PLURAL COMPONENT

Static Mixer Control

3000 psi (21 MPa, 210 bar) Maximum Fluid Working Pressure

Part No. 207861, Series C

Part No. 948338, Series A

Part No. 241809, Series A
Includes 207861 and a static pipe mixer.

Part No. 241808, Series A
Includes 948338 and a static pipe mixer.

Read warnings and instructions.
See page 2 for Table of Contents.

Model 207861 Shown
Symbols

**WARNING**

This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

**CAUTION**

This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

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**WARNING**

**EQUIPMENT MISUSE HAZARD**

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure stated on the equipment or in the Technical Data for your equipment. Do not exceed the maximum working pressure of the lowest rated component in your system.
- Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the Technical Data section of all equipment manuals. Read the fluid and solvent manufacturer’s warnings.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 82°C (180°F) or below –40°C (–40°F).
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.
## WARNING

### INJECTION HAZARD

Spray from the gun/valve, hose leaks or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Fluid splashed in the eyes or on the skin can also cause serious injury.

- Fluid injected into the skin might look like just a cut, but it is a serious injury. **Get immediate medical attention.**
- Do not point the gun/valve at anyone or at any part of the body.
- Do not put your hand or fingers over the spray tip/nozzle.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Do not “blow back” fluid; this is not an air spray system.
- Always have the tip guard and the trigger guard on the gun when spraying.
- Check the gun diffuser operation weekly. Refer to the gun manual.
- Be sure the gun/valve trigger safety operates before spraying/dispensing.
- Lock the gun/valve trigger safety when you stop spraying/dispensing.
- Follow the **Pressure Relief Procedure** on page 6 if the spray tip/nozzle clogs and before cleaning, checking or servicing the equipment.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately. Do not repair high pressure couplings; you must replace the entire hose.
- Fluid hoses must have spring guards on both ends, to help protect them from rupture caused by kinks or bends near the couplings.

### MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers.

- Keep clear of all moving parts when starting or operating the equipment.
- Before checking or servicing the equipment, follow the **Pressure Relief Procedure** on page 6 to prevent the equipment from starting unexpectedly.
### FIRE AND EXPLOSION HAZARD
Improper grounding, poor ventilation, open flames or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- Ground the equipment and the object being sprayed. Follow the grounding instructions on page 5.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop spraying/dispensing immediately**. Do not use the equipment until you identify and correct the problem.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being sprayed/dispensed.
- Keep the spray/dispense area free of debris, including solvent, rags, and gasoline.
- Electrically disconnect all equipment in the spray/dispense area.
- Extinguish all open flames or pilot lights in the spray/dispense area.
- Do not smoke in the spray/dispense area.
- Do not turn on or off any light switch in the spray/dispense area while operating or if fumes are present.
- Do not operate a gasoline engine in the spray/dispense area.

### TOXIC FLUID HAZARD
Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.

### REACTIVE CHEMICALS HAZARD
Graco Inc. does not manufacture or supply any of the reactive chemical components that are used in this equipment, and is not responsible for their effects. Because of the vast number of chemicals that could be used, and their varying chemical reactions, the buyer and user of this equipment should determine all facts relating to the materials used, including any of the potential hazards involved. Particular inquiry and investigation should be made into potential dangers relating to toxic fumes, fires, explosions, reaction times, and exposure of human beings to the individual components or their resultant mixtures. Graco assumes no responsibility for loss, damage, expense, or claims for bodily injury or property damage, direct or consequential, arising from use of such chemical components.
For assistance in setting up a plural component system, you should contact your Graco distributor. This will help ensure that you select the proper type and size of equipment for your job.

For Models 207861 and 241809 the solvent (S) and material (M) inlet valves have 1/4 npt(m) threads. The manifold outlet (F) has 1/2 npt(m) threads. Model 241809 includes a static mixer with a 3/8 npt(m) outlet. See Fig. 1.

For Models 948338 and 241808 the solvent (S) inlet valve has 1/4 npt(m) threads. The material (M) inlet valves have 1/2 npt(f) threads. The manifold outlet (F) has 1/2 npt(f) threads. Model 241808 includes a static mixer with a 3/8 npt(m) outlet. See Fig. 1.

Grounding

Proper grounding is an essential part of maintaining a safe system.

To reduce the risk of static sparking, ground the pump. Check your local electrical code for detailed grounding instructions for your area and type of equipment. Be sure to ground all of this equipment:

1. **Pump**: use a ground wire and clamp as instructed in your pump instruction manual.

2. **Fluid hoses**: Use only grounded hoses with a maximum of 500 feet (150 m) combined hose length to ensure grounding continuity.

3. **Spray gun, manifold, or dispensing valve**: obtain grounding through connection to a properly grounded connection to a properly grounded fluid hose and sprayer.

4. **Object being sprayed**: according to local code.

5. **Supply Containers**: according to local code.

6. **All solvent pails** used when flushing, according to local code. Use only **metal pails**, which are conductive. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts the grounding continuity.

7. To maintain grounding continuity when flushing or relieving pressure, always hold a metal part of the gun firmly to the side of a **grounded metal** pail, then trigger the gun.

Start-up

The mixer manifold was tested in oil, which was left in to protect the manifold. Before operating, thoroughly flush the manifold to prevent contamination of the fluids.

Start and prime the solvent pump and check the flushing system before connecting the material hoses.

Push the actuating lever forward to open the material valves and back to close them.

Open the solvent valve and flush the mixing equipment immediately after closing the material valves, to prevent material from hardening in the mixer or dispenser.

Fig. 1

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**Move Lever Forward to Open**
Installation

Flushing

⚠️ CAUTION

Be sure to label all fluid path parts “component A” or “component B” when disassembling them. Doing so prevents interchanging A and B parts during reassembly, which will contaminate the materials and the fluid path through the equipment.

Color-coded chemically resistant tape may be used to label the parts. Use blue for component A, green for component B, white for solvent, and red for mixed material.

When you stop spraying/dispensing for a short time, close the mixer material valves and open the solvent flush valve. Point the material outlet into a waste container, open the gun/valve and flush until the solvent is clean. Close the solvent valve, and open the gun/valve to relieve the pressure.

For longer shutdowns, solvent flush as above, follow the Pressure Relief Procedure, then disconnect the hose and equipment from the mixer. Soak and clean parts with clean solvent and a stiff brush. Rinse and blow dry with air. Clean all material off the mixer chamber. Do not reassemble until you are ready to use the mixer again.

Solvent may channel through viscous materials and leave a coating of mixed material on the inner tube of your hose. Be sure all material is thoroughly flushed from the hose after each use.

Disconnect all other spray/dispensing equipment, as necessary, and clean thoroughly.

If you are using a static mixer, it should be visually inspected weekly. Unscrew the static mixer from the manifold. Insert a wooden dowel at the adapter end and push the mixer element out of the static mixer. Clean all parts with a compatible solvent and reassemble.

Pressure Relief Procedure

⚠️ WARNING

INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying/dispensing accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the Pressure Relief Procedure whenever you:

- are instructed to relieve the pressure,
- stop spraying/dispensing,
- check or service any of the system equipment,
- or install or clean the spray tip/nozzle.

1. Close the mixer material valves.
2. Open the solvent flush valve and flush until clean.
3. Shut off the material and solvent pumps.
4. Open the gun/valve to relieve pressure.
5. If material has hardened in the hose(s) or mixer, close the material valves, shut off the material and solvent pumps, and slowly loosen the material inlet hose(s) to relieve pressure, then remove the dispensing hose.
Troubleshooting

1. Relieve the pressure before you check or service any system equipment.

2. Check all possible causes and solutions in the Troubleshooting Chart before disassembling the mixer for repair. If the problem is still not corrected, refer to the Troubleshooting section of the separate manuals supplied with each component in your system.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little or no part A (resin) output</td>
<td>Plugged material inlet or check valve</td>
<td>Clean</td>
</tr>
<tr>
<td></td>
<td>The fluid supply container is empty</td>
<td>Refill, prime</td>
</tr>
<tr>
<td>Little or no part B (catalyst) output</td>
<td>Plugged material inlet or check valve</td>
<td>Clean</td>
</tr>
<tr>
<td></td>
<td>The material supply container is empty</td>
<td>Refill, prime</td>
</tr>
<tr>
<td>The mixed material will not flush out</td>
<td>There is hardened material in the mixing chamber</td>
<td>Clean the chamber with a compatible solvent</td>
</tr>
<tr>
<td></td>
<td>The solvent supply container is empty</td>
<td>Refill, prime</td>
</tr>
<tr>
<td></td>
<td>The solvent is not compatible with the material</td>
<td>Check, correct*</td>
</tr>
</tbody>
</table>

* Be sure to read and observe the manufacturer’s literature before using any material in this system.

Service

Clean/Service Inlet Check Valves

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the Pressure Relief Procedure on page 6.

NOTE: Reference numbers refer to model 207861.

Relieve the pressure.

Remove the actuating lever (1) from the ball valves (3). See Fig. 2. Remove and disassemble the valves. See the Detail in Fig. 2. Clean all parts and inspect for wear or damage, replacing parts as necessary. Lubricate the parts with light grease and reassemble. Align the round hole (A) of the ball (3d) with the hole in the valve housing (3i) and the square hole (B) with the stem hole (C) in the valve housing.

To clean or repair the check valve, disconnect the swivel (2) from the seat (13). Screw the seat out of the manifold (18). Remove the ball (6), spring (16), and guide (14). Thoroughly clean all parts and the passageways of the manifold. Inspect parts for wear or damage and replace parts as necessary. Be sure there are no nicks or scratches on the seat which would prevent the ball from seating properly. Reassemble, screwing the seat in tightly.

Screw the ball valve (3) into the swivel union (2). Screw the swivel onto the check valve body (13). With both inlet valves opened or closed, install the actuating lever (1). Connect the hoses. If applicable, install the static mixer with the arrow pointing downward. Close the solvent valve and push the actuating lever back to the closed position before starting the system.
<table>
<thead>
<tr>
<th>Ref No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Ref No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>217561</td>
<td>LEVER, actuating</td>
<td>1</td>
<td>10</td>
<td>156173</td>
<td>UNION, straight swivel;</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>207411</td>
<td>SWIVEL, union adapter; 45°; 3/8 npt(f)</td>
<td>2</td>
<td>11</td>
<td>167124</td>
<td>GRIP, hand, lower; nylon</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>213040</td>
<td>BALL VALVE</td>
<td>12</td>
<td>13</td>
<td>167743</td>
<td>SEAT, check valve</td>
<td>3</td>
</tr>
<tr>
<td>3a*</td>
<td>104893</td>
<td>O-RING; PTFE</td>
<td>1</td>
<td>14*</td>
<td>167762</td>
<td>GUIDE, spring, check valve</td>
<td>3</td>
</tr>
<tr>
<td>3b*</td>
<td>104892</td>
<td>O-RING; PTFE</td>
<td>2</td>
<td>15</td>
<td>167763</td>
<td>BRACKET, mounting</td>
<td>1</td>
</tr>
<tr>
<td>3c*</td>
<td>164900</td>
<td>WASHER; acetal homopolymer</td>
<td>2</td>
<td>16*</td>
<td>167770</td>
<td>SPRING, helical compression, check valves</td>
<td>3</td>
</tr>
<tr>
<td>3d*</td>
<td>178746</td>
<td>BALL, valve</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>3e</td>
<td>165274</td>
<td>NIPPLE, adapter; 1/4 npt(m) x 11/16 thd</td>
<td>1</td>
<td>17*</td>
<td>168492</td>
<td>GASKET; copper</td>
<td>3</td>
</tr>
<tr>
<td>3f</td>
<td>165964</td>
<td>NUT, stem packing</td>
<td>1</td>
<td>18</td>
<td>208185</td>
<td>MANIFOLD, mixer control; 1/2 npt(m) outlet</td>
<td>1</td>
</tr>
<tr>
<td>3g</td>
<td>178745</td>
<td>STEM, valve</td>
<td>1</td>
<td>20</td>
<td>502265</td>
<td>BUSHING, reducer; 1/2 x 3/8 (241809 only)</td>
<td>1</td>
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<tr>
<td>3h*</td>
<td>172094</td>
<td>SEAT, ball</td>
<td>2</td>
<td>21</td>
<td>512506</td>
<td>MIXER, static pipe; 3/8 x 3/8 npt(m) (241809 only)</td>
<td>1</td>
</tr>
<tr>
<td>3i</td>
<td>178743</td>
<td>HOUSING, valve</td>
<td>1</td>
<td>22</td>
<td>158581</td>
<td>COUPLING, hex; 1/2 in (241809 only)</td>
<td>1</td>
</tr>
<tr>
<td>3j</td>
<td>165599</td>
<td>STUD; 3/8 npt(m) x 11/16 thd</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>178747</td>
<td>LEVER, solvent valve</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>100403</td>
<td>PLUG, pipe</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6*</td>
<td>101823</td>
<td>BALL; sst; 5/16&quot; (8 mm) dia</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7*</td>
<td>102310</td>
<td>CAPNUT, hex hd; 10–32 thd; nylon insert</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>102410</td>
<td>CAPSCREW, soc hd; 6–32 thd; 3/8&quot; (10 mm) long</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>102598</td>
<td>CAPSCREW, soc hd; 10–32 thd; 1/2&quot; (13 mm) long</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Keep these spare parts on hand to reduce down time.

* These parts are included in Repair Kit 217560, which may be purchased separately.
Parts

Model 948338, Series A and 241808, Series A
## Parts

**Model 948338, Series A includes items 1–9**
**Model 241808, Series A includes items 1–12**

<table>
<thead>
<tr>
<th>Ref No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Ref No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
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<tbody>
<tr>
<td>1</td>
<td>102022</td>
<td>PIPE BUSHING</td>
<td>1</td>
<td>4h</td>
<td>178745</td>
<td>. STEM, valve</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>113093</td>
<td>PIPE CONNECTOR</td>
<td>1</td>
<td>4i</td>
<td>172094</td>
<td>. SEAT, ball</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>166242</td>
<td>FITTING, elbow, street, 90 deg</td>
<td>2</td>
<td>4j</td>
<td>178743</td>
<td>. HOUSING, valve</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>214037</td>
<td>BALL VALVE; see manual 306861;</td>
<td></td>
<td>4k</td>
<td>178747</td>
<td>. LEVER, solvent valve</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Includes items 4a–4k</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>102310</td>
<td>. CAPNUT; hex hd; 10–32 thd; nylon</td>
<td>1</td>
<td>5</td>
<td>501603</td>
<td>CHECK VALVE, 1/2 npt mbe sst tf</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>insert</td>
<td></td>
<td></td>
<td>501867</td>
<td>CHECK VALVE</td>
<td>1</td>
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<tr>
<td>4b</td>
<td>104893</td>
<td>. O-RING; PTFE</td>
<td>1</td>
<td>6</td>
<td>116697</td>
<td>BALL VALVE, 5000 psi, 1/2 npt (f)</td>
<td>2</td>
</tr>
<tr>
<td>4c</td>
<td>104892</td>
<td>. O-RING; PTFE</td>
<td>2</td>
<td>9</td>
<td>624303</td>
<td>MANIFOLD, mix sst 1/2 npt(4)</td>
<td>1</td>
</tr>
<tr>
<td>4d</td>
<td>164900</td>
<td>. WASHER; acetal homopolymer</td>
<td>2</td>
<td>11</td>
<td>902554</td>
<td>HANDLE, mixer manifold</td>
<td>1</td>
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<tr>
<td>4e</td>
<td>178746</td>
<td>. BALL, valve</td>
<td>1</td>
<td></td>
<td>504285</td>
<td>BUSHING, reducer; 1/2 x 3/8 npt(m)</td>
<td>1</td>
</tr>
<tr>
<td>4f</td>
<td>165274</td>
<td>. NIPPLE, adapter; 1/4 npt(m) x 11/16 thd</td>
<td>2</td>
<td>12</td>
<td>512506</td>
<td>MIXER, static pipe; 3/8 x 3/8 npt(m)</td>
<td>1</td>
</tr>
<tr>
<td>4g</td>
<td>165964</td>
<td>. NUT, stem packing</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
## Technical Data

<table>
<thead>
<tr>
<th>Category</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Inlet</td>
<td><em>Model 207861 and 241809: 1/4 npt (m)</em></td>
</tr>
<tr>
<td></td>
<td><em>Model 948338 and 241808: 1/2 npt(m)</em></td>
</tr>
<tr>
<td>Solvent Inlet</td>
<td>1/4 npt(m)</td>
</tr>
<tr>
<td>Material Outlet</td>
<td><em>Model 207861 and 948338: 1/2 npt(m)</em></td>
</tr>
<tr>
<td>Static Mixer Material Outlet</td>
<td><em>Model 241808 and 241809: 3/8 npt(m)</em></td>
</tr>
<tr>
<td>Wetted Parts</td>
<td>Stainless Steel, Carbon Steel, PTFE, Nylon</td>
</tr>
<tr>
<td>Weight</td>
<td>approximately 6 lb (2.7 kg)</td>
</tr>
</tbody>
</table>
Dimensions

Model 207861
(In Closed Position)

Model 948338
(In Open Position)
**Graco Standard Warranty**

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor 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 présent 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 procedures concernées.

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**Graco Information**

**TO PLACE AN ORDER**, contact your Graco distributor, or call one of the following numbers to identify the distributor closest to you:

1–800–367–4023 Toll Free
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