Instructions – Parts List

Parts

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

BASE SEAL
Automatic Flow Guns 310547 rev.B

Maximum Air Inlet Pressure: 100 psi (0.7 MPa, 7 bar)
Maximum Fluid Working Pressure: 2400 psi (17 MPa, 165 bar)

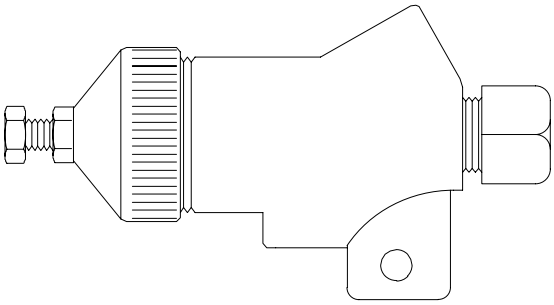
Model C27130
Double air-operated with ethylene propylene o-rings

Model C27134
Double air-operated with Viton® o-rings

Model C27132
Double air-operated with spring return assist and Viton® o-rings

Model C27151
Air actuated, spring return with ethylene propylene o-rings

Table of Contents



Model C27151 / 12062 shown 8009A

PROVEN QUALITY. LEADING TECHNOLOGY.

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

Symbols

Warning Symbol

⚠ WARNING

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

Caution Symbol

⚠ CAUTION

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

⚠ WARNING

INSTRUCTIONS

EQUIPMENT MISUSE HAZARD

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

- This equipment is for professional use only.
- Read all instruction manuals, warnings, 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 the equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed 100 psi (0.7 MPa, 7 bar) Maximum Air Inlet Pressure to the gun.
- Do not exceed the 2400 psi (17 MPa, 165 bar) Maximum Fluid Working Pressure of the gun.
- Do not exceed the maximum working pressure of any component or accessory used in the system.
- Route the hoses away from the 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).
- Do not use the hoses to pull the equipment.
- Use fluids and solvents that are chemically compatible with the equipment wetted parts. See the **Technical Data** sections of all the equipment manuals. Always read the material manufacturer's literature before using fluid or solvent in this equipment.
- Always wear protective eyewear, gloves, clothing, and respirator as recommended by the fluid and solvent manufacturers.
- Comply with all applicable local, state and national fire, electrical and other safety regulations.
- Never use 1,1,1–trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in this equipment. Such use could result in a serious chemical reaction, with the possibility of explosion, which could cause death, serious injury, and/or substantial property damage.

⚠ WARNING

INJECTION HAZARD

Spray from the flow gun, hose leaks, or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Splashing fluid 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 surgical treatment.**
- Do not point the flow gun at anyone or at any part of the body.
- Do not put your hand or fingers over the nozzle.
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** on page 5 if the 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, damaged, or loose parts immediately. Do not repair high pressure couplings; you must replace the entire hose.
- Use only Graco approved hoses. Do not remove any spring guard that is used to help protect the hose from rupture caused by kinks or bends near the couplings.

FIRE OR EXPLOSION HAZARD

Improper grounding, poor air ventilation, open flames, or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- Ground the equipment and all other electrically conductive objects in the dispense area. See **Ground the System** on page 4.
- Keep the dispense area free of debris, including solvent, rags, and gasoline.
- If there is any static sparking while using the equipment, **stop dispensing immediately**. Identify and correct the problem.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being dispensed.
- Extinguish all open flames or pilot lights in the dispense area.
- Do not smoke in the dispense area.
- Do not operate a gasoline engine in the dispense area.
- Do not turn on or off any light switch in the dispense area while dispensing or while operating if fumes are present.

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.

Installation

Ground The System

Ground the system as instructed here and in the individual component manuals.

⚠ WARNING

FIRE AND EXPLOSION HAZARD
To reduce the risk of a fire, explosion, and serious injury, proper electrical grounding of every part of your system is essential. Read the warning section, **FIRE AND EXPLOSION HAZARD**, on page 3 and follow the grounding instructions below.

The following grounding instructions are minimum requirements for a basic dispensing system. Your system may include other equipment or objects which must be grounded. Check your local electrical code for detailed grounding instructions for your area and type of equipment. Your system must be connected to a true earth ground.

1. *Pump:* connect a ground wire and clamp to a true earth ground as shown in separate pump manual.
2. *Fluid and air hoses:* use only electrically conductive hoses.
3. *Flow gun:* ground through the connection of a properly grounded fluid hose or a grounding cable.
4. *Air compressor:* ground according to the manufacturer's recommendations.
5. *Fluid supply container:* ground according to local code.
6. *Flammable liquids in the dispensing area:* must be kept in approved, grounded containers. Do not store more than the quantity needed for one shift.
7. *Solvent pails used when flushing:* ground according to local code.

Installation

NOTE: Read this manual thoroughly before installing the automatic flow gun.

The flow gun has an untapped hole for mounting, making it ideal for use in manual applications and high production operations. Material can be supplied to the automatic flow gun by any standard Graco pump.

1. Inspect the flow gun for shipping damage. If damage is found, notify the carrier immediately.

NOTE: For C27151 only – Remove collar and install 32 series nozzle (not included).

2. Connect 1/8 npt cylinder ports as follows:
   - Connect the normally-off cylinder port of the four-way valve to the 1/8 npt air inlet, located on the bottom of the gun body.
   - Connect the other cylinder port to the 1/8 npt air inlet, located in the cylinder cap.

NOTE: For C27151 only – Using a three-way valve and actuator, connect the normally off port to the 1/8 npt air inlet in the gun body.

3. Supply the actuator valve with filtered and oiled air at 80 psi (552 kPa, 5.5 bar) minimum.
4. Remove the nozzle and actuator device to check that the needle protrudes from the seal when the gun is actuated. Then reinstall the parts.
5. Connect the fluid supply hose to the 1/4 npt fluid inlet, located in the top of the gun body.
6. With the actuator depressed, gradually apply fluid pressure until the desired flow rate is attained and all air is purged from the fluid hose and supply system.
7. Mount the gun on a suitable bracket. Adjust the nozzle height.

⚠ WARNING

COMPONENT RUPTURE HAZARD
To reduce the risk of component rupture, which could cause serious injury, including injection, do not exceed the gun's Maximum Fluid Working Pressure of 2400 psi (17 MPa, 165 bar).

Operation

Pressure Relief Procedure

⚠ WARNING

INJECTION HAZARD
The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause a 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 dispensing,
- check or service any of the system equipment,
- or install or clean the nozzle.

1. Shut off the fluid supply to the flow gun.
2. Place a waste container beneath the nozzle to catch the drainage.
3. Actuate the flow gun. Wait until the fluid stops flowing from the hose and gun.
4. Shut off power to the fluid supply system.

If you suspect that the nozzle or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, very slowly loosen the nozzle or hose end coupling to relieve pressure gradually, then loosen completely. Now clear the nozzle or hose.

Troubleshooting

The following table contains troubleshooting information.

Problem	Cause(s)	Solution(s)
Gun fails to dispense or shut off when actuator is tripped or released.	Material lodged in nozzle.	Follow the **Pressure Relief Procedure** (above). Clear nozzle of blockage.
	Fluid supply, hose, passages clogged.	Check fluid supply settings, hoses, etc. for proper material supply.
	At initial set up, actuating hoses are reversed.	Set up actuating hoses correctly by reversing hoses.
	Malfunction at actuator and four-way valve.	Check actuator and four-way valve for proper function.
	Air supply inadequate; material supply depleted.	Check air supply and material supply.
Gun continues to fail when actuator is tripped or released.	Seals and packings are worn.	Rebuild gun as necessary.

Service

Automatic Flow Gun Disassembly

This procedure describes how to disassemble the automatic flow gun. Refer to the **Parts** information on the applicable pages while performing the disassembly procedure.

Model	Page
C27130	9
C27134	10
C27132	10
C27151	11

NOTE: Models C27130 and C27134 are shown in Fig. 1. The service procedure is basically the same for all flow gun models, except where differences are noted.

To disassemble the flow gun, follow this procedure:

1. Follow the **Pressure Relief Procedure** on page 5 to relieve the pressure and purge material from the gun.

⚠ WARNING

To reduce the risk of serious injury, whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5. Also, wear eye protection, gloves and protective clothing when operating or servicing this flow gun.

2. Shut off fluid and air supply lines to the gun.
3. Disconnect the fluid and air supply lines from the gun.
4. While holding the gun body (16) stationary, remove the following parts from the gun body. See Fig. 1.

   Model C27151: Remove the collar (18) and valve seat (19). Remove the adjustment screw (1), nut (2), and end cap (10).

   All other models:

   a. Remove the collar (18), nozzle (19), and washer (9).

   b. Remove the cylinder cap (10) with the fiber washer (1).

5. From the nozzle end of the gun, tap the needle (17) lightly with a soft rod or dowel until the piston (11) is exposed at the rear of the gun body (16).
6. Pull the piston (11) and needle (17) from the gun body (16). **Model C27132:** Remove the spring (20).

   Disassemble the piston and needle as follows:

   Model C27151: Remove the spring (4). Pull the piston (11) and needle (17) from the gun body (16). Remove the cup (12) from the piston (11). Remove the piston (11) from the needle (17).

   All other models:

   a. Remove the lock nut (2), washer (3), and piston packing (4) from the needle (17).

   b. Remove the quad ring (12) from the piston (11).

   c. Remove the piston (11) from the needle (17).

7. Remove the internal parts from the gun body (16) as follows:

   Model C27151: Follow steps a–d below. Skip step e.

   All other models:

   a. Using a deep well socket wrench, remove the packing nut (5). Remove the o-ring (7) from the packing nut.

   b. Using an o-ring pick, remove the packing washer (15) from the gun.

   c. Using an o-ring pick, remove the two seals (13) from inside the packing nut (5). Remove the o-rings (14) from the seals.

   d. Using an o-ring pick, remove the o-ring (6) from the o-ring groove in the packing nut (5).

   e. From the cylinder cap end of the gun, tap the seal (8) in the nozzle end of the gun body (16) lightly with a soft rod or dowel.

C27130 shown

1. 1/8 npt air inlet *(to open valve and start dispensing)*
2. 1/8 npt air inlet *(to close valve)*
3. 1/4 npt fluid inlet
4. Note the position of the washer (9)
5. 1/4 in. (6.4 mm) ID orifice, 2 in. (50.8 mm) long
6. 9/32 in. (7.1 mm) dia.

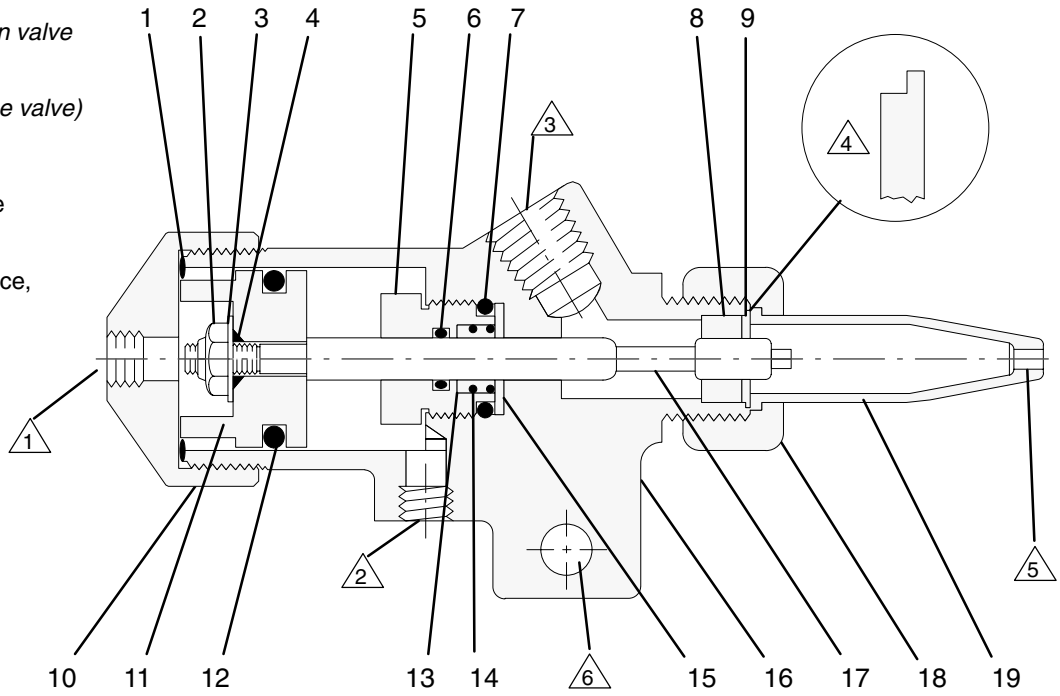


Fig. 1

Automatic Flow Gun Reassembly

This procedure describes how to reassemble the automatic flow gun. Refer to the **Parts** information on the applicable pages while performing the reassembly procedure.

NOTE: For the best results, use all the parts in the repair kit.

Model		Repair Kit	Pages
New	Old		
C27130	12060-A	C27131	9 and 12
C27134	12060-AV	C27133	10 and 12
C27132	12060-AS	C27133	10 and 12
C27151	12062	None	11

Clean all the parts thoroughly before reassembling. Check them carefully for damage or wear, replacing parts as needed.

Prior to installation, lubricate all seals and o-rings with PARKER-O-LUBE™ or an equivalent lubricant. Check with the material supplier for a compatible lubricant.

To reassemble the flow gun, perform the following procedure:

1. Install the internal parts in the gun body (16) as follows:

   Model C27151: Follow steps b–f below. Skip step a.

   All other models:

   a. Tap the seal (8) into place in the gun body (16) lightly with a soft rod or dowel. See Fig. 1.

   b. Install the o-ring (6) in the groove inside the packing nut (5).

   c. Put the o-rings (14) on the seals (13). Insert the seals into the recessed hole in the packing nut (5).

   d. Insert the packing washer (15) in the gun.

   e. Install o-ring (7) in the groove at the end of packing nut (5).

   f. Using a deep well socket wrench, install the packing nut (5) in the gun.

2. Reassemble the needle and piston as follows:

   Model C27151: Install the cup (12) on the piston (11). Connect the piston (11) to the needle (17).

   All other models:

   a. Install the quad ring (12) on the piston (11).

   b. Connect the piston (11) to the needle (17), using the piston packing (4), washer (3), and lock nut (2).

3. **Model C27132:** Install the spring (20).

4. Insert the needle (17) and piston (11) into the gun body (16).

5. **Model C27151:** Install the spring (4).

6. While holding the gun body (16) stationary, fasten the following parts onto the gun body.

   Model C27151: Install the end cap (10), nut (2), and adjustment screw (1) onto the gun body. Install the valve seat (19) and collar (18).

   All other models:

   a. Install the fiber washer (1) and cylinder cap (10) onto the gun body.

   b. Install the washer (9), nozzle (19), and collar (18), onto the gun body. Do not over tighten the collar.

7. Reconnect the flow gun to the material and air supply lines.

8. Turn on the material and air supply to the fluid supply system. Check for leakage.

9. Return the automatic flow gun to the normal operating condition.

Parts

Model C27130 *(See Fig. 2)*
Double Air Operated with Ethylene Propylene O-rings

Ref No.	Part No.	Description	Qty.
01 ✓	C20034	Washer, fiber	1
02	107110	Nut lock	1
03	C19197	Washer	1
04 ✓	114866	O–ring, packing	1
05	C02008	Nut, packing	1
06 ✓	112243	O-ring, ethylene propylene	1
07 ✓	C20156	O-ring, ethylene propylene	1
08 ✓	C02015	Seal	1
09	C27141	Washer	1
10	C27140	Cylinder cap	1
11	C02006	Piston	1
12 ✓	C02033	Quad, ring	1
13 ✓	C02013	Seal	2
14 ✓	C20084	O-ring, ethylene propylene	2
15	C02011	Packing washer	1
16	C27136	Body	1
17	C02007	Needle	1
18	C00004	Collar	1
19	C00008	Nozzle	1

✓ *This part is included in Repair Kit C27131, which may be purchased separately. See page 12.*

△1 1/8 npt air inlet *(to open valve and start dispensing)*

△2 1/8 npt air inlet *(to close valve)*

△3 1/4 npt fluid inlet

△4 Note the position of the washer (9)

△5 1/4 in. (6.4 mm) ID orifice, 2 in. (50.8 mm) long

△6 9/32 in. (7.1 mm) dia.

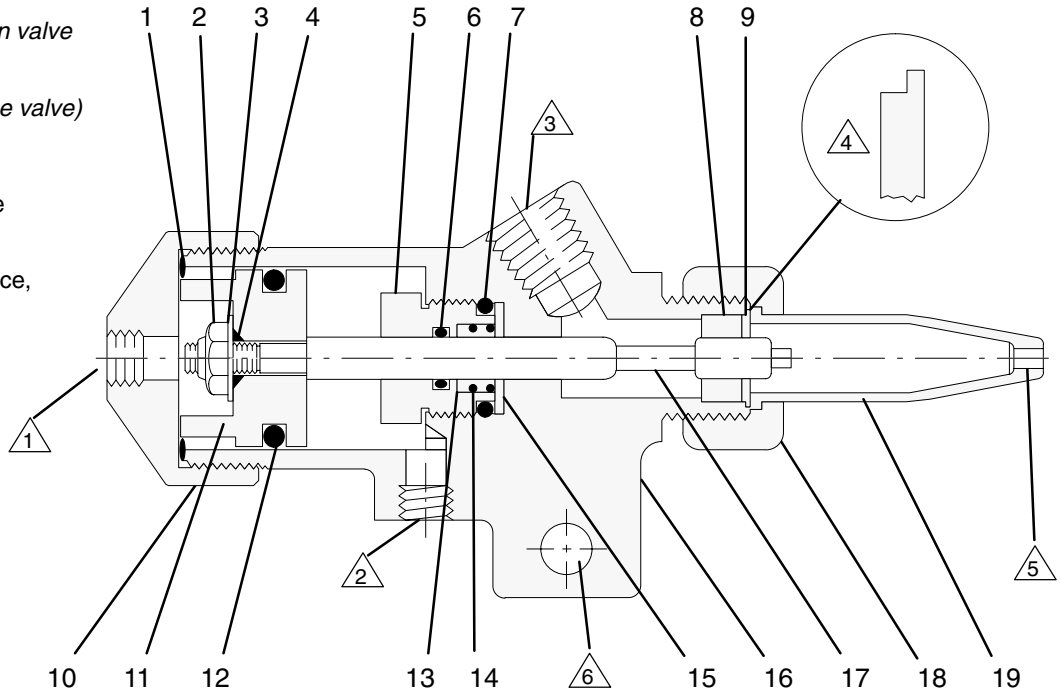


Fig. 2

Parts

Model C27134 ***(See Fig. 3)***
Double Air Operated with Viton® O-rings
Model C27132 ***(See Fig. 3)***
Double Air with Spring Return Assist and Viton® O-rings

Ref No.	Part No.	Description	Qty.
01 ✓	C20034	Washer, fiber	1
02	C02017	Nut lock #10-32	1
03	C19197	Washer	1
04 ✓	114866	O–ring, packing	1
05	C02009	Nut, packing	1
06 ✓	103337	O-ring, Viton®	1
07 ✓	115119	O-ring, Viton®	1
08 ✓	C02015	Seal	1
09	C27141	Washer	1
10	C27140	Cylinder cap	1
11	C02006	Piston	1
12 ✓	C02033	Quad, ring	1
13 ✓	C02013	Seal	2
14 ✓	111710	O-ring, Viton®	2
15	C02011	Packing washer	1
16	C27136	Body	1
17	C02007	Needle	1
18	C00004	Collar	1
19	C08001	Nozzle	1
20*	C02005	Spring	1
21*	C08002	Nozzle nut	1

✓ *This part is included in Repair Kit C27133, which may be purchased separately. See page 12.*

* *C27132 only.*

△1 1/8 npt air inlet *(to open valve and start dispensing)*

△2 1/8 npt air inlet *(to close valve)*

△3 1/4 npt fluid inlet

△4 Note the position of the washer (9)

△5 9/32 in. (7.1 mm) dia.

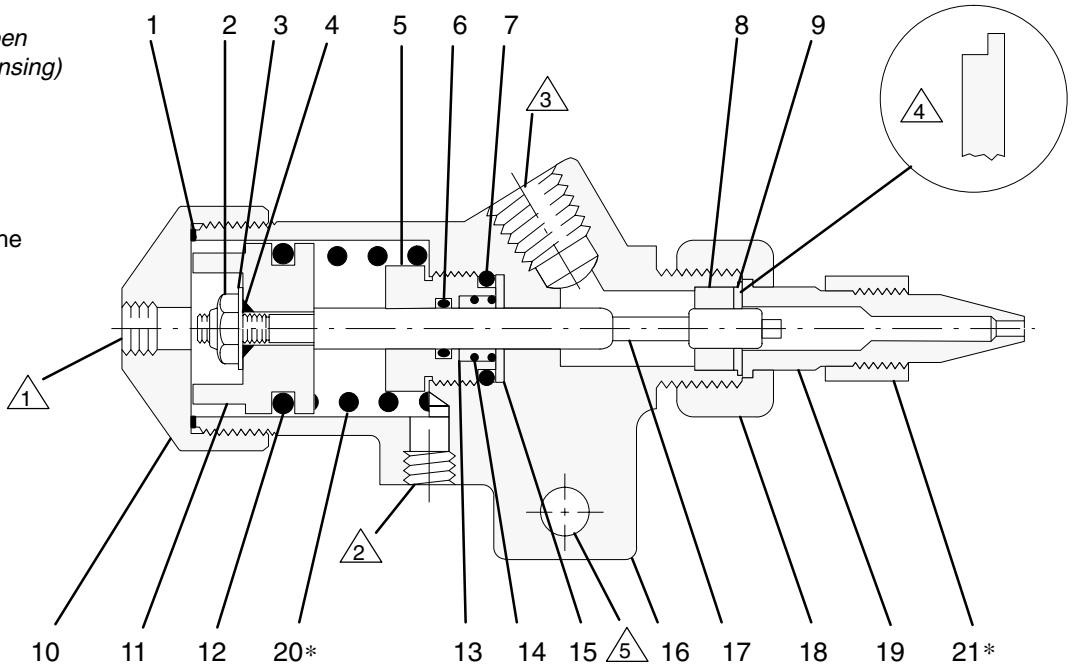
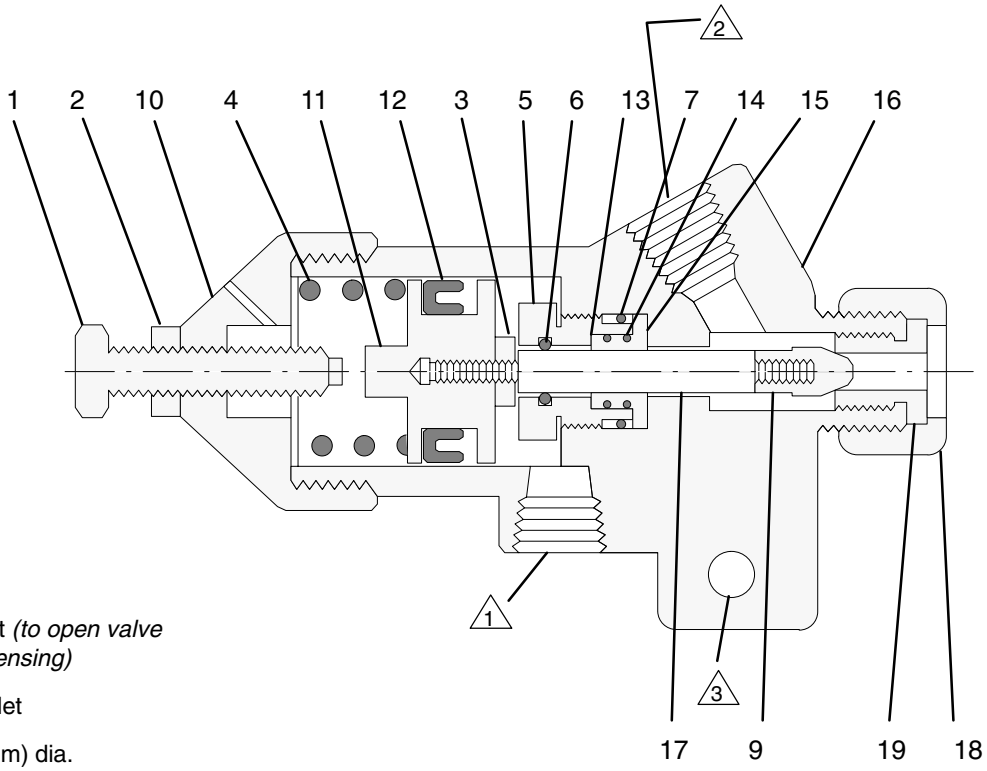


Fig. 3 8101A

Parts

Model C27151 *(See Fig. 4)*
Air Attached with Spring Return and Ethylene Propylene O-rings

Ref No.	Part No.	Description	Qty.	Ref No.	Part No.	Description	Qty.
01	C20014	Adjustment screw	1	11	C02001	Piston	1
02	C19175	Nut	1	12	C02003	Cup	1
04	C02004	Spring	1	13	C02013	Seal	2
03	C19286	Jam nut	1	14	C20084	O-ring, ethylene propylene	2
05	C02008	Packing nut	1	15	C02011	Support washer	1
06	112243	O-ring, ethylene propylene	1	16	C27147	Body	1
07	C20156	O-ring, ethylene propylene	1	17	C27153	Needle	1
09	C02018	Valve	1	18	C00004	Collar	1
10	C02000	End cap	1	19	C00025	Valve seat	1



1 1/8 npt air inlet *(to open valve and start dispensing)*

2 1/4 npt fluid inlet

3 9/32 in. (7.1 mm) dia.

8008A

Fig. 4

Repair Kits

Repair Kit C27131

Use repair kit C27131 for Models C27130 and C27151.

NOTE: Approximate repair kit interval: 6 months.

Quantity	Part Number	Description
1	C20034	Fibre washer
1	114866	O–ring
1	112243	O-ring, Ethylene propylene
1	C20156	O-ring, Ethylene propylene
1	C02015	Seal
1	C02033	Quad ring
2	C02013	Seal
2	C20084	O-ring, Ethylene propylene

Repair Kit C27133

Use repair kit C27133 for Models C27132 and C27134.

NOTE: Approximate repair kit interval: 6 months.

Quantity	Part Number	Description
1	C20034	Fibre washer
1	114866	Piston packing
1	103337	O-ring, Viton®
1	115719	O-ring, Viton®
1	C02015	Seal
1	C02033	Quad ring
2	C02013	Seal
2	111710	O-ring, Viton®

Technical Data

Models C27130 and C27151

Category	Data
Material inlet connection	1/4 in. npt(m)
Material outlet connection	1/8 in. npt(f)
Air connection	1/8 in. npt(m)
Maximum air inlet pressure	100 psi (0.7 MPa, 7 bar)
Maximum fluid working pressure	2400 psi (17 MPa, 165 bar)
Wetted parts	Aluminum, Ethylene propylene
Weight	0.73 lb (0.33 kg)

Models C27132 and C27134

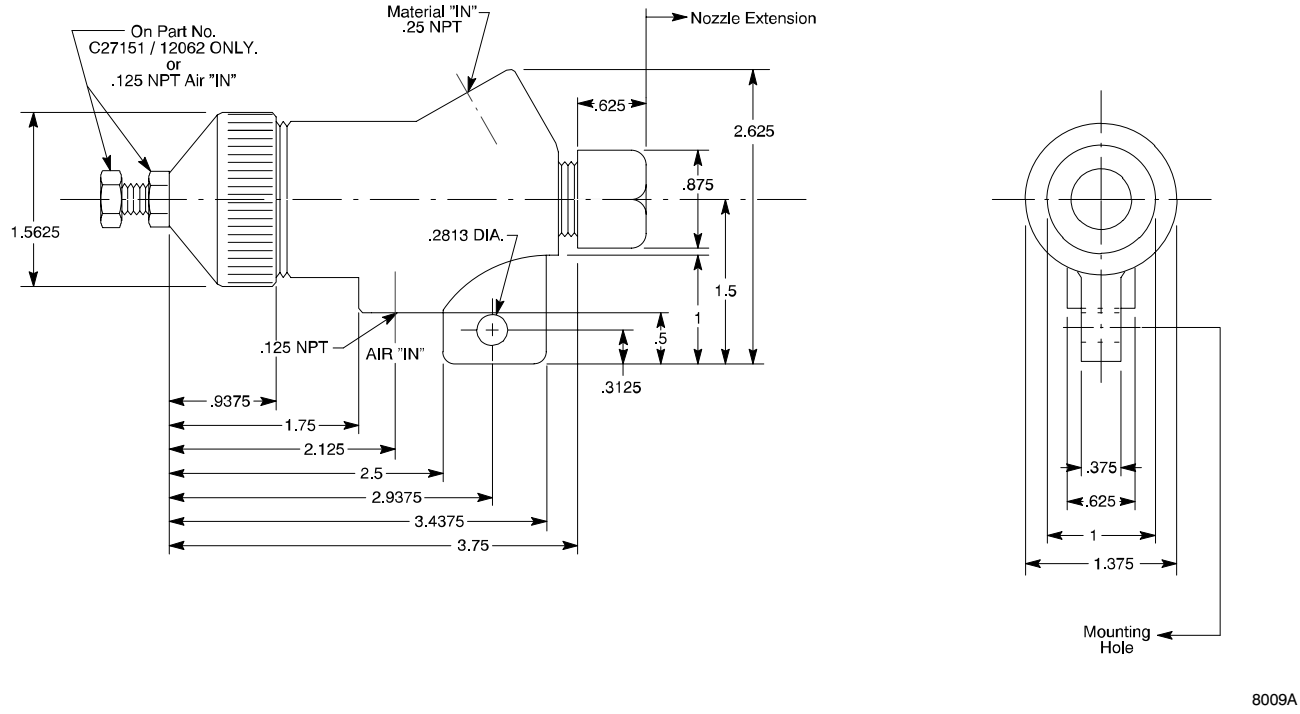
Category	Data
Material inlet connection	1/4 in. npt(m)
Material outlet connection	1/8 in. npt(f)
Air connection	1/8 in. npt(m)
Maximum air inlet pressure	100 psi (0.7 MPa, 7 bar)
Maximum fluid working pressure	2400 psi (17 MPa, 165 bar)
Wetted parts	Aluminum, Viton®
Weight	0.73 lb (0.33 kg)

Mounting Dimensions

Use the drawing below for mounting purposes only.

Model	
New	**Old**
C27130	12060-A
C27134	12060-AV
C27132	12060-AS
C27151	12062

NOTE: Some variance in the location of the mounting hole is possible; verify positions and diameters.



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 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.

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Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you:

1–800–328–0211 Toll Free
612–623–6921
612–378–3505 Fax

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