

Stainless Steel, Air-Operated Dispensing Valve

306715M

EN

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

Model No. 205612, Series B

Without seat or fluid needle.

Model No. 205435

Includes Dispensing Valve 205612, chrome-plated tapered fluid needle, and seat.

Model No. 685457

Includes Dispensing Valve 205612, chrome-plated tapered fluid needle, and seat.

Model Nos. 244382 and 244384

Includes Dispensing Valve 205612, with cup seal and non-drip needle and nozzle.

Model No. 207440, Series D

Includes chrome-plated fluid needle with tungsten carbide ball and seat.

Model No. 904227

Includes automatic dispense.

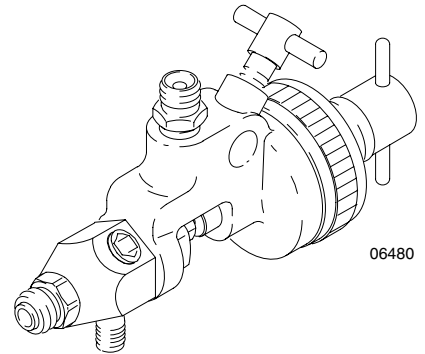
1500 psi (10.5 MPa, 105 bar) Maximum Working Pressure



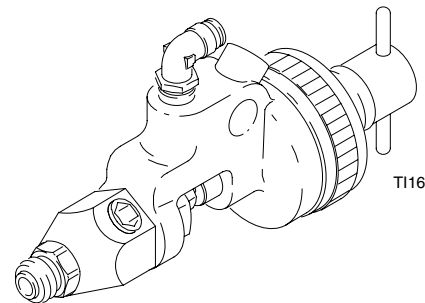
Important Safety Instructions

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

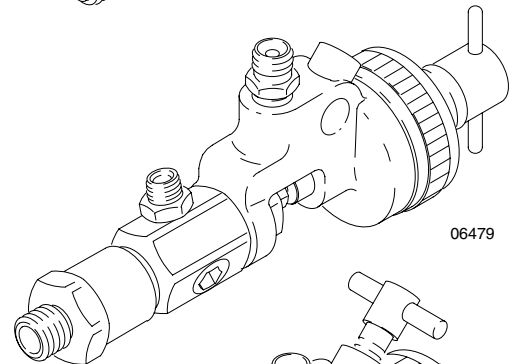
See page 2 for Table of Contents.



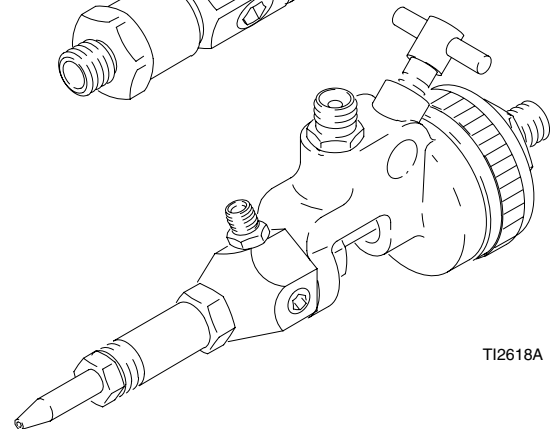
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Symbols

Warning Symbol



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

Caution Symbol



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

WARNING



SKIN INJECTION HAZARD

Spray from the valve, hose leaks, or ruptured components can inject fluid into your body and cause an extremely serious injury, including the need for amputation. Splashing fluid in the eyes or on the skin can also cause a 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 dispensing valve at anyone or at any part of the body.
- Do not put hand or fingers over the nozzle.
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Do not “blow back” fluid; this is not an air spray system.
- Follow the **Pressure Relief Procedure** on page 8 whenever you: are instructed to relieve pressure; stop dispensing; clean, check, or service the equipment; and install or clean the 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.



TOXIC FLUID HAZARD

Hazardous fluids or toxic fumes can cause a 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.
- Store hazardous fluid in an approved container. Dispose of the hazardous fluid according to all local, state, and national guidelines.
- Wear appropriate protective clothing, gloves, eyewear, and respirator.

WARNING



FIRE AND EXPLOSION HAZARD

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

- Ground the equipment and the object being sprayed. See **Grounding** on page 5.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvent or the fluid being dispensed.
- Extinguish all the open flames or pilot lights in the dispensing area.
- Electrically disconnect all the equipment in the dispensing area.
- Keep the dispensing area free of debris, including solvent, rags, and gasoline.
- Do not turn on or off any light switch in the dispensing area while operating or if fumes are present.
- Do not smoke in the dispensing area.
- Do not operate a gasoline engine in the dispensing area.
- If there is any static sparking while using the equipment, **stop dispensing immediately**. Identify and correct the problem.



INSTRUCTIONS



EQUIPMENT MISUSE HAZARD

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

- This equipment is for professional use only.
- Read all the instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check the equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. See **Technical Data** on page 19 for the maximum working pressure of this 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.
- Route the hoses away from 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).
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state, and national fire, electrical, and other safety regulations.






MOVING PARTS HAZARD

Moving parts, such as the air motor piston, can pinch or amputate fingers.

- Keep clear of all moving parts when starting or operating the pump.
- Before servicing the equipment, follow the **Pressure Relief Procedure** on page 8 to prevent the equipment from starting unexpectedly.

Installation

Grounding

 WARNING	
	FIRE AND EXPLOSION HAZARD Before operating, ground the system as explained below. Also read the section FIRE AND EXPLOSION HAZARD on page 4.
	

To reduce the risk of static sparking, ground the pump and all other components used or located in the dispensing area. Check your local electrical code for detailed instructions for your area and type of equipment and be sure to ground all of these components.

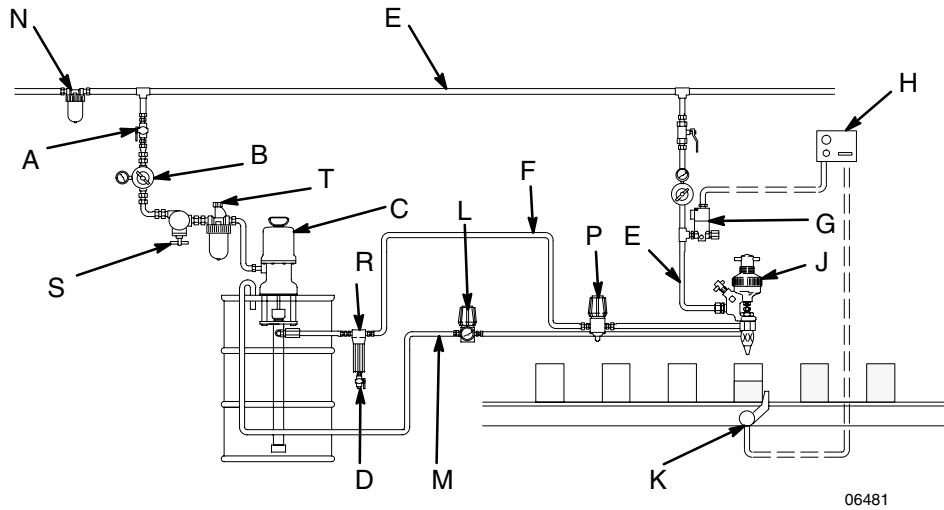
- *Pump:* use a ground wire and clamp as instructed in your separate pump instruction manual.
- *Air compressors and hydraulic power supplies:* ground according to the manufacturer's recommendations.
- *Air and fluid hoses:* use only electrically conductive hoses with a maximum of 500 feet (150 m) combined hose length to ensure grounding continuity.
- *Dispensing valve:* obtain grounding through connection to a properly grounded fluid hose and pump.
- *Fluid supply container:* according to local code.
- *All solvent pails* used when flushing, according to local code. Use only metal pails, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts grounding continuity.

Installation

Typical Installation

Key

- A Bleed-type Master Air Valve
- B Air Regulator
- C Supply Pump
- D Fluid Drain Valve
- E Air Line
- F Fluid Line
- G Solenoid Valve
- H Control Box
- J Dispensing Valve
- K Sensing Device
- L Back Pressure Valve
- M Circulation Return Line (optional)
- N Air Line Filter
- P Fluid Pressure Regulator
- R Fluid Filter
- S Pump Runaway Valve
- T Air Line Lubricator



General Information

NOTE: Reference numbers and letters in parentheses in the text refer to the callouts in the figures and the parts drawing.

NOTE: Always use Genuine Graco Parts and Accessories, available from your Graco distributor.

The **Typical Installation** drawing above is only a guide for selecting required and optional accessories for an automatic dispensing system. Contact your Graco distributor for assistance in designing a system to meet your particular needs.

Ventilate the Dispense Booth

WARNING

To prevent hazardous concentrations of toxic and/or flammable vapors, use this valve only in a properly ventilated dispense booth. Never operate the dispensing valve unless ventilation fans are operating.

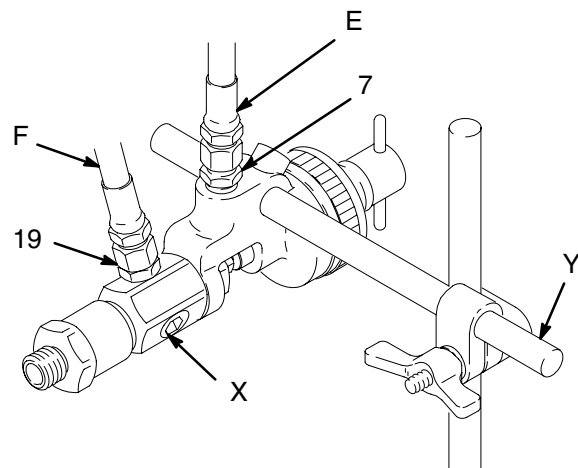
Mount Valve

Mount the valve on a 0.50 in. (12.7 mm) diameter rod (Y) on a mounting fixture or a dispensing machine. See Fig. 1 and the **Typical Installation**. Models 205435, 205612, and 685457 are supplied with a clamping screw for mounting. For Model 207440, order the clamping screw separately (Part No. 205355).

Connect the Air Lines

Clean all lines and connections of dirt, burrs, etc. and blow them out with clean air before connecting them to the system. The air supply line (E) should contain an air filter (N) to remove harmful dirt and moisture from the compressed air.

Use a normally closed 3-way air solenoid valve (G) to control the dispensing valve (J). Attach a grounded air supply line (E) from the 3-way valve to the 1/4 npsm(m) air inlet adapter (7) of the dispensing valve. See Fig. 1.



Model 207440 Shown

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Fig. 1

Installation

Connect the Fluid Lines

Connect a grounded fluid line (F) from the pump to the fluid inlet adapter (19) of the dispensing valve. You should install a fluid pressure regulator (P) to control fluid pressure to the dispensing valve. A regulator enables you to control fluid pressure more accurately than by regulating air pressure to the pump.

Install a fluid filter (R) to remove particles and sediment which may clog the nozzle.

In a circulating system, remove the plug (4) from the circulation port (X). Connect a return line (M) from the circulating port to the back pressure valve. The back pressure valve ensures regulated pressure to all dispensing valves in the system.

System Accessories

WARNING

Two accessories are required in your system: a bleed-type master air valve (A) and a fluid drain valve (D). These accessories help reduce the risk of serious injury including fluid injection, splashing in the eyes or on the skin, and injury from moving parts if you are adjusting or repairing the pump.

The bleed-type master air valve is required only with air-powered pumps. It relieves air trapped between this valve and the pump after the air regulator is shut off. Trapped air can cause the pump to cycle unexpectedly. Locate the valve close to the pump.

The fluid drain valve assists in relieving fluid pressure in the displacement pump, hose, and dispensing valve; triggering the valve to relieve pressure may not be sufficient.

Operation


Settings and Adjustments

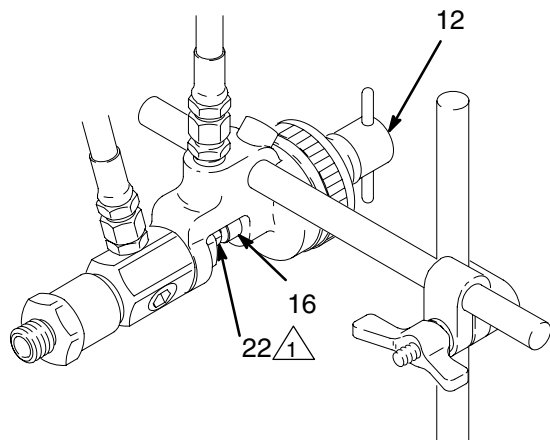
Before each day's operation, lubricate the exposed portion of the needle (22) and the piston (16) with a lubricant compatible with the fluid being dispensed. See Fig. 2. After lubrication, cover the exposed portions of the needle and piston with a piece of plastic to prevent fluid buildup on these parts. Any buildup could damage the valve packing (9 or 20). See Fig. 3 on page 12.

Set the actuating air to at least 50 psi (345 kPa, 3.4 bar) and start the pump. Adjust the pump speed and pressure to obtain the desired flow rate. Always use the lowest pump speed necessary to get the results you want.

To decrease needle travel, turn the adjusting screw (12) clockwise; to increase, turn counterclockwise. If the valve leaks from the outlet after it is closed, turn the adjusting screw clockwise until the valve stops leaking.

In a circulating system, adjust the back pressure valve to provide constant system back pressure for all dispensing valves while maintaining the proper pressure for fluid circulation. See the **Typical Installation** on page 6.

 Oil Daily



Model 207440 Shown

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Fig. 2

Pressure Relief Procedure

WARNING



SKIN INJECTION HAZARD

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,
- or install or clean the nozzle.

1. Shut off the power to the pump.
2. Close the bleed-type master air valve (required with air powered pumps).
3. Actuate the dispensing valve to relieve pressure.
4. Open the pump drain valve (required in your system) to help relieve fluid pressure in the displacement pump. Actuating the dispensing valve to relieve pressure may not be sufficient. Have a container ready to catch the drainage.
5. Leave the drain valve(s) open until you are ready to dispense again.

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

Maintenance

Clean the Dispensing Valve Daily

CAUTION

Be sure the solvent you use is compatible with the fluid being dispensed, to avoid clogging the valve's fluid passages.

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

An important part of the care and maintenance of your automatic dispensing valve is proper flushing. Flush the valve daily with a compatible solvent until all traces of fluid are removed from the valve passages. **Relieve the pressure** before flushing.

Clean the outside surfaces of the valve by wiping with a soft cloth dampened with a compatible solvent.

CAUTION

Never immerse the entire dispensing valve in solvent. Immersing in solvent removes lubricants and tends to damage packings.

To remove a hardened particle from the orifice, blow air through the orifice from the front.

Flushing

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

Before flushing, be sure the entire system and flushing pails are properly grounded. Refer to **Grounding** on page 5. **Relieve the pressure** and remove the nozzle from the dispensing valve. Always use the lowest possible fluid pressure, and maintain firm metal-to-metal contact between the dispensing valve and the pail during flushing to reduce the risk of fluid injection injury, static sparking, and splashing.

Start the pump and flush the system with a compatible solvent as explained in the instructions for your pump. Check the system under pressure for leaks; if any are found, **relieve the pressure** and repair the leaks. Pressurize the system again and make sure the leaking has stopped.

Troubleshooting

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

Before servicing this equipment always make sure to **relieve the pressure**.

NOTE: Check all possible causes and solutions before disassembling.

Problem	Cause	Solution
Uneven dispensing pattern.	Fluid pressure too low.	Increase air pressure to pump, or adjust fluid pressure regulator.
Valve will not stop dispensing.	Fluid pressure too high.	Reduce air pressure to pump, or adjust fluid pressure regulator.
	Fluid needle binding.	Clean, repair.
	Piston packing binding.	Repair.
	Obstructed or worn needle or seat.	Clean or replace.
Valve will not dispense.	Pump not operating.	Refer to separate pump manual.
	Fluid line clogged.	Clear.
	Fluid valve closed.	Open.
	Clogged orifice or needle seat.	Clean.
	No trigger or actuator pressure.	Check, clean all lines.
	Worn or dry piston packings.	Replace.

Service

Needle, Seat, and Packings

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

To clean or replace the needle (22), its seat (23) or packings (9 or 20), **relieve the pressure**, then flush the valve with a compatible solvent. **Relieve the pressure** after flushing and disconnect the fluid hose(s). Screw the locknut (8) off the outlet housing (17) and align the slot in the air piston (16) with the slot in the valve housing (18). Swing the outlet housing out of the valve housing and slide the needle out of the socket in the air piston.

Screw the packing nut (10) out and remove the packings (9 or 20), gland (24, model 207440 only), and needle (22). Screw the seat (23) out of the outlet housing (17). See Fig. 3. Handle the needle and seat carefully and inspect them closely for wear or damage. Reassemble the valve using new parts as necessary. Soak a new leather packing in light, compatible oil before installing it.

NOTE: When reassembling models 205435, 205612, and 685457, torque the seat (23) to 23–27 ft-lb (31–37 N•m).

Model 207440 Shown

- 1 **⚠** Torque to 23–27 ft-lb (31–37 N•m)
Models 205435, 205612, and 685457 only.
- 2 **⚠** Lubricate

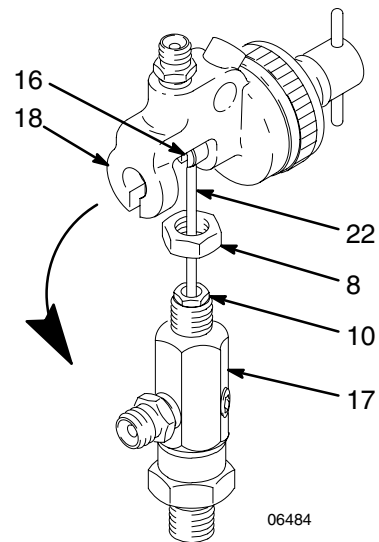
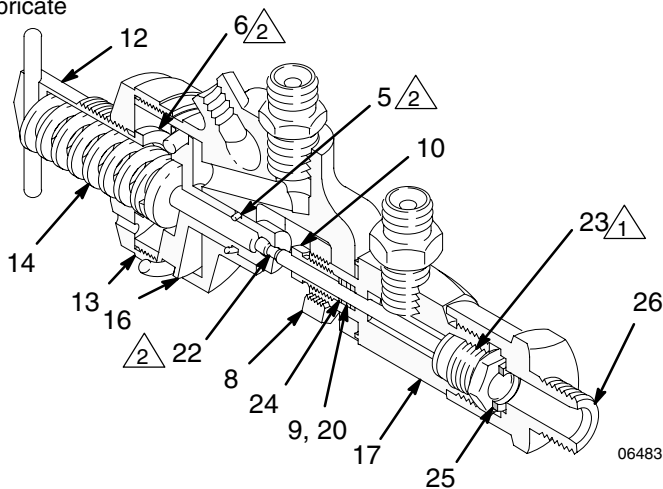


Fig. 3

Service

Air Piston, Spring, and Seals

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

Relieve the pressure, then disassemble the valve as explained above. Remove the air cylinder cap (13), take out the spring (14) and pull the piston (16) out. Clean and inspect all parts. Check the piston o-rings (5 and 6) carefully. Lubricate all parts with a light water-proof grease and reassemble the valve using new parts as necessary.

Packing Configurations

As shown in the following chart, on Models 205435, 205612, and 685457, the standard packings are two 181524 UHMWPE packings and one 164116 leather packing. On Model 207440, the standard packings are two 182523 UHMWPE packings and one 166258 leather packing. On Models 244382 and 244384, the standard packing is one 617272 cup seal. On Model 904227 the standard packing is three 164116 leather packings.

If your usage requires packings different from those that are standard on your valve, refer to the chart of available packing configurations.

Model No.	Standard Packings	Optional Packings
205435, 205612, and 685457	(2) 181524 UHMWPE and (1) 164116 leather	(3) 164116 leather
207440	(2) 181523 UHMWPE and (1) 166258 leather	(3) 166258 leather
244382 and 244384	(1) UHMWPE cup seal	None
904227	(3) 164116 leather	None

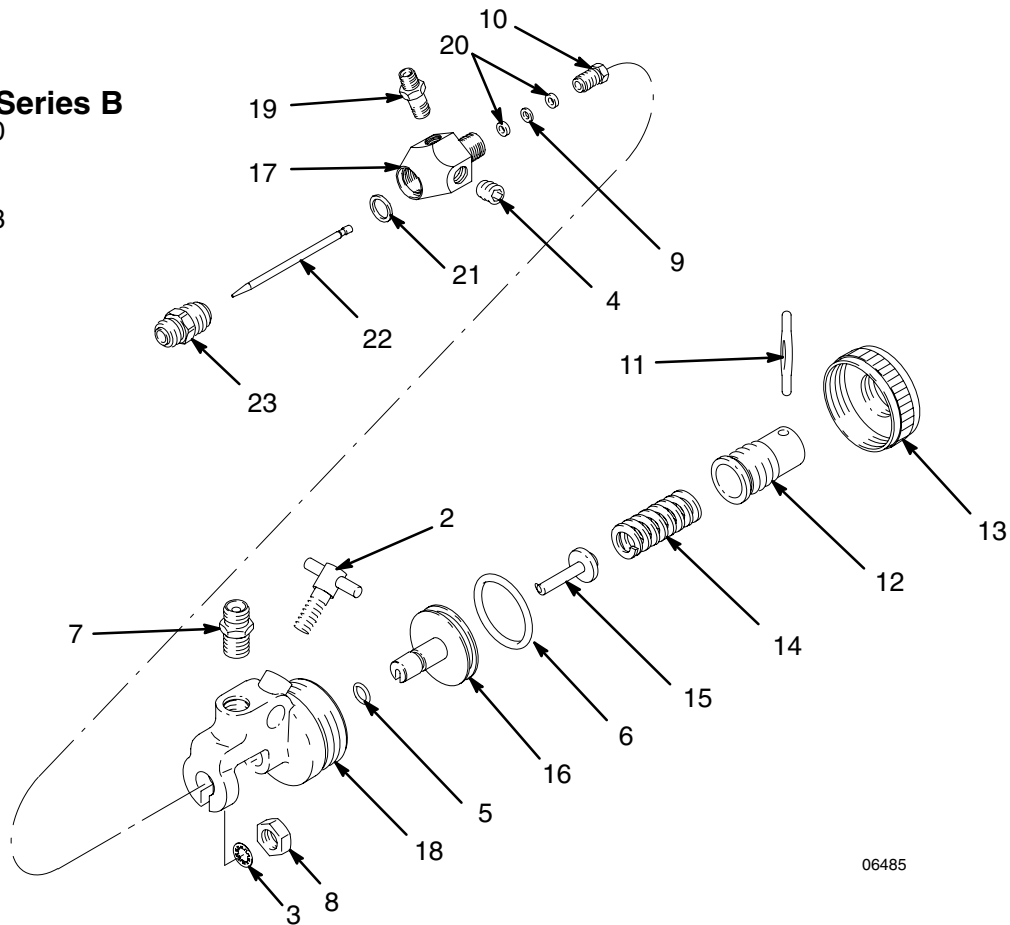
NOTE: For applications using abrasive fluids, UHMWPE/leather packings are recommended. PTFE packings are not recommended for abrasives.

Parts

Model 205435
Include items 1–23

Model 205612, Series B
Includes items 2–20

Model 685457
Includes items 1–23



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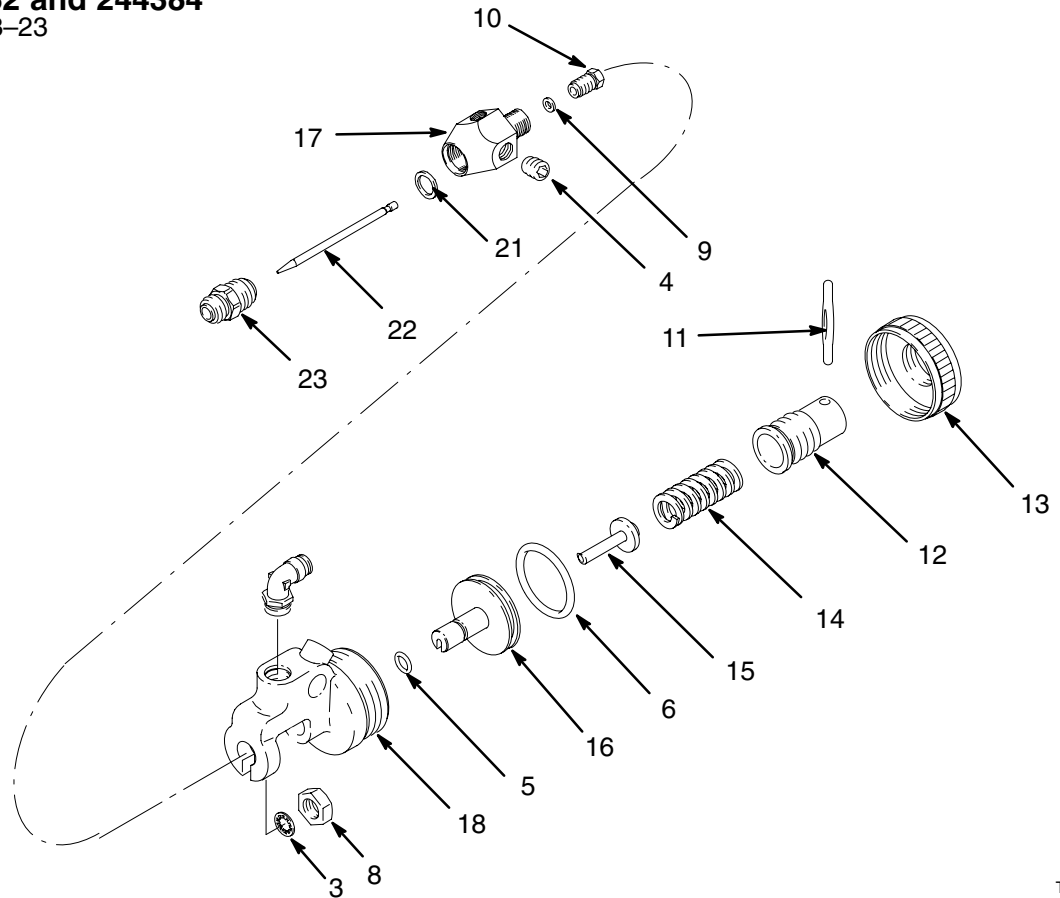
Ref No.	Part No.	Description	Qty.
1	205612	VALVE, dispensing Includes items 2–20	1
2	205355	. SCREW, tee-handle	1
3	101920	. LOCKWASHER, int shockproof; 9/16 screw size	1
4	101970	. PLUG, pipe; 1/4 npt	1
5	155685	. O-RING; nitrile rubber	1
6	156593	. O-RING; nitrile rubber	1
7	162453	. NIPPLE, hex; 1/4 npsm x 1/4 npt	1
8	162782	. LOCKNUT, hex; 9/16–18	1
9	164116	. PACKING, flat; leather	1
10	164313	. NUT, packing	1
11	164736	. PIN, adjusting screw	1
12	164737	. SCREW, adjusting	1
13	164738	. CAP, air cylinder	1
14	164739	. SPRING, helical compression	1
15	164740	. GUIDE, spring	1
16	164741	. PISTON, air	1
17	164744	. HOUSING, outlet	1
18	164745	. HOUSING, dispensing valve	1
19	164856	. NIPPLE, hex reducing; 3/8–18 npt x 1/4–18 npt	1

Ref No.	Part No.	Description	Qty.
20	181524	. PACKING, flat; UHMWPE	2
21	164111	GASKET; nylon	1
22	181525	NEEDLE, fluid (Model 205435 only)	1
22	181526	NEEDLE, fluid (Model 685457 only)	1
23	164747	SEAT, valve, 0.125 orifice (Model 205435 only)	1
23	164750	SEAT, valve, 0.312 orifice (Model 685457 only)	1

Optional Needle and Seat Set For Models 205435, 205612 & 685457		
Size	Seat	Needle
0.062	164746	181525
0.125	164747	181525
0.187	164748	181526
0.250	164749	181526
0.312	164750	181526

Parts

Model 244382 and 244384
Includes items 3–23



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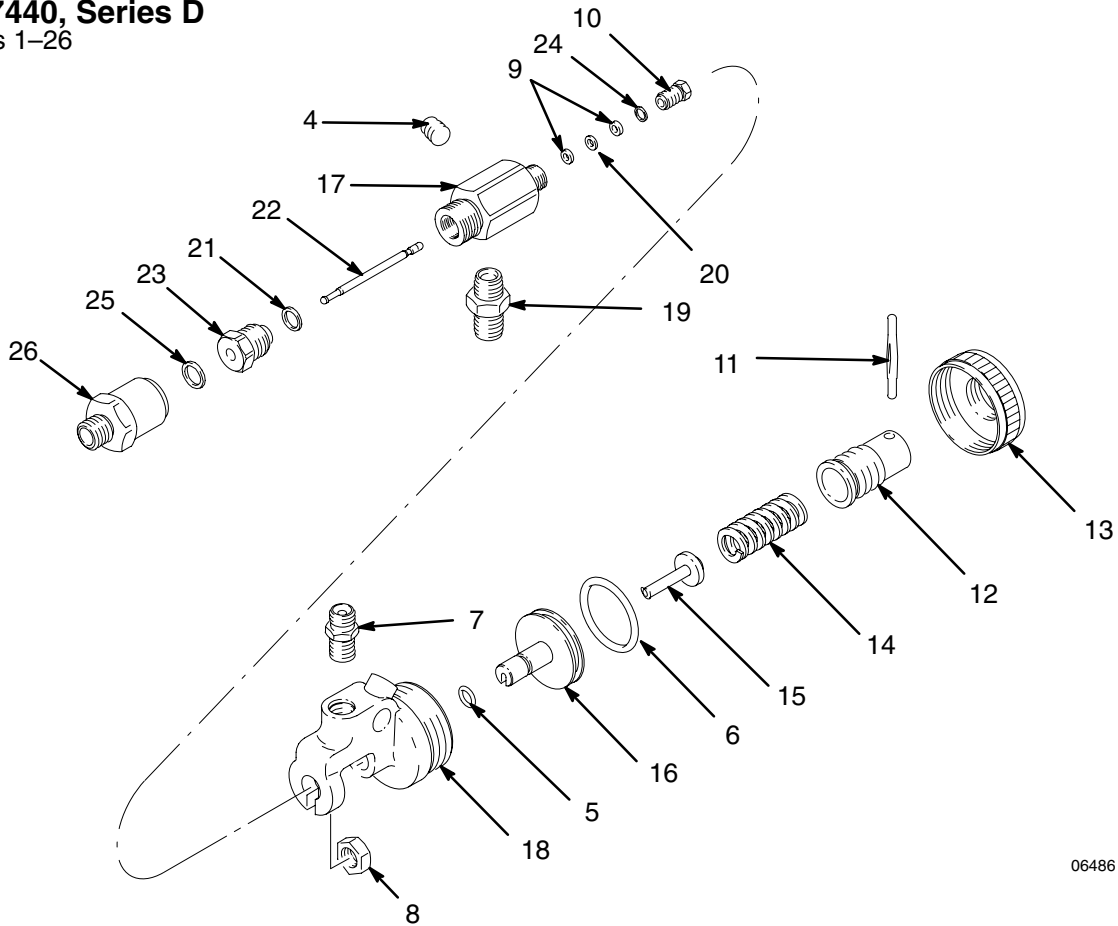
Ref No.	Part No.	Description	Qty.
3	101920	. LOCKWASHER, int shkproof; 9/16 screw size	1
4	101970	. PLUG, pipe; 1/4 npt	1
5	155685	. O-RING; nitrile rubber	1
6	156593	. O-RING; nitrile rubber	1
8	162782	. LOCKNUT, hex; 9/16–18	1
9	617272	. SEAL, u-cup	1
10	617271	. NUT, packing	1
11	164736	. PIN, adjusting screw	1
12	164737	. SCREW, adjusting	1
13	164738	. CAP, air cylinder	1
14	164739	. SPRING, helical compression	1
15	164740	. GUIDE, spring	1
16	164741	. PISTON, air	1

Ref No.	Part No.	Description	Qty.
17	164744	. HOUSING, outlet	1
18	164745	. HOUSING, dispensing valve	1
21	164111	GASKET; nylon	1

Needle (22) and Nozzle (23) Kits for Non-Drip Valves		
Valve Assembly	Needle/Nozzle Kit No.	Size
244382	244385	1/8 in.
244384	244387 corrosion-resistant	1/4 in.

Parts

Model 207440, Series D Include items 1–26

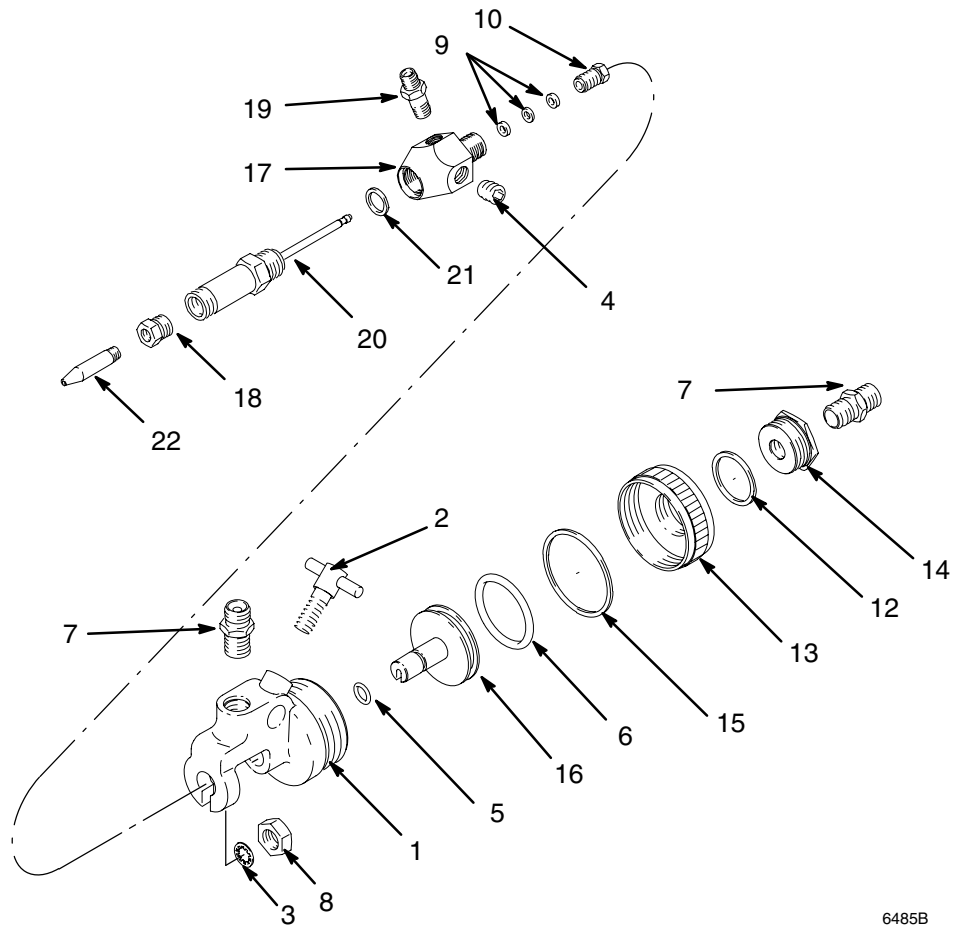


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Ref No.	Part No.	Description	Qty.	Ref No.	Part No.	Description	Qty.
4	101748	PLUG, pipe; 3/8 npt	1	16	164741	PISTON, air	1
5	155685	O-RING; nitrile rubber	1	17	166470	HOUSING, outlet	1
6	156593	O-RING; nitrile rubber	1	18	164745	HOUSING, dispensing valve	1
7	162453	NIPPLE, hex; 1/4 npsm x 1/4 npt	1	19	157350	NIPPLE, hex; 3/8 npt x 1/4 npt	1
8	102300	NUT, hex; 9/16–18	1	20	166258	PACKING, flat; leather	1
9	181523	PACKING, flat; UHMWPE	2	21	167730	GASKET, copper	1
10	164313	NUT, packing	1	22	220194	NEEDLE, valve	1
11	164736	PIN, adjusting screw	1	23	206987	SEAT, valve	1
12	164737	SCREW, adjusting	1	24	166255	GLAND; stainless steel	1
13	164738	CAP, air cylinder	1	25	166969	WASHER; non-metallic	1
14	164739	SPRING, helical compression	1	26	167738	ADAPTER, pipe; 7/8–14 unf(f) x 3/8–18 npt(m)	1
15	164740	GUIDE, spring	1				

Parts

Model 904227

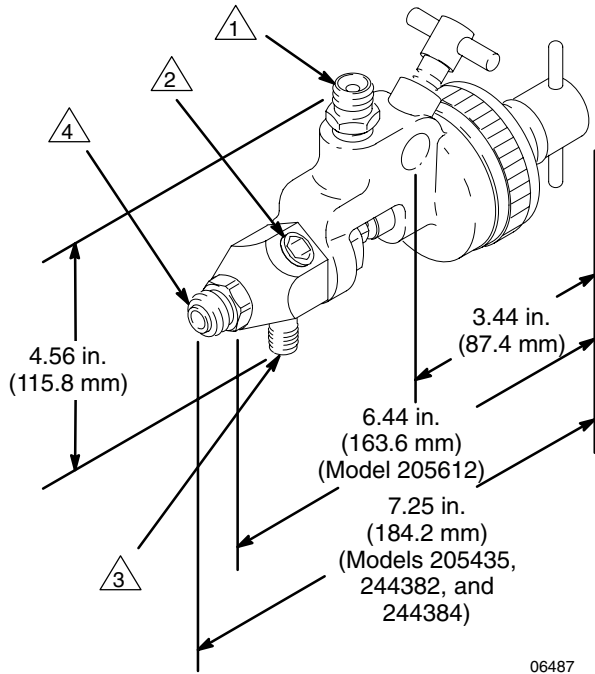


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Ref No.	Part No.	Description	Qty.	Ref No.	Part No.	Description	Qty.
1	607872	HOUSING, valve disp.	1	13	164738	CAP, air cylinder	1
2	205355	SCREW, tee-handle	1	14	608114	BUSHING, cs	1
3	101920	LOCKWASHER, int shkproof; 9/16 screw size	1	15	158429	GASKET, copper	1
4	101970	PLUG, pipe; 1/4 npt	1	16	608112	PISTON, air	1
5	155685	O-RING; nitrile rubber	1	17	164744	HOUSING, outlet	1
6	156593	O-RING; nitrile rubber	1	18	100030	BUSHING	1
7	156971	NIPPLE, short;	2	19	164856	NIPPLE, hex reducing; 3/8 – 18 npt x 1/4 – 18 npt	1
8	162782	LOCKNUT, hex; 9/16–18	1	20	946929	NEEDLE, valve	1
9	164116	PACKING, flat; leather	3	21	164111	GASKET; nylon	1
10	164313	NUT, packing	1	22	161505	NOZZLE, flow gun	1
12	150694	GASKET, metallic	1				

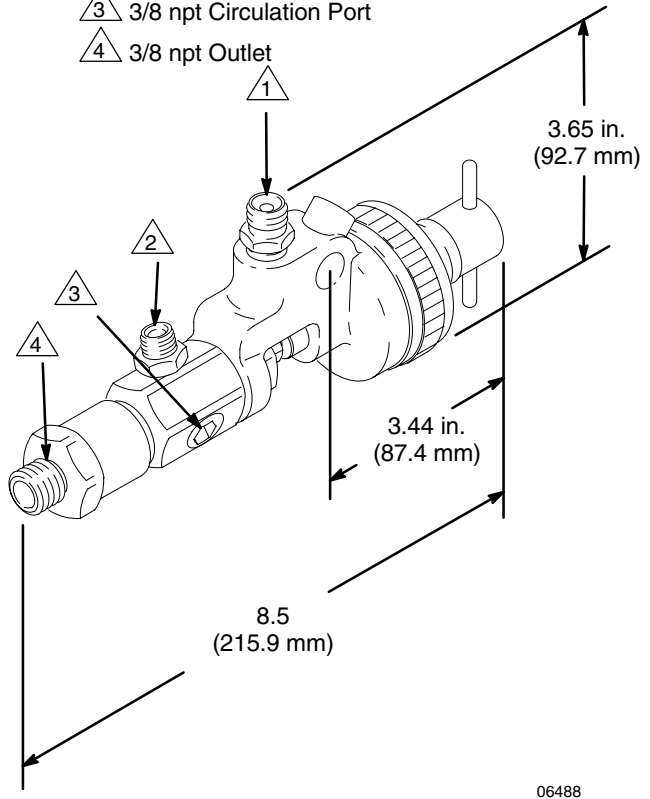
Dimensions

- △1 1/4 npsm Air Inlet
- △2 1/4 npt Circulation Port
- △3 Models 205435 & 205612: 3/8 npt Fluid Inlet
Models 244382 & 244384: 1/4 npt Fluid Inlet
- △4 3/8 npt Outlet



**Models 205435, 205612,
244382, 244384, and 904227**

- △1 1/4 npsm Air Inlet
- △2 3/8 npt Fluid Inlet
- △3 3/8 npt Circulation Port
- △4 3/8 npt Outlet



Model 207440

Technical Data

Category	Data
Maximum Working Pressure	3000 psi (21.0 MPa, 210 bar) For Model 904227: 1500 psi, (10.5 MPa, 105 bar)
Minimum Operating Pressure of Air Actuated Trigger	50 psi (345 kPa, 3.4 bar)
Air and Fluid Connections	<i>Models 205435, 205612, 685457, & 904227:</i> 3/8 npt(m) fluid inlet and outlet, 1/4 npsm(m) air inlet, 1/4 npt(f) circulation port <i>Model 207440:</i> 1/4 npt(m) fluid inlet, 3/8 npt(m) fluid outlet, 1/4 npsm(m) air inlet, 3/8 npt(f) circulation port <i>Models 244382 & 244384:</i> 1/4 npt(f) fluid inlet and outlet, 5/32 tube connector air inlet
Wetted Parts	<i>Models 205435, 205612, 685457, & 904227:</i> 400 Series Stainless Steel, Chrome, Nylon, UHMWPE, Leather <i>Model 207440:</i> 400 Series Stainless Steel, Chrome, Tungsten Carbide, Copper, Acetal Homopolymer, UHMWPE, Leather <i>Models 244382:</i> 400 Series Stainless Steel, Nylon, UHMWPE <i>Model 244384:</i> 400 Series Stainless Steel, 17-4 PH Stainless Steel Needle and Nozzle, Nylon, UHMWPE

Graco Standard Warranty

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

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

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

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

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

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

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

FOR GRACO CANADA CUSTOMERS

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Graco Information

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

1-800-328-0211 Toll Free

612-623-6921

612-378-3505 Fax

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.

For patent information, see www.graco.com/patents.

Original instructions. This manual contains English. MM 306715

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Revised March 2013