Instructions - Parts

GT Spray Gun

310888 rev.A

For professional spray application of liquid coating materials.

Air spray, HVLP, and compliant guns with pressure, siphon, and gravity feeds

Important Safety Instructions
Read all warnings and instructions in this manual.
Save these instructions.

See pages 2 and 3 for model information, including maximum working pressure.

287454 Gravity Feed Gun with 249259 PPS System

287462 Pressure Feed Gun

PROVEN QUALITY. LEADING TECHNOLOGY.

Graco Inc. P.O. Box 1441 Minneapolis, MN 55440-1441

CE Ex II 2 G

Contents

Related Manuals

This manual is also available in the following languages:

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Models

HVLP Guns: High transfer efficiency guns that limit the air pressure at the air cap to 10 psig (69 kPa, 0.7 bar) maximum, which is required in some areas for compliance with environmental standards.

Compliant Guns: High transfer efficiency guns that have been tested to have a transfer efficiency greater than or equal to HVLP guns. Graco compliant guns have no restrictions on air cap pressures, but gun inlet pressure must be 28 psig (193 kPa, 1.9 bar) or less to remain in compliance.

Air Spray Guns: Provide excellent atomization and high production rates, typically with some reduction in transfer efficiency.

Pressure Feed HVLP Spray Guns

Maximum Fluid and Inlet Air Pressure:100 psig (0.7 MPa, 7 bar)
Maximum HVLP Compliant Inlet Air Pressure: 35 psig (241 kPa, 2.4 bar)

Part No.	Needle/Nozzle Size mm (in.)	Air Consumption scfm (m^3/min)*	Recommended Usage
248993	1.2 (.045)	16 (0.45)	Primers, high viscosity materials including enamels
248994	1.4 (.055)	16 (0.45)	Primers, high viscosity materials including enamels
248995	1.7 (.070)	15 (0.42)	Primers, high viscosity materials including enamels

* At 35 psig (241 kPa, 2.4 bar)

Pressure and Siphon Feed Air Spray Guns

Maximum Fluid and Inlet Air Pressure:100 psig (0.7 MPa, 7 bar)

Part No.	Needle/Nozzle Size mm (in.)	Air Consumption scfm (m^3/min)*	Recommended Usage
287461	1.2 (.045)	15 (0.42)	Pressure feed production
287462	1.4 (.055)	15.5 (0.44)	Pressure feed production
287464	1.7 (.070)	15.5 (0.44)	Pressure feed production
287456	1.7 (.070)	12 (0.34)	Siphon feed; medium solids, colors and clears

* At 50 psi (345 kPa, 3.4 bar)

Pressure Feed Compliant Spray Guns

Maximum Inlet Air Pressure:100 psig (0.7 MPa, 7 bar)

Part No.	Needle/Nozzle Size mm (in.)	Air Consumption* scfm (m^3/min)	Recommended Usage
249014	1.2 (.045)	9.5 (0.27)	Pressure feed production
249015	1.4 (.055)	9.5 (0.27)	Pressure feed production
249425	1.7 (.070)	9.5 (0.27)	Pressure feed production

* At 28 psig (193 kPa, 1.9 bar)

Gravity Feed HVLP and Compliant Spray Guns

Maximum Fluid and Inlet Air Pressure:100 psig (0.7 MPa, 7 bar)
Maximum HVLP Compliant Inlet Air Pressure: 30 psig (207 kPa, 2.1 bar)

Part No.	Needle/Nozzle Size mm (in.)	Air Consumption* scfm (m^3/min)	Recommended Usage
HVLP Gravity Feed Gun			
248996	1.2 (.045)	14.5 (0.41)	High solids, colors and clears
248997	1.4 (.055)	14.5 (0.41)	High solids, colors and clears
248998	1.7 (.070)	14.5 (0.41)	Medium solids, colors and clears
Compliant Gravity Feed Gun			
248999	1.2 (.045)	11.5 (0.33)	High solids, clears
287454	1.4 (.055)	11.5 (0.33)	All automotive, colors and clears
287455	1.7 (.070)	11.5 (0.33)	Enamels and single stage colors

* At 30 psig (207 kPa, 2.1 bar)

Warnings

The following Warnings are for the safe setup, use, grounding, maintenance and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. Refer back to these Warnings.

⚠ WARNING

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- When flammable liquid is sprayed or used for flushing or cleaning, keep sprayer at least 20 feet (6 m) away from explosive vapors.
- 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 power or light switches on or off when flammable fumes are present.
- Ground equipment and conductive objects in work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- 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.

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- 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.

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.

- 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.

⚠ WARNING

PERSONAL PROTECTIVE EQUIPMENT

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:

- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

PRESSURIZED EQUIPMENT HAZARD

Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- 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.

Operation

- Check that your shop air provides adequate air flow.
- Use a minimum 3/8” ID air supply hose.
- Set shop air pressure regulator (not supplied) according to paint manufacturer’s recommendation for conventional equipment. Do not exceed maximum pressures.
- Make sure no air restrictions, such as low-volume cheater-valves, obstruct the air flow.
- Install a shutoff valve (not supplied) downstream of the air regulator to shut off gun air.
- **Pressure Feed Guns Only:** Install a shutoff valve (not supplied) on the fluid supply line to shut off fluid to the gun.
- Install an inline air filter (not supplied) to clean and dry the air supply to the gun.

Connect Air Supply

1. Shut off air pressure to the gun.
2. Connect a clean, dry, filtered air supply to the gun air inlet (9). See FIG. 1, page 7.
3. If this is the first time using the equipment, flush the spray gun (page 6).

Pressure Relief Procedure

WARNING

Follow **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment. Read warnings, page 5.

1. Turn off gun air supply.

   Pressure Feed Guns Only: Turn off gun fluid supply.
2. Hold a metal part of the gun to a grounded metal pail, and trigger the gun to relieve pressure.

Flushing

WARNING

Read warnings, page 5.

Flush before using the equipment, before changing colors, and when you are done spraying. Use solvent that is compatible with gun wetted parts and fluid that will be sprayed. Flush at lowest possible pressure.

Refer to **Compliant Cleaning Methods**, page 7, to comply with air quality laws if applicable.

1. Follow **Pressure Relief Procedure**, page 6.
2. **Gravity Feed Guns Only:** Dispose of paint in cup and fill with small amount of solvent. Reinstall cup or cup cover.

   Pressure Feed Guns Only: Connect a solvent supply line to the gun fluid inlet.
3. Hold a metal part of the gun to a grounded metal pail, and spray into pail until equipment is clean.
4. Follow **Pressure Relief Procedure**.

Spraying

CAUTION
Excessive air pressure can increase over-spray, reduce transfer efficiency, result in a poor quality finish from dry spray, and result in non-compliant operation.

1. **Gravity Feed Guns Only:** Fill cup with material. Do not fill past “full” markings on cup. Reinstall cup or cup cover.

   Pressure Feed Guns Only: Connect fluid supply line to the gun fluid inlet.

2. Turn on shop air to gun and set atomizing pressure with the gun fully triggered.

3. Adjust the pattern size and shape with the spray width adjustment knob (see FIG. 1, 16d). Turn knob clockwise to reduce pattern size and counterclockwise to increase it.

See **Troubleshooting** guide if you experience an irregular pattern.

4. Fluid control knob (15) is factory set for maximum needle trigger travel and material flow. To decrease needle/trigger travel and decrease fluid flow, turn the knob clockwise.

5. **Pressure Feed Guns Only:** Adjust fluid pressure for desired fluid flow.

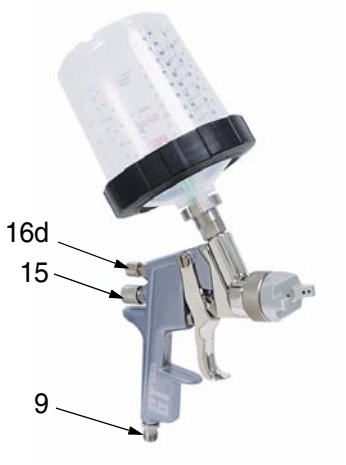


FIG. 1

Cleaning and Maintenance

WARNING

Follow **Pressure Relief Procedure**, page 6, when you stop spraying and before cleaning, checking, or servicing equipment. Read warnings, page 5.

CAUTION
• Do not submerge gun in solvent. Solvent dissolves lubricant, dries out packings, and may clog air passages.
• Do not use metal tools to clean air cap holes as this may scratch them and distort the spray pattern.
• Use a compatible solvent.
• Gun and cup can be cleaned in a gun washer.

Clean air line filters as directed by the manufacturer.

Volatile Organic Compounds (VOC) Regulation

In certain states, spraying solvents that release VOCs into the atmosphere when cleaning a spray gun is prohibited. To comply with these air quality laws you must use a cleaning method that prevents the escape of VOC vapors into the atmosphere. See **Compliant Cleaning Methods** below.

Compliant Cleaning Methods

- Place spray gun in a gun washer that completely encloses the gun and components during cleaning, rinsing, and draining.
- Spray solvent through the spray gun into a closed gun cleaning station.

Cleaning Gun and Cup

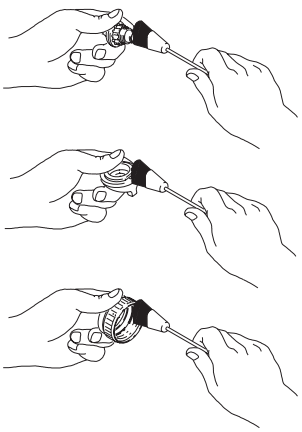
Refer to **Compliant Cleaning Methods** to comply with air quality laws if applicable.

1. Follow **Flushing** procedure, page 6.
2. Use a rag moistened in solvent to wipe cup lid, fluid tube, inside of cup, and outside of gun.
3. Blow dry gun inside and out. Lubricate gun - see **Spray Gun Maintenance**.

Cleaning Nozzle and Air Cap

CAUTION
• To avoid damaging needle seat and nozzle, use a ½ in., 6-point box end wrench and trigger the gun whenever you tighten or remove nozzle. • Do not use metal tools to clean air cap holes as this may scratch them and distort the spray pattern.

To clean the air cap and nozzle, remove and soak them in a compatible cleaning solution. Clean them and front of gun with a soft-bristle brush dipped in 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.



Spray Gun Maintenance

- Frequently lubricate the gun moving parts with a drop of non-silicone lubricant (part no. 111265). See FIG. 2.
- Do not disassemble the spray gun if you are having a spray pattern problem. Check **Troubleshooting**, page 9, for information on how to correct the problem.
- Check for fluid leakage. Tighten fittings or replace equipment as needed.

FIG. 2

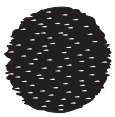
Fluid Needle Packings Installation and Maintenance

1. Insert the needle (17) through the fluid control bushing (10). Stop the needle before it enters the back of the gun head (38).
2. Place the new fluid packings (35, 36) and the packing screw (34) onto the needle (17). Note the orientation of the parts in the parts drawing on page 10.
3. Insert the fluid needle (17) into the back of the gun head (38) to install the fluid packings (35, 36).
4. Tighten the packing screw (34) just enough to hold the packings (35, 36) in the gun head (38). Ensure that the needle moves freely.
5. Tighten the packing screw (34) by turning the screw in until it touches the fluid packings (35, 36), then tighten one full turn to pre-set the packings. Loosen the screw, then turn it in until it touches the fluid packings again. Tighten the screw 1/12 turn more (equal to half the distance between points on the hex head).
6. Trigger the gun to test needle movement. If the needle does not return after the trigger is released or is slow in returning, loosen the packing screw (34) until the needle returns freely.
7. Make sure the gun fluid packings are sealing properly by spraying solvent at low pressure before fully pressurizing the gun with the fluid to be sprayed.
8. If the fluid packings leak, tighten the packing screw (34) slightly and retest until the packings and fluid needle seal completely.

Troubleshooting

WARNING

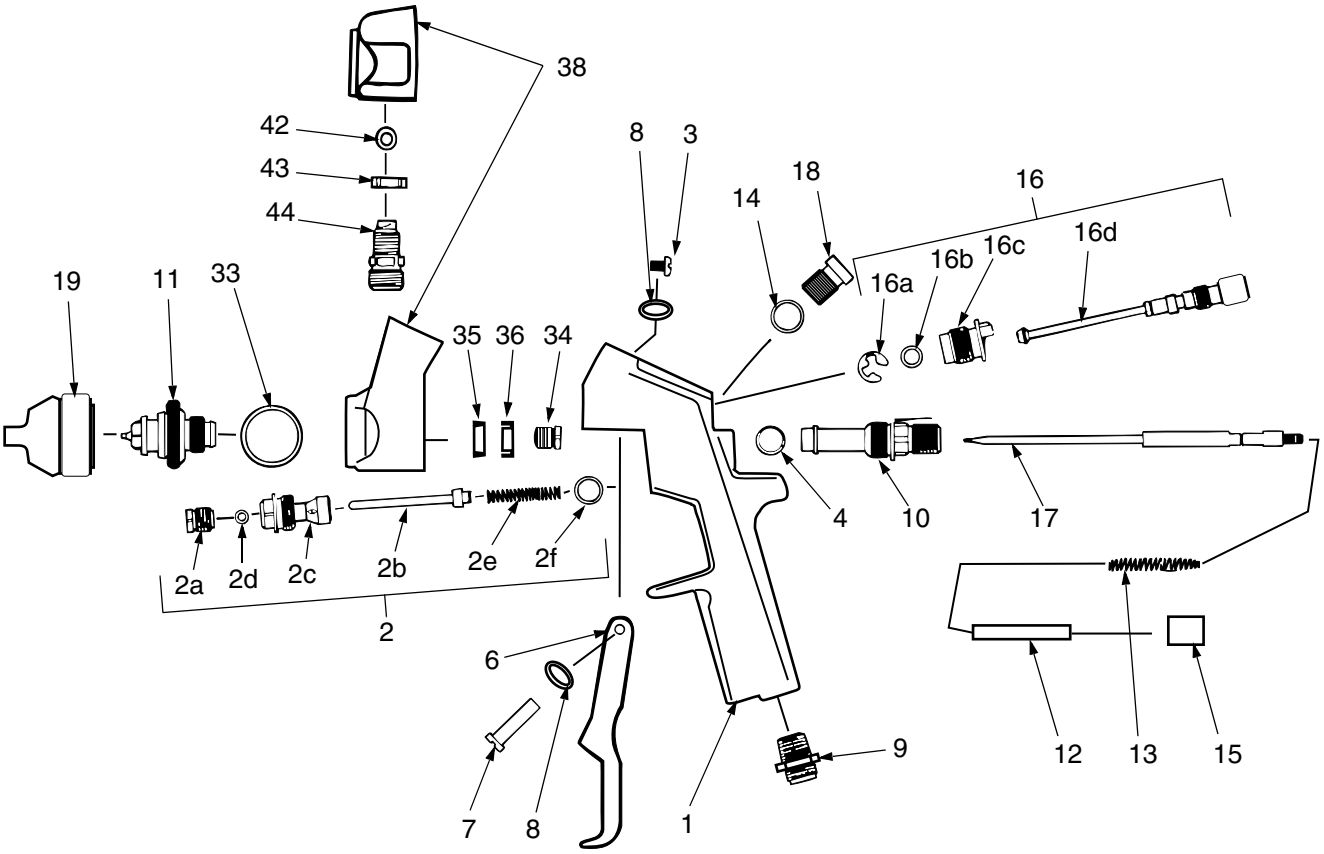
Follow **Pressure Relief Procedure**, page 6, before troubleshooting or servicing. Read warnings, page 5.

Problem	Cause	Solution
 **Right**	Normal pattern	No action necessary
 **Wrong** Heavy top or bottom pattern	Dirty or damaged air cap or fluid nozzle.	Rotate air cap 180°. *If pattern follows air cap,* problem is in air cap. Clean and inspect. See page 7. If pattern is not corrected, replace air cap. *If pattern does not follow the air cap,* the problem is with the fluid nozzle. Clean and inspect the nozzle. See page 7. If the pattern is not corrected, replace nozzle.
 **Wrong** Split pattern	Pressure too high for viscosity of material being sprayed.	a. Reduce air pressure. b. Increase material viscosity c. Correct pattern by narrowing fan size with spray width adjustment knob.
 **Wrong**	Dirty or distorted air horn holes.	Rotate air cap 180°. *If pattern follows air cap,* problem is in air cap. Clean and inspect. See page 7. If pattern is not corrected, replace air cap.
Gun spitting	Air getting into paint stream.	• Check if cup is empty and fill. • Tighten fluid nozzle. • Check and tighten fluid needle packing nut. • Check fluid nozzle seat for damage.
Will not spray.	a. Cup is not tight. b. Cup empty. c. Fluid adjustment knob (16) turned too far clockwise d. Air cap not seated.	a. Tighten cup. b. Fill cup. c. Adjust knob (16) counterclockwise. d. Turn spray width adjustment knob fully counterclockwise. Tighten air cap.
 **Wrong** Heavy pattern or orange peel	a. Air pressure too low. b. Gun held too close to surface.	a. Increase air pressure. b. Hold gun about 6-8 inches (150-200 mm) from surface.
Excessive air blowing back	a. Loose fluid nozzle. b. Damaged fluid nozzle seat.	a. Tighten fluid nozzle. b. Replace seat.

Parts

Airspray, HVLP, and Compliant Guns

With Pressure, Gravity, and Siphon Feeds



Ref. No.	Kit No.	Description	Qty.
1		Gun Handle	1
2	B	Air Valve Assembly; Includes items 2a-2f	1
2a	B	• Packing Nut	1
2b	B	• Air Valve Shaft	1
2c	B	• Air Valve Housing	1
2d	B, E	• Air Valve Packing	1
2e	B	• Air Valve Spring	1
2f	B, E	• Valve Gasket	1
3	G	Trigger Screw	1
4	C, E	Valve Gasket	1
6	G	Trigger	1
7	G	Trigger Shaft	1
8	G	Spring Washer	2
9	H	Air Inlet Fitting	1
10	C	Fluid Control Bushing	1
11	I	Needle/Nozzle Set	1
12	C	Needle Sleeve	1
13	C	Needle Spring	1
14	E, F	Head Attachment Gasket	1
15	C	Fluid Control Knob	1

Ref. No.	Kit No.	Description	Qty.
16	A	Width Control Assembly Includes item 16a-16d	1
16a	A	• Retaining Ring	1
16b	A, E	• O-Ring	1
16c	A	• Body	1
16d	A	• Control Valve/Knob	1
17	K	Needle Shaft	1
18	F	Screw; 7/16-27 UNS	1
19	J	Air Cap	1
33	E, I	Tip Gasket	1
34	D	Packing Screw	1
35	D	U-cup Spreader	1
36	D	U-cup Packing	1
38	F	Gun Head	1
42	E, H	Fluid Inlet Gasket	1
43	E, H	Fluid Inlet Lock Nut	1
44	H	Fluid Inlet Fitting	1

Kits

Use the table below to choose the correct kits for your gun. The kits are designated on the table by letter according to the following key:

A = 119800 Pattern Width Control Kit
B = 119801 Air Valve Kit
C = 119802 Fluid Control Kit
D = 119803 Fluid Section Repair Kit
E = 119804 Seal Kit
F = 15G411 & 15G412 Head Kit
G = 15G413 Trigger Replacement Kit
H = 15G414 Fluid/Air Inlet Kit
I = 119814-119819 Nozzle Kit
J = 119806-119812 Air Cap Kit
K = 119821 & 119822 Needle Assembly Kit

Gun Part No.	Needle/ Nozzle Size mm (in.)	A	B	C	D	E	F	G	H	I	J	K
Pressure Feed HVLP Spray Guns												
248993	1.2 (.045)	119800	119801	119802	119803	119804	15G412	15G413	15G414	119819	119806	119821
248994	1.4 (.055)	119800	119801	119802	119803	119804	15G412	15G413	15G414	119814	119806	119821
248995	1.7 (.070)	119800	119801	119802	119803	119804	15G412	15G413	15G414	119815	119806	119822
Pressure Feed Air Spray Guns												
287461	1.2 (.045)	119800	119801	119802	119803	119804	15G412	15G413	15G414	119817	119807	119821
287462	1.4 (.055)	119800	119801	119802	119803	119804	15G412	15G413	15G414	119816	119807	119821
287464	1.7 (.070)	119800	119801	119802	119803	119804	15G412	15G413	15G414	119818	119807	119822
Siphon Feed Air Spray Gun												
287456	1.7 (.070)	119800	119801	119802	119803	119804	15G412	15G413	15G414	119818	119808	119822
Gravity Feed HVLP Spray Guns												
248996	1.2 (.045)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119819	119809	119821
248997	1.4 (.055)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119814	119810	119821
248998	1.7 (.070)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119815	119812	119822
Gravity Feed Compliant Spray Guns												
248999	1.2 (.045)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119819	119811	119821
287454	1.4 (.055)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119814	119811	119821
287455	1.7 (.070)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119815	119811	119822
Pressure Feed Compliant Spray Guns												
249014	1.2 (.045)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119817	119807	119821
249015	1.4 (.055)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119816	119807	119821
249425	1.7 (.070)	119800	119801	119802	119803	119804	15G411	15G413	15G414	119818	119807	119822

Tools

Part No. 105749: Nozzle Cleaning Brush
Part No. 111265: Lubricant

Technical Data

Maximum Air Inlet Pressure	100 psig (0.7 MPa, 7 bar)
Maximum HVLP and Compliant Inlet Air Pressure	see **Models**, page 2
Air Consumption	see **Models**, page 2
Fluid and Air Operating Temperature Range	32°F to 109°F (0°C to 43°C)
Weight	
Pressure Feed	1 lb. 4 oz. (568 g)
Gravity Feed (without cup)	1 lb. 3 oz. (532 g)
Air Inlet	1/4 npsm (R1/4-19)
Fluid Inlet	3/8 npsm (R3/8-19) fluid inlet)
Wetted Parts	stainless steel, carbon steel, PTFE, low density polyethylene, (aluminum in gravity guns only)
Noise Data*	
Sound Pressure	78.6 Db(A)
Sound Power	86.9 Db(A)

* All readings were taken with the gun controls fully open and with 35 psi (241 kPa, 2.4 bar) inlet air pressure.
Sound pressure was tested to CAGI-PNUEROP-1969.
Sound power was tested to ISO 3744-1981.

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

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