid valve connected incorrectly	Check the solenoid valve air connections.
Clogged manifold passage	Clean or replace the manifold.	
No adhesive or incorrect amount of adhesive out of one/some modules when triggered	Plugged nozzle	Clean or replace nozzle.
	Failed module in close position	Check for the correct operation. Clean or replace. See Check Module on page 16.
	Plugged module filter	Replace the module. See Replace Module on page 23.
	Clogged manifold passage	Clean or replace the manifold.
Adhesive out of one/some modules when not triggered	Failed module in open position	Clean or replace the module. See Replace Module on page 23.
	Adhesive pressure too high	Check and reduce fluid pressure.

Problem	Cause	Solution
Applicator will not heat	Heater failure	Check and replace the heater cartridge. See Replace Heater Cartridge on page 19.
	Loose cordset connection	Check connection.
	RTD failure	Check and replace the RTD. See Check RTD on page 18.
	Incorrect RTD for adhesive delivery system	Check the delivery system RTD requirement.
	Thermal cutoff failure	Check and replace the thermal cutoff. See Replace Thermal Cutoff on page 20.
	Wrong RTD type selected	Check the RTD type settings on the system. Change if necessary. See Select RTD on page 10.
Applicator overheats	Heater failure	Check and replace the heater cartridge. See Replace Heater Cartridge on page 19.
	RTD failure	Check and replace the RTD. See Check RTD on page 18.
	Incorrect RTD for adhesive delivery system	Check the delivery system RTD requirement.
	Incorrect power to heater	Check and correct power.
	Wrong RTD type selected	Check the RTD type settings on the system. Change if necessary. See Select RTD on page 10.
Applicator under-heats	Heater failure	Check and replace the heater cartridge. See Replace Heater Cartridge on page 19.
	RTD failure	Check and replace the RTD. See Check RTD on page 18.
	Incorrect RTD for adhesive delivery system	Check the delivery system RTD requirement.
	Incorrect power to heater	Check and correct power.
	Wrong RTD type selected	Check the RTD type settings on the system. Change if necessary. See Select RTD on page 10.
Adhesive leaking from applicator	Module o-ring failure	Check and replace the o-ring. See Replace Module on page 23.
	Inlet fitting loose	Tighten the fitting.
	Manifold filter o-ring failure	Check and replace the o-ring.
	Nozzle loose	Tighten the nozzle.

Problem	Cause	Solution
Speed has reduced on one module	Low air pressure to solenoid valve	Check the air supply.
	Low fluid pressure	Check the adhesive delivery system.
	Low applicator temperature	Check the heat operation. See the “Applicator will not heat” section on page 14 .
	Plugged manifold filter	Replace the manifold filter. See Replace Inlet Filter on page 12 .
	Module piston seal air leak	Check the solenoid air close exhaust port. See Replace Module on page 23 .
Adhesive out of all modules when not triggered	Solenoid valve failure	Check and replace the solenoid valve.
	Adhesive pressure too high	Check and reduce the fluid pressure.
	Solenoid valve connected incorrectly	Check the solenoid valve air connections.
	Module failure	Check and replace all module. See Check Module on page 16 .
	No air to solenoid valve	Check the air supply.

Check Module

Check the module operation to verify if the module has failed and needs to be replaced.

1. Visually check for the presence of glue in the weep hole (W). See **Figure 11**.

NOTE: If glue is present, the module needs to be replaced. See **Replace Module** on page 23.

2. Verify that the air pressure to the solenoid valve is 65-80 psi (0.44-0.55 MPa, 4.4-5.5 bar).

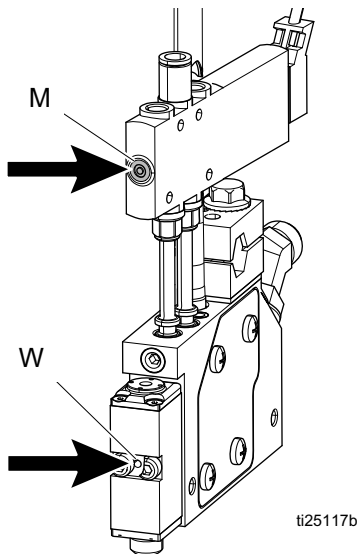


FIG. 11

3. Verify that there is air pressure to the motor, which will verify that there is fluid pressure.
4. Make sure the system is at the correct temperature.
5. While looking in the weep hole, press the solenoid valve manual override switch (M) to manually trigger the applicator.

NOTE: Look through the weep hole. If the rod moves, the module is functioning properly. If the rod does not move, the module needs to be replaced. See **Replace Module** on page 23.

6. Remove the nozzle.
7. Press the manual override switch to trigger the module. If glue flows from the seat, the module is functioning properly.

Check Nozzle and Module

Trigger the applicator without the nozzle to determine if the nozzle of the module is clogged.

1. Disable the applicator assembly. See **Before Beginning Repair** on page 19.
2. Use a 1/2 in. wrench to loosen the nozzle and remove it by hand.

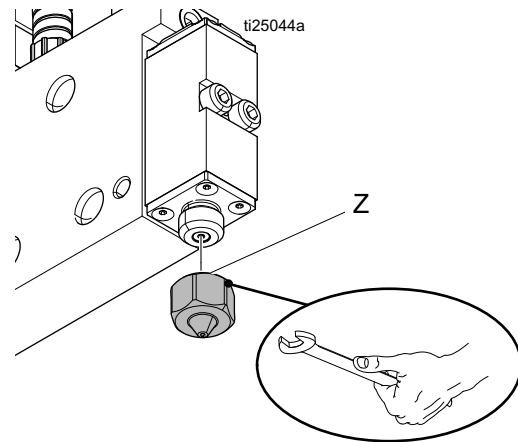


FIG. 12

3. Connect the power and solenoid cable.
4. Return the applicator back into operation.
5. Trigger the applicator.
 - a. If adhesive flows, clean the nozzle and reinstall it on the module.
 - b. If the adhesive does not flow, the module is clogged and needs to be replaced. See **Replace Module** on page 23.

Check Heater

Check the continuity of the heater to verify proper resistance. If there is no continuity, the heater has failed and needs to be replaced.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Check the resistance of the heater using a multi-meter between the pins of the cordset connector. See the illustrations of the two types of connectors in **Table 1** and **Table 2** on this page.
3. Replace the heater cartridge if the resistance reading is outside the range or if there is no continuity. See **Replace Heater Cartridge** on page 19.

Cordset RTD	Check Pins	Model	Resistance Values
Pt 100 (385) RTD Cordset	A and C	Slim Models	365-405 Ohms
		Dual and Dual Low Profile Models	180-200 Ohms
		Quad and Quad Low Profile Models	145-165 Ohms
Ni 120 RTD Cordset	1 and 2	Slim Models	365-405 Ohms
		Dual and Dual Low Profile Models	180-200 Ohms
		Quad and Quad Low Profile Models	145-165 Ohms

See **Heater Cartridges** page 36 for cordset RTD type B4 valve PN.

Table 1: 25E787, 25E785, or 25E783 Pt 100 (385) RTD Cordset

Pin	Description
A	Thermal Cutoff
B	Ground
C	Heat
D	RTD (White)
E	RTD (Red)

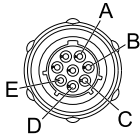
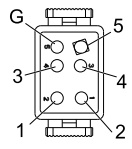


Table 2: 25E788, 25E784, or 25E786 Ni 120 RTD Cordset

Pin	Description
1	Thermal Cutoff
2	Heat -
3	RTD (White)
4	RTD (Red)
G	Ground



Check RTD

Check the continuity of the RTD to verify proper resistance. If there is no continuity, the RTD has failed and needs to be replaced.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Check the resistance of the RTD using a multi-meter between the pins of the cordset connector. See the illustrations of the two types of connectors in **Table 1** and **Table 2** on page 17.

Cordset	Check Pins	Resistance Values at Room Temperature
25E787, 25E785, or 25E783 Pt 100 (385) RTD Cordset	D and E	107-115 Ohms
25E788, 25E784, or 25E786 Ni 120 RTD Cordset	3 and 5	130-140 Ohms

3. Replace the RTD if the resistance reading is outside the range or if there is no continuity. See **Replace RTD** on page 20.

Check Thermal Cutoff

If working properly, the cutoff will trip at 500° F (260° C) and reset at 420° F (216° C). If failure is suspected, allow the applicator to cool and then check the continuity of the thermal cutoff to verify it has not failed. If there is no continuity, the cutoff has failed and needs to be replaced.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Remove the cover plate.
3. Check for continuity using a multi-meter between the pin of the cordset connector and the wire from the thermal cutoff that connects to the heater lead. See the illustrations of the two types of connectors in **Table 1** and **Table 2** on page 17.

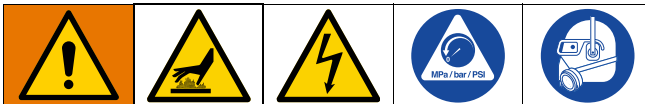
Cordset	Check Pins
25E787 or 25E785 Pt 100 (385) RTD Cordset	A
25E788, 25E784, or 25E786 Ni 120 RTD Cordset	1

Repair

Required Tools

- Phillips screwdriver
- Flat blade screwdriver
- 2 mm, 3 mm, 4 mm, and 5 mm Allen wrenches
- 10 mm, 1/2 in., 11/16 in., and 3/4 in. wrenches
- Torque wrenches
- Waste container
- High-temperature anaerobic thread sealant
- High-temperature lubricant
- Anti-seize
- Crimp tool

Before Beginning Repair



Material inside the applicator can be near the setpoint temperature. Wear protective clothing to avoid severe burns.

1. Turn off the melter system. Refer to the InvisiPac HM25 Tank-Free Hot Melt Delivery System manual. See **Related Manuals** on page 3.
2. Relieve pressure. See the **Pressure Relief Procedure** on page 11.
3. Disconnect the cordset (F) from the heated hose.

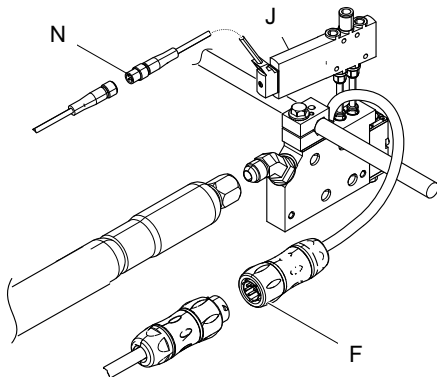


FIG. 13

4. Disconnect the M8 solenoid electrical connector (N).

Replace Heater Cartridge

NOTE: Depending on the model, the heater may be retained by a stainless steel plug pressed into the applicator body. You must remove this plug before the heater can be accessed and removed. Refer to **Parts** starting on page 25 and **Replace Plug** on page 20.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Use a Phillips screwdriver to remove the four screws (15) and manifold cover plate (18).

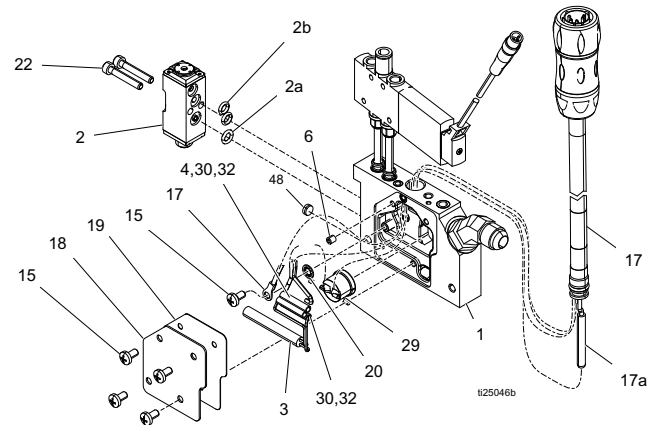


FIG. 14

3. Remove the heater cartridge(s) (3) from the manifold (1).

NOTE: Note the placement of the heaters and lead lengths.

4. Remove the butt splices (4) from the heater wires (3), thermal cutoff (29), and cordset wire leads (17).
5. Crimp the new heater wires into new splices (4). See **Wiring Diagram** on page 21.

NOTICE

To prevent a short to ground and blowing a MZLP fuse, ensure bare wires are covered and fiber glass tape and sleeves are centered over the splices.

6. Insert the new heater cartridge(s) (3) into the manifold (1).

NOTE: Do not apply thermal grease to the heater cartridge.

7. It is recommended that the gasket is replaced each time the cover is removed to service the applicator. See **Replace Cover Gasket** on this page.
8. Reinstall the manifold cover plate (18).
9. Reconnect the cordset to the heated hose.
10. Reconnect the M8 solenoid electrical connector (N).

Replace Heater Plug

NOTE: Depending on the model, the heater may be retained by a stainless steel plug pressed into the applicator body. You must remove this plug before the heater can be accessed and removed.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Securely clamp the applicator in a vise or clamp.
3. Drill a hole through the plug using a no. 27 (.144) drill bit. The plug is approximately 1/8 in. thick.
4. Turn an 8-32 self-tapping screw into the plug.
5. Pull out the screw and plug with a claw or slide hammer. If using a claw hammer, place a piece of cardboard between the hammer and the surface of the applicator to prevent damage to the applicator.
6. After the heater is replaced, place the tapered end of a new plug into the heater cavity.
7. Lightly tap the plug into the applicator body with a hammer until flush.

NOTICE

To prevent damage to the valve body, it is recommended that you use the hammer to tap a flat piece of aluminum scrap rather than striking the plug directly with a hammer.

Replace Cover Gasket

1. Peel the used gasket away from the cover plate.
2. Remove any excess adhesive from the plate.
3. Remove the paper backing from the new gasket.
4. Apply the new gasket to the plate and press it lightly into place.

NOTE: Make sure the holes in the gasket are aligned with the holes in the plate.

Replace RTD

The RTD is replaced by replacing the entire cordset. See **Replace Cordset** on page 22 for instructions.

Replace Thermal Cutoff

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Use a Phillips screwdriver to remove the four screws (15) and manifold cover plate (18).
3. Remove the butt splices (4) from the heater wires (3) and cordset wire leads (17).

NOTICE

To prevent a short to ground and blowing a MZLP fuse, ensure bare wires are covered and fiber glass tape (32) and sleeves (30) are centered over the butt splices (4).

4. Crimp the wires. See **Wiring Diagram** on page 21.
 - a. Crimp the butt splice on the cordset heater wires (17) and heater wires (3). Lightly pull on the splice to ensure it is crimped.
 - b. Slide the sleeves (30) over each pair of wires before crimping.
 - c. Crimp the white wire to one of the thermal cutoff leads (29).

- d. Crimp the other thermal cutoff lead (29) to one of the heater wires (3).
 - e. Crimp the other heater wire to the black lead (17).
 - f. Wrap a short piece of fiber glass tape (32) around each splice.
 - g. Center the sleeves (30) over each taped splice.
5. Gently press the wires into the manifold. Install the plate (18) and screws (15).

Wiring Diagram

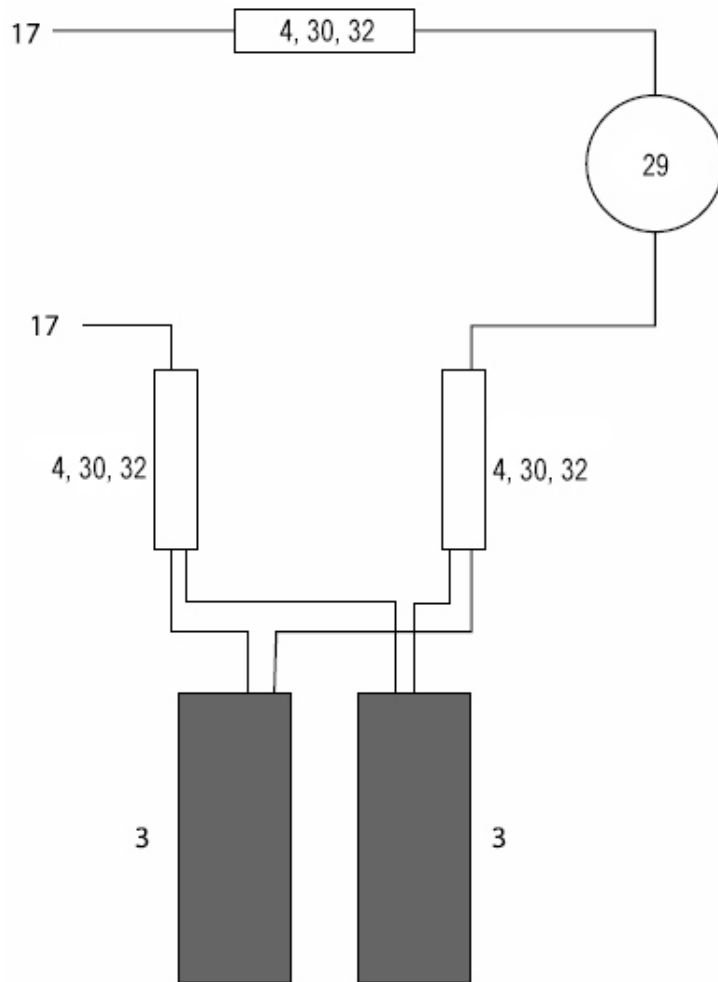


FIG. 15: Thermal Cutoff Wiring Diagram

NOTE: Slim (25B021, and 25B024), quad (25B077 and 25B303) and low profile quad (25B075 and 25B301) use one heater (3).

Replace Cordset

The replacement cordset (17) depends on the model you are using. Applicator cordsets have a black rubberized coating over the metal conduit. Cordsets are not interchangeable so make sure you have the correct cordset for your applicator before replacing.

NOTE: For the complete list of cordsets, refer to **Cordsets** on page 36.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Use a Phillips screwdriver to remove the four screws (15) and manifold cover plate (18).
3. Use a 2 mm Allen wrench to remove the set screw (6) holding the cordset (17) on the manifold (1).
4. Use a Phillips screwdriver to remove the ground lead and star washer (20) from the manifold (1). **Low Profile models only:** Remove the Phillips screw next to the RTD.
5. Remove the RTD (17a) from the manifold (1).
6. Disconnect the thermal cutoff (29).
7. Remove the cordset (17) from the manifold (1).
8. Lubricate the o-ring on the end of the cordset prior to installing and inspect the rubberized cordset covering to ensure there are no cuts or tears.
9. Install the new cordset, RTD, and ground (17) in the manifold (1). Crimp the thermal cutoff wires (29). See **Wiring Diagram** on page 21 for connections.

NOTE: Ensure that the cordset bushing is fully inserted into the manifold.

10. Install the set screw (6) against the cordset bushing to secure the cordset (17) to the manifold (1).
11. Reinstall the ground lead onto the manifold (1).

NOTE: Ensure the star washer (20) is placed below the ground ring terminal.

12. Insert the RTD (17a) and thermal cutoff (29) into the manifold ports.

NOTE: Do not apply grease on the RTD or thermal cutoff.

13. Insert the heater cartridge(s) (3) in the manifold (1).

NOTICE

To prevent removing wire insulation or disconnecting wires, do not pinch any wires when inserting the wire in the manifold. If wire insulation is removed, the RTD or heaters could short out and need to be replaced.

14. Replace the cover gasket. See **Replace Cover Gasket** on page 20.

15. Reinstall the manifold cover plate (18).

16. Reconnect the cordset (17) to the heated hose.

17. Reconnect the M8 solenoid electrical connector.

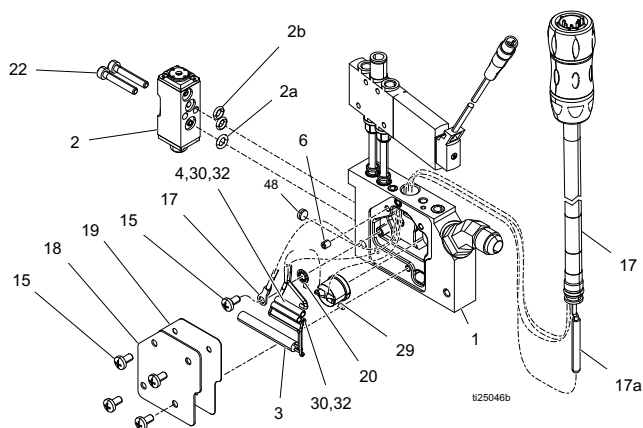


FIG. 16

Replace Solenoid Valve

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Turn off the air supply to the solenoid valve.
3. Disconnect the M8 solenoid electrical connector (N).
4. Disconnect the air line from the air fitting (L).

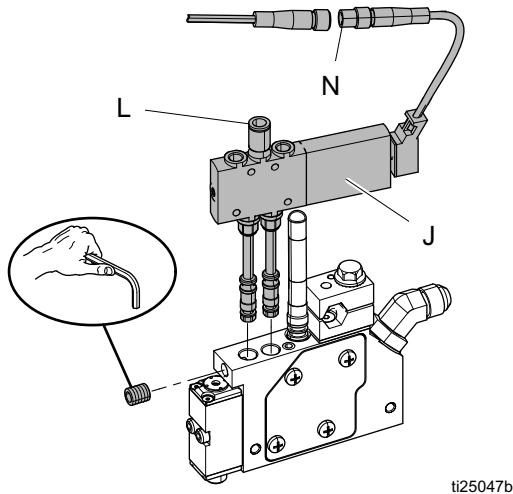


FIG. 17

5. Loosen the solenoid valve set screw with a 3 mm Allen wrench, then remove the solenoid valve (J).
6. Apply high temperature grease to the o-rings on the solenoid tubes.
7. Install the new solenoid valve into the manifold, then use a 3 mm Allen wrench to tighten the solenoid valve set screw.
8. Connect the M8 solenoid valve electrical connector (N).
9. Connect the 1/4 in. air line to the solenoid. Turn the air on.

Replace Module



Material inside the applicator can be near the setpoint temperature. Wear protective clothing to avoid severe burns.

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Turn off the air supply to the solenoid valve.
3. Use a 3 mm Allen wrench to remove the two mounting screws (22) and the module (2) from the manifold (1).

NOTICE

Do not allow adhesive to enter the air ports to allow air to flow through the valve. Adhesive in the air ports will obstruct the flow of air and damage the valve.

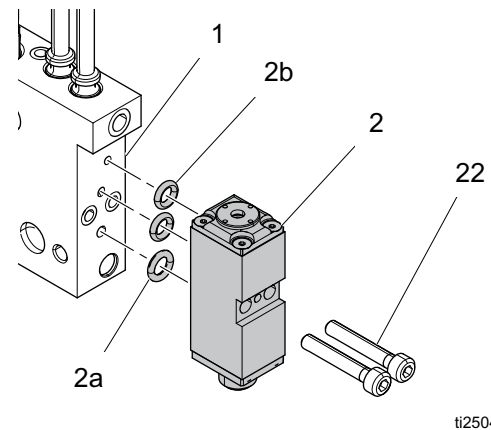


FIG. 18

4. Verify that no glue is present in the manifold air ports.

5. Hold a rag over the manifold air ports and turn the air supply ON to clean the ports as shown in **Figure 19**.

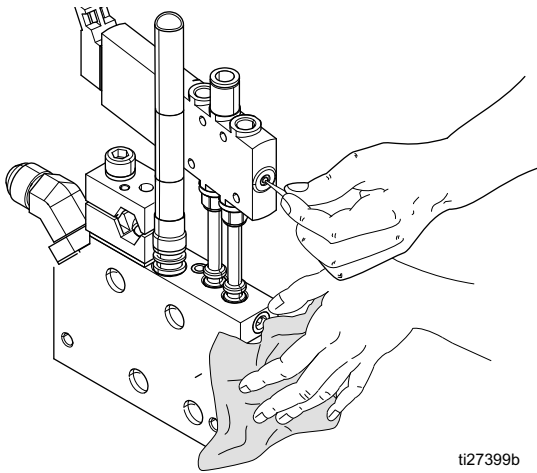


FIG. 19

6. Cycle the solenoid by pushing the blue button on the solenoid.
7. Turn off the air supply and remove the rag.
8. Apply the high-temperature lubricant to the air section o-rings (2b) and the fluid section o-ring (2a) in the module (2).

NOTE: The air section o-rings are brown and the fluid section o-ring is black. All o-rings are fluoroelastomer. The color is only used to identify the difference in size.

9. Apply anti-seize to the two screw threads (22). Use a 3 mm Allen wrench to install the new module (2) on the manifold with the two screws (22). Torque to 28-32 in-lb (3.2-3.6 N•m).
10. Connect the cordset (17) to the heated hose.

Replace Applicator

1. Disable the applicator. See **Before Beginning Repair** on page 19.
2. Loosen the mounting bar clamp and remove the applicator from the mounting bar.
3. Install the new applicator. See **Installation** on page 8.

Slim Parts List

Ref	Part	Description	Qty
1	---	MANIFOLD, single	1
2	25B241	MODULE, ac, gm100	1
3◆	24X043	HEATER, rod	1
4†	---	CONNECTOR, butt splice	3
5▲	16K931	TAG, warning	1
8	129647	SCREW, set, sh, cup m3 x 4 mm, sst	1
9*	24X038	SOLENOID, quick disconnect	1
10❖	---	INSULATOR, slim	1
11a	---	CLAMP, top	1
11b	---	CLAMP, bottom	1
11c	---	SCREW, valve	1
12❖	---	BOLT, shcs, M6 x 35 mm	1
13	102411	PIN, spring	1
14❖	---	SCREW, mach, hex flat hd	1
15	128306	SCREW, mach, phillips, pan hd	5
16★	---	FILTER, applicator, 80 mesh	1
17	---	CORD SET, 240 v, applicator, mini	1
17a‡	---	KIT, cordset, slim, pt100 (model 25B021)	-
17b‡	---	KIT, cordset, slim, ni1200 (model 25B024)	-
18	17A518	PANEL, single	1
19	18A386	INSULATOR, electrical, slim	1
20	157021	WASHER, lock, int	1
22	111119	SCREW, valve	2
24	24P548	FITTING, elbow, 45, jic 06 x sae 06, mm	1
25	103473	STRAP, tie, wire	1
26	16P285	SCREW, set, cup, socket hd	1
29	24X046	SWITCH, over temp, 500f with 2 in. leads	1
30†	---	SLEEVE, silicone, red, 2 in. lg x 0.16 in. od	3
32†	C33049	TAPE, adhesive, fiberglass	0.25
40	24X456	CABLE, m8, 3-pin, 5.0 m	1
41▲	17F001	TAG, instruction	1
42❖	---	WASHER, lock, spring	1
48◆	---	PLUG	1

--- Not available for individual sale.

❖ Included in the Slim Mounting Clamp Kit. See **Kits and Accessories** on page 36.

† Included with all Heater, Cordset, and Overtemp Kits. See **Kits and Accessories** on page 36.

◆ Included with the Slim Heater Kit. See **Kits and Accessories** on page 36.

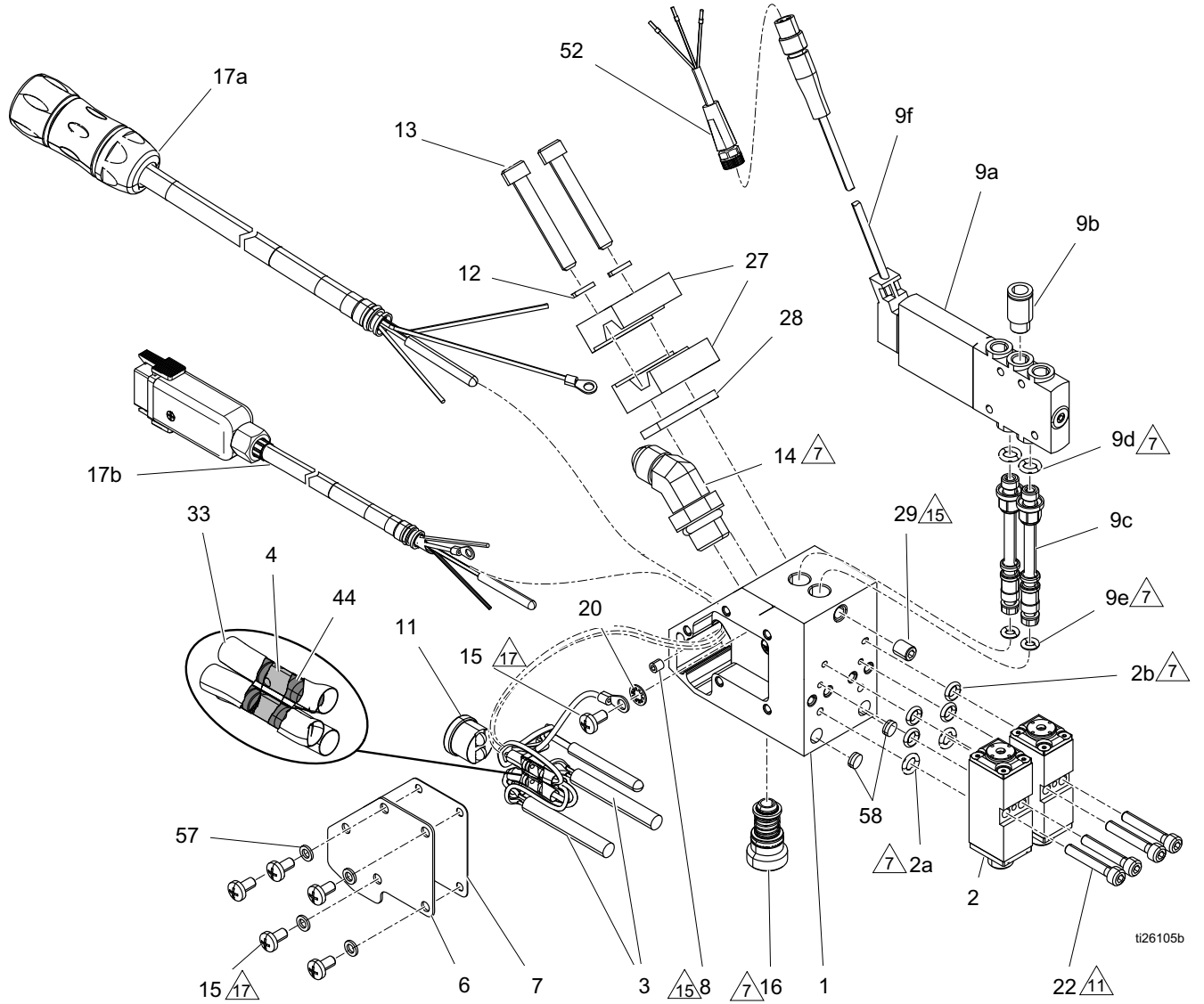
★ Included in the Inlet Filter Kit options. See **Kits and Accessories** on page 36.

* For individual solenoid components. See **Solenoid Valve Kits** on page 35.

▲ Replacement safety labels, tags, and cards are available at no cost.

‡ See **Cordsets** page 36

Dual (25B075, 25B301)



- Apply a thin coating of lubricant to seals.
- Apply lubricant to the first .05 in. of the thread of the bolts (22) before installing the module (2). Torque to 30 +/- in-lb (3.3 +/- 0.2 N•m).
- Torque to 10-12 in-lb (1.1-1.3 N•m).
- Torque to 15-20 in-lb (1.7-2.2 N•m)

FIG. 21

Dual Parts List

Ref	Part	Description	Quantity
1	---	MANIFOLD, dual, gm100, machined	1
2	25B241	MODULE, ac, gm100	2
3◆	24X242	HEATER, rod	2
4†	---	CONNECTOR, butt splice	3
5▲	16K931	TAG, warning	1
6	17D782	PLATE, electrical, gm100, dual	1
7	18A387	INSULATOR, electrical, dual	1
8	129647	SCREW, set, cup, m3 x 4 mm	1
9*	24X038	SOLENOID, quick disconnect	
11	24X046	SWITCH, over temp, 500f with 2 in. leads	1
12	108050	WASHER, lock, spring	2
13	117030	SCREW, shcs m6 x 40	2
14	24P548	FITTING, elbow, 45, jic 06 x sae 06, mm	1
15	128306	SCREW, mach, phillips, pan hd	6
16★	---	FILTER, applicator, 80 mesh	1
17	---	CORD SET, 240 v, applicator, dual,100	1
17a‡	---	KIT, pt100 cordset, dual, gm100	1 - 25B075
17b‡	---	KIT, ni120 cordset, dual, gm100	1 - 25B301
20	157021	WASHER, lock, int	1
22	111119	SCREW, valve	4
26	103473	STRAP, tie, wire	1
27❖	16T205	CLAMP, bar, housing, metric	2
28❖	16P848	INSULATOR, clamp, bar, housing	1
29	16P285	SCREW, set, cup, socket hd	1
33†	---	SLEEVE, silicone, red, 2 in. lg x 0.16 in. od	3
44†	C33049	TAPE, adhesive, fiberglass	0.25
52	24X456	CABLE, m8, 3-pin, 5.0 m	1
53▲	17F001	TAG, instruction	1
57	111637	WASHER, lock	5
58◆	19A555	PLUG	2

--- Not available for individual sale.

❖ Included in the Dual Mounting Clamp Kit. See **Kits and Accessories** on page 36.

† Included with all Heater, Cordset, and Overtemp Kits. See **Kits and Accessories** on page 36.

◆ Included with the Dual Heater Kit. See **Kits and Accessories** on page 36.

★ Included in the Inlet Filter Kit options. See **Kits and Accessories** on page 36.

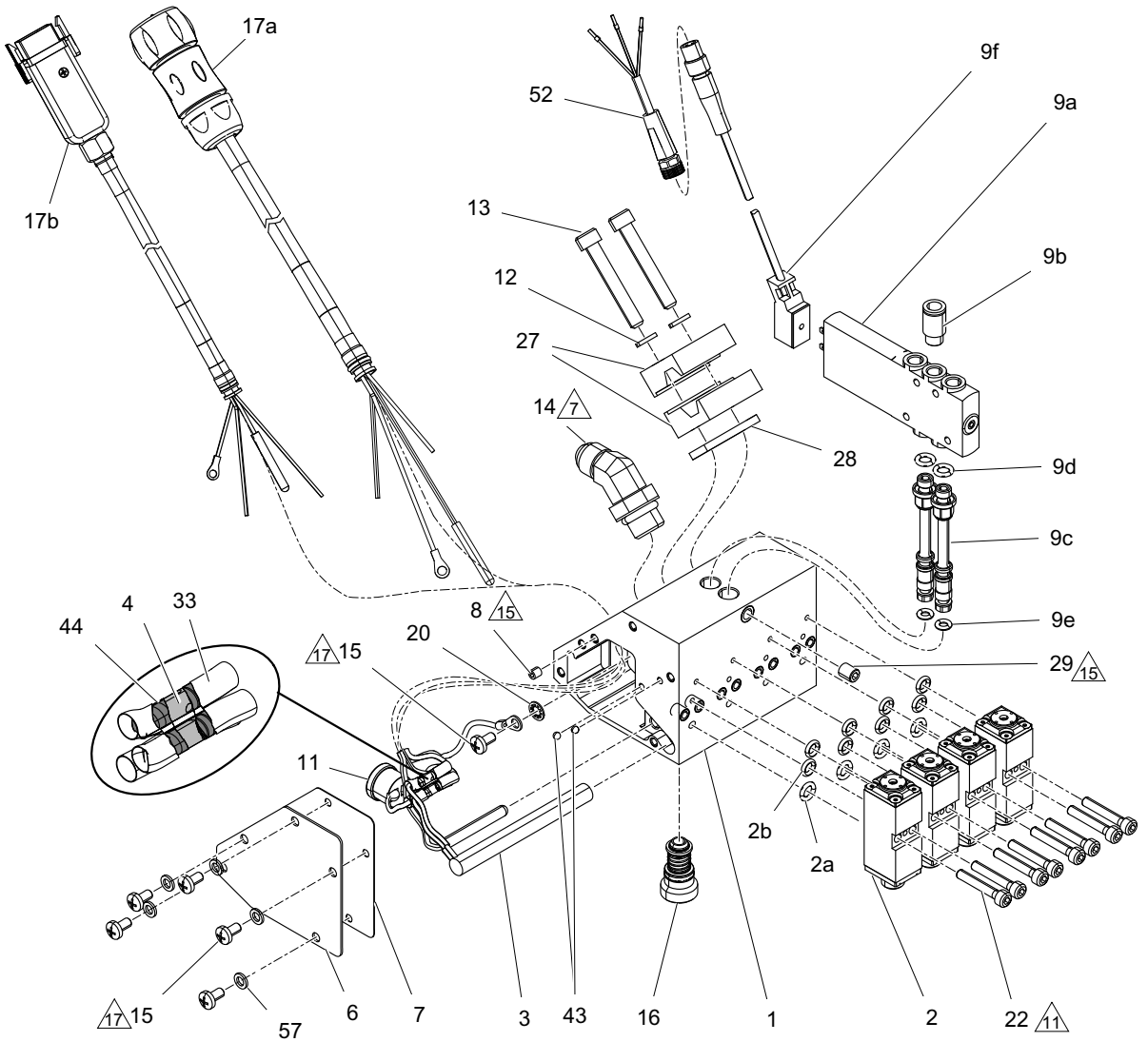
* For individual solenoid components. See **Solenoid Valve Kits** on page 35.

▲ Replacement safety labels, tags, and cards are available at no cost.

‡ See **Cordsets** page 36

Quad (25B077, 25B303, GSC079, GSC080)

Type 1 Shown







-  Apply a thin coating of lubricant to seals.
-  Apply lubricant to the first .05 in. of the thread of the bolts (22) before installing the module (2). Torque to 30 +/- in-lb (3.3 +/- 0.2 N•m).
-  Torque to 10-12 in-lb (1.1-1.3 N•m).
-  Torque to 15-20 in-lb (1.7-2.2 N•m)

FIG. 22

Quad Parts List

Ref	Part	Description	Quantity			
			25B077	25B303	GSC079	GSC080
1	---	MANIFOLD, quad, mini, machined	1	1	1	1
2	25B241	MODULE, ac, gm100	4	4	4	4
3◆	24X758	HEATER, 240 vac, 375w, 8 mm dia	1	1	1	1
4†	---	CONNECTOR, butt splice	3	3	3	3
5▲	16K931	TAG, warning	1	1	1	1
6	17A618	COVER, electric, gm100, quad	1	1	1	1
7	18A388	INSULATOR, electrical, quad	1	1	1	1
8	129647	SCREW, set, cup, m3 x 4 mm	1	1	1	1
9*	24X038	SOLENOID, quick disconnect	1	1	1	
11	24X046	SWITCH, over temp, 500f with 2 in. leads	1	1	1	1
12❖	108050	WASHER, lock, spring	2	2	2	1
13❖	117030	SCREW, shcs m6 x 40	2	2	2	2
14	24P548	FITTING, elbow, 45, jic 06 x sae 06, mm	1	1	1	2
15	128306	SCREW, mach, phillips, pan hd	6	6	6	1
16★	---	FILTER, applicator, 80 mesh	1	1	1	6
17	---	CORD SET, 240 v, applicator	1	1	1	1
17a‡	---	KIT, pt100 cordset			1	
17b‡	---	KIT, ni120 cordset				1
20	157021	WASHER, lock, int	1	1	1	1
22	111119	SCREW, valve	8	8	8	8
26	103473	STRAP, tie, wire	1	1	1	1
27❖	16T205	CLAMP, bar, housing, metric	2	2	2	2
28❖	16P848	INSULATOR, clamp, bar, housing	1	1	1	1
29	16P285	SCREW, set, cup, socket hd	1	1	1	1
33†	---	SLEEVE, silicone, red, 2 in. lg x 0.16 in. od	3	3	3	3
43	102233	BALL, stainless steel	2	2	2	2
44†	C33049	TAPE, adhesive, fiberglass	0.25	0.25	0.25	0.25
52	24X456	CABLE, m8, 3-pin, 5.0 m	1	1	1	1
53▲	17F001	TAG, instruction	1	1	1	1
57	111637	WASHER	5	5	5	5

--- Not available for individual sale.

❖ Included in the Quad Mounting Clamp Kit. See **Kits and Accessories** on page 36.

† Included with all Heater, Cordset, and Overtemp Kits. See **Kits and Accessories** on page 36.

◆ Included with the Quad Heater Kit. See **Kits and Accessories** on page 36.

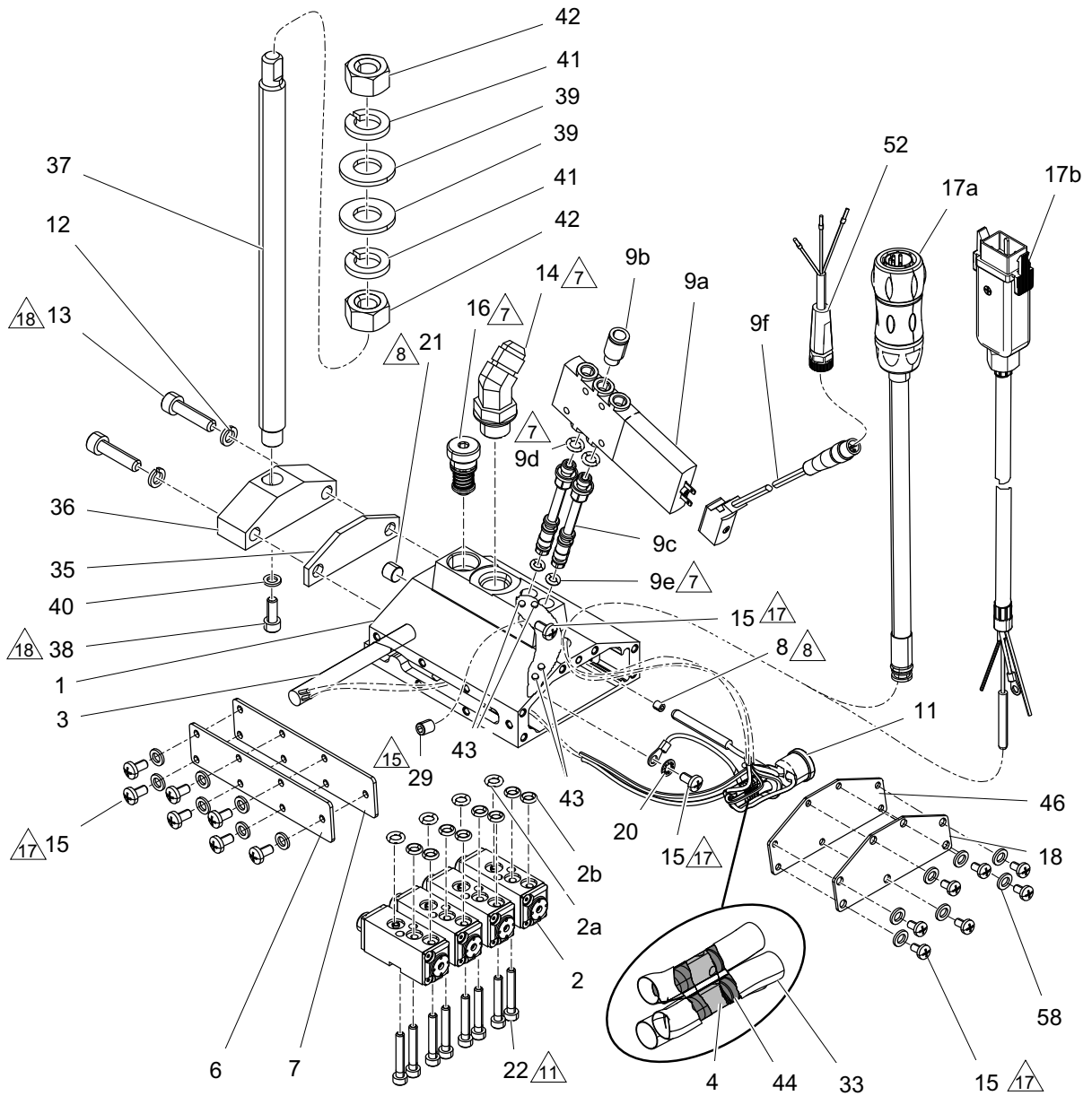
★ Included in the Inlet Filter Kit options. See **Kits and Accessories** on page 36.

* For individual solenoid components. See **Solenoid Valve Kits** on page 35.

▲ Replacement safety labels, tags, and cards are available at no cost.

‡ See **Cordsets** page 36

Low Profile Quad (25B033, 25B036)








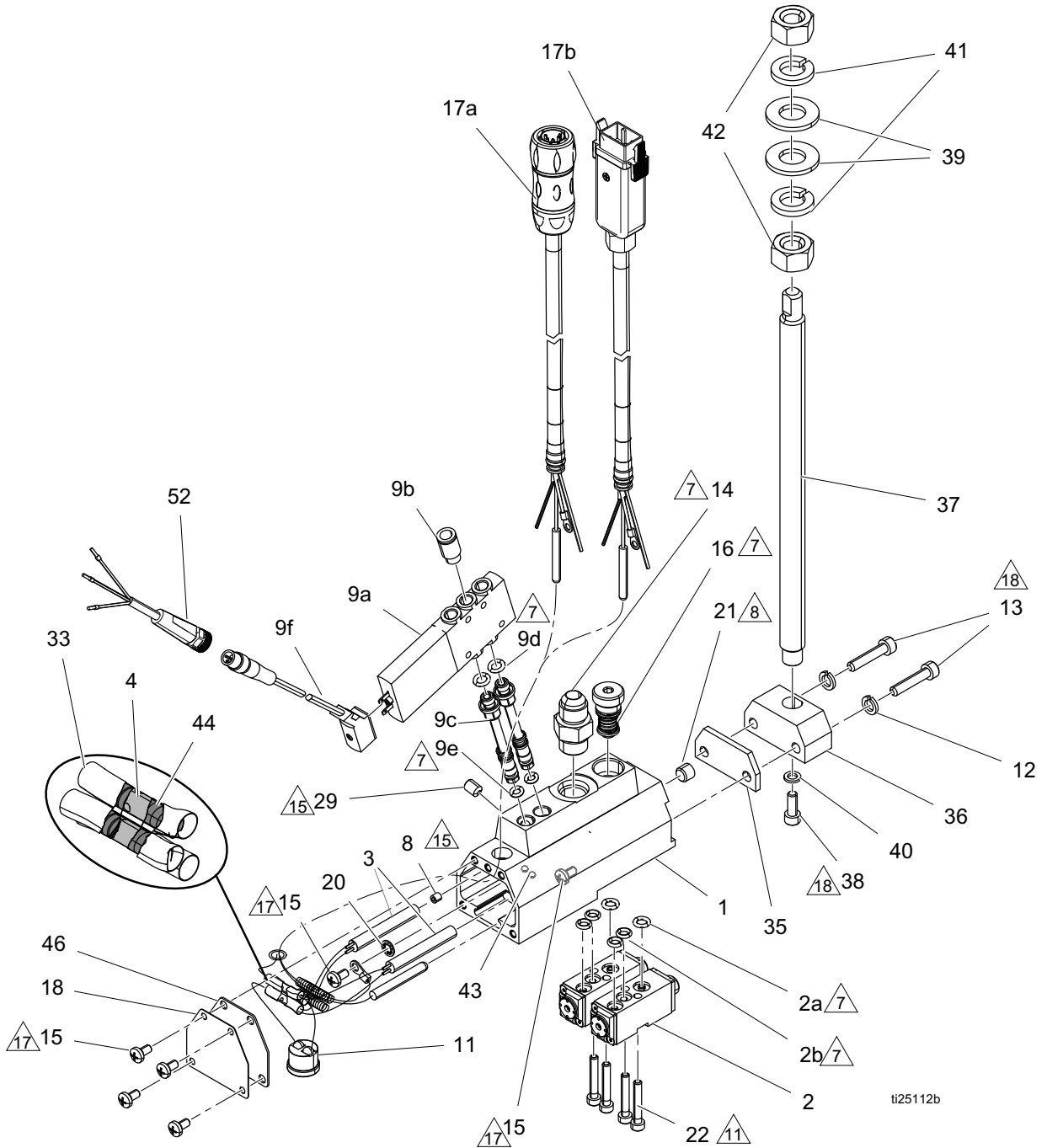
-  Apply a thin coating of lubricant to seals.
-  Apply sealant to threads. The head of the plug needs to be flush with the housing
-  Apply lubricant to the first .05 in. of the thread of the bolts (22) before installing the module (2). Torque to 30 +/- in-lb (3.3 +/- 0.2 N•m).
-  Torque to 15-20 in-lb (1.7-2.2 N•m)
-  Torque to 20-30 in-lb (2.2-3.3 N•m).







FIG. 23

Low Profile Quad Parts List

Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	---	MANIFOLD, quad, lp, mini, machined	1	46	18A391	INSULATOR, electrical, back plate	1
2	25B241	MODULE, ac, gm100	4	52	24X456	CABLE, m8, 3-pin, 5.0 m	1
3◆	24X758	HEATER, 240 vac, 375w, 8 mm diameter	1	53▲	17F001	TAG, instruction	1
4†	---	CONNECTOR, butt splice	3	58	111637	WASHER	14
5▲	16K931	TAG, warning	1	--- Not available for individual sale.			
6	18A392	PLATE, side, quad, lp, gm100	1	◆ Included in the Quad Mounting Clamp Kit. See Kits and Accessories on page 36.			
7	18A390	INSULATOR, electrical, side plate	1	† Included with all Heater, Cordset, and Overtemp Kits. See Kits and Accessories on page 36.			
8	129647	SCREW, set, cup, m3 x 4 mm, sst	1	◆ Included with the Quad Heater Kit. See Kits and Accessories on page 36.			
9*	24X038	SOLENOID, quick disconnect	1	★ Included in the Inlet Filter Kit options. See Kits and Accessories on page 36.			
11	24X046	SWITCH, over temp, 500f with 2 in. leads	1	* For individual solenoid components. See Solenoid Valve Kits on page 35.			
12❖	108050	WASHER, lock, spring	2	▲ Replacement safety labels, tags, and cards are available at no cost.			
13❖	117029	SCREW, shcs m6 x 25	2	‡ See Cordsets page 36			
14	24P548	FITTING, elbow, 45, jic 06 x sae 06, mm	1				
15	128306	SCREW, mach, phillips, pan hd	16				
16★	---	FILTER, applicator, 80 mesh	1				
17	---	CORD SET, 240 v, applicator	1				
17a‡	---	KIT, pt100, cordset (model 25B033)	-				
17b‡	---	KIT, ni120 cordset (model 25B036)	-				
18	18A393	PLATE, back, quad, lp, gm100	1				
20	157021	WASHER, lock, int	1				
21	103147	PLUG, pipe	1				
22	111119	SCREW, valve	8				
26	103473	STRAP, tie, wire	1				
29	16P285	SCREW, set, cup, socket hd	1				
33†	---	SLEEVE, silicone, red, 2 in. lg x 0.16 in. od	3				
35❖	---	INSULATOR, clamp, gm100, quad, lp	1				
36❖	---	BLOCK, mounting, gm100, quad, lp	1				
37❖	---	ROD, mtg, threaded, low profile	1				
38❖	102598	SCREW, cap, socket head	1				
39❖	109570	WASHER, plain	2				
40❖	100020	WASHER, lock	1				
41❖	100018	WASHER, lock, spring	2				
42❖	100321	NUT	2				
43	102233	BALL, stainless steel	4				
44†	C33049	TAPE, adhesive, fiberglass	0.25				

Low Profile Dual (25B027, 25B030)



-  Apply a thin coating of lubricant to seals.
-  Apply sealant to threads. The head of the plug needs to be flush with the housing
-  Apply lubricant to the first .05 in. of the thread of the bolts (22) before installing the module (2). Torque to 30 +/- in-lb (3.3 +/- 0.2 N•m).
-  Torque to 10-12 in-lb (1.1-1.3 N•m).
-  Torque to 15-20 in-lb (1.7-2.2 N•m)
-  Torque to 20-30 in-lb (2.2-3.3 N•m).

ti25112b

FIG. 24

Low Profile Dual Parts List

Ref	Part	Description	Qty	
1	---	MANIFOLD, dual, lp, mini, machined	1	--- Not available for individual sale.
2	25B241	MODULE, ac, gm100	2	❖ Included in the Quad Mounting Clamp Kit. See Kits and Accessories on page 36.
3◆	24X242	HEATER, rod	2	† Included with all Heater, Cordset, and Overtemp Kits. See Kits and Accessories on page 36.
4†	---	CONNECTOR, butt splice	3	
5▲	16K931	TAG, warning	1	◆ Included with the Quad Heater Kit. See Kits and Accessories on page 36.
8	124736	SCREW, set, cup, m4 x 0.7 x 4 mm, sst	1	★ Included in the Inlet Filter Kit options. See Kits and Accessories on page 36.
9*	24X038	SOLENOID, quick disconnect	1	
11	24X046	SWITCH, over temp, 500f with 2 in. leads	1	* For individual solenoid components. See Solenoid Valve Kits on page 35.
12❖	108050	WASHER, lock, spring	2	
13❖	127941	SCREW, shcs m5 x 25	2	▲ Replacement safety labels, tags, and cards are available at no cost.
14	24P615	FITTING, adapter, jic 06 x sae 06, mm	1	‡See Cordsets page 36
15	128306	SCREW, mach, phillips, pan hd	6	
16★	---	FILTER, applicator, 80 mesh	1	
17	---	CORD SET, 240 v, applicator	1	
17a‡	---	KIT, pt100 cordset (model 25B027)	-	
17b‡	---	KIT, ni120 cordset (model 25B030)	-	
18	17C165	PLATE, electrical, gm100, dual, lp	1	
20	157021	WASHER, lock, int	1	
21	103147	PLUG, pipe	1	
22	111119	SCREW, valve	4	
26	103473	STRAP, tie, wire	1	
29	16P285	SCREW, set, cup, socket hd	1	
33†	---	SLEEVE, silicone, red, 2 in. lg x 0.16 in. od	3	
35❖	17C164	INSULATOR, clamp, gm100, dual, lp	1	
36❖	17C163	BLOCK, mounting, gm100, dual, lp	1	
37❖	16V783	ROD, mtg, threaded, low profile	1	
38❖	102598	SCREW, cap, socket head	1	
39❖	109570	WASHER, plain	2	
40❖	100020	WASHER, lock	1	
41❖	100018	WASHER, lock, spring	2	
42❖	100321	NUT	2	
43	102233	BALL, stainless steel	2	
44†	C33049	TAPE, adhesive, fiberglass	0.25	
46	18A389	INSULATOR, electrical	1	
52	24X456	CABLE, m8, 3-pin, 5.0 m	1	
53▲	17F001	TAG, instruction	1	

Solenoid Valve Kits

24X038, 24 VDC Solenoid Valve

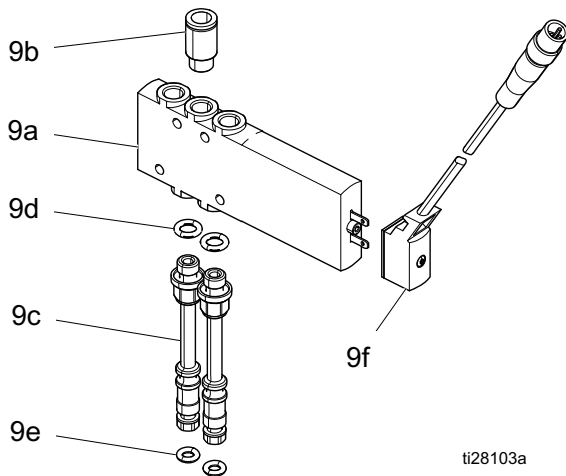


FIG. 25

Ref	Part	Description	Qty.
9a	---	VALVE, solenoid, 5w, sr, 24 VDC	1
9b	17A633	FITTING, 1/4 push-to-connect, M7	1
	128478	FITTING, m6 push-to-connect, m7 (not shown)	1
9c	24X044	KIT, solenoid tube with o-rings	1
9d	295685	O-RING	1
9e	106560	O-RING, packing	1
9f	24X045	KIT, solenoid cable	1
9g+	24T156	LUBRICANT, high temp, 3g	1

+ Apply lubricant (9g) to the o-rings (9d, 9e). The lubricant is not for use on solenoid valve internal components.

Kits and Accessories

Cordsets

Cordsets include the RTD. Use crimp tool kit 24W086 (purchase separately).

Valve Part	Kit Part Ser B **	Kit Part Ser A *	Valve Type	RTD Type
25B021	25E783	24X039	Slim	Pt 100 (385)
25B024	25E784	24X040	Slim	Ni 120
25B075	25E785	24X760	Dual	Pt 100 (385)
25B301	25E786	24X761	Dual	Ni 120
25B077	25E787	24W087	Quad Spacing I	Pt 100 (385)
GSC079	25E787	24W087	Quad Spacing II	Pt 100 (385)
25B303	25E788	24W088	Quad Spacing I	Ni 120
GSC080	25E788	24W088	Quad Spacing II	Ni 120
25B033	25E787	24W087	Low Profile Quad	Pt 100 (385)
25B036	25E788	24W088	Low Profile Quad	Ni 120
25B027	25E787	24W087	Low Profile Dual	Pt 100 (385)
25B030	25E788	24W088	Low Profile Dual	Ni 120
GSC101	NA	25E783**	Slim	Ni 120

* Slim and dual kits include the heater rod plug 19A555.

** Replace the insulator gasket when replacing the heater.

GM100 Module Kit, 25B241

Parts for GM100 Module Kit 25B241

Part	Description	Qty.
---	MODULE	1
111119	SCREW, valve	2
24T179	LUBRICANT, anti-seize	1

GS35 O-Ring Module Kit, 24R835

Parts for GS35 O-Ring Module Kit 24R835

Part	Description	Qty.
295685	O-Ring	10

008FKM O-Ring Kit, 24X834

Parts for 008KFM O-Ring Kit 24X834

Part	Description	Qty.
556553	O-Ring, 008 Viton - A Duro	10

Heater Cartridges

Heater cartridges for single, dual, and quad models.

Kit	For Model(s)	Length	Qty.
24X043*	Slim	1.75 in. (44 mm)	1
24X242*	Dual Low Profile and Dual	1.75 in. (44 mm)	2
24X758**	Quad Low Profile and Quad	3.1 in. (79 mm)	1

* Slim and dual kits include the heater rod plug 19A555.

** Replace the insulator gasket when replacing the heater.

Insulator Gaskets

Part	For Model(s)
18A386	Slim - 25B021, 25B024
18A388	Quad - 25B077, 25B303
18A387	Dual - 25B075, 25B301
18A388	Quad 1.5 - GSC079, GSC080
18A390	Dual LP - 25B027, 25B030
18A390	Quad LP (side) - 25B033, 25B036
18A391	Quad LP (back)

High Temperature Lubricant

24T156

Packet with 3 grams of high temperature lubricant. For use on seals in InvisiPac applicators.

Anti-Seize

24T179

Tube with 0.5 oz of anti-seize for use on module mounting screws in InvisiPac applicators.

Mufflers / Water Trap

24X037

Includes two mufflers that can be used with solenoid valve kits.

25P581

Includes two water trap assemblies that can be used with solenoid valve kits to keep water out of exhaust ports. This is required for wash down applications.

Blanking Plate Kit

24W017

Use to run two or three modules on a quad applicator or one module on a dual applicator.

Inlet Filter

Kit	Qty.
24P275	Single
24P802	3 Pack

Material Inlet Fittings

Single Kit	Description
24P615	Straight
24P548	45°
24P547	90°

Thermal Cutoff Replacement Kit

Single Kit	Description
24X046	Standard

Mounting Clamp Kits

24X042 (Slim)

Ref	Part	Description	Qty.
10	17A496	INSULATOR, clamp, bar, housing	1
11a	---	CLAMP, top	1
11b	---	CLAMP, bottom	1
11c	---	SCREW, valve	1
12	108050	WASHER, lock, spring	1
13	112674	SCREW, shcs, M6 x 35	1
14	106371	SCREW, flat head	1

24P277 (Dual and Quad)

Ref	Part	Description	Qty.
1	16T205	CLAMP, bar, housing, metric	2
2	108050	WASHER, lock, spring	2
3	117030	SCREW, shcs, M6 X 40	2
4	16P848	INSULATOR, clamp, bar, housing	1
	17M319	90° fitting adapter	
	17M460	90° solenoid block	

24X835 (Low Profile Quad)

Ref	Part	Description	Qty.
1	100018	WASHER, lock, spring	2
2	100020	WASHER, lock	1
3	100321	NUT	2
4	102598	SCREW, cap, socket head	1
5	108050	WASHER, lock, spring	2
6	---	WASHER, plain	2
7	---	SCREW, shcs, M5 x 25	2
8	16V783	ROD, mtg, threaded, low profile	1
9	17C203	BLOCK, mounting, GM100, quad, lp	1
10	17C204	INSULATOR, clamp, GM100, quad, lp	1

24X243 (Low Profile Dual)

Ref	Part	Description	Qty.
10	24P276	INSULATOR, clamp, bar, housing	1
11	---	BLOCK, mating, low profile	1
12	108050	WASHER, lock, spring	2
13	117029	SCREW, shcs, M6 x 25	2
44	---	ROD	1
45	---	SCREW, cap, socket head	1
46	---	WASHER, lock	1
47	---	WASHER, plain	2
48	---	WASHER, lock, spring	2
49	---	NUT, 1/2-13	2

Solenoid Extension Cables

Part	Description
24X456	5 m
24X457	10 m

Solenoid Remote Mounting Kits

Use these kits to remotely mount the GM100 air solenoid valve. The kits include a coupling block to allow air tubing to be routed from a remotely mounted solenoid to the GM100 standoff tubes (9c).

NOTE: Performance is decreased as tube length increases.

24X049 Standard Remote Mounting Kit

Ref	Part	Description	Qty.
1	---	BLOCK, remote mount	1
2	---	FITTING, push-connect, 1/4 in. tube	5

24X050 Metric Remote Mounting Kit

Ref	Part	Description	Qty.
1	---	BLOCK, remote mount	1
2	---	FITTING, push-connect, M6 tube	5

Nozzles (Single Orifice)

Single	5 Pack	Description
24P636	24P794	0.008 straight
24P637	24P795	0.010 straight
24P638	24P796	0.012 straight
24P639	24P797	0.016 straight
24P640	24P798	0.018 straight
24P641	24P799	0.020 straight
24P642	24P800	0.024 straight
24P643	24P803	0.008 90°
24P644	24P804	0.010 90°
24P645	24P805	0.012 90°
24P646	24P806	0.016 90°
24P647	24P807	0.018 90°
24P648	24P808	0.020 90°
24P649	24P809	0.024 90°

Applicator Air Filter/Regulator Kits

Kit 26A122

For systems with the air filtered by the InvisiPac system

Ref	Part	Description	Qty.
1	111804	REGULATOR	1
2	129055	GAUGE	1
3	104984	FITTING, tee	1
4	156823	FITTING, swivel	3
5	162453	FITTING, nipple, 1/4-1/4	2

Kit 26A121

For systems with the air not filtered by the InvisiPac system

Ref	Part	Description	Qty.
1	111804	REGULATOR	1
2	129055	GAUGE	1
3	106148	AIR FILTER	1
4	156823	FITTING, swivel	1
5	162453	FITTING, nipple, 1/4-1/4	1

Dimensions

Slim Dimensions

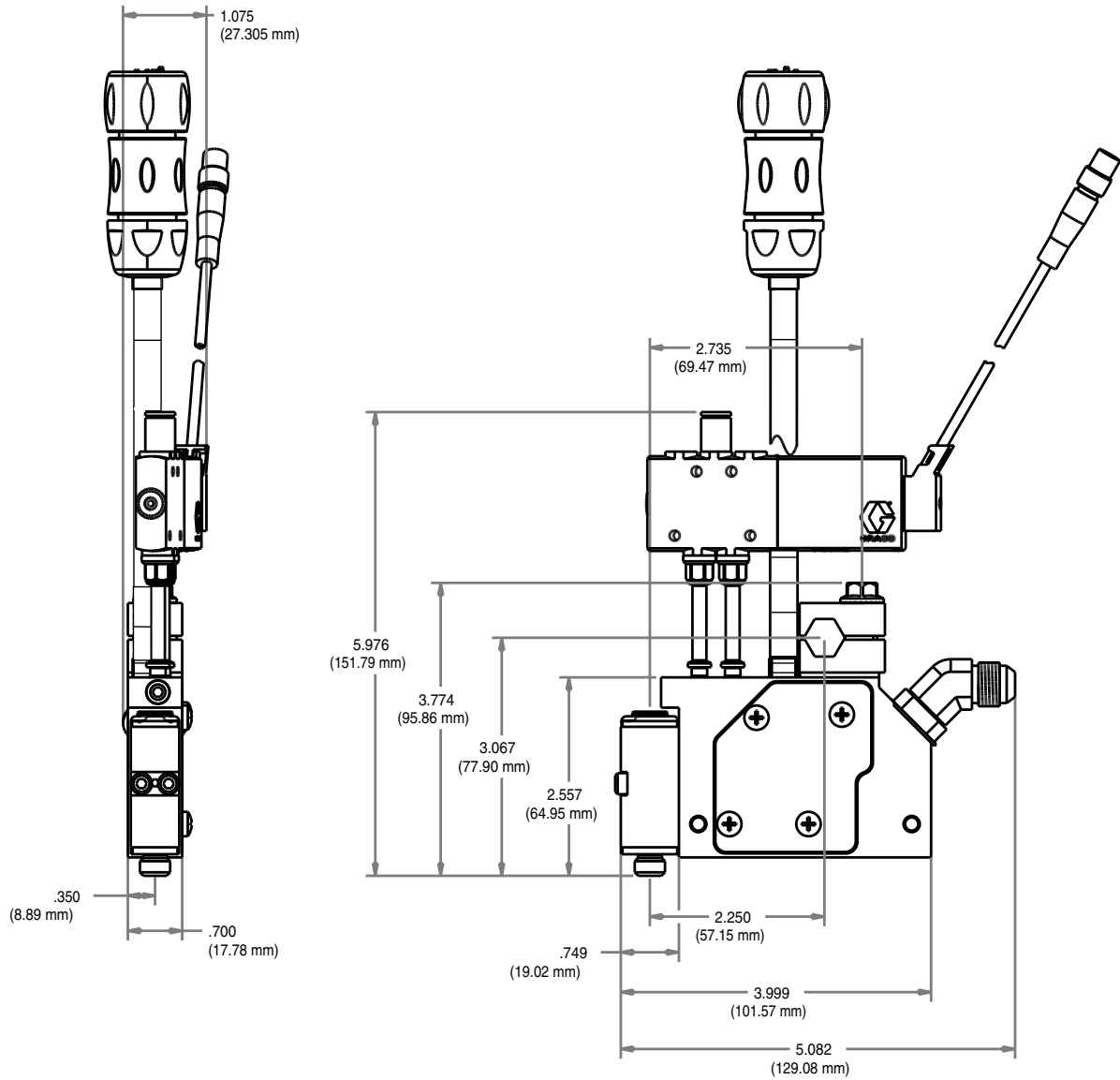


FIG. 26: Models 25B021 and 25B024

Dual Dimensions

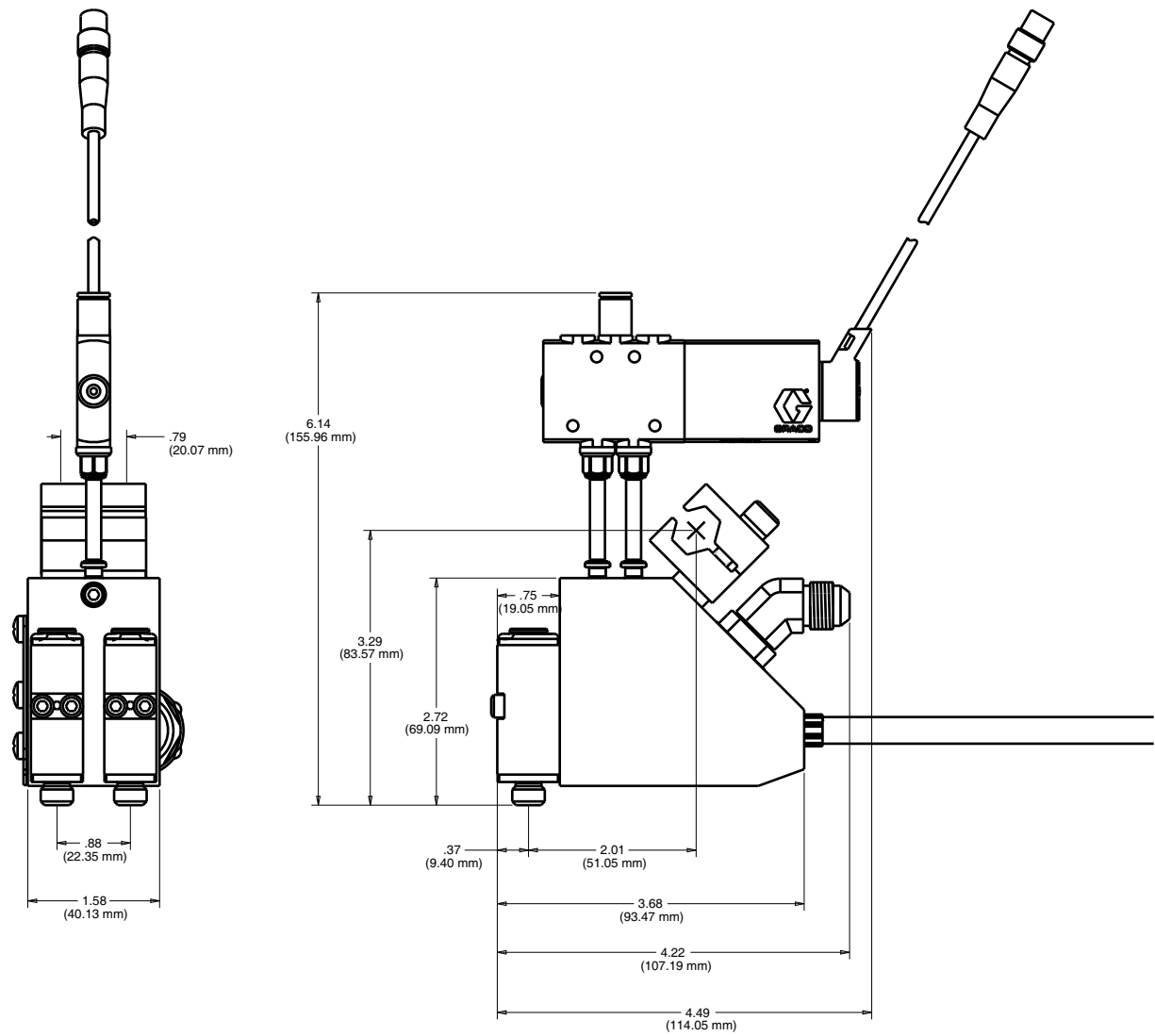
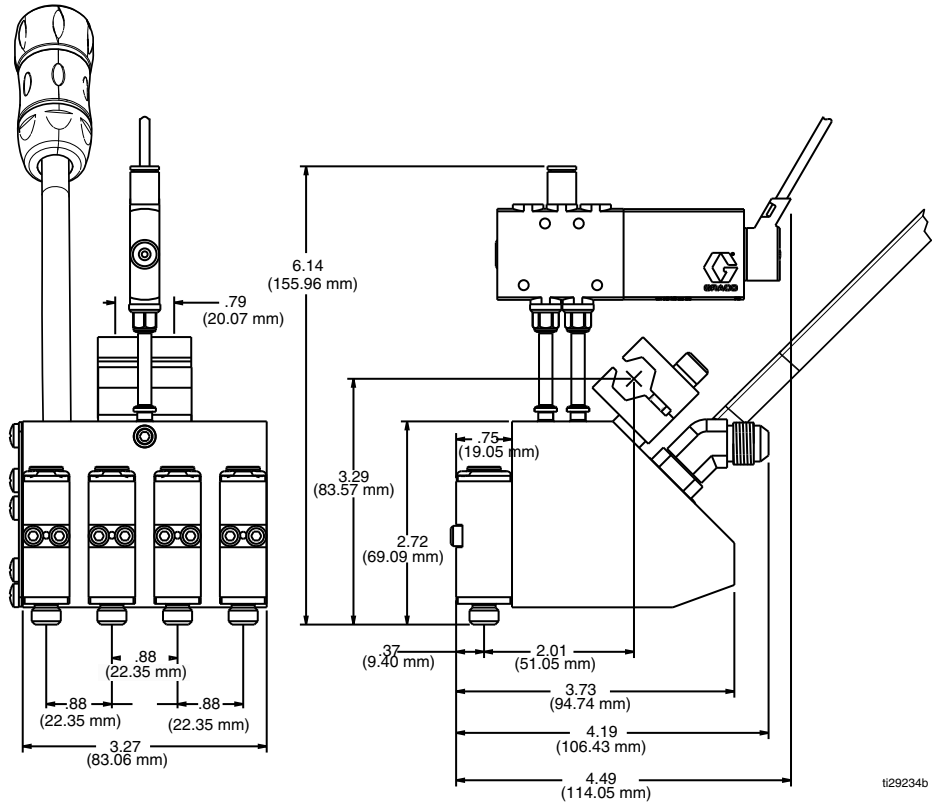


FIG. 27: Models 25B075 and 25B301

Quad Dimensions



25B077 Type I Shown

GSC079 Type II Shown

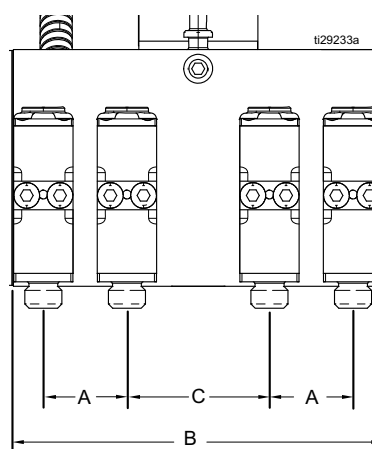
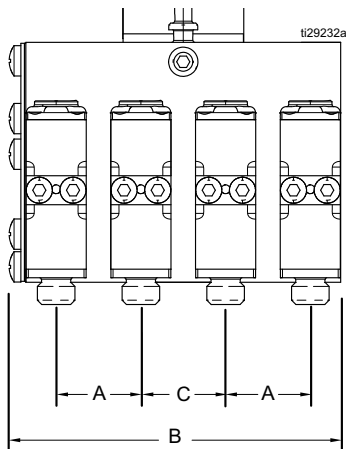
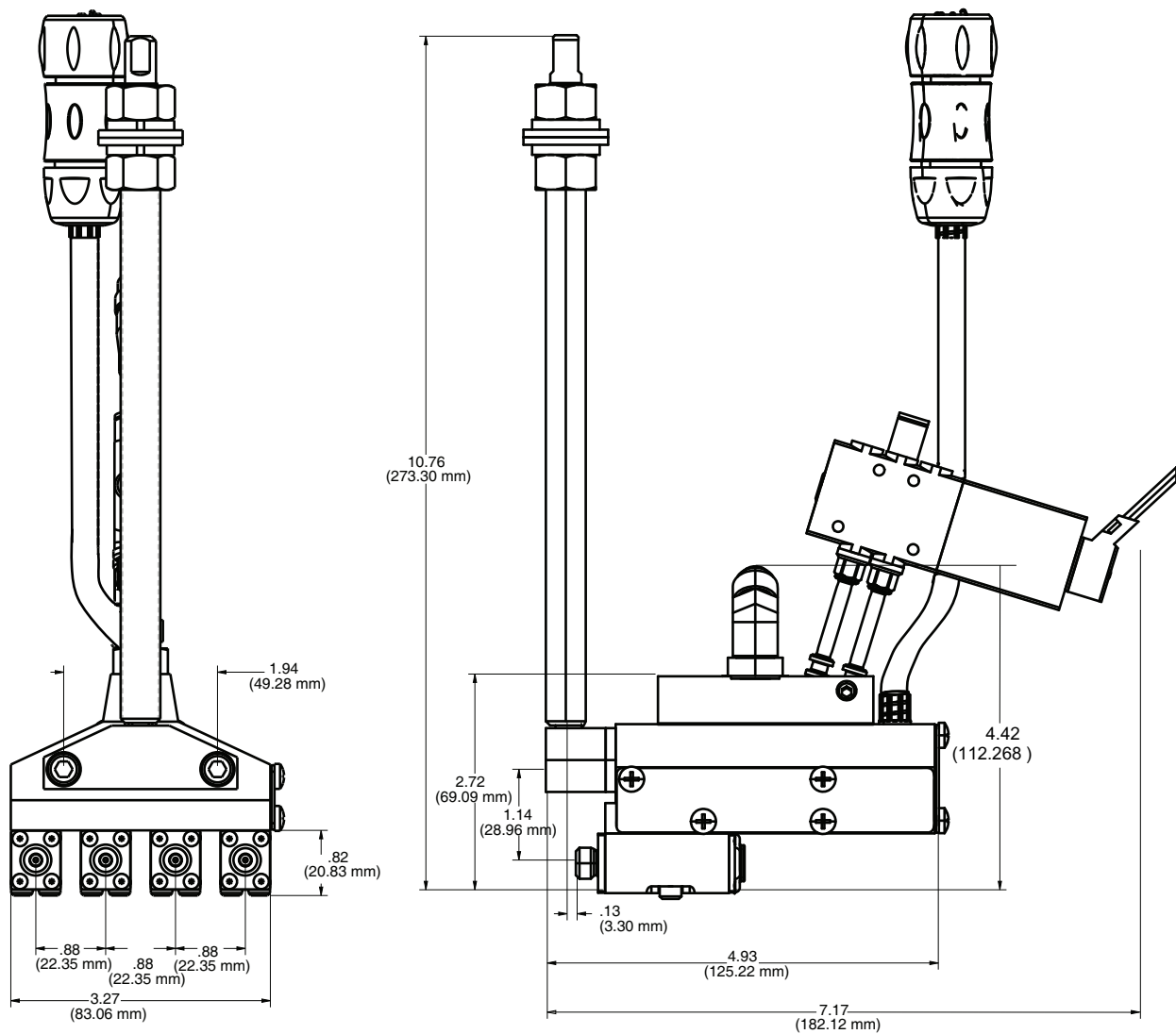


FIG. 28: Models 25B077, 25B303, GSC079, and GSC080

Applicator	A in. (mm)	B in. (mm)	C in. (mm)
Type I	0.88 (22.35)	3.27 (83.06)	0.88 (22.35)
Type II	0.88 (22.35)	3.94 (100.08)	1.5 (38.1)

Low Profile Quad Dimensions



ti27397a

FIG. 29: Models 25B033 and 25B036

Low Profile Dual Dimensions

(Models 25B027, 25B030)

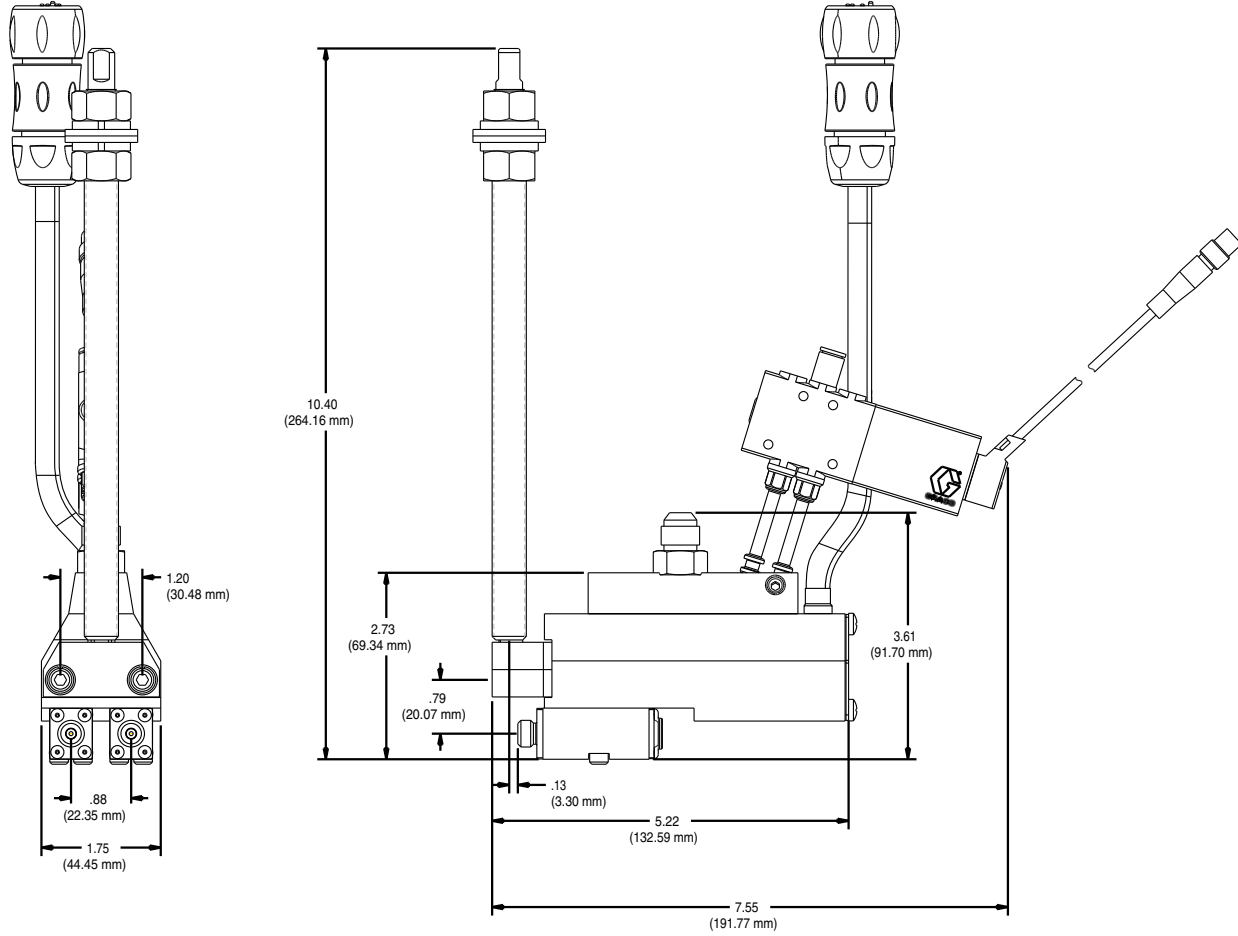


FIG. 30: Models 25B027 and 25B030

Technical Specifications

InvisiPac GM100 Plug-Free Melt Adhesive Applicator		
	US	Metric
Speed	> 10,000 cycles/minute	
Heat-up time	< 10 minutes to 350° F at 240 VAC	< 10 minutes to 176° C at 240 VAC
Maximum fluid working pressure	1500 psi	10.3 MPa, 103 bar
Maximum air pressure	80 psi	0.5 MPa, 5.5 bar
Minimum air pressure	65 psi	0.44 MPa, 4.4 bar
Maximum operating temperature	400° F	204° C
Ambient storage temperature range	32°–122° F	0°–50° C
Ambient operating temperature range	32°–122° F	0°–50° C
Solenoid air flow rating	1.0 Cv	
Electrical Service		
Slim	200-240 V, 50-60 HZ, 150 W	
Dual Low Profile	200-240 V, 50-60 HZ, 300 W	
Quad Low Profile	200-240 V, 50-60 HZ, 375 W	
Dual Standard	200-240 V, 50-60 HZ, 300 W	
Quad Standard	200-240 V, 50-60 HZ, 375 W	
Cordsets		
25E783, 25E785, 25E787, 24X039, 24X760, 24W087	Pt 100 (385) RTD Cordsets	
25E784, 25E786, 25E788, 24X040, 24X761, 24W088	Ni 120 RTD Cordsets	
Solenoid Control Voltages		
24X038	24 VDC	
Materials of Construction*		
Wetted materials on all models	Aluminum, carbon steel, stainless steel, carbide, brass, chemically resistant seals, chrome	
Noise (dBa)		
Sound pressure measured 6.5 feet (2 m) from the applicator at 80 psi (550 KPa, 5.5 bar) per ISO-3744.	Without mufflers: 89.2 dBa With mufflers: 78.4 dBa	
Notes		
* All fluid contact materials are FDA-compliant and meet the United States Code of Federal Regulations (CFR) Title 21 for repeated use in food-processing machinery. The applicator user must verify that the construction materials meet their specific application requirements.		

California Proposition 65

CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – www.P65warnings.ca.gov.

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Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of eighteen months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

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This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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For more information about InvisiPac, visit www.InvisiPac.com or email InvisiPac@graco.com.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

For technical assistance or customer service, call toll free: 1-800-458-2133.

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Original instructions. This manual contains English. MM 334627

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