



INSTRUCTIONS

This manual contains important warnings and information.
READ AND KEEP FOR REFERENCE.

First choice when
quality counts.™

PrecisionFlo™ Metering Valve

3500 psi (24 MPa, 240 bar) Maximum Working Fluid Pressure

For use when dispensing fluids that meet at least one of the following conditions for non-flammability:

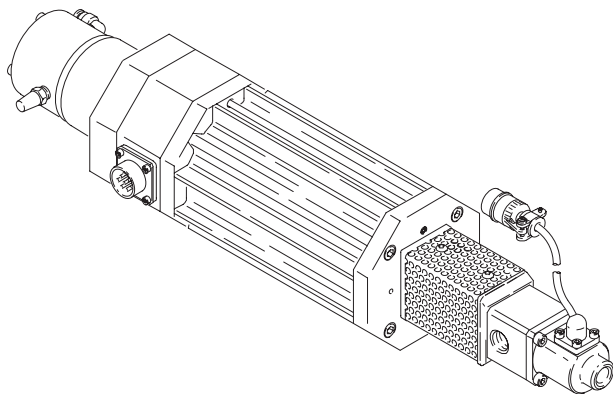
- The fluid has a flash point above 140°F (60°C) and a maximum organic solvent concentration of 20%, by weight, per ASTM Standard D93.
- The fluid does not sustain burning when tested per ASTM Standard D4206 Sustained Burn Test.

Part No. 237791

PrecisionFlo Metering Valve for PVC application

Part No. 918518

PrecisionFlo Metering Valve for HemFlange application



05477B

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Symbols

Warning Symbol



WARNING

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

Caution Symbol



CAUTION

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

! WARNING



INJECTION HAZARD

Spray from the dispensing device, 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 medical attention.**
- Do not point the dispensing device at anyone or at any part of the body.
- Do not put hand or fingers over the front of the dispensing device.
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** on page 5 whenever you: are instructed to relieve pressure; stop dispensing; clean, check, or service the equipment; or install or clean a spray tip or nozzle.
- Tighten all the fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.



FIRE, EXPLOSION, AND ELECTRIC SHOCK HAZARD

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

- The system must only be installed and serviced by a qualified electrician.
- Ground the equipment and the object being sprayed. The Metering Valve is grounded through proper connection of the two electrical cables.
- Do not install the Metering Valve in a hazardous area, as defined in Article 500 of the National Electrical Code (USA).
- Keep the dispensing area free of debris, including solvent, rags, and gasoline.
- Do not smoke in the dispensing area.
- If there is any static sparking while using the equipment, **stop dispensing immediately**. Identify and correct the problem.
- Disconnect the two electrical cables from the Metering Valve before servicing the valve.

⚠ WARNING



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, 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.
- Only use the PrecisionFlo Metering Valve with the PrecisionFlo Control.
- 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 disassemble the Metering Valve motor. The motor contains powerful magnets, which could attract metal objects and create a hazardous condition if the motor end plates are removed. Contact your Graco distributor for motor service.
- Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a **3500 psi (24 MPa, 240 bar) maximum working pressure**.
- Route the hoses away from the traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 180°F (82°C) or below -40°F (-40°C).
- Do not use the hoses to pull the equipment.
- Use fluids that are compatible with the equipment wetted parts. See the **Technical Data** section of all the equipment manuals. Read the fluid manufacturer's warnings.
- Comply with all applicable local, state and national fire, electrical and other safety regulations.
- Do not touch the metal heat sink when the surface is hot.
- Do not cover the Metering Valve; the motor needs air ventilation.



TOXIC FLUID HAZARD

Hazardous fluids or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, swallowed, or inhaled.

- Know the specific hazards of the fluid you are using. Read the fluid manufacturer's warnings.
- Provide fresh air ventilation to avoid the buildup of vapors from the fluid being dispensed.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Wear the appropriate protective clothing, gloves, eyewear, and respirator.



MOVING PARTS HAZARD

Moving parts, such as the fluid needle, can pinch fingers. Parts of the Metering Valve are spring-loaded and parts may fly out or spring apart when the valve is disassembled and cause serious injury, including eye injuries.

- Do not operate the equipment with the guard removed.
- Keep clear of any moving parts when starting or operating the equipment.
- Wear eye protection during all service procedures.

Installation

⚠ WARNING



ELECTRIC SHOCK HAZARD

Installing and servicing this equipment requires access to parts which could cause an electric shock or other serious injury if the work is not performed properly. Do not install or service this equipment unless you are trained and qualified.

NOTES:

- Have the system binder (a collection of manuals and diagrams in a three-ring binder, supplied by Graco) available during installation.
 - Reference numbers and letters in parentheses in the text refer to the numbers and letters in the illustrations.
 - Be sure all accessories are adequately sized and pressure-rated to meet the system's requirements.
 - Only use the PrecisionFlo Metering Valve with the PrecisionFlo Control.
1. Mount the Metering Valve. See the mounting hole dimensions in Fig. 1.
 2. Connect the fluid supply line to the 3/8–18 npt fluid inlet (A). See Fig. 2.
 3. Connect a fluid line between the 3/8–18 npt fluid outlet (B) and the dispensing device.
 4. Connect the electrical cable (C) to the Metering Valve connector (E).
 5. Connect a 0.25 inch (6.35 mm) O.D. air line between the closer air inlet (G) and the closer actuating air valve.

⚠ WARNING



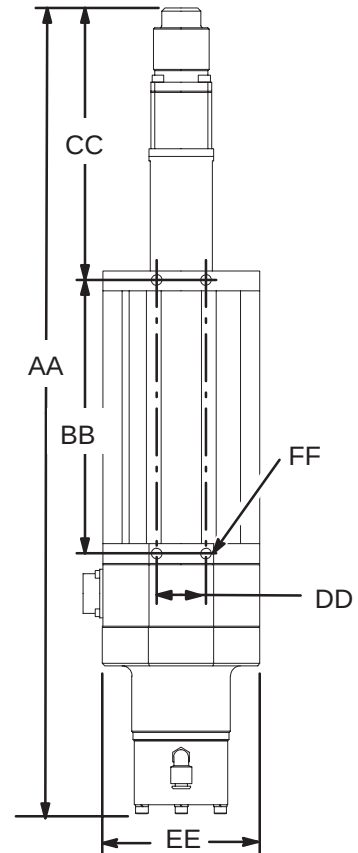
FIRE, EXPLOSION, AND ELECTRIC SHOCK HAZARD

To reduce the risk of fire, explosion, or electric shock the Metering Valve must be grounded through proper connection of the two electrical cables.



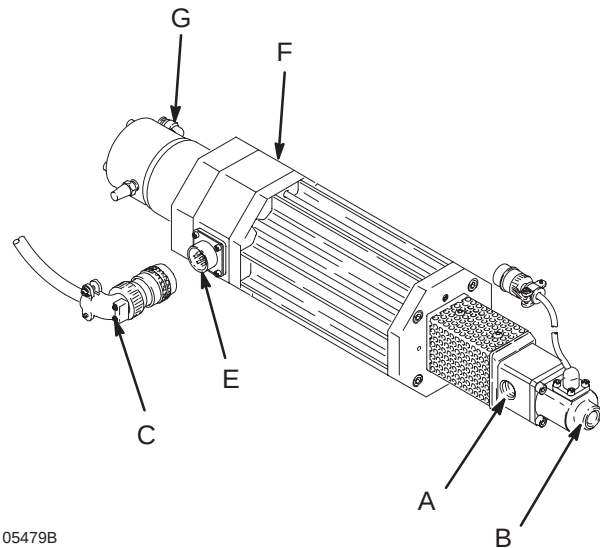
A qualified electrician must complete all grounding and wiring connections.

A	A= 20.42 in. (519 mm)
B	B= 6.913 in. (175.6 mm)
C	C= 6.9 in. (175.3 mm)
D	D= 1.25 in. (31.8 mm)
E	E= 4 in. (102 mm)
FF	FF = 4 x 1/4–20 in.



05478B

Fig. 1



05479B

Fig. 2

Operation and Maintenance

Pressure Relief Procedure

WARNING



INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or 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 dispensing
- Check or service any of the system equipment
- Install or clean a spray tip or nozzle

1. Shut off the fluid supply to the Metering Valve.
2. Actuate the Metering Valve and the dispensing device until the fluid stops flowing from them.

NOTE: Follow the manual purge procedure in the PrecisionFlo system manual to actuate the metering valve and dispensing device.

3. Relieve the system pressure as instructed in the separate instruction manuals.

Operating the Metering Valve

The Metering Valve is operated through the PrecisionFlo Control. Follow the PrecisionFlo Control instructions to operate the Metering Valve.

WARNING



MOVING PARTS HAZARD

Moving parts, such as the fluid needle, can pinch fingers. Do not operate the equipment with the guard (41) removed.

Maintenance

Visually check the following items periodically:

- Check the fluid needle and seat area for leakage and wear.
- Check the fluid needle shaft for leakage and wear.
- Make sure the fluid connections are tight and are not leaking.
- Check the cables for damage and make sure they are securely connected.

Clean the Fluid Needle and Seat Assembly

If the fluid flow from the dispensing device appears to be restricted, disassemble the fluid needle and seat as instructed on page 8 and clean the parts. Use a non-flammable cleaning fluid that is recommended by your material supplier.

Service

Troubleshooting the Metering Valve

WARNING

EQUIPMENT MISUSE HAZARD

Do not disassemble the Metering Valve motor. The motor contains powerful magnets, which could attract metal objects and create a hazardous condition if the motor end plates are removed. Contact your Graco distributor for motor service.

WARNING



MOVING PARTS HAZARD

Parts of the Metering Valve are spring-loaded and parts may fly out or spring apart when the valve is disassembled and cause serious injury, including eye injuries. Wear eye protection during all service procedures. Follow the instructions, paying special attention when you see the *Moving Parts Hazard* symbol in this warning.

1. If the fluid continues to flow after the dispense cycle has stopped, check for the following problems:
 - a. The fluid needle may need adjustment. Follow the procedure **Adjusting the Fluid Needle**, at right.
 - b. The fluid needle may be obstructed or damaged. Service the fluid needle as instructed on page 8.
 - c. The seat or seals may be worn or damaged. Service the fluid needle as instructed on page 8.

- d. Check that the PrecisionFlo Control on/off delay is set properly. See the chart for the applicable PrecisionFlo Control Assembly manual.

Form	P/N	Title
310531	918463 *	<i>PrecisionFlo™ Control Assembly</i>
	918644 ‡	
310558	918640 §	<i>PrecisionFlo™ Plus Control Assembly</i>

* Hand pendant

‡ Door Pendant

§ Single Application

2. If the pressure sensor needs replacement, follow the procedure on page 12.
3. Refer to the wiring diagram in Fig. 9, page 13, for cable wire connections.

Adjusting the Fluid Needle

WARNING



INJECTION HAZARD

To reduce the risk of a serious injury, including an injection injury, follow the **Pressure Relief Procedure** on page 5 before checking or servicing the equipment and whenever you are instructed to relieve the pressure.

Needle travel is adjusted to ensure the needle closes against the seat when the motor moves to its forward position. Follow the procedure below.

1. Relieve the pressure in the system.
2. Disconnect the electrical cable (C) from the Metering Valve connector (E). See Fig. 2, page 4.
3. Disconnect the fluid lines from the metering valve fluid inlet (A) and outlet (B). See Fig. 3, page 7.
4. Disconnect the closer air line from the closer air inlet (G). See Fig. 2.
5. Unmount the Metering Valve and take it to a clean work area with a compressed air supply.

Continued on the next page.

Service

Adjusting the Fluid Needle (continued)

6. Connect a compressed air supply to the closer air inlet (G). Actuate the cylinder with about 50 psi (3500 kPa, 3.5 bar) air pressure to retract the closer rod and keep the closer spring compressed.

WARNING



MOVING PARTS HAZARD

The valve air cylinder is spring-loaded and parts may fly out or spring apart when the valve is disassembled and cause serious injury. During service procedures that will expose internal meter parts, wear protective eyewear and keep the closer spring compressed, as instructed in step 6.

7. Disconnect the pressure sensor cable (K) from the connector (L). See Fig. 3.
8. Remove the guard (41).
9. Make sure the retainer nut (39) is tight.
10. Loosen the lock nut (38).
11. Insert a 1/8 hex allen wrench, or other suitable tool, through the hole in the needle adjuster (37), and turn the needle adjuster into the motor shaft (X).
12. Move the motor shaft (X) fully forward.
13. While holding the motor shaft (X) extended, turn the needle adjuster (37) out until the needle (33) bottoms against the seat (31). Refer to Fig. 4, page 9. Then screw the adjuster out an additional 1/2 to 3/4 turn, which will force the motor shaft back away from its full forward position.
14. Tighten the lock nut (38) against the motor shaft (X) to set the adjustment.
15. Check that the motor shaft (X) travel distance is at least 0.26 inches (6.6 mm).
16. Slowly relieve the air pressure from the Metering Valve to release the closer.

CAUTION

The motor shaft is forced to the full forward position by the closer. Slowly relieve the air pressure to prevent excessive impact of the shaft, which could damage the equipment.

17. Install the guard (41).
18. Connect the pressure sensor cable (K) to the connector (not shown).
19. Mount the Metering Valve.
20. Connect the fluid lines to the metering valve fluid inlet (A) and outlet (B). See Fig. 3.
21. Connect the electrical cable (C) to the Metering Valve connector (E). See Fig. 2, page 4.
22. Connect the closer air line to the closer air inlet (G).
23. Turn on the fluid supply.
24. Re-calibrate the PrecisionFlo system. See the PrecisionFlo Control manual.

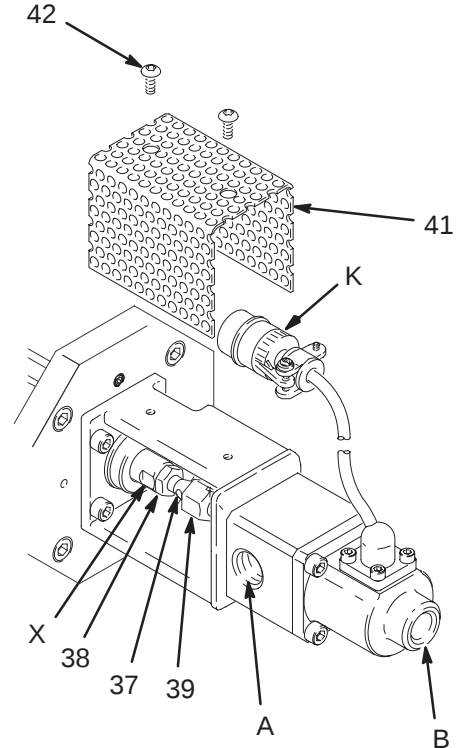


Fig. 3

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Service

Fluid Needle and Seat Assembly Service

WARNING



INJECTION HAZARD

To reduce the risk of a serious injury, including an injection injury, follow the **Pressure Relief Procedure** on page 5 before checking or servicing the equipment and whenever you are instructed to relieve the pressure.

1. Relieve the pressure in the system.
2. Disconnect the electrical cable (C) from the Metering Valve connector (E). See Fig. 2, page 4.
3. Disconnect the fluid lines from the metering valve fluid inlet (A) and outlet (B). See Fig. 4.
4. Disconnect the closer air line from the closer air inlet (G).
5. Unmount the Metering Valve and take it to a clean work area with a compressed air supply.
6. Connect a compressed air supply to the closer air inlet (G). Actuate the cylinder with about 50 psi (3500 kPa, 3.5 bar) air pressure to retract the closer rod and keep the closer spring compressed.

WARNING



MOVING PARTS HAZARD

The valve air cylinder is spring-loaded and parts may fly out or spring apart when the valve is disassembled and cause serious injury. During service procedures that will expose internal meter parts, wear protective eyewear and keep the closer spring compressed, as instructed in step 6.

7. Disconnect the pressure sensor cable (K) from the connector (L).
8. Remove the guard (41).
9. Disconnect the fluid needle (33) from the needle adjuster (37) by unscrewing the retainer nut (39).
10. Remove the screws (29), and separate the fluid section from the fluid head mount (26).

11. Unscrew the seal housing (36).
12. Separate the fluid body (27) and adapter (28).
13. Remove the seat (31) and fluid needle (33).
14. Remove the o-rings (30, 32).
15. Remove the seal (34) and bushing (35) from the fluid body (27).
16. Clean the parts in a non-flammable cleaning fluid that is recommended by your material supplier. Replace the parts as needed.

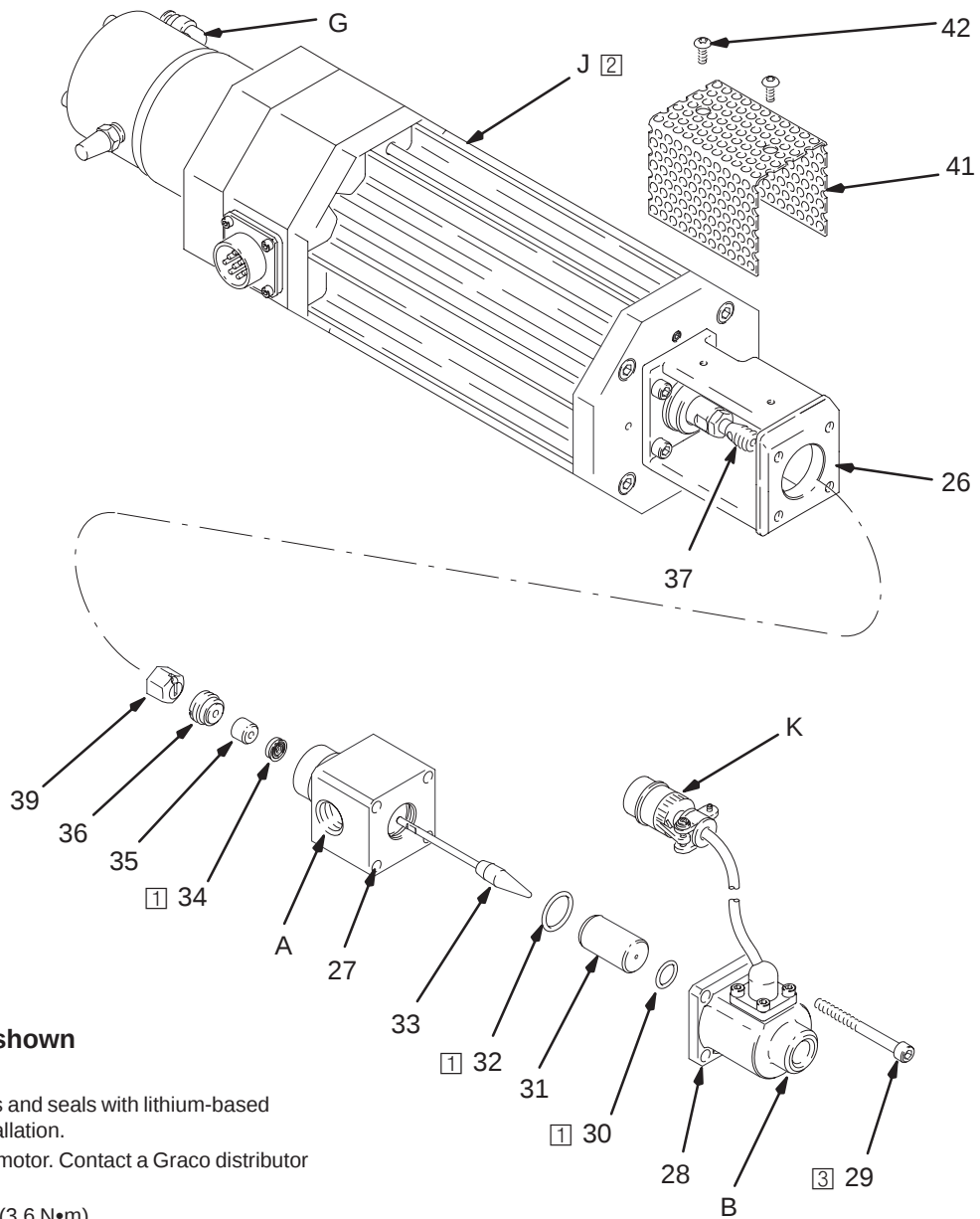
NOTE: Use lithium-based grease to lubricate o-rings and seals.

17. Lubricate the seal (34) and press the seal into the fluid body (27), with the lips of the seal facing into the fluid body.
18. Install the bushing (35) into the fluid body (27).
19. Lubricate the fluid needle (33) shaft. Turn the needle as you install the shaft through the fluid body (27), seal (34), and bushing (35).
20. Install the o-rings (30, 32) and lubricate them.
21. Press and turn the seat (31) as you install it into the fluid body (27).
22. Press the fluid body (27) and adapter (28) together and secure them with the four screws (29). Torque the screws to 32 in-lbs (3.6 N•m).
23. Install the retainer nut (39) onto the fluid needle (33). Secure the fluid needle to the needle adjuster (37) with the retainer nut. Adjust the needle as instructed on page 6.
24. Slowly relieve the air pressure from the Metering Valve to release the closer.

CAUTION

The motor shaft is forced to the full forward position by the closer. Slowly relieve the air pressure to prevent excessive impact of the shaft, which could damage the equipment.

Service



Part No. 237791 shown

- [1] Lubricate all o-rings and seals with lithium-based grease prior to installation.
- [2] Do not service the motor. Contact a Graco distributor for service.
- [3] Torque to 32 in-lbs (3.6 N•m).

05481B

Fig. 4

05481

Fluid Needle and Seat Assembly Service (continued)

25. Install the guard (41).

26. Connect the pressure sensor cable (K) to the connector (L).

27. Mount the Metering Valve.

28. Connect the fluid lines to the metering valve fluid inlet (A) and outlet (B). See Fig. 4.

29. Connect the two electrical cables (C). See Fig. 2.

30. Connect the closer air line to the closer air inlet (G).

31. Turn on the fluid supply.

32. Re-calibrate the PrecisionFlo system. See the PrecisionFlo Control manual.

Service

Closer Service

⚠ WARNING



INJECTION HAZARD

To reduce the risk of a serious injury, including an injection injury, follow the **Pressure Relief Procedure** on page 5 before checking or servicing the equipment and whenever you are instructed to relieve the pressure.

1. Relieve the pressure in the system.
2. Disconnect the electrical cable (C) from the Metering Valve connector (E). See Fig. 2, page 4.
3. Disconnect the fluid lines from the metering valve fluid inlet (A) and outlet (B).
4. Disconnect the closer air line from the closer air inlet (G). See Fig. 5.
5. Unmount the Metering Valve and take it to a clean work area with a compressed air supply.
6. Connect a compressed air supply to the closer air inlet (G). Actuate the cylinder with about 50 psi (3500 kPa, 3.5 bar) air pressure to retract the closer rod and keep the closer spring compressed.

⚠ WARNING



MOVING PARTS HAZARD

The valve air cylinder is spring-loaded and parts may fly out or spring apart when the valve is disassembled and cause serious injury. During service procedures that will expose internal meter parts, wear protective eyewear and keep the closer spring compressed, as instructed in step 6.

7. Remove the eight screws (3) from the closer assembly (2), and remove the closer assembly. See Fig. 5.
8. Slowly relieve the air pressure from the Metering Valve to release the closer.
9. Disconnect the air line from the closer air inlet (G).
10. Remove the screws (109) and lockwashers (108) from the closer cylinder (110). See Fig. 7.
11. Remove the cylinder (110) from the cover (104).

12. Remove the o-rings (105, 103) from the cover (104).
13. Insert a 1/8 inch diameter pin or hex key (S) between the spring (113) coils and into the 0.156 inch diameter hole in the cylinder rod (R). See Fig. 6.
14. Turn the spring as far as you can so as many of the spring coils as possible are under the pin or key to help reduce the spring tension on the rod extension (102).
15. Place the flat end of the closer cylinder (110) on a sturdy, horizontal, work surface.

⚠ WARNING



MOVING PARTS HAZARD

The rod extension (102) and spring cup (112) may fly apart as the rod extension is unscrewed from the cylinder rod (R), due to the pressure from the spring (113). Wear eye protection and follow the instructions in steps 16–17 to reduce the risk of serious injury from moving parts.

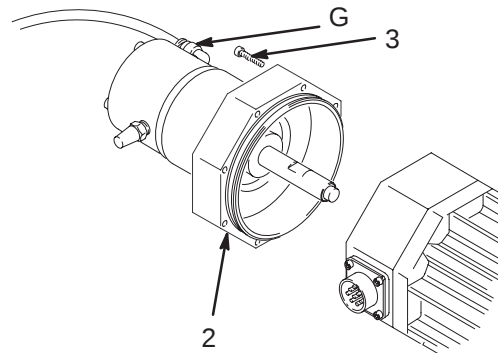


Fig. 5

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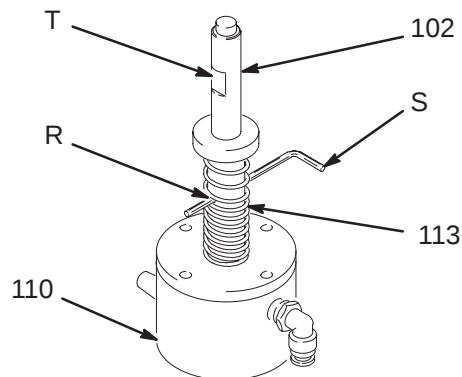


Fig. 6

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Service

Closer Service (continued)

16. Hold the pin or hex key (S) in the cylinder rod (R). Place a 3/8 inch open end wrench on the flats (T) of the rod extension (102). Turn the extension only enough to loosen the Loctite® seal.
17. Press down on the rod extension to prevent the parts from springing apart, and unscrew the extension from the cylinder rod (R).
18. Compress the spring (113) enough to withdraw the 1/8 inch diameter pin or key (S) from the cylinder rod (R).
19. Remove the spring (113), cylinder spacer (106), and o-ring (114) from the cylinder rod (R). See Fig. 7.
20. Remove the rubber bumper (101) from the rod extension (102).
21. Inspect the parts for damage and clean or replace them as needed. Lubricate the o-rings with lithium-based grease before re-installing them.
22. Place the flat end of the closer cylinder (110) on a sturdy, horizontal, work surface, with the rod (R) pointing up.
23. Install the o-ring (114), cylinder spacer (106), and spring (113) onto the cylinder rod (R).
24. Insert a 1/8 inch diameter pin or hex key between the spring coils and into the 0.156 inch diameter hole in the cylinder rod (R). See Fig. 6.
25. Turn the spring as far as you can so as many of the spring coils as possible are under the pin or key to help control the spring tension.
26. Place the spring cup (112) on the end of the spring (113).
27. Apply anaerobic sealant (Loctite® 242 or 243 or equivalent) to the threaded end of the rod extension (102).
28. Insert the threaded end of the rod extension (102) into the spring cup (112) hole. Press down on the rod extension and spring cup, and screw the rod extension into the cylinder rod (R).
29. Hold the pin or hex key in the cylinder rod (R) while tightening the rod extension (102) with a 3/8 inch open end wrench.
30. Remove the 1/8 inch diameter pin or key from the cylinder rod (R) and spring (113).
31. Install the cover o-rings (103, 105).
32. Install the closer cylinder (110) assembly into the cover (104), and secure it with the screws (109) and lockwashers (108).
33. Install the rubber bumper (101) on the end of the rod extension (102).
34. Connect a compressed air supply to the closer air inlet (G). Actuate the cylinder to retract the closer rod and keep the closer spring compressed.
35. Secure the closer assembly to the metering valve with the eight screws (3). See Fig. 5.
36. Slowly relieve the air pressure from the Metering Valve to release the closer.

CAUTION

The motor shaft is forced to the full forward position by the closer. Slowly relieve the air pressure to prevent excessive impact of the shaft, which could damage the equipment.

37. Disconnect the air line from the closer air inlet (G).

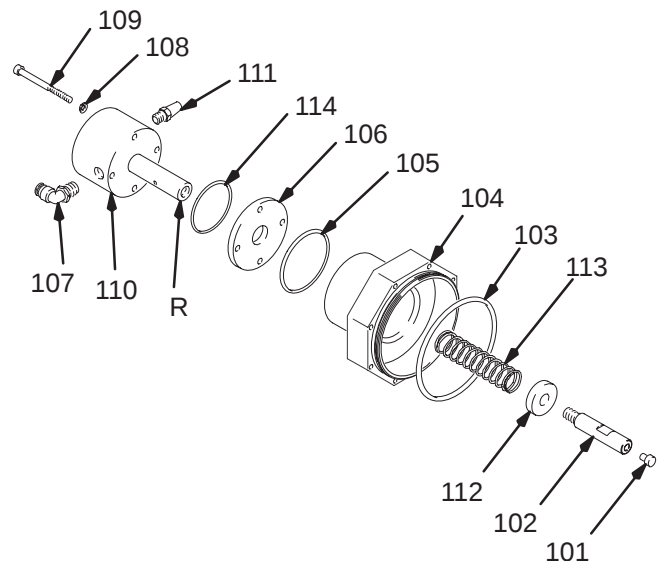


Fig. 7

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Service

Replacing the Pressure Sensor

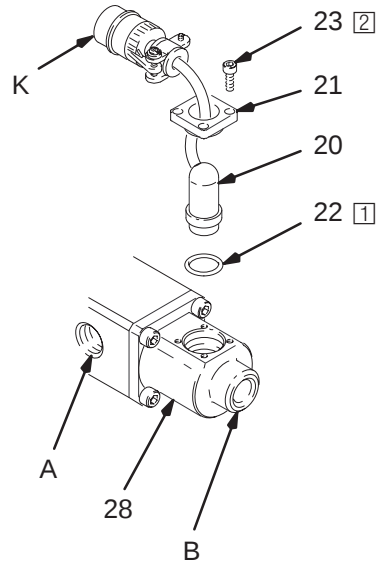
WARNING



INJECTION HAZARD

To reduce the risk of a serious injury, including an injection injury, follow the **Pressure Relief Procedure** on page 5 before checking or servicing the equipment and whenever you are instructed to relieve the pressure.

1. Relieve the pressure in the system.
2. Disconnect the electrical cable (C) from the Metering Valve connector (E). See Fig. 2, page 4.
3. Disconnect the fluid lines from the metering valve fluid inlet (A) and outlet (B). See Fig. 8.
4. Disconnect the closer air line from the closer air inlet (G). See Fig. 2.
5. Unmount the Metering Valve and take it to a clean work area.
6. Disconnect the pressure sensor cable (K).
7. Remove the four screws (23), retainer (21), pressure sensor (20) and o-ring (22). Replace the o-ring if it is damaged.
8. Install the o-ring (22) on the new pressure sensor (20).
9. Lubricate the o-ring (22) with lithium-based grease, and re-install the pressure sensor (20), retainer (21), and screws (23). Torque the screws to 16 in-lbs (1.8 N•m).
10. Connect the pressure sensor cable (K).
11. Mount the Metering Valve.
12. Connect the fluid lines to the metering valve fluid inlet (A) and outlet (B). See Fig. 8.
13. Connect the electrical cable (C) to the Metering Valve connector (E). See Fig. 2, page 4.
14. Connect the closer air line to the closer air inlet (G).
15. Turn on the fluid supply.
16. Re-calibrate the PrecisionFlo system. See the applicable PrecisionFlo Control manual.

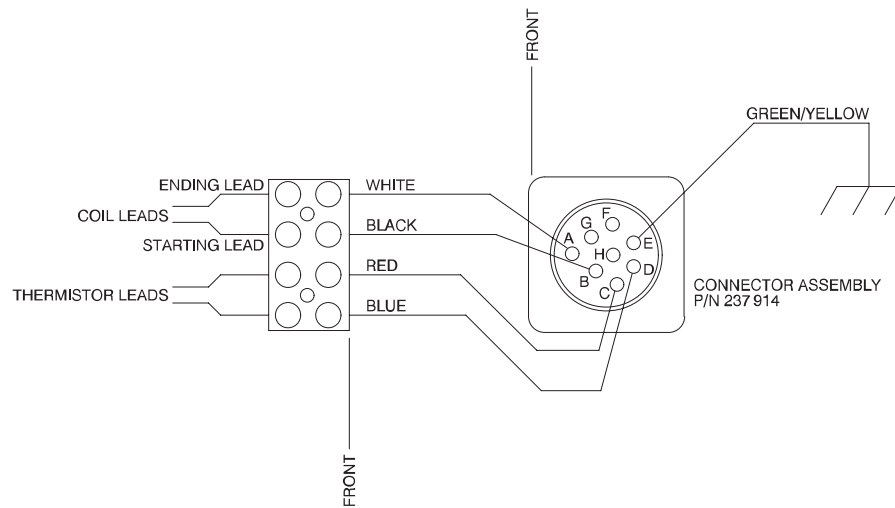


1 Lubricate all o-rings and seals with lithium-based grease prior to installation

2 Torque to 16 in-lbs (1.8 N•m).

Fig. 8

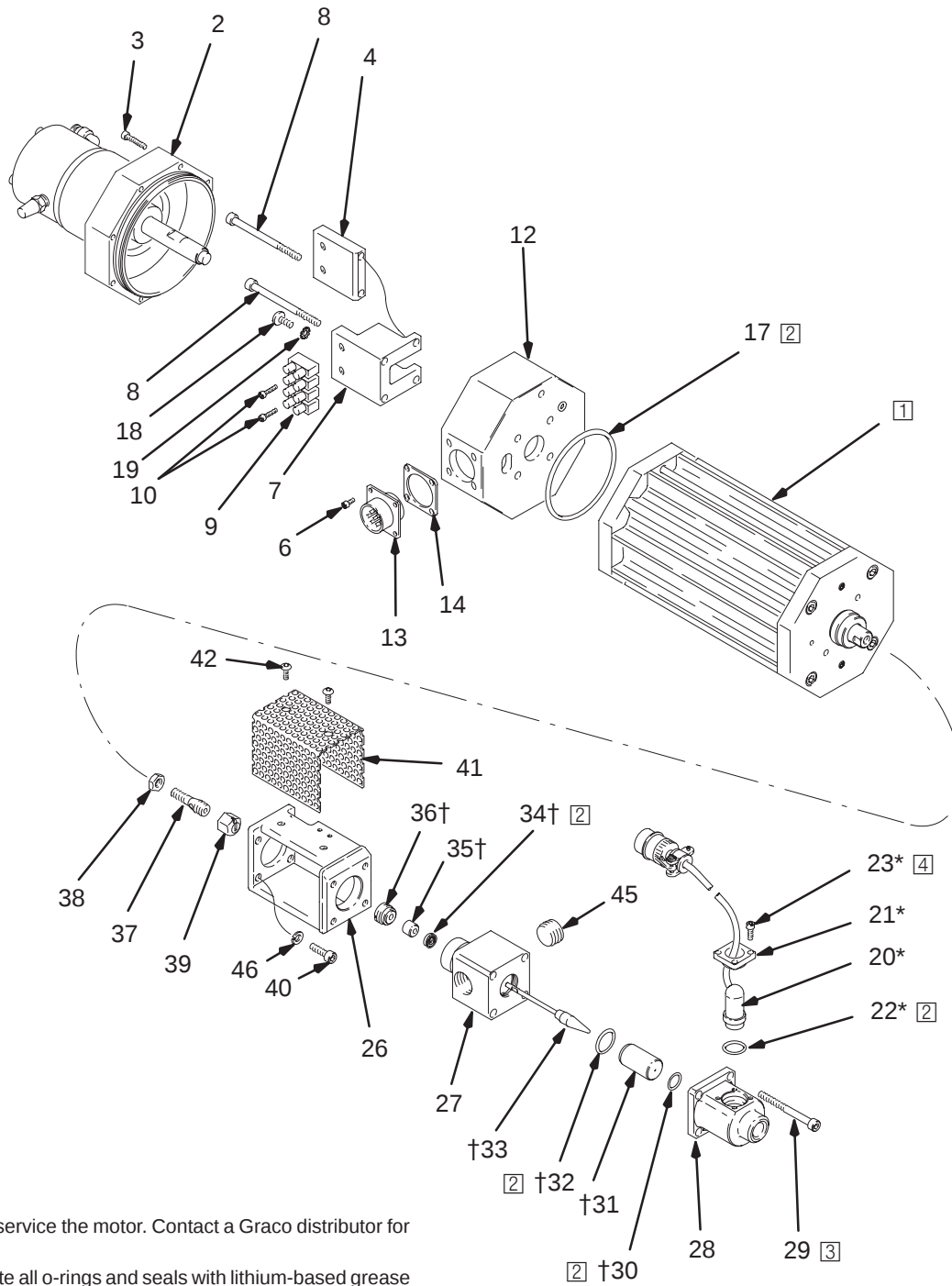
Wiring Diagram



05480

Fig. 9

Parts



- 1 Do not service the motor. Contact a Graco distributor for service.
- 2 Lubricate all o-rings and seals with lithium-based grease prior to installation.
- 3 Torque to 32 in-lbs (3.6 N•m).
- 4 Torque to 16 in-lbs (1.8 N•m).

05484B

Parts

Use Only Genuine Graco Parts and Accessories



WARNING

EQUIPMENT MISUSE HAZARD

Do not disassemble the Metering Valve motor. The motor contains powerful magnets, which could attract metal objects and create a hazardous condition if the motor end plates are removed. Contact your Graco distributor for motor service.

Part No. 237791, Metering Valve Assembly

Includes items 1–46

Ref. No.	Part No.	Description	Qty.
1	918582	MOTOR ASSY.; Includes items 2 to 19	1
2	918511	•CLOSER ASSY. metering valve, see page 17 for parts	1
3	C19962	•SCREW, cap, #6–32 x 3/4"	8
4	617745	•SUPPORT, terminal strip	1
6	C19950	•SCREW, cap, #4–40 x 3/8"	4
8	617559	•SCREW, cap, #10–32 x 2-1/4"	4
9	113199	•TERMINAL BLOCK, 4 pole	1
10	C19952	•SCREW, cap, #4–40 x 5/8"	2
12	617746	•REAR ENCLOSURE	1
13	237914	•CONNECTOR ASSY., motor	1
14	112994	•GASKET	1
17	C38200	•O-RING, buna-n, size –038	3
18	113276	•SCREW, machine, 10–32 x 1/2"	1
19	100732	•LOCK WASHER, #10	1
20*☆	918578	PRESSURE SENSOR, 3500 psi (24 MPa, 240 bar), <i>not sold separately; order Kit 918428</i>	1
21*	190518	RETAINER, pressure sensor	1
22*†	C20145	O-RING, buna-n, size –014	1
23*	102410	SCREW, cap SST #6–32 x 3/8"	4
24▲	290182	TAG, warning	1

Ref.

No.	Part No.	Description	Qty.
25	238935	FLUID HEAD ASSY.; Includes items 26 to 36	1
26	191381	•FLUID HEAD MOUNT	1
27	190516	•FLUID BODY	1
28	190517	•ADAPTER	1
29	113263	•SCREW, SHC, SST #10–32 x 2"	4
30†	C20113	•O-RING, buna-n, size –012	1
31†	113005	•SEAT, needle, carbide	1
32†	C20167	•O-RING, buna-n, size –016	1
33†	237794	•NEEDLE ASSY.	1
34†	102921	•SEAL, needle shaft, polyurethane	1
35†	190761	•BUSHING, seal backup, Teflon®	1
36†	188271	•SEAL HOUSING	1
37	190757	NEEDLE ADJUSTER	1
38	C19182	LOCK NUT, hex, 1/4"–20	1
39	190514	RETAINER NUT, needle	1
40	113003	SCREW, cap, #10–32 x 5/8"	4
41	617742	GUARD, support	1
44	114628	SCREW, #10–32 x 3/8"	2
45	C19257	PLUG, pipe SST, 3/8 npt	1
46	C19277	WASHER, lock, #10	4

* These parts are included in Pressure Sensor Kit 918428, which may be purchased separately.

† These parts are included in Repair Kit 918429, which may be purchased separately.

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

☆ Some applications may require an optional 1500 psi (10.4 MPa, 104 bar) pressure sensor, which is available in Kit 918487. Contact your Graco distributor to order the kit.

Parts

Use Only Genuine Graco Parts and Accessories

WARNING

EQUIPMENT MISUSE HAZARD

Do not disassemble the Metering Valve motor. The motor contains powerful magnets, which could attract metal objects and create a hazardous condition if the motor end plates are removed. Contact your Graco distributor for motor service.

Part No. 918518, Metering Valve Assembly

Includes items 1–46

Ref. No.	Part No.	Description	Qty.
1	918582	MOTOR ASSY.;	1
		Includes items 2 to 19	
2	918511	• CLOSER ASSY. metering valve, see page 17 for parts	1
3	C19962	• SCREW, cap, #6–32 x 3/4"	8
4	617745	• SUPPORT, terminal strip	1
6	C19950	• SCREW, cap, #4–40 x 3/8"	4
8	617559	• SCREW, cap, #10–32 x 2-1/4"	4
9	113199	• TERMINAL BLOCK, 4 pole	1
10	C19952	• SCREW, cap, #4–40 x 5/8"	2
12	617746	• REAR ENCLOSURE	1
13	237914	• CONNECTOR ASSY., motor	1
14	112994	• GASKET	1
17	C38200	• O-RING, buna-n, size –038	3
18	113276	• SCREW, machine, 10–32 x 1/2"	1
19	100732	• LOCK WASHER, #10	1
20*☆	918578	PRESSURE SENSOR, 3500 psi (24 MPa, 240 bar), <i>not sold separately; order Kit 918428</i>	1
21*	190518	RETAINER, pressure sensor	1
22*†	C20145	O-RING, buna-n, size –014	1
23*	102410	SCREW, cap SST #6–32 x 3/8"	4
24▲	290182	TAG, warning	1

Ref. No.	Part No.	Description	Qty.
25	918516	FLUID HEAD ASSY.	1
		Includes items 26 to 36	
26	191381	• FLUID HEAD MOUNT	1
27	190516	• FLUID BODY	1
28	190517	• ADAPTER	1
29	113263	• SCREW, SHC, SST #10–32 x 2"	4
30†	C20113	• O-RING, buna-n, size –012	1
31†	617524	• SEAT, needle, carbide	1
32†	C20167	• O-RING, buna-n, size –016	1
33†	918493	• NEEDLE ASSY.	1
34†	102921	• SEAL, needle shaft, polyurethane	1
35†	190761	• BUSHING, seal backup, Teflon®	1
36†	188271	• SEAL HOUSING	1
37	190757	NEEDLE ADJUSTER	1
38	101345	LOCK NUT, hex, 1/4"–20	1
39	190514	RETAINER NUT, needle	1
40	113003	SCREW, cap, #10–32 x 5/8"	4
41	617742	GUARD, support	1
44	114628	SCREW, #10–32 x 3/8"	2
45	112306	PLUG, pipe SST, 3/8 npt	1
46	C19277	WASHER, lock, #10	4

* These parts are included in Pressure Sensor Kit 918428, which may be purchased separately.

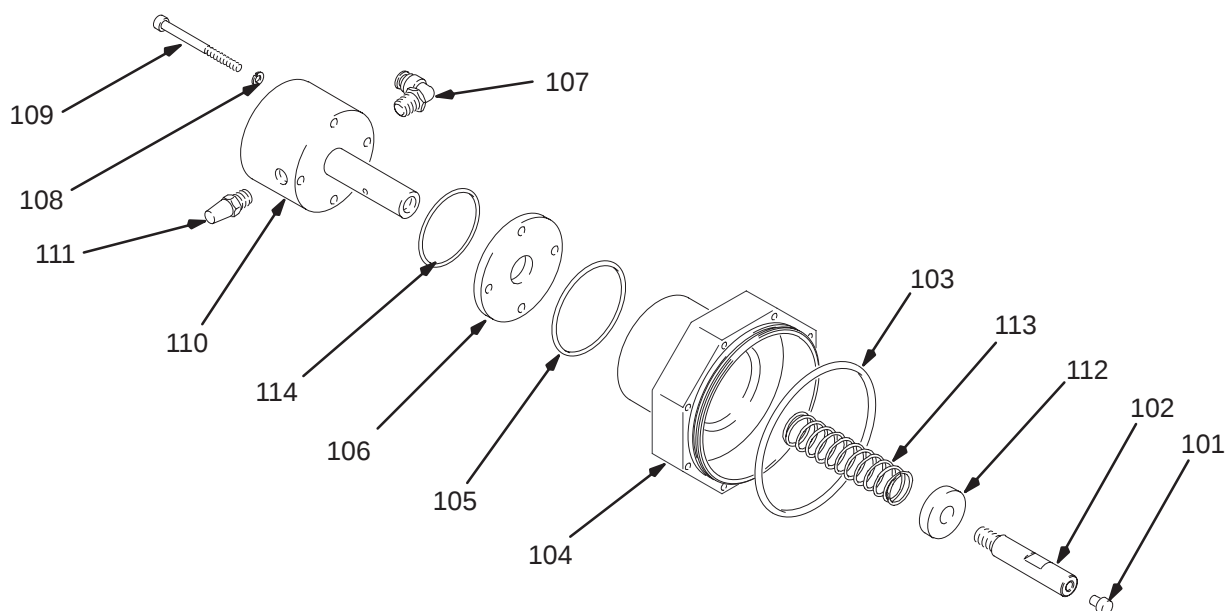
† These parts are included in Repair Kit 918517, which may be purchased separately.

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

☆ Some applications may require an optional 1500 psi (10.4 MPa, 104 bar) pressure sensor, which is available in Kit 918487. Contact your Graco distributor to order the kit.

Parts

Use Only Genuine Graco Parts and Accessories



05484A

Part No. 918511 Closer Assembly

Includes items 101–114

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
101	112987	BUMPER, rubber	1	108	100020	WASHER, lock, #10	4
102	617530	EXTENSION, rod	1	109	107404	SCREW, #10-32 x 2.25 in.	4
103	112106	O-RING, buna-n, -042	1	110	617535	CYLINDER, air closer	1
104	617531	COVER, rear enclosure	1	111	C06061	MUFFLER, 1/8 npt	1
105	104010	O-RING, buna-n, -029	1	112	617533	CUP, piston spring	1
106	617532	SPACER, cylinder	1	113	617534	SPRING, pre-flo closer	1
107	C19388	FITTING, 90°, 1/4 x 1/8 npt	1	114	C38312	O-RING, buna-n, -019	1

Technical Data

Category	Data
Maximum Fluid Working Pressure	3500 psi (24 MPa, 240 bar)
Fluid Inlet and Outlet	3/8–18 npt
Weight	18 lbs. (8.16 kg)
Wetted Parts	303 stainless steel (SST), tungsten carbide, chrome-plated 17–4 PH SST, 15–5 PH SST, braze, cast polyurethane, buna-n, Teflon®
Fluid Specifications	For use when dispensing fluids that meet at least one of the following conditions for non-flammability: • The fluid has a flash point above 140°F (60°C) and a maximum organic solvent concentration of 20%, by weight, per ASTM Standard D93. • The fluid does not sustain burning when tested per ASTM Standard D4206 Sustained Burn Test.
	Fluid Viscosity: 10,000 cps to 1,000,000 cps*
	Maximum Fluid Temperature: 176°F (80°C)

Teflon® is a registered trademark of the DuPont Company.

* Flow rate is dependent upon material viscosity, tip size and supply pressure.

Related Publications

Product	Form#
PrecisionFlo Module	308540
PrecisionFlo Control Assembly	310531
PrecisionFlo Plus Control Assembly	310558

PrecisionFlo™ and PrecisionFlo™ Plus are trademarks of Graco, Inc.

Manual Change Summary

The manual was revised to reflect the latest design level of the metering valve. The changes involved relocating the pressure sensor cable and modifying the metering valve motor assembly.

[illegible]

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.

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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:
1-800-367-4023 Toll Free

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