

Injecto-Flo[®] Oil Pump

3A5213B

EN

Used for continuously pumping oil in circulating and hydrostatic oil lubrication systems using progressive distributors.

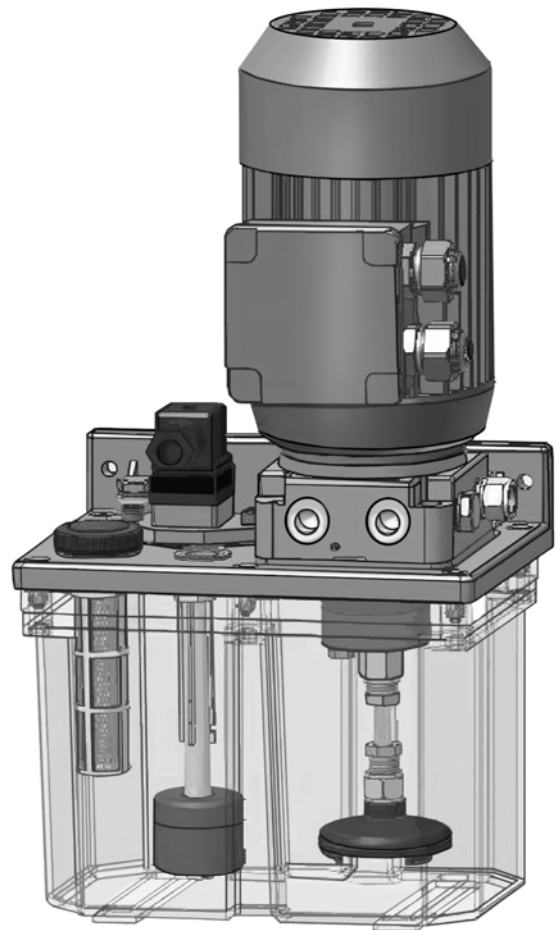
Pump Part No.: 26A485

725 psi (5.0 MPa, 50 bar) Maximum Working Pressure




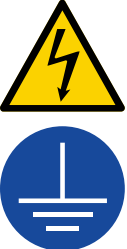


Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.



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>ELECTRIC SHOCK HAZARD</p> <p>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>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the equipment, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow the Pressure Relief Procedure when you stop spraying/dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
	<p>FIRE AND EXPLOSION HAZARD</p> <p>When flammable fluids are present in the work area, such as gasoline and windshield wiper fluid, be aware that flammable fumes can ignite or explode. 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 cigarettes and portable electric lamps. • Ground all equipment in the work area. • Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline. • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Use only grounded hoses. • 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.



WARNING



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- 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.
- Do not leave the work area while equipment is energized or under pressure.
- 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.



PERSONAL PROTECTIVE EQUIPMENT

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:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Installation

Component Identification

See FIG. 1 and FIG. 2

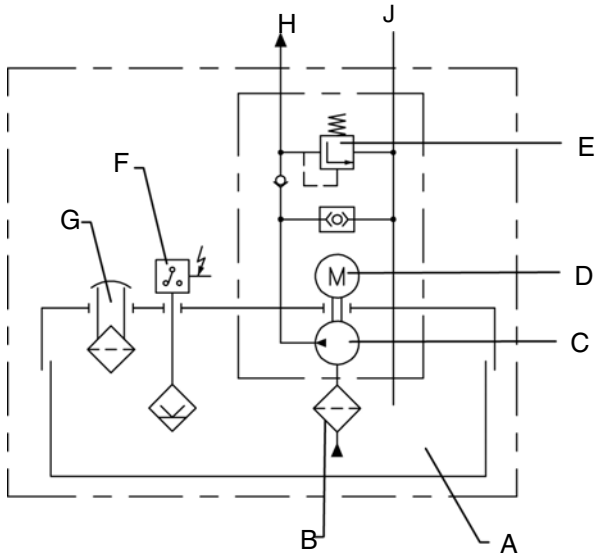


FIG. 1: Hydraulic Diagram

- A Tank
- B Suction filter
- C Gear pump
- D Electric motor
- E Pressure limiting valve
- F Level switch
- G Filling cap filter
- H Pressure outlet*
- J Return

* To relieve pressure in the system, a 3-way valve must be installed in the outlet tubing.

Typical Circulation Lubrication System

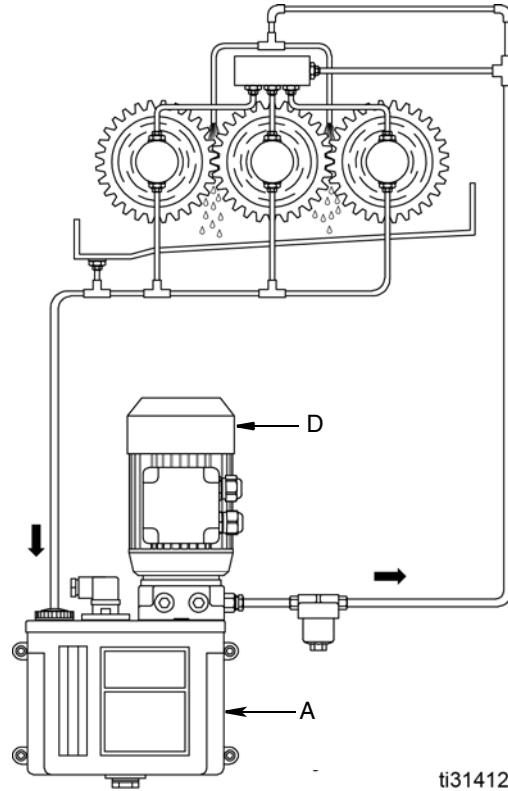
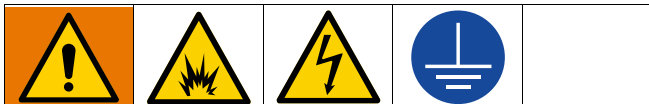


FIG. 2

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.

To ground the pump, remove the ground screw (*gs*) and connect a ground wire. Reconnect the ground screw back into the pump and tighten securely. Reconnect the other end of the ground wire to a true earth ground (FIG. 3).

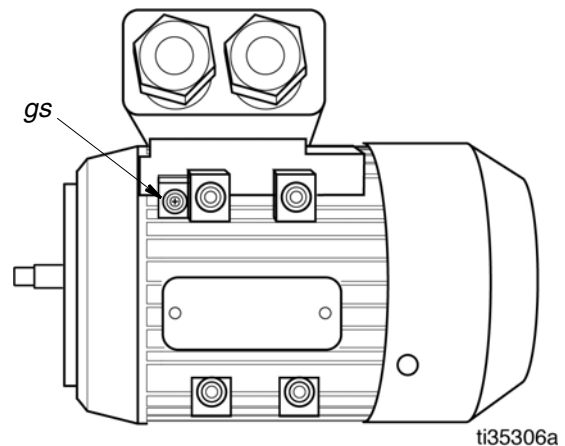
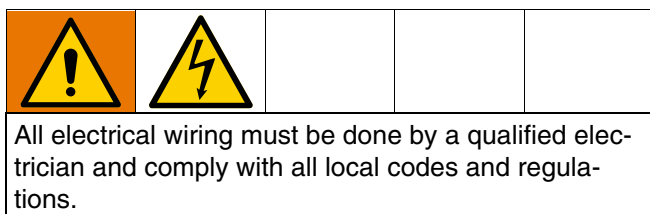


FIG. 3

Installation



Instructions

1. Disconnect the power at the source.
2. Remove the 4 bolts from the cover to the junction box and remove the cover from the motor.
3. Verify the voltage in the facility is compatible with the voltage shown inside the plate cover on the electric motor.
4. Connect the power supply cable as shown in the Wiring Diagram.

NOTE: Be sure cables are securely connected to the terminals and cannot be unintentionally disconnected.

5. Replace junction box cover and 4 bolts (a). Tighten bolts securely.
6. Reconnect power to the source.
7. Verify motor rotation direction is correct (clockwise) as shown on the motor housing.

Wiring Diagram

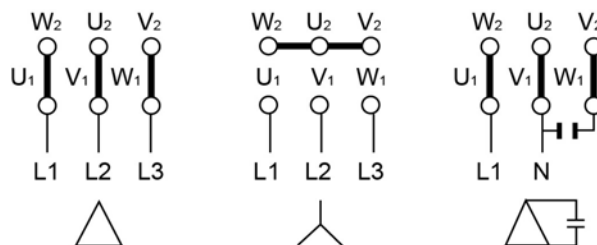


FIG. 4

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, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.

To relieve pressure:

1. Turn off main power to the motor.

After the power is turned off, the pressure will drop partially, through the gears. This depends on the oil viscosity, valves and gears.

2. The remaining pressure will be relieved through the 3-way valve installed in the outlet tubing.

Operation

System Control

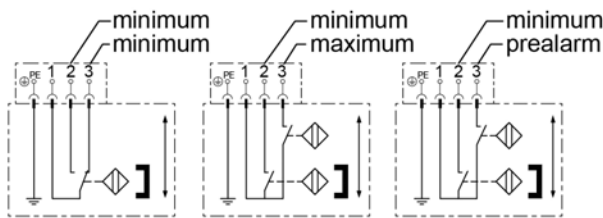
The system is controlled externally using a PLC or automated device. Controlled parameters include:

- Start/stop (cycle) time.
- Time needed to decompress the circuit when setting up the cycle time.
- Time needed for recharging the volumetric dispensers. This time depends on the oil viscosity, length of the circuit, amount of fluid required for each lubrication point.

A pressure gauge can be installed in the pressure line to verify the working pressure is correct, 25 to 30 bar (2.5 to 3.0 MPa, 362.6 to 435.1 psi).

Electric Level Switch

Type of contact	Reed
maximum switching voltage	230 VAC
Connection	max 0.5 Amps
Power breakdown	max 30 Watts
Connector	DIN EN175301-803
Function	See FIG. 5



If inductive or capacitive loads are connected, appropriate protective circuits (diode, RC elements, varistors) must be provided.

ti31413a

FIG. 5

Reed Switch Protection

To protect the functionality of the reed switch, the customer must provide appropriate protective circuits. This depends on the used loads.

If **inductive loads** are used (relays, solenoids and motors) the most common contact suppression methods are diode and RC suppression.

If **capacitive loads** like long wires are used, the most common solution is to fit a resistor in series with the switch.

If a **lamp load** is used the high inrush current can be reduced through the use of a current limiting resistor in series with the switch.

Filling the Reservoir

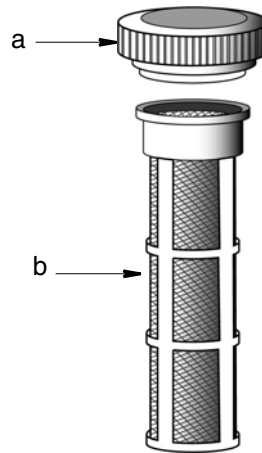


FIG. 6

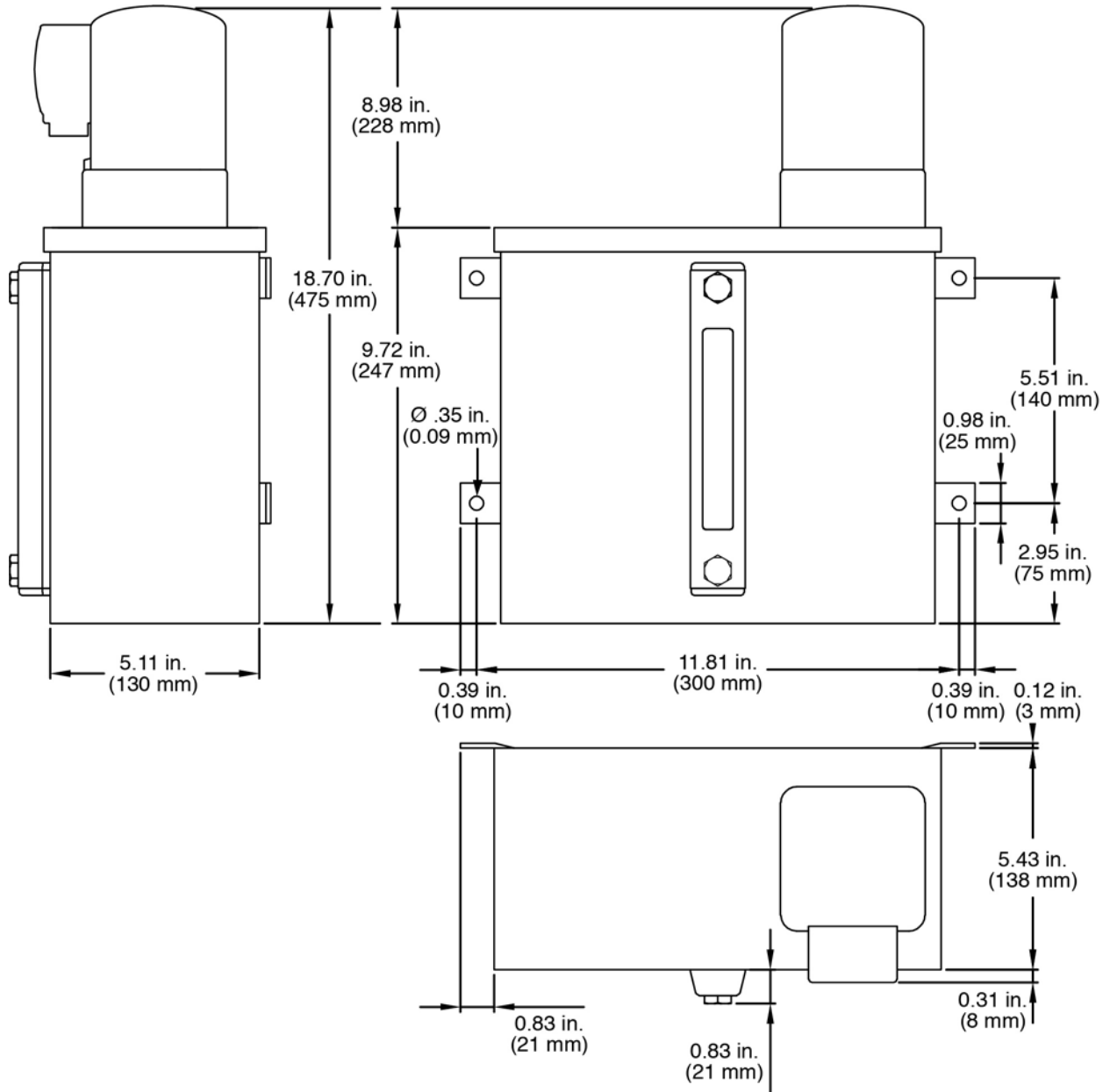
1. Remove the fill cap (a) and filter (b) from the fill tube.
2. Wipe the top of the fill tube and reservoir cover with a clean cloth to remove any dirt or debris that could contaminate the clean oil while filling the reservoir.
3. Fill the reservoir using clean oil with the same compatibility as the used oil.
4. Use a cloth to wipe off any oil drips or spills around the top and sides of the fill tube and reservoir cover.
5. Replace filter (b) in the end of the fill tube.
6. Replace the cover (a). Hand tighten securely.

Troubleshooting



Problem	Cause	Solution
Low pump pressure	Pressure valve is dirty	Clean valve
	Fittings leak after installation	Check fittings and pipelines
No fluid flow	Motor does not run	Check voltage compatibility by comparing voltage requirements in the facility with the voltage shown inside the plate cover on the electric motor. See Steps 1-3 of Installation Instructions, page 5.
		Check that wiring is correct. See Step 4 of Installation Instructions, page 5.
		Make sure the motor is not burned out
	Pump does not pump	Check coupling between pump and motor. Be sure motor rotates in the right direction. See Step 7 of Installation Instructions, page 5.

Dimensions



ti31414a

Technical Specifications

Injecto-Flo Oil Pump		
	US	Metric
Tank		
Tank Capacity	1.6 gallons	6 liters
Tank material	Metal	
Output connection	M14 x 1.5	
Pump		
Lubricant	Oil	
Flow	0.56 gallons per minute	0.2 liters per minute
Maximum pressure	725 psi	5.0 MPa, 50 bar
Working temperature	50°F - 104°F	10°C - 40°C
Electric Motor		
Voltage/Frequency	230/400 VAC, 50/60 Hz, 0.5 - 0.3A	
Consumption	70W	
RPM	50Hz: 2730 60 Hz: 3200	
Wiring Options	See Wiring Diagram, page 5	
Level Switch		
Type of contact	Reed	
Maximum switching voltage	230 VAC	
Connection	max 0.5 Amps	
Power breakdown	max 30 Watts	
Function	See Level Switch FIG. 5, page 6	

Graco Standard Warranty

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 twelve 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.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

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.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

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

Phone: 612-623-6928 or Toll Free: 1-800-533-9655, Fax: 612-378-3590

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM3A5213

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA
Copyright 2018, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com
Revision B, January 2019