

SoloTech™ Peristaltic Pumps

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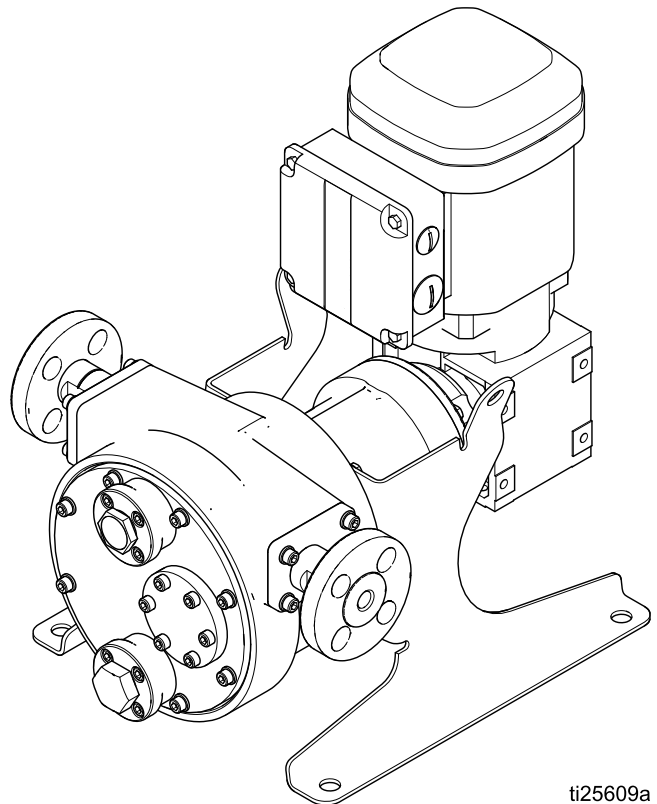
Electric-powered hose pump for use in fluid transfer and metering applications. For professional use only. Not approved for use in explosive atmospheres or hazardous locations unless otherwise stated in the model approvals section.



Important Safety Instructions

Read all warnings and instructions in this manual and in your Installation and Operation Manual before using this equipment. Save all instructions.

*125 psi (0.9 MPa, 9 bar) Maximum Fluid Working Pressure
See page 6 for model information.*



ti25609a



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Related Manuals








| Manual Number | Title |
|---------------|--|
| 334859 | SoloTech Peristaltic Pumps, Installation and Operation |










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 symbol refers 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>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. • 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. • 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>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 remove 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. • Wait five minutes for capacitor discharge before opening equipment. • Always use the recommended amount of genuine Graco hose lubricant to minimize build-up of static electricity. |

WARNING

| | |
|---|---|
|    | <p>PRESSURIZED EQUIPMENT HAZARD 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>EQUIPMENT MISUSE HAZARD 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 Data in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheet (SDS) 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>THERMAL EXPANSION HAZARD Fluids subjected to heat in confined spaces, including hoses, can create a rapid rise in pressure due to the thermal expansion. Over-pressurization can result in equipment rupture and serious injury.</p> <ul style="list-style-type: none"> • Open a valve to relieve the fluid expansion during heating. • Replace hoses proactively at regular intervals based on your operating conditions. |

|  <h1 style="margin: 0;">WARNING</h1> | |
|---|---|
|   | <p>MOVING PARTS HAZARD Moving parts can pinch, cut or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> • Keep clear of moving parts. • Do not operate equipment with protective guards or covers removed. • Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure and disconnect all power sources. |
|   | <p>ENTANGLEMENT HAZARD Rotating parts can cause serious injury.</p> <ul style="list-style-type: none"> • Keep clear of moving parts. • Do not operate equipment with protective guards or covers removed. • Do not wear loose clothing, jewelry or long hair while operating equipment. • Equipment can start without warning. Before checking, moving or servicing equipment, follow the Pressure Relief Procedure and disconnect all power sources. |
|   | <p>TOXIC FLUID OR FUMES HAZARD 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 the Safety Data Sheet (SDS) 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>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>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:</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. |

Configuration Number Matrix

Check the identification plate (ID) for the Configuration Number of your pump. Use the following matrix to define the components of your pump.

Some combinations are not possible. Check with your local supplier.




Sample Configuration Number: i23 MAC NR SS A1 A1 0

| | | | | | | | |
|------------|-----------|------------|---------------|---------------|-----------|-----------|----------|
| i | 23 | MAC | NR | SS | A1 | A1 | 0 |
| Pump Model | Hose Size | Motor | Hose Material | Barb Material | Roller | Housing | Options |

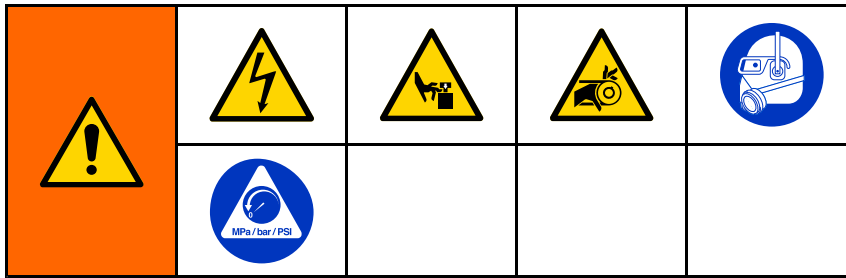
| Model | | Hose Size | | Motor/Gear Reducer | |
|----------|------------|-----------|-------|--------------------|---|
| i | Industrial | 6 | 6 mm | HAC† | AC motor with high-speed gear reducer |
| h | Hygienic | 10 | 10 mm | MAC† | AC motor with medium-speed gear reducer |
| | | 16 | 16 mm | LAC† | AC motor with low-speed gear reducer |
| | | 23 | 23 mm | MPM† | Brushless DC (BLDC) motor with gear reducer |
| | | 25 | 25 mm | HC† ♦ | High-speed gear reducer, no motor, IEC |
| | | 26 | 26 mm | HN† ♦ | High-speed gear reducer, no motor, NEMA |
| | | 30 | 30 mm | MC† ♦ | Medium-speed gear reducer, no motor, IEC |
| | | 32 | 32 mm | MN† ♦ | Medium-speed gear reducer, no motor, NEMA |
| | | | | LC† ♦ | Low-speed gear reducer, no motor, IEC |
| | | | | LN† ♦ | Low-speed gear reducer, no motor, NEMA |
| | | | | 0 | No motor or gear reducer |

| Hose Material/Color | | Barb Material | | Roller | | Housing | | Options | |
|---------------------|---|---------------|-----------------|-----------|----------|-----------|----------|----------|------|
| BN | Nitrile (NBR), Yellow | HS | Hastelloy | A1 | Aluminum | A1 | Aluminum | 0 | None |
| CS | Chlorosulfonated Polyethylene (CSM), Orange | PV | PVDF | | | | | | |
| EP | Ethylene propylene diene monomer (EPDM), Blue | SS* | Stainless Steel | | | | | | |
| FG†■* | Food Grade Nitrile (White) | | | | | | | | |
| NR | Natural Rubber, Black | | | | | | | | |

* Food Grade pumps ship with stainless steel tri-clamp hose barbs.

| Approvals | |
|--|--|
| ◆ These models are certified: |  II 2 G Ex h IIB T4 Gb |
| † These models are certified: |  |
| ‡ These models comply with: |  EC 1935/2004 |
| ■ Food Grade fluid contact parts: These materials are FDA-compliant and meet the United States Code of Federal Regulations (CFR) Title 21. | |

Troubleshooting



NOTE:

- Follow the [Pressure Relief Procedure, page 10](#).
- Check all possible remedies before disassembling the pump.

See the Operation Manual (334859) for troubleshooting or error information on the Graco Motor Control.

| Problem | Cause | Solution |
|------------------------|--|---|
| Hammering in piping. | Inlet or outlet pipe diameter is too small. | Increase the pipe size or add pulsation dampeners. |
| | Pump speed is too high. | Reduce the speed of the pump. |
| | Inlet or outlet connections are not properly anchored. | Secure the piping. |
| | Inlet or outlet pressures are too high. | Add pulsation dampeners. |
| High pump temperature. | Lubricant level is low. | Add hose lubricant to the proper level. |
| | Improper lubricant is being used. | Use only genuine Graco glycerin hose lubricant for low temperature operation. |
| | Pumped fluid temperature is too high. | Consult your Graco distributor for maximum temperature limits of your pump and hose material. |
| | Pump speed is too high or the pump is undersized. | Reduce the pump speed or switch to a larger pump. |
| High outlet pressure. | Outlet line is blocked. | Clear any obstructions in the outlet line. |
| | Pipe diameter is narrowed due to settled solids. | Flush/remove as required. |
| | Viscosity or specific gravity of pumped fluid is too high. | Consult your Graco distributor for suitable operating conditions for your pump. |

| Problem | Cause | Solution |
|--|--|--|
| Low inlet pressure. | The hose has failed. | Replace with a new hose and lubricant. |
| | Inlet line is blocked. | Clear any obstructions in the inlet line. |
| | Inlet line is too long or too small. | Try to locate the pump as near to the fluid source as possible. Oversize the inlet piping when possible. |
| | Viscosity or specific gravity of pumped fluid is too high. | Consult your Graco distributor for suitable operating conditions for your pump. |
| Low flow. | The hose has failed. | Replace with a new hose and lubricant. |
| | The back pressure is too high for the combination of fluid viscosity and cycle rate. | Reduce back pressure and/or increase your cycle rate. |
| Poor hose life. | Hose is incompatible with the fluid being pumped. | Consult your Graco distributor to see if you have the correct hose for your application. |
| | Hose has failed due to normal wear. | Replace. |
| | Excessive pulsations have weakened the hose. | If your pump is equipped with a pulsation dampener, adjust its pressure. If you do not have a dampener, consult your Graco distributor. |
| | Outlet pressure is too high. | Check items listed in "High outlet pressure." Running the pump against a closed valve, even for a short amount of time, may damage the hose. |
| | Solids have settled in the hose. | Flush the pump and hose prior to turning the pump off. |
| Hose lubricant is leaking from the front cover. | The cover bolts are not tight enough. | Refer to torque specifications in Install the Front Cover, page 18 . |
| | The cover gasket is worn or damaged. | Replace. |
| Hose lubricant is leaking from the hose barb area. | Gaskets are missing or worn. | Replace. |
| Hose failed because it wrapped around the roller. | Pump was operated against a closed outlet valve or blocked line. | Replace hose. Check pressure relief system. Check that valves are open. Clear any blockages. |

Repair

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.

| | | | | |
|---|--|--|--|--|
| | | | | |
| <p>This equipment stays pressurized until pressure is relieved manually. To help prevent serious injury from pressurized fluid, such as splashing in the eyes or on skin, follow the Pressure Relief Procedure when you stop pumping and before you clean, check, or service the equipment.</p> | | | | |

1. Remove power from the system.
2. Open the dispensing valve, if used.
3. Open the fluid drain valve to relieve fluid pressure. Have a container ready to catch the drainage.

Before You Start

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

1. Flush the pump.
2. Follow the [Pressure Relief Procedure, page 10](#).
3. Disconnect power to the pump.
4. Make sure the pump is electrically isolated. Unexpected operation of the pump can cause serious injury. Remove the fan cover only after the motor has been locked out.

Drain the Lubricant

1. Hold a pail under the drain plug (29) and unscrew the plug to drain the lubricant. Dispose of the lubricant properly. Take care, as the lubricant may be contaminated by the pumped fluid.
2. Remove the vent plug (30) and flush the pump housing with a compatible solvent.

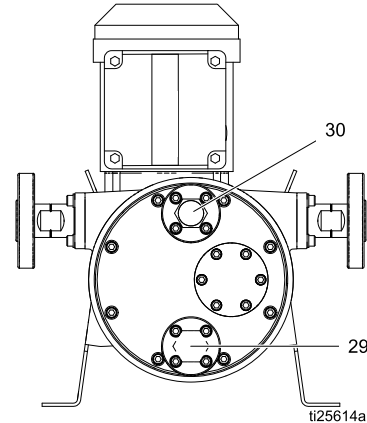


Figure 1 Pump Drain (29) and Vent (30)

Remove the Front Cover

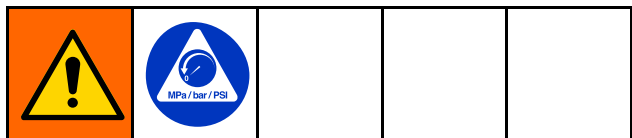
1. Drain the lubricant per the instructions in the previous section.
2. See Figure 2, page 10. Use a wrench to remove the bolts (45) and washers (52, 53, if present) that hold the front cover (16), removing the top screw and washer (if present) last. Take the cover off the pump. If the cover is stuck, gently break the gasket seal with a flat-headed screwdriver between the cover and the housing.

| Pump Model | Wrench size |
|----------------------------------|-------------|
| i6, i10, h10, i16, h16, i23, h25 | 10 mm |
| i26, h26 | 13 mm |
| i30, i32, h32 | 17 mm |

3. Remove the front cover gasket (15).

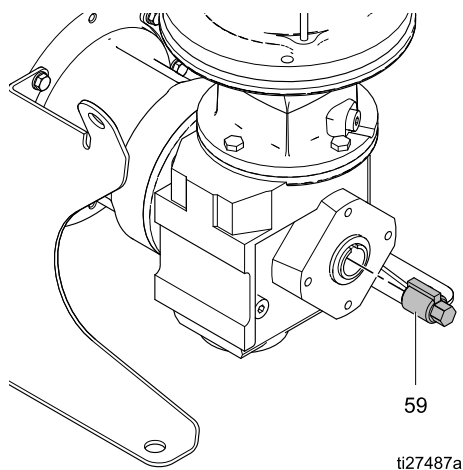
Replace the Hose

Remove the Hose



1. Follow the [Pressure Relief Procedure, page 10](#).
2. Follow the steps under [Drain the Lubricant, page 10](#), and [Remove the Front Cover, page 10](#).
3. The roller must be moved to remove the hose. Follow the directions for your pump to move the roller between the 4- and 8-o'clock positions while pulling on the hose at the bottom until the hose is free from the roller.
 - a. **AC Models:** Loosen the screws and remove the motor fan cover (FC). Turn the fan by hand to move the roller.

NOTE: Low RPM pumps and high ratio gearboxes may require many turns of the motor fan to move the roller.
 - b. **BLDC Models:**
 - i. Insert the shaft socket tool (59) into the back of the gearbox.
 - ii. Use a socket wrench to move the roller.
 - iii. Remove the socket from the gearbox.



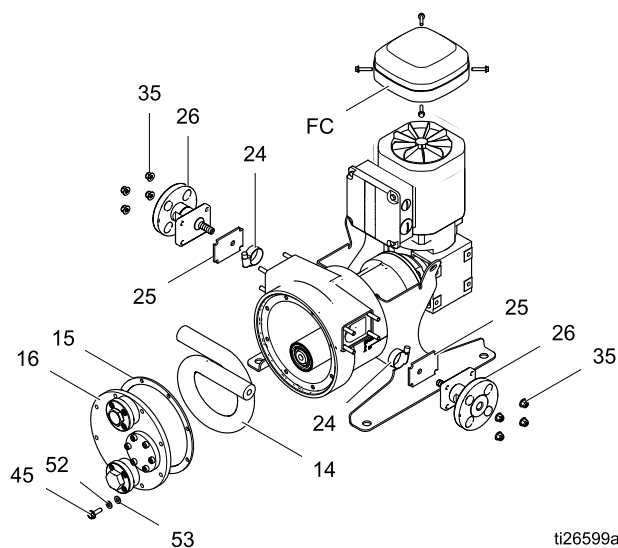
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4. Use a wrench to remove the four nuts (35) from the hose barb assembly on one port. Pull the hose so it extends about 2–3 in. (51–76 mm) out of the pump. Remove the nuts (35) from the barb assembly on the other port, and pull the hose so it extends about 2–3 in. (51–76 mm) out of the pump.

| Pump Model | Wrench size |
|----------------------------------|-------------|
| i6, i10, h10, i16, h16, i23, h25 | 10 mm |
| i26, i30, h32 | 13 mm |

5. Use a 7mm wrench or a flat-headed screwdriver to loosen the hose clamps (24).
6. Pull the barb assembly off of the hose on one side, then remove the gasket (25) and clamp (24).
7. Grasp the hose (14) from the inside of the pump housing and pull it into the pump housing and out of the front. Drain the hose contents into a bucket.
8. Remove the second barb assembly, the gasket (25) and the clamp (24).
9. Pull the other end of the hose into the pump housing and out of the front.
10. Remove and safely discard the used hose per your facility's waste disposal policy. Wipe clean the inside of the pump housing.

NOTE: To continue with disassembly, see [Remove the Roller, page 13](#). If you are replacing the hose, continue with the next section.



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Figure 2 Remove or Install the Hose

Install the Hose

1. Install a gasket (25) onto each hose barb (28) so that it mates with the plate (26).
2. Insert one end of the hose through the left housing port and extend the hose 2–3 in. (51–76 mm) beyond the pump housing (1).
3. Orient the hose clamp so the clamp housing aligns with the recessed cavity in the pump housing. Slide the hose clamp over the hose. Slide on the barb assembly.
4. Tighten the clamp. Torque to 25 in-lb (2.8 N•m) plus one full turn. Or, tighten the clamp so that the clamp is flush with the outer hose diameter.
5. Push the hose and clamp into the pump housing.
6. Use nuts (35) to attach the hose barb assembly to the pump. Torque to the value specified in the table.

| Pump Model | Torque |
|---|---------------------|
| i6 , i10 , h10 , i16 , h16 , i23 , h25 | 8 ft-lb (10.8 N•m) |
| i26 , i30 , h32 | 18 ft-lb (24.4 N•m) |

7. Loop the hose 360 degrees and insert the second end through the opposite side port.

8. Repeat steps 3–6.
9. The roller must be moved to install the hose. Follow the directions for your pump to move the roller. Start at the 4 o'clock position and move the roller to the 8 o'clock position while pushing the hose in at the bottom. Be sure the hose is past the plane of the cover gasket.
 - a. **AC Models:** Loosen the screws and remove the motor fan cover. Turn the fan by hand to move the roller.
NOTE: Low RPM pumps and high ratio gearboxes may require many turns of the motor fan to move the roller.
 - b. **BLDC Models:**
 - i. Insert the shaft socket tool (29) into the back of the gearbox.
 - ii. Use a socket wrench to move the roller.
10. **AC Models:** Reinstall the motor fan cover. **BLDC Models:** Remove the socket from the gearbox.
11. Follow the steps under [Install the Front Cover, page 18](#).

Replace the Roller

The bearings in the roller are sealed and non-serviceable. If the bearings fail, replace the roller assembly.

Remove the Roller

1. Follow the steps in [Remove the Hose, page 11](#).
2. Use a flat-headed screw driver on the inside diameter to pry out the rotary shaft seals (13a and 13b). Discard the seals.
3. Use external snap ring pliers to remove the roller retaining ring (12) from the front of the eccentric shaft (9).
4. Pull the roller (11) off the shaft (9).
5. Inspect the inside and outside diameter of the roller (11), and replace it if worn or damaged.

NOTE: To continue with disassembly, see [Remove the Eccentric Shaft, page 14](#). If you are replacing the roller, continue with the next section.

Install the Roller

1. Lubricate the eccentric shaft (9) with hose lubricant. Slide the roller (11) onto the shaft.

NOTE: The roller has an orientation groove on one end that must face out of the pump housing.
2. Install a roller retaining ring (12) and the outer shaft seals (13a, 13b). The lips of the seals must face **out** from the center of the roller. Install the seals so they are flush with the roller edge. If you are replacing the roller, seal 13b is press fit into the roller at the factory.
3. Turn the roller (11) by hand to verify that it turns freely on the shaft (9).
4. Follow the steps under [Install the Front Cover, page 18](#).

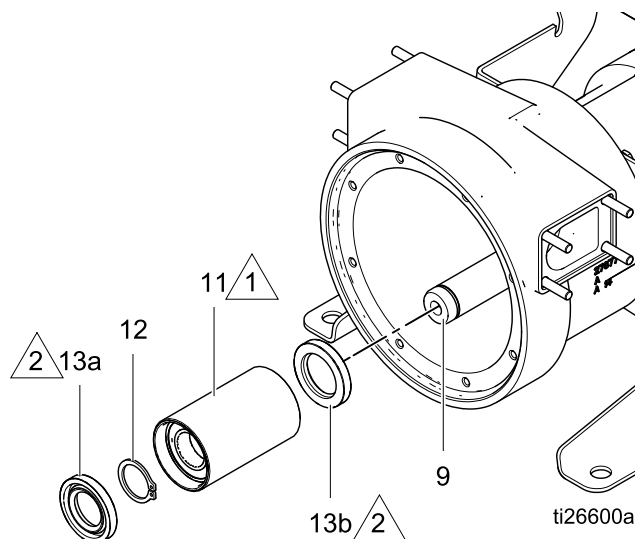


Figure 3 Remove or Install the Roller

KEY



The orientation groove on one end of the roller must face out of the pump housing.



Lips must face **out** from the center of the roller.

Complete Pump Repair

Disassembly

Complete pump disassembly is necessary only to replace the main shaft assembly, for example in the case of a failed bearing.

Remove the Eccentric Shaft

1. Follow the steps in [Remove the Hose, page 11](#).
2. Follow the steps in [Remove the Roller, page 13](#).
3. Use external snap ring pliers to remove the eccentric shaft retaining ring (10) from the motor output shaft (6).
4. Remove the eccentric shaft (9) from the motor output shaft (6). **Be sure to retain the eccentric shaft key (56).**

NOTE: You may need to use a puller to disengage the eccentric shaft from the motor output shaft.

| Pump Model | Bolt Size |
|---|-----------|
| i6 , i10 , h10 , i16 , h16 | 6 mm |
| i23 , h25 , i26 , h26 , i30 , i32 , h32 | 8 mm |

Remove the Motor Output Shaft

See Figure 4 on page 15.

1. Remove the four screws (31) and washers (21) that hold the gearbox and motor assembly (4) to the pump housing (1).
2. Remove the plastic plugs on the back of the motor to reveal threaded metric holes for a gear puller. Inspect the center opening. If it contains a snap ring, remove it.
3. Use a gear puller to remove the gearbox and motor assembly. **Be sure to retain the motor output shaft key (57).**

NOTE: For motor and gearbox repair information, contact SEW-Eurodrive.

4. Use a flat head screw driver on the inside diameter to remove the front rotary shaft seal (8). Discard the seal.
5. Use a large internal snap ring pliers to remove the retaining ring (7) from the pump housing (1).
6. Gently tap the gearbox end of the shaft (6) with a rubber mallet to drive the shaft out through the front of the pump housing (1).
7. Remove and discard the rear rotary shaft seal (5).

Reassembly

Clean and Inspect All Parts

NOTICE

Use only genuine Graco replacement parts. Non-standard parts will void your warranty and may damage your equipment.

- Discard all used seals, gaskets and worn parts.
- Ensure that all new and existing parts are clean and undamaged.
- Thoroughly clean all parts with a compatible solvent and inspect for damage or wear. Replace all gaskets, washers, worn parts and hardware as necessary.
- Inspect the outer diameter of the pump roller. If the surface has been worn, replace the roller.
- Inspect the bearings on the motor output shaft (6). If the bearings are worn, replace the shaft assembly.
- Inspect the shaft and bearing bore in the pump housing (1). Ensure it is round, without grooves or other signs of wear, and free of dirt, filings, or other debris. A dirty or damaged bearing bore will greatly reduce the life of the bearings.
- Inspect all metal parts for signs of wear or cracks. Replace all worn parts.

NOTICE

The pump housing is aluminum. To help prevent galling, inspect the bolt threads for foreign material and clean or replace if necessary.

Install the Motor Output Shaft

1. Inspect the bearings and make sure that all rotate freely and are seated against the shoulder of the shaft (6).
2. Install the eccentric shaft key (56).
3. Coat the outer races of the shaft bearings and the inner diameter of the housing with lithium-based grease. Make sure there is no dirt or debris on either the bearings or the housing.
4. Insert the shaft (6) into the pump housing (1) from the front. Make sure that the bearings engage the opening flush and straight. If necessary, lightly tap the roller end of the shaft with a rubber mallet until the shaft is firmly seated in the pump housing.

Alternative Method: Prop the housing so the front is facing up. Insert the shaft from the top down.

NOTICE

Do not force the shaft and bearings into the pump housing. This may cause damage to the bearings or the housing.

5. Install the bearing retaining ring (7) in front of the outer bearing.

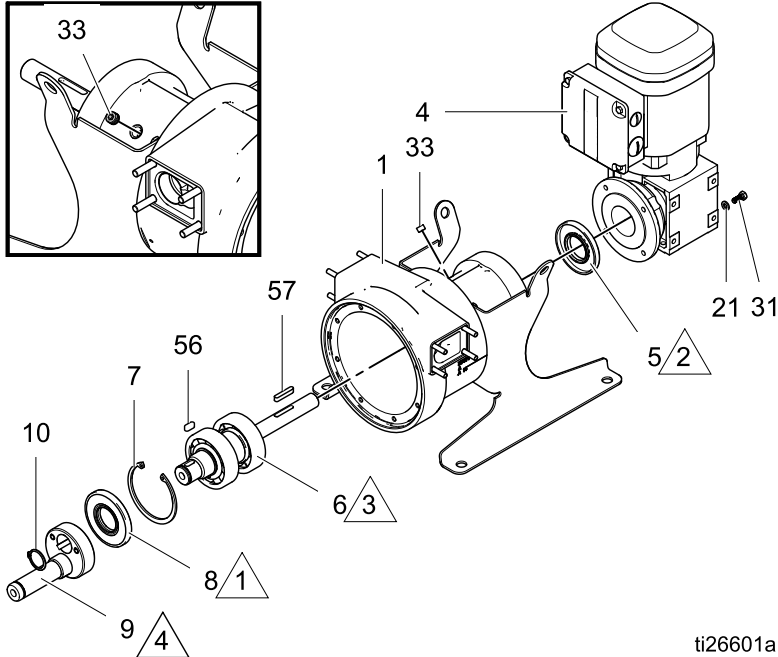
Install the Seals

1. Clean the surfaces that the seals will contact.
2. Grease the pump with lithium-based grease. Remove the plug (33) from the pump housing and replace with a zerk fitting (1/8–27 npt, not included). Add grease until it passes through the outer bearing of the shaft. This provides a visual reference of the proper amount of grease. Remove the zerk fitting.

3. Press a new seal (5) onto the pump end of the shaft (6) and a new seal (8) into the bore at the front of the pump housing (1). The lips of the seals must face toward the shaft bearings. Do not install the seals past the plane of the housing.

NOTE: If the seals are installed too deep, they may cause excessive friction.

4. Turn the shaft by hand a couple of times to be sure that the shaft rotates smoothly.
5. Reinstall the plug (33).



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Figure 4 Remove or Install the Motor Output Shaft and Eccentric Shaft

Key



Lips of the front rotary shaft seal (8) must face toward the shaft bearings.



Lips of the rear rotary shaft seal (5) must face into the pump housing.



Lubricate with lithium-based grease.



Lubricate with anti-seize compound

Install the Motor and Gearbox

1. Use an anti-seize compound to lubricate the motor output shaft (6) and the keyway.
2. Install the motor output shaft key (57).
3. Remove the plastic cap on the back of the gearbox, if one is present.
4. Slide the motor and gearbox assembly (4) onto the shaft (6). Secure the assembly to the pump housing (1) with the four screws (31) and washers (21). Torque to the value shown in the table.

| Model | Torque |
|--|----------------------|
| i6 , i10 , h10 , i16 , h16 , i23 , h25 | 8 ft-lb (10.8 N•m) |
| i26 , h26 | 18 ft-lb (24.4 N•m) |
| i30 , i32 , h32 | 32 ft-lb (43.4 N•m) |

Install the Eccentric Shaft

1. Verify that the eccentric shaft key (56) is installed.
2. Use an anti-seize compound to lubricate the eccentric shaft (9). Slide the eccentric shaft over the end of the motor output shaft (6). Use a soft rod and a plastic mallet to tap lightly on the round base until the eccentric shaft is fully seated on the motor output shaft.
3. Secure the eccentric shaft (9) with the retaining ring (10).
4. Follow the steps under [Install the Roller, page 13](#), and [Install the Hose, page 12](#).

Install the Front Cover

1. Clean any debris from the gasket mating surfaces on the front cover (16) and the pump housing (1).

NOTE: The pump housing and front cover must be free of dirt, debris and residue to ensure a leak-free seal.



2. Line up the holes in the gasket (15) with the holes in the cover (16). Place the gasket on the cover.
3. Line up the front cover (16) and gasket (15) with the pump housing (1).

i/h6, i/h10, i/h16, i/h23, h25: Install the flangehead bolts (45) onto the front cover (16).

i/h26, i/h30, i/h32: Install the bolts (45), with flat washers (53) and lock washers (52), onto the front cover (16). Torque the bolts evenly and oppositely to the torque shown in the table.

| Model | Torque |
|---------------------------------------|----------------------|
| i/h6, i/h10, i/h16, i/h23, h25 | 8 ft-lb (10.8 N•m) |
| i/h26 | 18 ft-lb (24.4 N•m) |
| i/h30, i/h32 | 32 ft-lb (43.4 N•m) |

Lubricate the Pump

| | | | | |
|---|---|--|--|--|
|  |  | | | |
| <p>To reduce the risk of fire or explosion that can result from static sparking or chemical incompatibility:</p> <ul style="list-style-type: none"> • Verify that the hose lubricant is compatible with your pumped fluid. Do not use glycerin hose lubricant if pumping strong oxidizer or acids. • Keep the pump properly filled with hose lubricant. | | | | |

| NOTICE |
|--|
| <p>The vent and drain port threads are aluminum. To help prevent galling, inspect the bolt threads for foreign material and clean or replace if necessary.</p> |

1. Wrap the drain plug (29) threads with PTFE tape and install the plug into the bottom cover port. Be sure that it is tight to prevent leakage of lubricant.
2. Use a funnel with a flexible spout to add hose lubricant through the vent port. The lubricant level must cover the bottom of the roller.

NOTE: If you are using the optional leak sensor, overfilling may cause nuisance tripping of the sensor.

See the following table for the correct amount of lubricant for your pump. Pre-measuring the correct amount will help prevent overfilling.

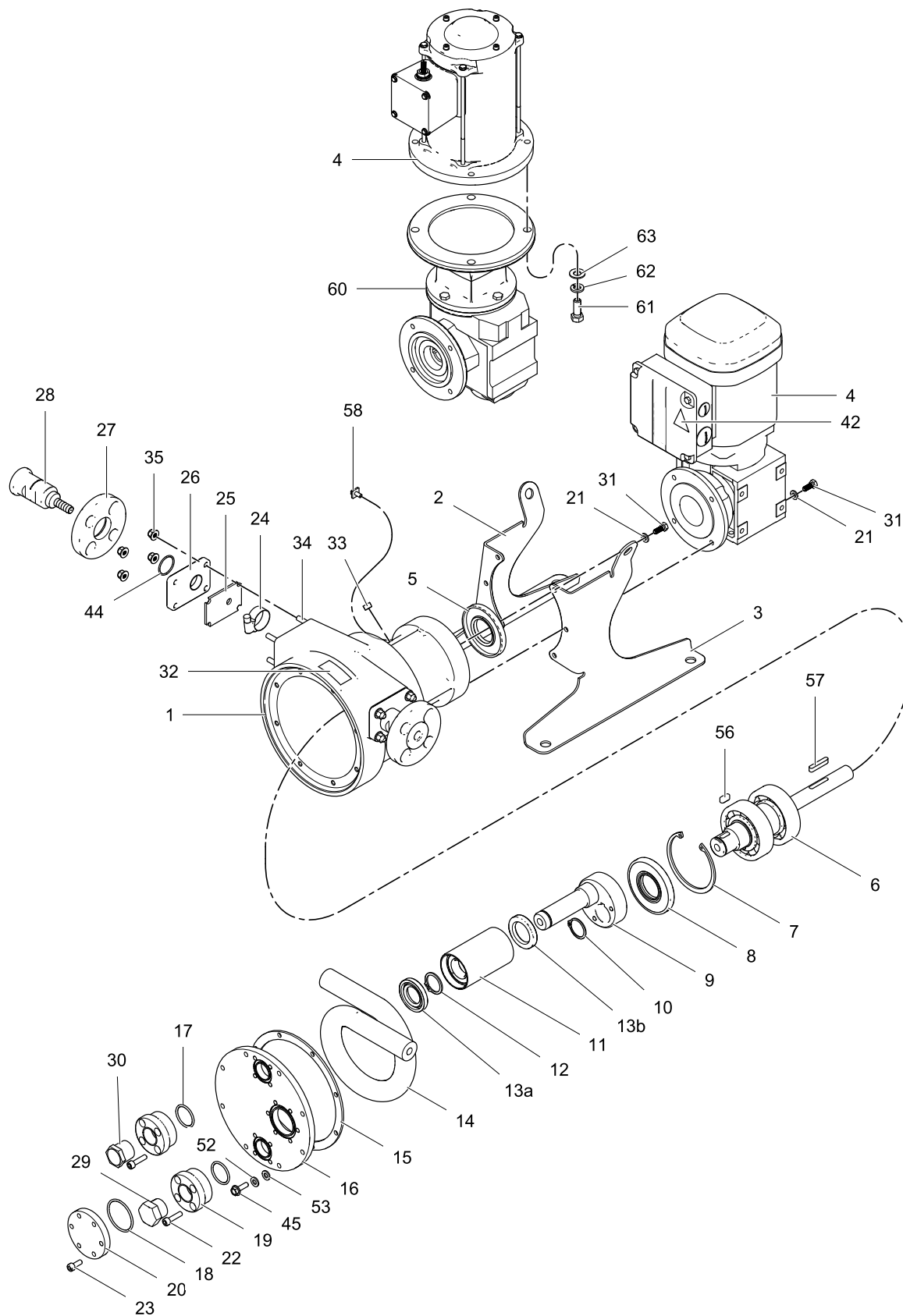
| Pump Model | Amount of Hose Lubricant (approximate) |
|-------------------------|--|
| i6, i/h10, i/h16 | 4.5 fl oz (130 ml) |
| i/h23, h25 | 12 fl oz (350 ml) |
| i/h26 | 27 fl oz (800 ml) |
| i/h30, i/h32 | 34 fl oz (1000 ml) |

3. Wrap the vent plug (30) threads with PTFE tape and screw it into the vent port.

Hose Lubricant (order separately)

| Glycerin | Silicone | Volume |
|----------|----------|----------------------|
| 24K691 | — — — | Quart (0.95 l) |
| 24Y920 | — — — | Half Gallon (1.89 l) |
| 24K693 | 24K686 | Gallon (3.79 l) |
| 24M435 | 24M434 | 55 Gallons (208 l) |

Parts



i6, i/h10, i/h16 Parts

| i6, i/h10, i/h16 Parts | | | |
|------------------------|--------|--|-------|
| Ref | Part | Description | Qty |
| 1 | --- | HOUSING, pump | 1 |
| 2 | 17C220 | FOOT, mounting, left | 1 |
| 3 | 17C221 | FOOT, mounting, right | 1 |
| 4 | 25A365 | MOTOR, AC HAC; 0.75 hp, 19.50:1 | 1 |
| | 25A366 | MAC; 0.50 hp, 48.00:1 | |
| | 25A367 | LAC; 0.25 hp, 157.43:1 | |
| | 24Z038 | MPM; BLDC, 1.0 hp | 1 |
| 5‡ | --- | SEAL, motor shaft, rear | 1 |
| 6‡ | --- | MOTOR SHAFT, subassembly | 1 |
| 7‡ | --- | RING, retaining, internal, 80 mm | 1 |
| 8‡ | --- | SEAL, motor shaft, front | 1 |
| 9 | 24Y837 | ECCENTRIC SHAFT (driver assembly), kit; includes ref. 10 | 1 |
| 10 | --- | RING, retaining, external, 27 mm; included with ref. 9 | 1 |
| 11 | 24Y789 | ROLLER ASSEMBLY, kit, includes ref. 12 and 13 | 1 |
| 12 | --- | RING, retaining, external, 25 mm | 1 |
| 13a, 13b | 24Y845 | SEALS, eccentric shaft, front and back | 1 ea. |

| i6, i/h10, i/h16 Parts | | | |
|------------------------|--------|---|-----|
| Ref | Part | Description | Qty |
| 14 | --- | HOSE, 6 mm, for i6 | 1 |
| | 19C737 | Natural Rubber, black | |
| | 19C739 | CSM, orange | |
| | 19C740 | EPDM, blue | |
| | 19C738 | Nitrile, yellow | |
| | --- | HOSE, 10 mm, for i10 | 1 |
| | 24Y797 | Natural Rubber, black | |
| | 24Y798 | CSM, orange | |
| | 24Y799 | EPDM, blue | |
| | 24Y800 | Nitrile, yellow | |
| | 19D234 | HOSE, 10 mm, Food Grade Nitrile, for h10 | 1 |
| | --- | HOSE, 16 mm, for i16 | 1 |
| | 17C741 | Natural Rubber, black | |
| | 19C743 | CSM, orange | |
| | 19C744 | EPDM, blue | |
| | 19C742 | Nitrile, yellow | |
| | 19D235 | HOSE, 16 mm, Food Grade Nitrile, for h16 | 1 |
| 15*† | --- | GASKET, front cover | 1 |
| 16* | --- | FRONT COVER, kit | 1 |
| | 24Y829 | for i6 | |
| | 24Y898 | for i10 | |
| | 19C942 | for h10 | |
| | 19C993 | for i16 | |
| | 19C948 | for h16 | |
| 17* | 121110 | O-RING | 2 |
| 18* | 107249 | O-RING | 1 |
| 19* | 17C529 | HANDLE, cover | 2 |
| 20* | 17C521 | SIGHTGLASS | 1 |
| 21 | 117018 | WASHER | 10 |
| 22* | 124164 | SCREW, M6-1.0 x 25mm, stainless steel | 8 |
| 23* | 124313 | SCREW, M6-1 x 16mm, stainless steel | 6 |
| 24 | 24Y825 | CLAMP, hose, size 12 | 2 |
| 25† | --- | GASKET, hose plate | 2 |
| 26 | 17B693 | PLATE, hose barb | 2 |
| 27■ | 17B690 | FLANGE, hose barb | 2 |

| i6, i/h10, i/h16 Parts | | | |
|------------------------|---|---|-----|
| Ref | Part | Description | Qty |
| 28 | 19C907 19C918 | BARB, kit, for i6 ; includes o-ring (ref. 44) | 2 |
| | | Stainless steel PVDF | |
| | 24Y813 24Y814 24Y815 | BARB, kit, for i10 ; includes o-ring (ref. 44) | 2 |
| | | Stainless steel PVDF | |
| | | Hastelloy | |
| | 19D236 | BARB, kit, for h10 ; includes o-ring (ref. 44) | 2 |
| 19C908 19C919 | BARB, kit, for i16 ; includes o-ring (ref. 44) | 2 | |
| | Stainless steel PVDF | | |
| 19D237 | BARB, kit, for h16 ; includes o-ring (ref. 44) | 2 | |
| 29* | 16K274 | PLUG, hex, 3/4 npt | 1 |
| 30* | 16K281 | VENT, breather, muffler; 3/4 npt | 1 |
| 31 | 114670 | SCREW, cap, hex head, M6-1 x 16mm | 10 |
| 32▲ | 16K630 | LABEL, warning | 1 |
| 33 | 110208 | PLUG, pipe, headless | 1 |

| i6, i/h10, i/h16 Parts | | | |
|------------------------|--------|---|-----|
| Ref | Part | Description | Qty |
| 34 | — — — | STUD, M6, fastener | 8 |
| 35 | 17G152 | NUT, lock, hex, flange, | 8 |
| 42▲ | 15J075 | LABEL, warning | 1 |
| 43 | Δ | LUBRICANT | 1 |
| 44 | 103255 | O-RING; included with ref. 28 | 2 |
| 45* | 17G170 | SCREW, flange head, M6-1 x 20 mm | 8 |
| 54 | 24Y445 | GRACO MOTOR CONTROL; used on MPM (BLDC) pumps | 1 |
| 55 | 15Y051 | CABLE, M12, 8 pin, m/f, 3.0 m (9.8 ft); used on MPM (BLDC) pumps | 1 |
| 56‡ | 17C575 | KEY, eccentric shaft | 1 |
| 57 | 25A838 | KEY, motor output shaft | 1 |
| 58 | 116343 | SCREW, ground | 1 |
| 59 | 17B594 | TOOL, BLDC, shaft socket | 1 |
| 60 | 24Z039 | GEARBOX, BLDC | 1 |
| 61 | — — — | SCREW, cap, hex hd, 3/8-16 x 1, grade 8.8 | 4 |
| 62 | — — — | WASHER, lock, 3/8 | 4 |
| 63 | — — — | WASHER, flat, 3/8 | 4 |

Notes for i6, i/h10, and i/h16 Parts:

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

— — — Not sold separately.

* Parts included in Front Cover Kit, Ref. 16

† Parts included in Gasket Kit 24Y833.

‡ Parts included in Main Shaft Kit 24Y841.

Δ See [Lubricate the Pump, page 18](#) for ordering information.

■ Not used in food grade pump models.

i23 and h25 Parts

| i23 and h25 Parts | | | |
|-------------------|--------|--|-------|
| Ref | Part | Description | Qty |
| 1 | — — — | HOUSING | 1 |
| 2 | 17C222 | FOOT, mounting, left | 1 |
| 3 | 17C223 | FOOT, mounting, right | 1 |
| 4 | | MOTOR, AC | 1 |
| | 25A368 | HAC ; 1.0 hp, 19.13:1 | |
| | 25A369 | MAC ; 0.75 hp, 48.00:1 | |
| | 25A367 | LAC ; 0.25 hp, 157.43:1 | |
| | 24Z038 | MPM ; 1.0 hp, BLDC | 1 |
| 5‡ | — — — | SEAL, rotary shaft, rear | 1 |
| 6‡ | 24Y842 | MOTOR OUTPUT SHAFT, kit | 1 |
| 7‡ | — — — | RING, retaining, internal, 90 mm | 1 |
| 8‡ | — — — | SEAL, rotary shaft, front | 1 |
| 9 | 24Y838 | ECCENTRIC SHAFT (driver assembly), kit; includes ref. 10 | 1 |
| 10 | — — — | RING, retaining, external, 40 mm, included with ref. 9 | 1 |
| 11 | 24Y794 | ROLLER ASSEMBLY, kit, includes refs. 12 and 13 | 1 |
| 12 | — — — | RING, retaining, external, 35 mm | 1 |
| 13a, 13b | 24Y846 | SEALS, rotary shaft, front and back | 1 ea. |
| 14 | | HOSE, 23 mm, for i23 | 1 |
| | 24Y801 | Natural Rubber, black | |
| | 24Y802 | CSM, orange | |
| | 24Y803 | EPDM, blue | |
| | 24Y804 | Nitrile, yellow | |
| | 19C745 | HOSE, 25 mm, Food Grade, for h25 | 1 |
| 15*† | — — — | GASKET, front cover | 1 |
| 16* | | FRONT COVER, kit | 1 |
| | 24Y830 | for i23 | |
| | 19C912 | for h25 | |
| 17* | 121110 | O-RING | 2 |
| 18* | 117337 | O-RING | 1 |
| 19* | 17C529 | HANDLE, cover | 2 |
| 20* | 17F092 | SIGHTGLASS | 1 |
| 21 | 117018 | WASHER | 10 |
| 22* | 124164 | SCREW, M6-1.0 x 25mm, stainless steel | 8 |

| i23 and h25 Parts | | | |
|-------------------|--------|---|-----|
| Ref | Part | Description | Qty |
| 23* | 124313 | SCREW, M6-1 x 16mm, stainless steel | 6 |
| 24 | 24Y826 | CLAMP, hose, size 20 | 2 |
| 25† | — — — | GASKET, hose plate | 2 |
| 26 | 17B694 | PLATE, hose barb | 2 |
| 27■ | 17B691 | FLANGE, hose barb | 2 |
| 28 | | BARB, kit, for i23 ; includes o-ring (ref. 44) | 2 |
| | 24Y816 | Stainless steel | |
| | 24Y817 | PVDF | |
| | 24Y818 | Hastelloy | |
| | 19C910 | BARB, kit, for h25 ; includes o-ring (ref. 44) | 2 |
| 29* | 16K274 | PLUG, hex, 3/4 npt | 1 |
| 30* | 16K281 | VENT, breather, muffler, 3/4 npt | 1 |
| 31 | 114670 | SCREW, cap, hex head, M6-1 x 16mm | 10 |
| 32▲ | 16K630 | LABEL, warning | 1 |
| 33 | 110208 | PLUG, pipe, headless | 1 |
| 34 | — — — | STUD, M6, fastener | 8 |
| 35 | 17G152 | NUT, lock, hex, flange, | 8 |
| 42▲ | 15J075 | LABEL, warning | 1 |
| 43 | Δ | LUBRICANT | 1 |
| 44 | 107550 | O-RING; included with ref. 28 | 2 |
| 45* | 17G170 | SCREW, flange head, M6-1 x 20 mm | 8 |
| 54 | 24Y445 | GRACO MOTOR CONTROL; used on MPM (BLDC) pumps | 1 |
| 55 | 15Y051 | CABLE, M12, 8 pin, m/f, 3.0 m (9.8 ft); used on MPM (BLDC) pumps | 1 |
| 56‡ | 17C576 | KEY, eccentric shaft | 1 |
| 57 | 25A838 | KEY, motor output shaft | 1 |
| 58 | 116343 | SCREW, ground | 1 |
| 59 | 17B594 | TOOL, BLDC, shaft socket | 1 |
| 60 | 24Z039 | GEARBOX, BLDC | 1 |
| 61 | — — — | SCREW, cap, hex hd, 3/8-16 x 1, grade 8.8 | 4 |
| 62 | — — — | WASHER, lock, 3/8 | 4 |
| 63 | — — — | WASHER, flat, 3/8 | 4 |

Notes for i23 and h25 Parts:

▲ *Replacement Danger and Warning labels, tags, and cards are available at no cost.*

— — — *Not sold separately.*

* *Parts included in Front Cover Kit, Ref. 16.*

† *Parts included in Gasket Kit 24Y834.*

‡ *Parts included in Main Shaft Kit 24Y842.*

△ *See [Lubricate the Pump, page 18](#) for ordering information.*

■ *Not used in food grade pump models.*

i/h26 Parts

| i/h26 Parts | | | |
|-------------|--------|--|-------|
| Ref | Part | Description | Qty |
| 1 | --- | HOUSING | 1 |
| 2 | 17C224 | FOOT, mounting, left | 1 |
| 3 | 17C225 | FOOT, mounting, right | 1 |
| 4 | | MOTOR, AC | 1 |
| | 25A370 | HAC; 2.0 hp, 19.27:1 | |
| | 25A371 | MAC; 1.0 hp, 47.02:1 | |
| | 25A372 | LAC; 0.33 hp, 145.00:1 | |
| | 24Z037 | MPM; 1.5 hp, BLDC | 1 |
| 5‡ | --- | SEAL, rotary shaft, rear | 1 |
| 6‡ | 24Y843 | MOTOR OUTPUT SHAFT, kit | 1 |
| 7‡ | --- | RING, retaining, internal, 110 mm | 1 |
| 8‡ | --- | SEAL, rotary shaft, front | 1 |
| 9 | 24Y839 | ECCENTRIC SHAFT (driver assembly), kit; includes ref. 10 | 1 |
| 10 | --- | RING, retaining, external, 45 mm; included with ref. 9 | 1 |
| 11 | 24Y795 | ROLLER ASSEMBLY, kit, includes ref. 13 | 1 |
| 12 | --- | RING, retaining, external, 45 mm | 1 |
| 13a, 13b | 24Y847 | SEALS, rotary shaft, front and back | 1 ea. |
| 14 | | HOSE, 26 mm, for i26 | 1 |
| | 24Y805 | Natural Rubber, black | |
| | 24Y806 | CSM, orange | |
| | 24Y807 | EPDM, blue | |
| | 24Y808 | Nitrile, yellow | |
| | 19C714 | HOSE, 26 mm, Food Grade, sanitary, for h26 | 1 |
| 15*† | --- | GASKET, front cover | 1 |
| 16* | | FRONT COVER, kit | 1 |
| | 24Y831 | for i26 | |
| | 19C913 | for h26 | |
| 17* | 121110 | O-RING | 2 |
| 18* | C20242 | O-RING | 1 |
| 19* | 17C529 | HANDLE, cover | 2 |
| 20* | 17C608 | SIGHTGLASS | 1 |
| 21 | 108788 | WASHER | 10 |
| 22* | 124164 | SCREW, M6-1.0 x 25mm, stainless steel | 8 |
| 23* | 124313 | SCREW, M6-1 x 16mm, stainless steel | 6 |

| i/h26 Parts | | | |
|-------------|--------|---|-----|
| Ref | Part | Description | Qty |
| 24 | 24Y827 | CLAMP, hose, size 28 | 2 |
| 25† | --- | GASKET, hose plate | 2 |
| 26 | 17B695 | PLATE, hose barb | 2 |
| 27■ | 17B691 | FLANGE, hose barb | 2 |
| 28 | | BARB, kit, for i26; includes o-ring (ref. 44) | 2 |
| | 24Y819 | Stainless steel | |
| | 24Y820 | PVDF | |
| | 24Y821 | Hastelloy | |
| | 19C910 | BARB, kit, Food Grade, sanitary, for h26; includes o-ring (ref. 44) | 2 |
| 29* | 16K274 | PLUG, hex, 3/4 npt | 1 |
| 30* | 16K281 | VENT, breather, muffler | 1 |
| 31 | 107558 | SCREW, cap, hex head, M8-1.25 x 25mm | 10 |
| 32▲ | 16K630 | LABEL, warning | 1 |
| 33 | 110208 | PLUG, pipe, headless | 1 |
| 34 | --- | STUD, M8, fastener | 8 |
| 35 | 17G188 | NUT, lock, hex, flange, | 8 |
| 42▲ | 15J075 | LABEL, warning | 1 |
| 43 | Δ | LUBRICANT | 1 |
| 44 | 107550 | O-RING; included with ref. 28 | 2 |
| 45* | 112084 | SCREW, flange head, M8-1.25 x 25mm | 8 |
| 52* | 107542 | WASHER, lock, spring | 8 |
| 53* | 111003 | WASHER, flat | 8 |
| 54 | 24Y445 | GRACO MOTOR CONTROL; used on MPM (BLDC) pumps | 1 |
| 55 | 15Y051 | CABLE, M12, 8 pin, m/f, 3.0 m (9.8 ft); used on MPM (BLDC) pumps | 1 |
| 56‡ | 17C577 | KEY, eccentric shaft | 1 |
| 57 | 25A839 | KEY, motor output shaft | 1 |
| 58 | 116343 | SCREW, ground | 1 |
| 59 | 17B595 | TOOL, BLDC, shaft socket | 1 |
| 60 | 24Z040 | GEARBOX, BLDC | 1 |
| 61 | --- | SCREW, cap, hex hd, 3/8-16 x 1, grade 8.8 | 4 |
| 62 | --- | WASHER, lock, 3/8 | 4 |
| 63 | --- | WASHER, flat, 3/8 | 4 |

Notes for i/h26 Parts:

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

— — — Not sold separately.

* Parts included in Front Cover Kit, Ref. 16.

† Parts included in Gasket Kit 24Y835.

‡ Parts included in Main Shaft Kit 24Y843.

△ See [Lubricate the Pump, page 18](#) for ordering information.

■ Not used in food grade pump models.

i30, i/h32 Parts

| i30, i/h32 Parts | | | |
|------------------|--------|--|-------|
| Ref | Part | Description | Qty |
| 1 | — — — | HOUSING | 1 |
| 2 | 17C226 | FOOT, mounting, left | 1 |
| 3 | 17C227 | FOOT, mounting, right | 1 |
| 4 | 25A374 | MOTOR, AC HAC; 3.0 hp, 19.70:1 | 1 |
| | 25A375 | MAC; 1.5 hp, 48.00:1 | |
| | 25A376 | LAC; 0.5 hp, 150.06:1 | |
| | 24Z037 | MPM, 2.2 hp, BLDC | |
| 5‡ | — — — | SEAL, rotary shaft, rear | 1 |
| 6‡ | 24Y844 | MOTOR OUTPUT SHAFT, kit | 1 |
| 7‡ | — — — | RING, retaining, internal, 120 mm | 1 |
| 8‡ | — — — | SEAL, rotary shaft, front | 1 |
| 9 | 24Y840 | ECCENTRIC SHAFT (driver assembly), kit; includes ref. 10 | 1 |
| 10 | — — — | RING, retaining, external, 50 mm; included with ref. 9 | 1 |
| 11 | 24Y796 | ROLLER ASSEMBLY, kit, includes refs. 12 and 13 | 1 |
| 12 | — — — | RING, retaining, external, 45 mm | 1 |
| 13a, 13b | 24Y847 | SEALS, rotary shaft, front and back | 1 ea. |
| 14 | 24Y809 | HOSE, 30 mm, for i30 Natural Rubber, black | 1 |
| | 24Y810 | CSM, orange | |
| | 24Y811 | EPDM, blue | |
| | 24Y812 | Nitrile, yellow | |
| | 19C746 | HOSE, 32 mm, for i32 Natural Rubber, black | 1 |
| | 19C748 | CSM, orange | |
| | 19C749 | EPDM, blue | |
| | 19C747 | Nitrile, yellow | |
| | 19C750 | HOSE, 32 mm, Food Grade, for h32 | 1 |
| 15*† | — — — | GASKET, front cover | 1 |
| 16* | | FRONT COVER, kit | 1 |
| | 24Y832 | for i30 | |
| | 19D482 | for i32 | |
| | 19C914 | for h32 | |
| 17* | 121110 | O-RING | 2 |

| i30, i/h32 Parts | | | |
|------------------|--------|--|-----|
| Ref | Part | Description | Qty |
| 18* | C20242 | O-RING | 1 |
| 19* | 17C529 | HANDLE, cover | 2 |
| 20* | 17C608 | SIGHTGLASS | 1 |
| 21 | 16Y267 | WASHER, flat, M10 | 10 |
| 22* | 124164 | SCREW, M6-1.0 x 25mm, stainless steel | 8 |
| 23* | 124313 | SCREW, M6-1 x 16mm, stainless steel | 6 |
| 24 | 24Y828 | CLAMP, hose, size 32 | 2 |
| 25† | — — — | GASKET, hose plate | 2 |
| 26 | 17B696 | PLATE, hose barb | 2 |
| 27■ | 17B692 | FLANGE, hose barb | 2 |
| 28 | 24Y822 | BARB, kit, for i30; includes o-ring (ref. 44) Stainless steel | 2 |
| | 24Y823 | PVDF | |
| | 24Y824 | Hastelloy | |
| | 19C909 | BARB, kit, for i32; includes o-ring (ref. 44) Stainless steel | 2 |
| | 19C920 | PVDF | |
| | 19C911 | BARB, kit, for h32; includes o-ring (ref. 44) | 2 |
| 29* | 16K274 | PLUG, hex, 3/4 npt | 1 |
| 30* | 16K281 | VENT, breather, muffler, 3/4 npt | 1 |
| 31 | 16Y268 | SCREW, cap, hex head, M10-1.5 x 25mm | 10 |
| 32▲ | 16K630 | LABEL, warning | 1 |
| 33 | 110208 | PLUG, pipe, headless | 1 |
| 34 | — — — | STUD, M8, fastener | 8 |
| 35 | 17G188 | NUT, lock, hex, flange, | 8 |
| 42▲ | 15J075 | LABEL, warning | 1 |
| 43 | Δ | LUBRICANT | 1 |
| 44 | 107249 | O-RING; included with ref. 28 | 2 |
| 45* | 16K729 | SCREW, flange head, M8-1.25 x 25mm | 10 |
| 52* | 16K738 | WASHER, lock, spring | 10 |
| 53* | 112914 | WASHER, flat | 10 |
| 54 | 24Y445 | GRACO MOTOR CONTROL; used on MPM (BLDC) pumps | 1 |

| i30, i/h32 Parts | | | |
|------------------|--------|--|-----|
| Ref | Part | Description | Qty |
| 55 | 15Y051 | CABLE, M12, 8 pin, m/f, 3.0 m (9.8 ft); used on MPM (BLDC) pumps | 1 |
| 56‡ | 17C577 | KEY, eccentric shaft | 1 |
| 57 | 25A840 | KEY, motor output shaft | 1 |
| 58 | 116343 | SCREW, ground | 1 |
| 59 | 17B596 | TOOL, BLDC, shaft socket | 1 |

| i30, i/h32 Parts | | | |
|------------------|--------|---|-----|
| Ref | Part | Description | Qty |
| 60 | 24Z041 | GEARBOX, BLDC | 1 |
| 61 | — — — | SCREW, cap, hex hd, 3/8–16 x 1, grade 8.8 | 4 |
| 62 | — — — | WASHER, lock, 3/8 | 4 |
| 63 | — — — | WASHER, flat, 3/8 | 4 |

Notes for i30, i/h32 Parts:

▲ *Replacement Danger and Warning labels, tags, and cards are available at no cost.*

— — — *Not sold separately.*

* *Parts included in Front Cover Kit, Ref. 16.*

† *Parts included in Gasket Kit 24Y836.*

‡ *Parts included in Main Shaft Kit 24Y844.*

△ *See [Lubricate the Pump, page 18](#) for ordering information.*

■ *Not used in food grade pump models.*

Kits and Accessories

Hose Kits

| Industrial Hose Kits | | | | | | | |
|----------------------|--------|--------|--------|--------|--------|--------|--------|
| Hose Material | i6 | i10 | i16 | i23 | i26 | i30 | i32 |
| CSM (CS) | 19C739 | 24Y798 | 19C743 | 24Y802 | 24Y806 | 24Y810 | 19C748 |
| Natural Rubber (NR) | 19C737 | 24Y797 | 17C741 | 24Y801 | 24Y805 | 24Y809 | 19C746 |
| EPDM (EP) | 19C740 | 24Y799 | 19C744 | 24Y803 | 24Y807 | 24Y811 | 19C749 |
| Nitrile (BN) | 19C738 | 24Y800 | 19C742 | 24Y804 | 24Y808 | 24Y812 | 19C747 |

| Food Grade Hose Kits | | | | | |
|-------------------------|--------|--------|--------|--------|--------|
| Hose Material | h10 | h16 | h25 | h26 | h32 |
| Food Grade Nitrile (FG) | 19D234 | 19D235 | 19C745 | 19C921 | 19C750 |

All hose kits include:

| Ref. | Description | Qty. |
|------|-------------|------|
| 14 | HOSE | 1 |

Barb Kits

| Industrial Barb Kits | | | | | | | |
|----------------------|--------|--------|--------|--------|--------|--------|--------|
| Barb Material | i6 | i10 | i16 | i23 | i26 | i30 | i32 |
| Stainless Steel (SS) | 19C907 | 24Y813 | 19C908 | 24Y816 | 24Y819 | 24Y822 | 19C909 |
| PVDF (PV) | 19C918 | 24Y814 | 19C919 | 24Y817 | 24Y820 | 24Y823 | 19C920 |
| Hastelloy (HS) | --- | 24Y815 | --- | 24Y818 | 24Y821 | 24Y824 | --- |

--- Not available

| Food Grade Barb Kits | | | | | |
|---------------------------------|--------|--------|--------|-----|--------|
| Barb Material | h10 | h16 | h25 | h26 | h32 |
| Food Grade Stainless Steel (SS) | 19D236 | 19D237 | 19C910 | | 19C911 |

All barb kits include:

| Ref. | Description | Qty. |
|------|-------------|------|
| 28 | BARB, hose | 1 |
| 44 | O-RING | 1 |

Hose Clamp Kits

| i6, i/h10, i/h16 | i23, h25 | i/h26 | i30, i/h32 |
|---------------------|----------|--------|------------|
| 24Y825 | 24Y826 | 24Y827 | 24Y828 |

All hose clamp kits include:

| Ref. | Description | Qty. |
|------|-------------|------|
| 24 | CLAMP, hose | 2 |

Hose Lubricant Kits

| Glycerin Hose Lubricant | |
|-------------------------|-----------------------|
| 24K691 | 1-quart (0.95 liter) |
| 24Y920 | 2-quart (1.89 liter) |
| 24K693 | 1-gallon (3.79 liter) |
| 24M435 | 55-gallon (208 liter) |

| Silicone Hose Lubricant | |
|-------------------------|-----------------------|
| 24K686 | 1-gallon (3.79 liter) |
| 24M434 | 55-gallon (208 liter) |

Gasket Kits

| i6, i/h10, i/h16 | i23, h25 | i/h26 | i/h30, i/h32 |
|---------------------|----------|--------|-----------------|
| 24Y833 | 24Y834 | 24Y835 | 24Y836 |

All gasket kits include:

| Ref. | Description | Qty. |
|------|---------------------|------|
| 15 | GASKET, front cover | 1 |
| 25 | GASKET, hose plate | 2 |

Front Cover Kits

| Industrial Cover Kits | | | | | | |
|-----------------------|--------|--------|--------|--------|--------|--------|
| i6 | i10 | i16 | i23 | i26 | i30 | i32 |
| 24Y898 | 24Y829 | 19C993 | 24Y830 | 24Y831 | 24Y832 | 19D482 |

| Food Grade Cover Kits | | | | |
|-----------------------|--------|--------|--------|--------|
| h10 | h16 | h25 | h26 | h32 |
| 19C942 | 19C948 | 19C912 | 19C913 | 19C914 |

Front cover kits include:

| Ref. | Description | Qty. |
|------|-------------------------|------|
| 15 | GASKET, front cover | 1 |
| 16 | COVER, front, assembly | 1 |
| 17 | O-RING, handle | |
| | i/h10, i/h16, i/h23 | 2 |
| | i/h26, i/h30 | 3 |
| 18 | O-RING, sightglass seal | 1 |
| 19 | HANDLE, cover | |
| | i/h10, i/h16, i/h23 | 2 |
| | i/h26, i/h30 | 3 |
| 20 | SIGHTGLASS | 1 |
| 22 | SCREW, handle | |
| | i/h10, i/h16, i/h23 | 8 |
| | i/h26, i/h30 | 12 |
| 23 | SCREW, sightglass | 6 |
| 29 | PLUG, hex | |
| | i/h10, i/h16, i/h23 | 1 |
| | i/h26, i/h30 | 2 |

Front cover kits include:

| Ref. | Description | Qty. |
|------|----------------------------|------|
| 30 | VENT, breather, muffler | 1 |
| 45 | SCREW, cover, flange head, | |
| | i/h10, i/h16, i/h23 | 8 |
| | i/h26 | 8 |
| | i/h30 | 10 |
| 52 | WASHER, lock, spring | |
| | i/h10, i/h16, i/h23 | 0 |
| | i/h26 | 8 |
| | i/h30 | 10 |
| 53 | WASHER, flat | |
| | i/h10, i/h16, i/h23 | 0 |
| | i/h26 | 8 |
| | i/h30 | 10 |

Gearbox Cover Kits

| Kit | Pump | Nord Gearbox | | | | | | | | | | Diameter of Bolt Circle |
|--------|--------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------------|
| | | HAC | HC | HN | LAC | LC | LN | MAC | MC | MN | MPM | |
| 25F093 | i/h6, i/h10, i/h16 | HAC | HC | HN | LAC | LC | LN | MAC | MC | MN | MPM | 75 mm |
| | i/h23, i/h25 | HAC | HC | HN | LAC | LC | LN | MAC | MC | MN | --- | |
| 25F094 | i/h23, i/h25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | MPM | 115 mm |
| | i/h26 | HAC | HC | --- | LAC | LC | LN | MAC | MC | MN | MPM | |
| 25F095 | i/h30, i/h32 | --- | --- | --- | LAC | LC | LN | --- | MC | MN | MPM | 160 mm |
| | | HAC | HC | HN | --- | --- | --- | MAC | --- | --- | --- | |

--- Not available

Gearbox cover kits include:

| Ref. | Description | Qty. |
|------|--------------------------------|------|
| 61 | SCREW | 4 |
| 62 | WASHER, lock, <i>not shown</i> | 4 |
| 63 | WASHER, flat, <i>not shown</i> | 4 |

Motor Kits

Motor Shaft Kits

| i6, i/h10, i/h16 | i23, h25 | i/h26 | i30, i/h32 |
|---------------------|----------|--------|------------|
| 24Y841 | 24Y842 | 24Y843 | 24Y844 |

Motor kits include:

| Ref. | Description | Qty. |
|------|--|------|
| 5 | SEAL, motor shaft, rear | 1 |
| 6 | SHAFT, assembly; includes eccentric shaft key (56) | 1 |
| 7 | RING, retaining, internal | 1 |
| 8 | SEAL, motor shaft, front | 1 |

Eccentric Shaft Kits

| i6, i/h10, i/h16 | i23, h25 | i/h26 | i30, i/h32 |
|---------------------|----------|--------|------------|
| 24Y837 | 24Y838 | 24Y839 | 24Y840 |

Eccentric shaft kits include:

| Ref. | Description | Qty. |
|------|---------------------------|------|
| 9 | SHAFT, eccentric | 1 |
| 10 | RING, retaining, external | 1 |

Roller Kits

| i6, i/h10, i/h16 | i23, h25 | i/h26 | i30, i/h32 |
|---------------------|----------|--------|------------|
| 24Y789 | 24Y794 | 24Y795 | 24Y796 |

Roller kits include:

| Ref. | Description | Qty. |
|------|--|------|
| 11 | ROLLER, assembly; includes rear shaft seal | 1 |
| 12 | RING, retaining, external | 1 |
| 13a | SEAL, eccentric shaft, front | 1 |

Roller Seal Kits

| i6, i/h10, i/h16 | i23, h25 | i/h26, i30, i/h32 |
|---------------------|----------|----------------------|
| 24Y845 | 24Y846 | 24Y847 |

Roller seal kits include:

| Ref. | Description | Qty. |
|------|------------------------------|------|
| 13a | SEAL, eccentric shaft, front | 1 |
| 13b | SEAL, eccentric shaft, rear | 1 |

Kits for AC and BLDC Motors

Leak Sensor Kit 24Y849

Upgrade kit, to add a leak sensor to an existing system. Includes leak sensor and housing.

NOTE: Also purchase a cable from the following selections. For systems with BLDC motors that use a Graco Motor Control, order an extension cable from the first section. For systems with AC motors that use a VFD, order a field-wireable cable from the second section.

Leak Sensor/PLC Extension Cables (For BLDC Motors)

M8, 4-pin

| Part | Description |
|--------|----------------|
| 121683 | 9.8 ft; 3.0 m |
| 17H349 | 24.6 ft; 7.5 m |
| 17H352 | 52.5 ft; 16 m |

Leak Sensor Cables; Field Wireable (for VFDs)

M8, 4-pin

| Part | Description |
|--------|----------------|
| 17H389 | 9.8 ft; 3.0 m |
| 17H390 | 24.6 ft; 7.5 m |
| 17H391 | 52.5 ft; 16 m |

Controller-to-Motor Cables

Preassembled cable to wire the motor controller to the motor. Includes cable, strain reliefs, and terminals.

| Part | Description |
|--------|---------------|
| 17L368 | 1.0 ft; 0.3 m |
| 17S306 | 9.8 ft; 3.0 m |

Kits for BLDC Motors

Graco Motor Control Kit 24Y445

Replacement kit includes Graco Motor Control with necessary software.

Software Upgrade Kit 17H103

Upgrade kit includes software token and instructions.

NOTE: Also purchase Programming Cable Kit 24Y788.

Motor Feedback Cables

M12, 8-pin

| Part | Description |
|--------|---------------|
| 17F709 | 1.0 ft; 0.3 m |
| 15Y051 | 9.8 ft; 3.0 m |

| Part | Description |
|--------|----------------|
| 16X521 | 24.6 ft; 7.5 m |
| 16P791 | 52.5 ft; 16 m |

PLC Control Cable

M8, 4-pin

| Part | Description |
|--------|----------------|
| 17H365 | 9.8 ft; 3.0 m |
| 17H366 | 24.6 ft; 7.5 m |
| 17H367 | 52.5 ft; 16 m |

Technical Data

| SoloTech Peristaltic Pumps | | |
|---|--|----------------|
| | U.S. | Metric |
| Maximum Fluid Working Pressure | 125 psi | 0.9 MPa, 9 bar |
| Motor Horsepower/Gear Ratio | See the identification tag on your gear motor. | |
| Maximum Pump Speed, using a Graco BLDC motor | 90 RPM | |
| Environmental Temperature Range (Do not allow material to freeze in the pump.) | 14°F to 104°F | -10°C to 40°C |
| Maximum Flow | | |
| i/h6 | 0.25 gpm | 0.95 lpm |
| i/h10 | 0.67 gpm | 2.5 lpm |
| i/h16 | 1.4 gpm | 5.3 lpm |
| i/h23 | 4.5 gpm | 17.0 lpm |
| h25 | 5.2 gpm | 19.6 lpm |
| i26 | 9.8 gpm | 37.1 lpm |
| h26 | 9.3 gpm | 35.1 lpm |
| i/h30 | 15.8 gpm | 59.8 lpm |
| i/h32 | 17.7 gpm | 67.0 lpm |
| Fluid Capacity per Revolution | | |
| i/h6 | 0.003 gal. | 0.01 L |
| i/h10 | 0.007 gal. | 0.03 L |
| i/h16 | 0.015 gal. | 0.06 L |
| i/h23 | 0.054 gal. | 0.20 L |
| h25 | 0.058 gal. | 0.218 L |
| i26 | 0.11 gal. | 0.42 L |
| h26 | 0.10 gal. | 0.39 L |
| i/h30 | 0.18 gal. | 0.68 L |
| i/h32 | 0.20 gal. | 0.74 L |
| Flange Dimensions | | |
| i/h6, i/h10, i/h16 | | |
| Outer Diameter | 3.54 in. | 90 mm |
| Bolt Circle | 2.30–2.56 in. | 58–65 mm |
| Bolt Size | 1/2 in. | |
| i/h23, h25, and i/h26 | | |
| Outer Diameter | 4.25 in. | 108 mm |
| Bolt Circle | 2.95–3.13 in. | 75–80 mm |
| Bolt Size | 1/2 in. | |
| i/h30 and i/h32 | | |
| Outer Diameter | 4.92 in. | 125 mm |
| Bolt Circle | 3.35–3.54 in. | 85–90 mm |
| Bolt Size | 1/2 in. | |

| SoloTech Peristaltic Pumps | | |
|--|--------------|---------------|
| | U.S. | Metric |
| Hose Inner Diameter | | |
| i/h6 | 0.24 in. | 6 mm |
| i/h10 | 0.39 in. | 10 mm |
| i/h16 | 0.63 in. | 16 mm |
| i/h23 | 0.91 in. | 23 mm |
| h25 | 0.98 in. | 25 mm |
| i/h26 | 1.02 in. | 26 mm |
| h26 | 0.98 in. | 25 mm |
| i/h30 | 1.18 in. | 30 mm |
| i/h32 | 1.26 in. | 32 mm |
| Industrial Barbs Fitting Inner Diameter | | |
| i6 | 0.18 in. | 4.5 mm |
| i10 (metal) | 0.25 in. | 6.4 mm |
| i10 (plastic) | 0.20 in. | 5.1 mm |
| i16 | 0.45 in. | 11.4 mm |
| i23 | 0.67 in. | 17.0 mm |
| i26 | 0.80 in. | 20.3 mm |
| i30 | 0.97 in. | 24.6 mm |
| i32 | 1.05 in. | 26.7 mm |
| Hygienic Barbs Fitting Inner Diameter | | |
| h10 | 0.25 in. | 6.4 mm |
| h16 | 0.45 in. | 11.4 mm |
| h25 | 0.74 in. | 18.8 mm |
| h26 | 0.74 in. | 18.8 mm |
| h32 | 1.00 in. | 25.4 mm |
| Suction Lift (Wet and Dry) | | |
| i/h6 | 33.0 ft | 10 m |
| i/h10 | 31.7 ft | 9.6 m |
| i/h16 | 31.8 ft | 9.7 m |
| i/h23 | 32.8 ft | 9.9 m |
| h25 | 32.4 ft | 9.8 m |
| i26 | 33.2 ft | 10.1 m |
| h26 | 32.8 ft | 9.9 m |
| i/h30 | 33.2 ft | 10.1 m |
| i/h32 | 32.0 ft | 9.75 m |
| Weight | | |
| i/h6, i/h10, i/h16 | 55–65 lbs | 25–29 kg |
| i/h23 and h25 | 100–120 lbs. | 45–54 kg |
| i/h26 | 190–215 lbs. | 86–98 kg |
| i/h30 and i/h32 | 235–285 lbs | 107–129 kg |


Technical Data

| SoloTech Peristaltic Pumps | | |
|---|--|--------------|
| | U.S. | Metric |
| Noise | | |
| Sound Pressure | Less than 70 dB(A) | |
| Wetted Parts | | |
| Hose options | Natural Rubber, CSM, EPDM, NBR | |
| Barbed fitting options | Stainless steel, PVDF, Hastelloy | |
| Graco Motor Control for SoloTech Peristaltic Pumps (All installations and wiring must comply with NEC and local electrical codes.) | | |
| DC Power Supply | Class 2 Power Supply only | |
| Approvals | UL508C | |
| Conformity | CE-Low Voltage (2006/95/EC), EMC (2004/108/EC), and RoHS (2011/65/EU) Directives | |
| Ambient Temperature | -40°F – 104°F | -40°C – 40°C |
| Environment Rating | Type 4X, IP 66 | |
| Overtemperature Sensing Specifications (The drive is provided with a means to accept and act upon a signal from a thermal sensor in the motor. Motor overtemperature sensing is required to provide the motor overload protection.) | 0–3.3 VDC, 1mA maximum | |
| Weight | 10.5 lb. | 4.8 kg |
| Input Specifications | | |
| Input Line Voltage | 120/240 VAC, line-to-line | |
| Input Line Phasing | Single Phase | |
| Input Line Frequency | 50/60 Hz | |
| Input Current per Phase | 16A | |
| Maximum Branch Circuit Protection Rating | 20A, Inverse Time Circuit Breaker | |
| Short Circuit Current Rating | 5 kA | |
| Output Specifications | | |
| Output Line Voltage | 0–264 VAC | |
| Output Line Phasing | Three Phase | |
| Output Current (Current limit, set via the software, is provided as a secondary protection from motor overload.) | 0–12A | |
| Output Power | 1.92 KW / 2.6 hp | |
| Output Overload | 200% for 0.2 seconds | |

| Electric Motor for SoloTech Peristaltic Pumps | | | | | | | | | | | | | | | | | | |
|---|-------------------------|--------------------------------------|--------------------------------------|--------------------------|------------------------------|---|----------------------|--------------------------|-------------------------------------|-------------------------------------|--------------|--------------|--------|------------------------------|------------------------------|--------------------------------------|--------------------------------------|-----|
| Motor | Config-uration Code | Pump Size | Gear Ratio | Pump Shaft Di- ameter | Gearmotor Flange Diameter | Maxi- mum Torque (in.-lb (N·m)) | Power | Output Speed (RPM) | Maximum Amperage Load | Voltage and Frequency | IP Rating | IE Rating | Poles | Moun- ting Fla- nge | Const- ant Tor- que | Nom- inal Speed at 50 Hz | Nom- inal Speed at 60 Hz | |
| AC Gear- motors | HAC | i/h6, i/h10, i/h16 | 20 | 20 mm | 120 mm | 434 (49) | 0.75 HP (0.56 kW) | 15-90 | 2.70/1.35 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE1 | 4-Pole | --- | --- | --- | --- | |
| | | i/h23, h25 | 20 | 20 mm | 120 mm | 573 (65) | 1.0 HP (0.75 kW) | 15-90 | 3.14/1.57 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE3 | 4-Pole | --- | --- | --- | --- | |
| | | i/h26 | 19.52 | 30 mm | 160 mm | 1380 (156) | 2.0 HP (1.5 kW) | 15-92 | 5.60/2.80 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE3 | 4-Pole | --- | --- | --- | --- | |
| | | i/h30, i/h32 | 24.88 | 35 mm | 200 mm | 1950 (220) | 3.0HP (2.2 kW) | 12-72 | 7.68/3.84 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE3 | 4-Pole | --- | --- | --- | --- | |
| | MAC | i/h6, i/h10, i/h16 | 48 | 20 mm | 120 mm | 660 (75) | 0.5 HP (0.37 kW) | 6-38 | 1.90/0.95 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE1 | 4-Pole | --- | --- | --- | --- | --- |
| | | i/h23, h25 | 48 | 20 mm | 120 mm | 996 (113) | 0.75 HP (0.56 kW) | 6-38 | 2.70/1.35 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE1 | 4-Pole | --- | --- | --- | --- | --- |
| | | i/h26 | 44.19 | 30 mm | 160 mm | 1610 (182) | 1.0 HP (0.75 kW) | 7-41 | 3.14/1.57 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE3 | 4-Pole | --- | --- | --- | --- | --- |
| | | i/h30, i/h32 | 48.56 | 35 mm | 200 mm | 2638 (298) | 1.5 HP (1.1 kW) | 6-37 | 4.20/2.10 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE3 | 4-Pole | --- | --- | --- | --- | --- |
| | LAC | i/h6, i/h10, i/h16, i/h23, h25 | 120 | 20 mm | 120 mm | 647 (73) | 0.25 HP (0.19 kW) | 3-15 | 1.12/0.56 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE1 | 4-Pole | --- | --- | --- | --- | --- |
| | | i/h26 | 159.09 | 30 mm | 160 mm | 1918 (217) | 0.33 HP (0.25 kW) | 2-11 | 1.56/0.78 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE1 | 4-Pole | --- | --- | --- | --- | --- |
| | | i/h30, i/h32 | 159.09 | 35 mm | 200 mm | 2906 (328) | 0.5HP (0.37 kW) | 2-11 | 1.90/0.95 (230 V/460 V) | 230/460 VAC, 3-phase, 50/60 Hz | IP66 | IE1 | 4-Pole | --- | --- | --- | --- | --- |
| | BLDC Gear- motors | MPM | i/h6, i/h10, i/h16, i/h23, h25 | 36.75 | --- | --- | --- | 1.0HP (0.75 kW) | 2-90 | 2.6 (120/240 V, single-phase) | 320 VDC | IP56 | --- | --- | NEMA 56C | --- | --- | --- |
| i/h26 | | | 38.67 | --- | --- | --- | 2.2HP (1.6 kW) | 2-90 | 5.2 (120/240 V, single-phase) | 320 VDC | IP56 | --- | --- | NEMA 56C | --- | --- | --- | |
| i/h30, i/h32 | | | 38.67 | --- | --- | --- | 2.2HP (1.6 kW) | 2-90 | 5.2 (120/240 V, single-phase) | 320 VDC | IP56 | --- | --- | NEMA 56C | --- | --- | --- | |
| Gear- boxes | HC | i/h6, i/h10, i/h16 | 19.56 | 20 mm | 120 mm | 770 (87) | --- | --- | --- | --- | --- | --- | --- | IEC 71 | --- | --- | --- | |
| | | i/h23, h25 | 19.56 | 20 mm | 120 mm | 770 (87) | --- | --- | --- | --- | --- | --- | --- | IEC 80 | --- | --- | --- | |
| | | i/h26 | 18.75 | 30 mm | 160 mm | 2151 (243) | --- | --- | --- | --- | --- | --- | --- | IEC 90 | --- | --- | --- | |
| | | i/h30, i/h32 | 24.88 | 35 mm | 200 mm | 3213 (363) | --- | --- | --- | --- | --- | --- | --- | IEC 100 | --- | --- | --- | |
| | HN | i/h6, i/h10, i/h16 | 19.56 | 20 mm | 120 mm | 770 (87) | --- | --- | --- | --- | --- | --- | --- | NEMA 56C | --- | --- | --- | |
| | | i/h23, h25 | 19.56 | 20 mm | 120 mm | 770 (87) | --- | --- | --- | --- | --- | --- | --- | NEMA 140TC | --- | --- | --- | |
| | MC | i/h6, i/h10, i/h16, i/h23, h25 | 59.83 | 20 mm | 120 mm | 885 (100) | --- | --- | --- | --- | --- | --- | --- | NEMA 180TC | --- | --- | --- | |
| | | i/h26 | 44.4 | 30 mm | 160 mm | 2151 (243) | --- | --- | --- | --- | --- | --- | --- | IEC 71 | --- | --- | --- | |

| Electric Motor for SoloTech Peristaltic Pumps | | | | | | | | | | | | | | | | | |
|---|---------------------|--------------------------------------|--------------------------------------|--------------------------|---------------------------------|---|---------------------|--------------------------|----------------------------|---------------------------------|--------------|--------------|--------|------------------------------|------------------------------|--------------------------------------|--------------------------------------|
| Motor | Config-uration Code | Pump Size | Gear Ratio | Pump Shaft Di- ameter | Gearmotor Flange Diameter | Maxi- mum Torque (in.-lb (N·m)) | Power | Output Speed (RPM) | Maximum Amperage Load | Voltage and Frequency | IP Rating | IE Rating | Poles | Moun- ting Flan- ge | Const- ant Tor- que | Nom- inal Speed at 50 Hz | Nom- inal Speed at 60 Hz |
| | | i/h30, i/h32 | 44.4 | 35 mm | 200 mm | 2982 (337) | --- | --- | --- | --- | --- | --- | --- | IEC 80 | --- | --- | --- |
| | MN | i/h6, i/h10, i/h16, i/h23, h25 | 59.83 | 20 mm | 120 mm | 885 (100) | --- | --- | --- | --- | --- | --- | --- | NEMA 56C | --- | --- | --- |
| | | i/h26 | 44.4 | 30 mm | 160 mm | 2151 (243) | --- | --- | --- | --- | --- | --- | --- | NEMA 140TC | --- | --- | --- |
| | | i/h30, i/h32 | 44.4 | 35 mm | 200 mm | 2982 (337) | --- | --- | --- | --- | --- | --- | --- | NEMA 140TC | --- | --- | --- |
| | | LC | i/h6, i/h10, i/h16, i/h23, h25 | 128.7 | 20 mm | 120 mm | 938 (106) | --- | --- | --- | --- | --- | --- | --- | IEC 71 | --- | --- |
| | i/h26 | | 158.12 | 30 mm | 160 mm | 3275 (370) | --- | --- | --- | --- | --- | --- | --- | IEC 71 | --- | --- | --- |
| | i/h30, i/h32 | | 158.12 | 35 mm | 200 mm | 3275 (370) | --- | --- | --- | --- | --- | --- | --- | IEC 71 | --- | --- | --- |
| | LN | i/h6, i/h10, i/h16, i/h23, h25 | 128.7 | 20 mm | 120 mm | 938 (106) | --- | --- | --- | --- | --- | --- | --- | NEMA 56C | --- | --- | --- |
| | | i/h26 | 158.12 | 30 mm | 160 mm | 3275 (370) | --- | --- | --- | --- | --- | --- | --- | NEMA 56C | --- | --- | --- |
| | | i/h30, i/h32 | 158.12 | 35 mm | 200 mm | 3275 (370) | --- | --- | --- | --- | --- | --- | --- | NEMA 56C | --- | --- | --- |
| AC Mo- tors, ATEX | | i/h6, i/h10, i/h16 | --- | --- | --- | --- | 0.5 HP (0.37 kW) | --- | 1.84/1.06 (240 V/415 V) | 240/415 V, 3-phase, 50/60 Hz | IP55 | IE1 | 4-Pole | IEC 71 | 5:1 | 1500 | 1800 |
| | | i/h23, h25 | --- | --- | --- | --- | 1.0 HP (0.75 kW) | --- | 3.46/2.00 (240 V/415 V) | 240/415 V, 3-phase, 50/60 Hz | IP55 | IE1 | 4-Pole | IEC 80 | 10:1 | 1500 | 1800 |
| | | i/h26 | --- | --- | --- | --- | 2.0 HP (1.5 kW) | --- | 5.89/3.40 (240 V/415 V) | 240/415 V, 3-phase, 50/60 Hz | IP55 | IE1 | 4-Pole | IEC 90 | 10:1 | 1500 | 1800 |
| | | i/h30, i/h32 | --- | --- | --- | --- | 3.0 HP (2.2 kW) | --- | 8.66/5.00 (240 V/415 V) | 240/415 V, 3-phase, 50/60 Hz | IP55 | IE1 | 4-Pole | IEC 100 | 10:1 | 1500 | 1800 |
| AC Mo- tors, Explo- sion proof | | i/h6, i/h10, i/h16, i/h23, h25 | --- | --- | --- | --- | 0.5 HP (0.37 kW) | --- | 1.94/0.97 (230 V/460 V) | 230/460 V, 3-phase, 50/60 Hz | IP55 | IE1 | 4-Pole | NEMA 56C | 5:1 | 1500 | 1800 |
| | | i/h26 | --- | --- | --- | --- | 1.0 HP (0.75 kW) | --- | 3.88/1.94 (230 V/460 V) | 230/460 V, 3-phase, 50/60 Hz | IP55 | IE3 | 4-Pole | NEMA 143TC | 10:1 | 1500 | 1800 |
| | | i/h30, i/h32 | --- | --- | --- | --- | 3.0 HP (2.2 kW) | --- | 8.60/4.30 (230 V/460 V) | 230/460 V, 3-phase, 50/60 Hz | IP55 | IE3 | 4-Pole | NEMA 182TC | 10:1 | 1500 | 1800 |

--- Not available.

| Optional Leak Sensor | |
|----------------------|--|
| Contact Ratings: | |
| State | Normally open |
| Voltage | 200 VAC/VDC max. |
| Current | 1.25 A DC or peak AC |
| Power | 10 W max |
| Ambient Temperature | -5°C to 80°C (23°F to 176°F) |
| Ex Ratings: | |
| Classification | <p>"simple apparatus" in accordance with UL/EN/IEC 60079-11, clause 5.7</p> <p>Class I, Div 1, Group A, B, C, D T4 -5°C T_a 80°C</p> <p> II 1 G Ex ia IIC T4 Ga -5°C T_a 80°C</p> |
| Parameters | <p>U_i = 24 V I_i = 280 mA P_i = 1.0 W C_i = 2.8 pF L_i = 0.8 µH</p> |

Maximum Fluid Temperature

NOTICE

Temperature limits are based on mechanical stress only. Certain chemicals will further limit the fluid temperature range. Stay within the temperature range of the most-restricted wetted component. Operating at a fluid temperature that is too high or too low for the components of your pump may cause equipment damage.

| Hose | Fahrenheit (max) | Celsius (max) |
|--------------------------------------|------------------|---------------|
| Natural Rubber | 160°F | 71°C |
| CSM | 250°F | 121°C |
| EPDM | 220°F | 104°C |
| Nitrile (NBR) and Food Grade Nitrile | 250°F | 121°C |

California Proposition 65

CALIFORNIA RESIDENTS

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

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.

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Graco Information

To place an order, contact your Graco Distributor or call to identify the nearest distributor.

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211 **Fax:** 612-378-3505

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, MM 3A3367
For patent information, see www.graco.com/patents.

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