

LT Series

Gravity Feed Air Spray Guns

311104A

For professional spray application of liquid coating materials.

Models

Model	Part No.	Needle/ Nozzle Size (mm/in)	Maximum Working Air Pressure	Recommended Maximum Inbound Air Pressure
Mini-HVLP	249346	1.0/0.039	100 psi (0.7 MPa, 7 bar)	29 psi (0.20 MPa, 2.0 bar) *
Conventional	249347	1.4/0.055	100 psi (0.7 MPa, 7 bar)	60 psi (0.41 MPa, 4.1 bar)
	249348	1.8/0.071		
HVLP	249349	1.3/0.051	100 psi (0.7 MPa, 7 bar)	29 psi (0.20 MPa, 2.0 bar) *
	249350	1.4/0.055		
	249351	1.5/0.059		
	249352	1.8/0.071		

* Maximum HVLP Compliant Pressure



Important Safety Instructions

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

Contents

Warnings 2
 Setup 3
 Troubleshooting 5
 Service 6
 Technical Data 7
 Parts 8
 Graco Standard Warranty 10









PROVEN QUALITY. LEADING TECHNOLOGY.



Warnings

The following general warnings are related to the safe setup, use, grounding, maintenance and repair of this equipment. Additional more specific warnings may be found throughout the text of this manual where applicable.

 WARNING	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Ground equipment and conductive objects in work area. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a fire extinguisher in the work area.
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not 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. • Check equipment daily. Repair or replace worn or damaged parts immediately. • Do not alter or modify equipment. • Use equipment only for its intended purpose. Call your Graco distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not kink or over bend hoses or use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> • Read MSDS's to know the specific hazards of the fluids you are using. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eyewear • Clothing and respirator as recommended by the fluid and solvent manufacturer • Gloves • Hearing protection
	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow Pressure Relief Procedure in this manual, when you stop spraying 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.

Setup

1. Install an air pressure regulator on gun air supply line to control air pressure.
2. Install a shutoff valve downstream of the air regulator to shut off gun air.
3. Connect a clean, dry, filtered air supply.
4. Connect air supply line to gun air inlet (21). FIG. 1. Connect other end to shutoff valve.
5. Install fluid filter (29) into fluid inlet (6). Refer to page 8.
6. Screw on gravity cup (30).
7. Remove gravity cup cover (A) and fill cup with solvent to flush if this is first time using equipment.

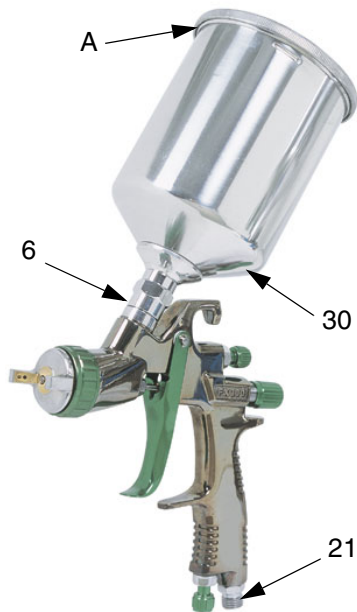


FIG. 1

Flush Spray Gun

CAUTION

Flush spray gun before using it. Use solvent that is compatible with gun wetted parts and fluid that will be sprayed. Use lowest possible pressure, and spray into grounded metal waste container. Read warnings, page 2.

After flushing, follow **Pressure Relief Procedure**.

Pressure Relief Procedure

WARNING



Follow **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment. Read warnings, page 2.

1. Turn off gun air supply.

Adjust Spray Pattern

1. Rotate air cap to change spray pattern direction. FIG. 2.

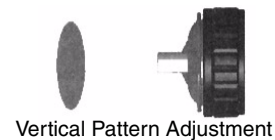


FIG. 2

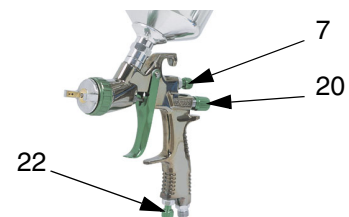


FIG. 3

2. FIG. 3. For maximum fluid flow and to prevent premature fluid nozzle wear, turn fluid adjustment knob (20) left until no trigger restriction is felt; trigger should be able to touch gun handle. Then turn knob out 1/2 turn more.
3. If further fluid flow restriction is needed, use different size needle/nozzle/air cap combination.

If necessary, fluid adjustment knob (20) can be turned right to reduce volume of fluid output. However, continuously spraying with fluid adjustment knob closed causes accelerated abrasive wear on fluid needle and trigger/air valve shaft interface.



If fluid adjustment knob (20) is turned in all the way, the gun emits only air.

4. Test spray pattern and atomization while holding gun about 6-8 inches (150-200 mm) from test piece.
 - a. If pattern is too wide, turn pattern adjustment knob (7) right to narrow pattern.
 - b. To create a round pattern, turn pattern adjustment knob (7) fully right.
 - c. If pattern is too narrow, turn knob (7) left.
 - d. Check atomization. Increase gun air supply pressure in 5 psi (34 kPa, 0.3 bar) increments until you have the desired atomization.

CAUTION

Do not exceed maximum working air pressure shown on front cover. Read warnings, page 2.

Applying Paint

For the best results:

- Keep gun perpendicular to surface and consistent distance of about 6-8 inches (150-200 mm). Do not angle the gun as you spray. FIG. 4.

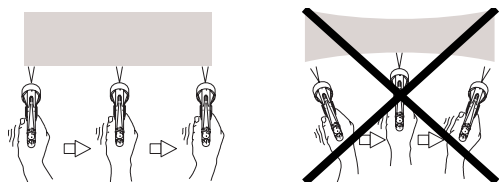


FIG. 4

- Use smooth, even strokes, with about 50% overlap.
- Mini-HVLP and HVLP Guns: Use a slightly slower hand movement and make fewer passes than you would with a conventional air spray gun. Take care to avoid runs or sags.

Daily Cleaning and Maintenance

WARNING

Follow **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment. Read warnings, page 2.

CAUTION

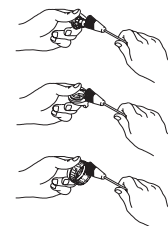
- Do not submerge gun in solvent. Solvent dissolves lubricant, dries out packings, and may clog air passages. You can immerse front end of gun in solvent just until cup connection is covered.
- Do not use metal tools to clean air cap holes as this may scratch them and distort the spray pattern.
- Use a compatible solvent.

1. Follow **Pressure Relief Procedure**, page 3.
2. Clean fluid and air line filters.
3. Check for fluid leakage from gun and fluid hoses. Tighten fittings or replace equipment as needed.
4. Flush gun before changing colors and when you are done spraying.
5. Remove cup (30) and filter (29) and clean them. FIG. 7.
6. Remove air cap (1) and nozzle (2) as instructed on page 6 and soak them in compatible solvent.

CAUTION

Trigger gun and use gun tool (27) whenever you tighten or remove nozzle (2) to avoid damaging needle seat (4) and nozzle,

7. Use a rag moistened in solvent to wipe down outside of gun.
8. Before reinstalling air cap and nozzle, clean them and front of gun with a soft-bristle brush dipped into compatible solvent. Do not use a wire brush or metal tools. To clean out air cap holes, use a soft implement, such as a toothpick.






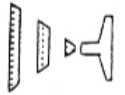
Troubleshooting



WARNING




Follow **Pressure Relief Procedure**, page 3, before troubleshooting or servicing. Read warnings, page 2.

Problem	Cause	Solution
	One side of air cap (1) dirty or clogged	Clean air cap orifices. See page 4. Blow air through orifices until clean. If air cap holes are damaged, replace air cap.
	a. Loose air cap (1). b. Dried or damaged air cap (1) or fluid nozzle (2).	a. Tighten. b. Rotate air cap 180°. <i>If pattern follows air cap</i> , problem is in air cap. Clean and inspect. See page 4. <i>If pattern does not follow the air cap</i> , the problem is with the fluid nozzle. Clean and inspect the nozzle. See page 4. If the pattern is not corrected, replace nozzle.
	a. Atomization air pressure set too high. b. Spraying a thin material in too wide of a pattern.	a. Reduce air pressure. b. Increase material control by turning fluid adjustment knob (20) to left, while reducing spray width by turning pattern adjustment knob (7) to right. Or increase material viscosity.
 Spitting	Air getting into paint stream. a. Cup almost empty. b. Dry needle packing (3). c. Fluid nozzle (2) too loose. d. Dried material between nozzle (2) and gun body. e. Damaged needle seal	a. Fill cup. b. Loosen packing seat (4) and put a few drops of machine oil on packing (3). Retighten seat (4). c. Tighten. d. Clean nozzle and front of gun. See page 4. e. Replace seal. See page 6.
Other spray pattern problems	a. Gun not properly adjusted. b. Sluggish needle (18).	a. See page 3. b. Clean and lubricate.
Unable to get round pattern.	Pattern adjustment knob (7) not seating properly.	Clean or replace knob.
Will not spray.	a. No air pressure at gun. b. Cup empty. c. Fluid adjustment knob (20) turned too far right. d. Fluid too thick for gravity feed.	a. Check air supply and air lines. b. Fill cup. c. Adjust knob (20) to the left. d. Thin material.
Fluid leaking from packing nut (4).	a. Packing nut (4) loose. b. Packing (3) worn or dry.	a. Tighten, but not so tight as to grip needle. b. Lubricate or replace.
Fluid nozzle (2) dripping.	a. Dry packing (3). b. Sluggish needle (18). c. Packing nut (4) too tight. d. Worn fluid nozzle or needle.	a. Lubricate. b. Clean and lubricate. c. Loosen. d. Replace.
Thin, coarse finish.	a. Gun held too far from surface. b. Atomization air pressure set to high.	a. Hold gun about 6-8 inches (150-200 mm) from surface. b. Reduce air pressure.
Thick, dimpled finish (resembling orange peel)	Gun held too close to surface.	Hold gun about 6-8 inches (150-200 mm) from surface.

Service

WARNING



Follow **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment. Read warnings, page 2.

Preparation

1. Flush and clean gun before servicing. See page 4.
2. Follow **Pressure Relief Procedure**, page 3.

Air Cap, Nozzle, and Needle

1. Unscrew air cap (1). FIG. 6.
2. Trigger gun while you remove the nozzle (2) with gun tool (27). See FIG. 5.

CAUTION

Trigger gun and use gun tool (27) whenever you tighten or remove the nozzle (2) to avoid damage.

3. Remove fluid adjustment knob (20) and spring (19). FIG. 6.
4. Pull needle (18) out the back of the gun.

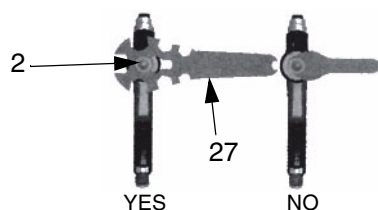


FIG. 5

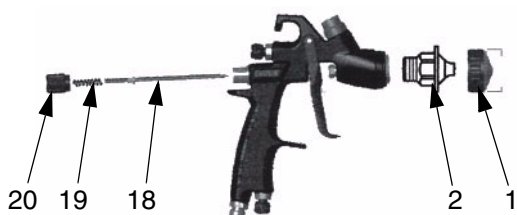


FIG. 6

Air Valve and Needle Packings

1. Remove retaining ring (26), gaskets (24), pin (25) and trigger (23). FIG. 7.
2. Remove packing nut (4) and packing (3).

3. Remove air valve shaft (8).
4. Remove fitting (17) with Allen wrench (Mini-HVLP: 8 mm, Conventional/HVLP: 9 mm).
5. Remove o-rings (13, 10) and holder (9) from fitting (17).
6. Remove spring (16), piston (14), and o-ring (10).
7. Remove air valve seat (12) with o-ring (13) and gasket (11).
8. Remove o-ring (10) and holder (9).
9. Replace parts as needed.
10. Reassemble in reverse order. Lubricate needle and o-rings. Be sure to trigger gun when installing nozzle (2).

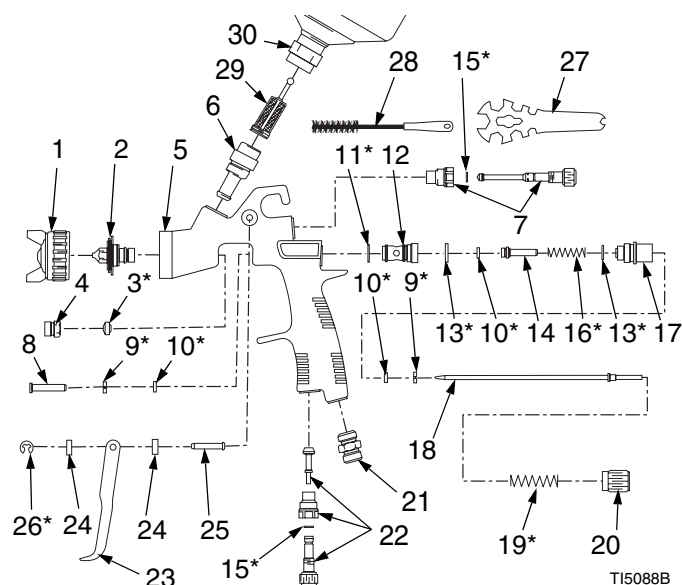


FIG. 7

Technical Data

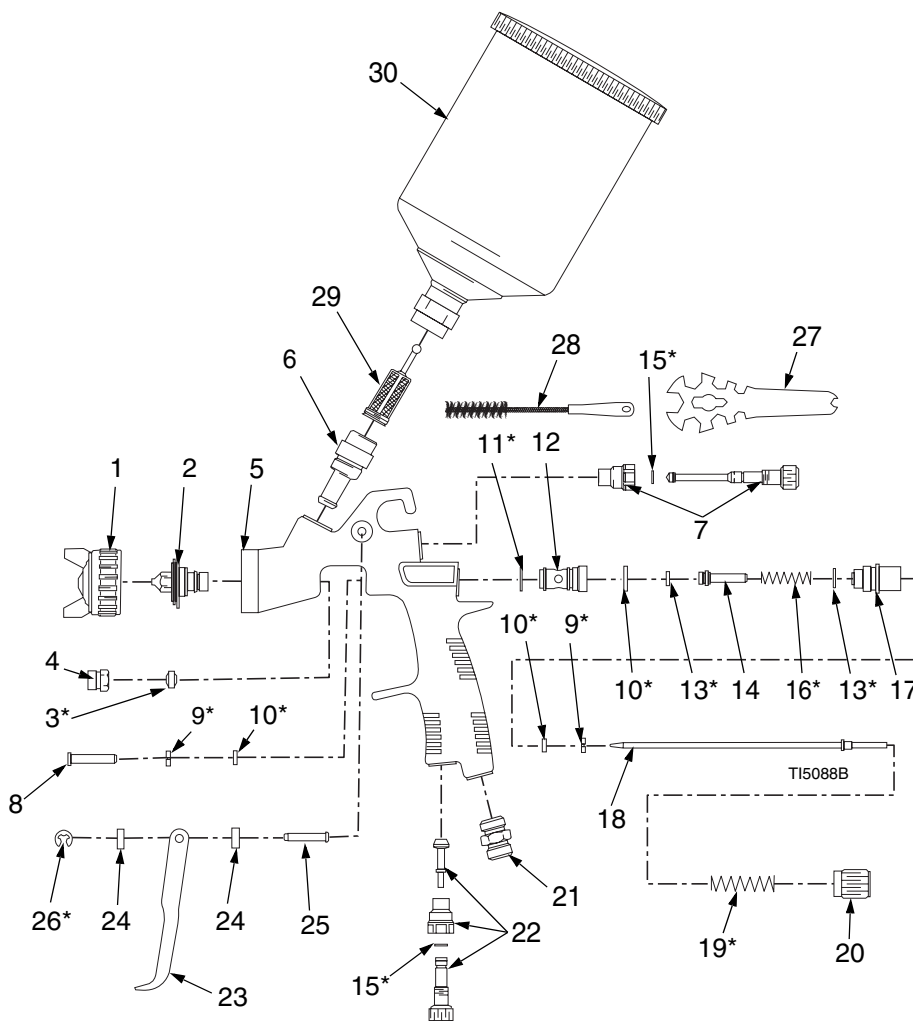
Maximum Working Air Pressure	100 psi (0.7 MPa, 7 bar)
Maximum HVLP Inbound Air Pressure	29 psi (0.2 MPa, 2 bar)
Fluid and Air Operating Temperature Range	32–109° F (0–43° C)
Weight	
Mini-HVLP	14 oz. (40 g)
Conventional	24 oz. (68 g)
HVLP	24 oz. (68 g)
Air Inlet	1/4-18 npsm (R1/4-19) compound thread
Wetted Parts	Aluminum, stainless steel, brass, PTFE
Noise Data	
Mini-HVLP	Sound Pressure 64.08 dB(A)
	Sound Power 73.97 dB(A)
Conventional	Sound Pressure 79.01 dB(A)
	Sound Power 88.91 dB(A)
HVLP	Sound Pressure 72.98 dB(A)
	Sound Power 82.88 dB(A)
Air Consumption	
Mini-HVLP	4.9 cfm at 29 psi (200 kPa, 2 bar)
Conventional	11.9 cfm at 41 psi (283 kPa, 2.8 bar)
HVLP	11.4 cfm at 29 psi (200 kPa, 2 bar)

Parts

Mini-HVLP - Part No. 249346

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	15G123	Air Cap	1	16*		Air Valve Spring	1
2	15G124	Fluid Nozzle, 1.0	1	17	15G135	Air Valve Fitting	1
3*		Needle Packing	1	18	15G136	Fluid Needle	
4	15G126	Needle Packing Seat	1	19*		Needle Spring	1
5	15F998	Gun Body	1	20	15G138	Fluid Adjustment Knob	1
6	15G127	Fluid Inlet Fitting	1	21	15G139	Air Inlet Fitting	1
7	15G128	Pattern Adjustment Knob	1	22	15G140	Air Adjustment Valve	1
8	15G129	Air Valve Shaft	1	23	15G141	Trigger	1
9*		Packing Holder	2	24	15G142	Gasket	2
10*		O-ring	3	25	15G143	Trigger Pin	1
11*		Gasket	1	26*		Retaining Ring	1
12	15G132	Air Valve Seat	1	27	15G145	Gun Wrench	1
13*		O-ring	2	28	15G146	Brush	1
14	15G133	Air Valve Piston	1	29	15G147	Fluid Filter	1
15*		O-ring	2	30	15G148	Cup	1

* Parts included in Repair Kit 249510



**Conventional - Part Nos. 249347 and 249348 and
HVLP - Part Nos. 249349, 249350, 249351, and 249352**

Includes:							
Model No.	Part No.	Description	Air Cap (1)	Nozzle (2)	Gun Body (5)	Needle (18)	Repair Kit
Conventional	249347	Conventional Air Spray, 1.4	15G157	15G151	15F999	15G170	249511
Conventional	249348	Conventional Air Spray, 1.8	15G157	15G153	15F999	15G156	249511
HVLP	249349	HVLP, 1.3	15G149	15G150	15F178	15G154	249511
HVLP	249350	HVLP, 1.4	15G149	15G151	15F178	15G170	249511
HVLP	249351	HVLP, 1.5	15G149	15G152	15F178	15G155	249511
HVLP	249352	HVLP, 1.8	15G149	15G153	15F178	15G156	249511

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	See table	Air Cap	1	16*		Air Valve Spring	1
2	See table	Fluid Nozzle, 1.0	1	17	15G169	Air Valve Fitting	1
3*		Needle Packing	1	18	See table	Fluid Needle	
4	15G159	Needle Packing Seat	1	19*		Needle Spring	1
5	See table	Gun Body	1	20	15G172	Fluid Adjustment Knob	1
6	15G160	Fluid Inlet Fitting	1	21	15G173	Air Inlet Fitting	1
7	15G161	Pattern Adjustment Knob	1	22	15G174	Air Adjustment Valve	1
8	15G162	Air Valve Shaft	1	23	15G175	Trigger	1
9*		Packing Holder	2	24	15G176	Gasket	2
10*		O-ring	3	25	15G143	Trigger Pin	1
11*		Gasket	1	26*		Retaining Ring	1
12	15G166	Air Valve Seat	1	27	15G145	Gun Wrench	1
13*		O-ring	2	28	15G146	Brush	1
14	15G167	Air Valve Piston	1	29	15G147	Fluid Filter	1
15*		O-ring	2	30	15G177	Cup	1

* Parts included in Repair Kit 249511

Graco Standard Warranty

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

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

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

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

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

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

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

FOR GRACO CANADA CUSTOMERS

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

Graco Information

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

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0122, **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.*

MM 311104

Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

www.graco.com

Printed in USA 311104A

5/2005