

Mix Manifold

310654 rev.D

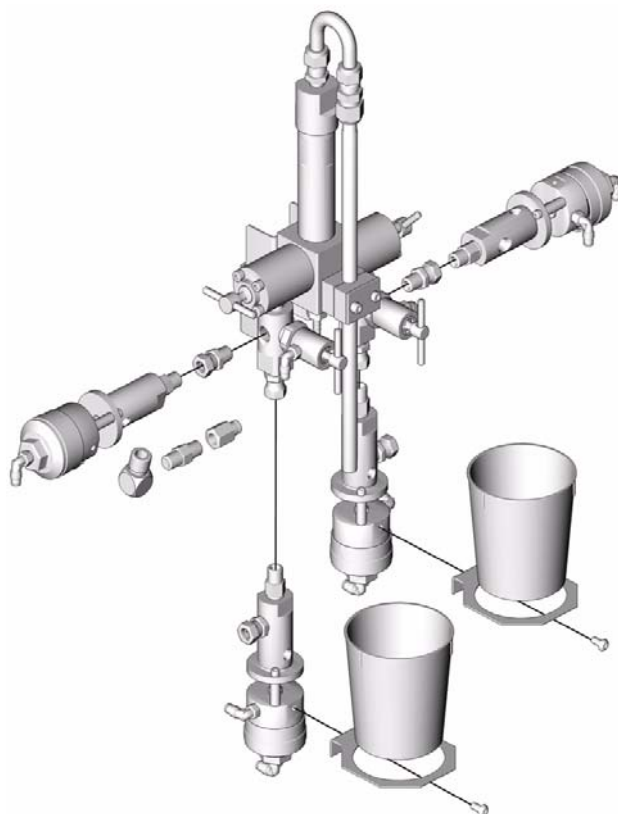
For proportional mixing of plural component coatings.

5000 psi (34.5 MPa, 345 bar) Maximum Working Pressure



Important Safety Instructions

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




Part No. 248251 shown


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Manual Conventions


WARNING


Hazard Symbol

WARNING: a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Warnings in the instructions usually include a symbol indicating the hazard. Read the general **Warnings** section for additional safety information.

CAUTION
CAUTION: a potentially hazardous situation which, if not avoided, may result in property damage or destruction of equipment.

Note








Additional helpful information.






Models

Part No.	Description	Maximum Working Pressure psi (MPa, bar)
248251	For ProMix™ II and ProMix™ Auto (Wall Mount) proportioners, stainless steel	<i>5000 psi (34.5 MPa, 345 bar)</i>
234450	For Xtreme Mix™ 185 proportioner, carbon steel	
234451	For ProMix Easy™ proportioner, stainless steel	
234593	For ProMix Easy™ proportioner, carbon steel	

Warnings

The following warnings include general safety information for this equipment. More specific warnings are included in the text where applicable.

 WARNING	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Ground equipment and conductive objects in work area. See Grounding instructions. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem.
	<p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not point gun at anyone or at any part of the body. • Do not put your hand over the spray tip. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Do not spray without tip guard and trigger guard installed. • Engage trigger lock when not spraying. • Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. • Check equipment daily. Repair or replace worn or damaged parts immediately. • Do not alter or modify equipment. • For professional use only. • Use equipment only for its intended purpose. Call your Graco distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not use hoses to pull equipment. • Comply with all applicable safety regulations.
	<p>MOVING PARTS HAZARD</p> <p>Moving parts can pinch or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> • Keep clear of moving parts. • Do not operate equipment with protective guards or covers removed. • Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure in this manual. Disconnect power or air supply.

 WARNING	
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> • Read MSDS's to know the specific hazards of the fluids you are using. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
  	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eyewear • Clothing and respirator as recommended by the fluid and solvent manufacturer • Gloves • Hearing protection

Installation

Fluid Supply

The fluid supply must be free of pressure spikes, which are commonly caused by pump stroke changeover. If necessary, install pressure regulators or a surge tank on the mix manifold fluid inlets to reduce pulsation.

Contact your Graco distributor for additional information.

Fluid Supply Lines

Accessories

Required

- **Fluid filter:** install a 100 mesh (150 micron) minimum fluid filter on solvent and component A and B fluid lines.


WARNING




To reduce the risk of injury, including fluid injection, you must install a shutoff valve on each fluid supply line.

- **Fluid shutoff valve:** install between each fluid supply line and the fluid manifold assembly to shut off fluid flow during maintenance and service.
- **Fluid hoses:** use grounded hoses that are correctly sized for your system.

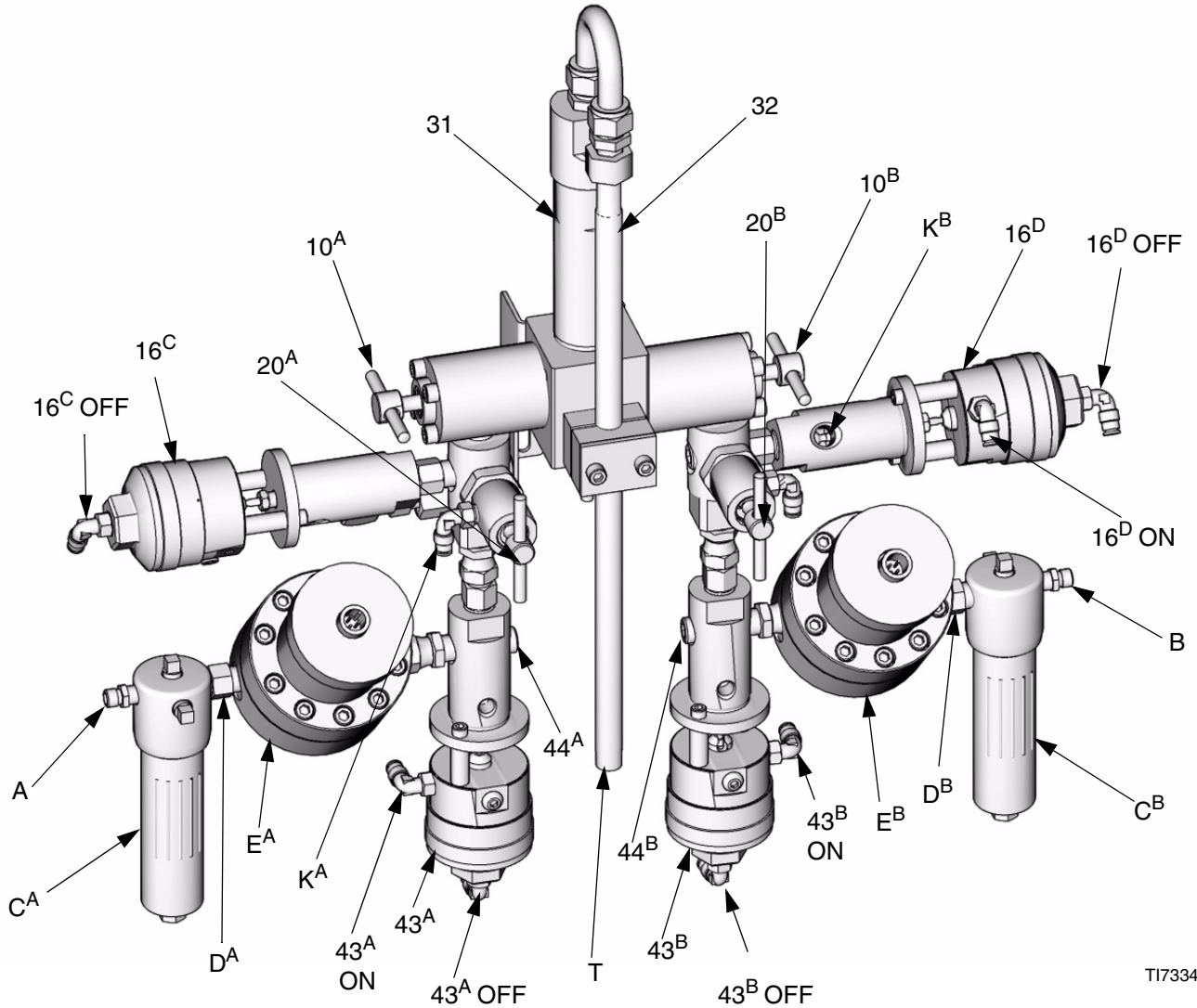
Optional

- **Fluid pressure regulator:** install on the manifold static mixer outlet for more precise adjustment of the fluid pressure to the gun.

Connect Fluid Supply Lines

See FIG. 1 or FIG. 2.

1. Connect component A and B supply lines.
2. **248251:** Connect the solvent supply line to the solvent purge valve inlet (K^B). FIG. 1.
3. **234451, 234593, 234450:** Connect solvent supply lines to solvent purge valves (44^A, 44^B). FIG. 2.
3. **All models except 234450:** Connect a fluid line between the mixer fluid outlet (T) and spray gun.



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FIG. 1: Typical Installation of 248251

Component A Side

- A Supply Line A connection
- C^A Fluid Filter A, 100 mesh
- D^A Check Valve A
- E^A Flow Meter A (G3000 shown)
- 10^A Fluid Shutoff Valve A
- 43^A Dispense Valve A
- 16^C Air Purge Valve
- 20^A Sampling Valve A
- K^A Air Purge inlet
- 44^A Dump Port A (option)

Component B Side

- B Supply Line B connection
- C^B Fluid Filter B, 100 mesh
- D^B Check Valve B
- E^B Flow Meter B (G3000 shown)
- 10^B Fluid Shutoff Valve B
- 43^B Dispense Valve B
- 16^D Solvent Purge Valve
- 20^B Sampling Valve B
- K^B Solvent Purge inlet
- 44^B Dump Port B (option)

Other




- 31 Integrator
- 32 Static Mixer
- T Mixer Fluid Outlet to gun

Air Supply and Pilot Lines

Accessories

Required

- **Compressed air supply pressure:** 75-100 psi (0.5-0.7 MPa, 5.2-7 bar). Most applications use about 80 psi (550 kPa, 5.5 bar).
- **Air line filter:** 40 micron or better air filter to filter oil and water out of the air supply and help avoid paint contamination and clogged solenoids.
- **Air hoses:** use grounded hoses that are correctly sized for your system.


WARNING



Trapped air can cause a pump to cycle unexpectedly, which could result in serious injury from splashing or moving parts.

- **Air regulator and bleed-type shutoff valve:** include in each air line to fluid supply equipment. Install an additional shutoff valve upstream of all air line accessories to isolate them for servicing.

Connect Air Supply Lines

See FIG. 1 or FIG. 2.

1. Connect air pilot lines, a maximum of 6 ft. (1.83 m) long, between the air solenoids and the dispense/purge valve pilot line inlets as indicated in FIG. 1 or FIG. 2.
2. **248251 Only:** Connect an air line to air purge valve inlet (K^A). FIG. 1.
3. Pressurize the system with air, and check for leaks, then relieve air pressure.

Grounding


WARNING



Your system must be grounded. Read warnings, pages 4-5.

Connect a ground wire from a true earth ground to the mix manifold or the mix manifold mounting surface if there is electrical continuity between it and the mix manifold.

Follow the specific grounding instructions in the system and individual component manuals. The system may have special grounding requirements for the mix manifold.

A ground wire and clamp, part no. 222011, is available from Graco.

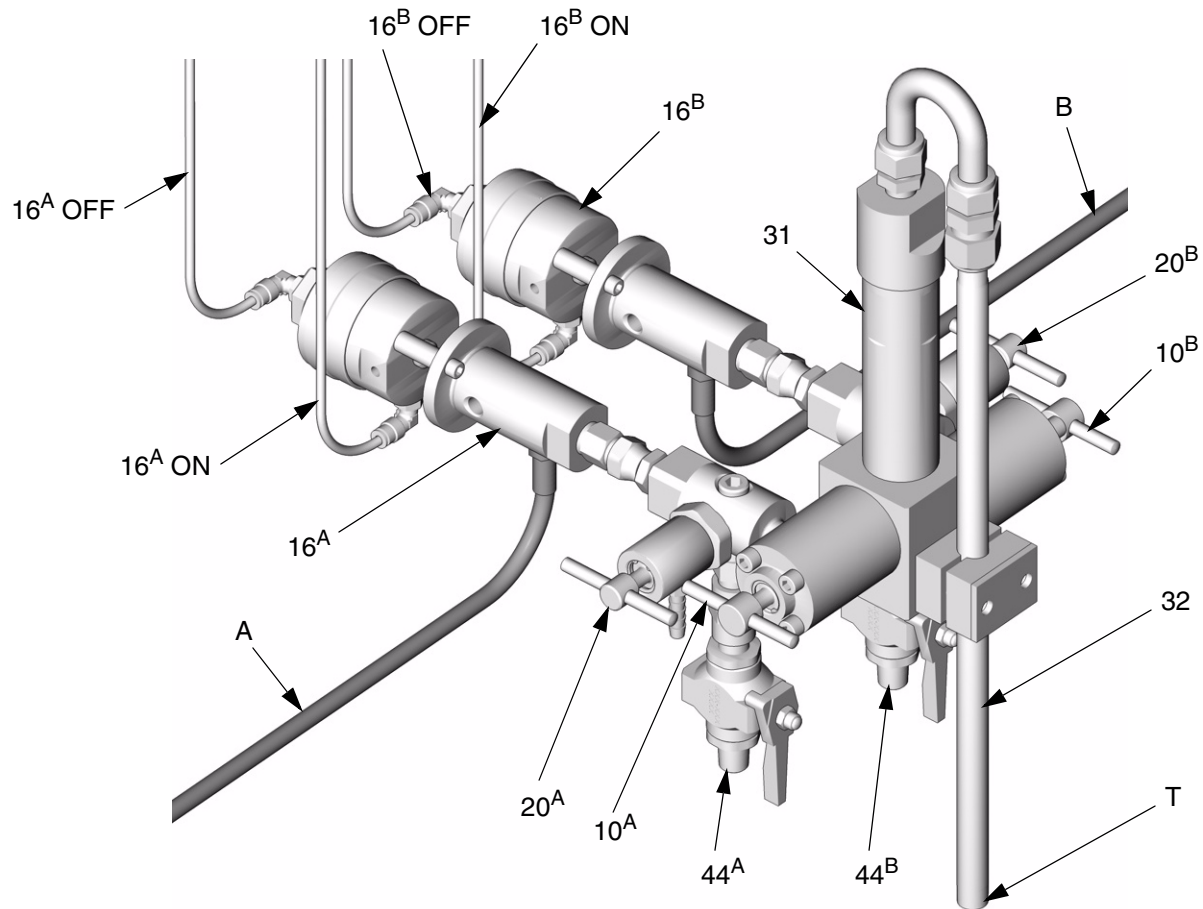


FIG. 2: Typical Installation 234451 / 234593

Component A Side

- A Supply Line A connection
- 10^A Fluid Shutoff Valve A
- 16^A Dispense Valve A
- 20^A Sampling Valve A
- 44^A Solvent Purge Valve

Component B Side



- B Supply Line B connection
- 10^B Fluid Shutoff Valve B
- 16^B Dispense Valve B
- 20^B Sampling Valve B
- 44^B Solvent Purge Valve

Other

- 31 Integrator
- 32 Static Mixer
- T Mixer Fluid Outlet to gun

Operation

Pressure Relief Procedure

	WARNING	
		
Follow Pressure Relief Procedure when you stop spraying and before cleaning, checking, servicing, or transporting equipment. Read warnings, page 4.		

Follow the **Pressure Relief Procedure** in your proportioning equipment manual.

Purging Guidelines

	WARNING		
			
Read warnings, page 4.			


Follow the purging procedure in the proportioner system manual.

- Purge before using equipment, which was tested with lightweight oil that could contaminate your material.
- Purge before changing colors, before fluid can dry in the equipment, at the end of the day, before storing, and before repairing equipment.
- Purge at the lowest pressure possible. Check connectors for leaks and tighten as necessary.
- Use a cleaning fluid that is compatible with the fluid being dispensed and the equipment wetted parts.

CAUTION
Purge the sampling valves with solvent immediately after using them to keep material from hardening inside.

Operation Guidelines

Manifold operation is dependent on the system it is connected to. Follow the system operation instructions.

 After the system has been shut down for a period of time, it is normal for component A and B solenoids and valves to cycle rapidly until system pressure is built back up when restarted.

- **Purge Air from fluid lines** when component A and B are loaded.
- **Adjust fluid supply pressure** if the fluid output is too low or too high.
- **Adjust flow rate** with fluid supply pressure regulators (optional) or dispense valves. Flow rate should be the same at the spray gun regardless of whether component A or B dispense valve is open. Pressure adjustments of each component will vary with fluid viscosity. Start with the same fluid pressure for component A and B, then adjust as needed. See **Mix Manifold Valve Settings**, page 11.
- **Adjust gun atomizing air pressure** as needed.

CAUTION
Do not use the first 4-5 oz. (120-150 cc) of material as it may not be thoroughly mixed due to alarms while priming the system.

Mix Manifold Valve Settings

To open dispense or purge valves, turn their hex nut (E) *counterclockwise*. To close, turn *clockwise*. FIG. 3.

Valve	Hex Nut (E) Setting	Function
Dispense (16 ^A , 16 ^B , 43 ^A , 43 ^B)	1 turn out from fully closed	Limits maximum fluid flow rate into integrator and minimizes valve response time.
Purge (16 ^C , 16 ^D) <i>248251 only</i>		
Fluid Shutoff (10 ^A , 10 ^B)	Fully open during Run/Mix operation	Closes component A and B ports to integrator during ratio check or meter calibration. Open ports during Run/Mix operation.
Sampling (20 ^A , 20 ^B)	Fully closed during Run/Mix operation	Opens valves to dispense component A and B while calibrating meters. Do not open sampling valves unless fluid shutoff valves are closed.

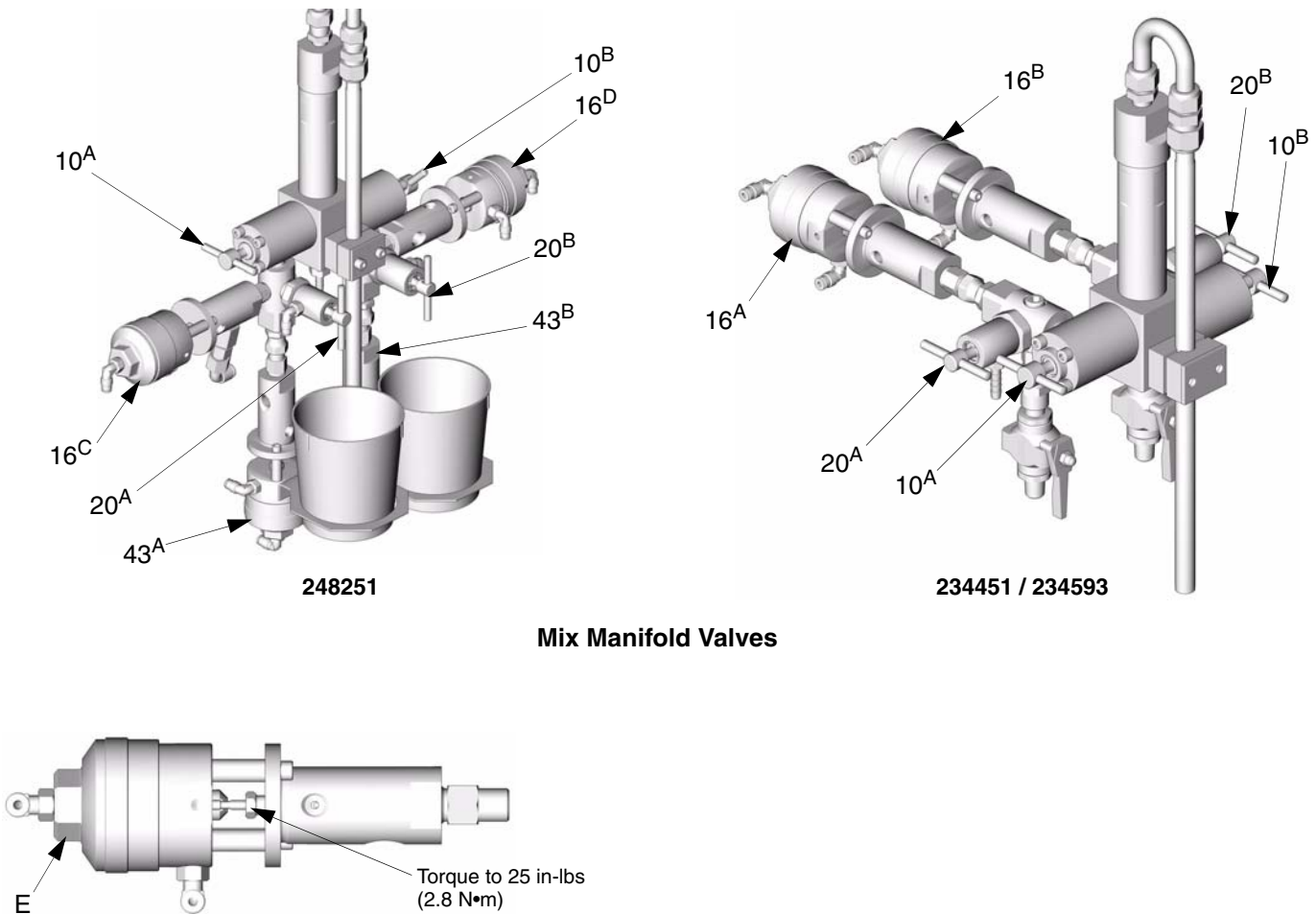




FIG. 3

Maintenance

**WARNING**



Follow the **Pressure Relief Procedure** in your proportioning equipment manual before cleaning, checking, or servicing equipment. Read warnings, page 4.

Daily

- Purge the mixing system at the end of production.
- Check and refill fluid supplies for component A and B and solvent.
- Inspect the manifold and fluid line components for leaks.
- Make sure meter cables and air pilot lines are securely connected.

Weekly

- Clean and inspect the integrator mixer assembly. Follow **Servicing Integrator and Static Mixer**, page 16. Ensure that the integrator tube (27) distributor holes are not clogged. The cleaning frequency required depends on the fluid being mixed.
- Clean and inspect fluid and air filters.
- Check packing nut torque [25 in-lbs (2.8 N•m)] on the dispense/purge valves. FIG. 3, page 11.

Preventive

At least once a year, take apart the mix manifold and dispense/purge valves and sampling valves. Clean and inspect them. Replace o-rings and v-packings. Repair kits are available from Graco. See **Repair**, page 14.

Troubleshooting

Isolating Mixing Problem

A mixing problem can be caused by a problem with the controller, meters, and solenoid valves, as well as the mix manifold.

1. To isolate the problem, check for any visible faults or errors:
 - a. Are all air and fluid tubes, hoses, and electrical cables properly connected?
 - b. Are valves and controls properly set?
 - c. Do the fluid supplies, solenoids, and spray gun have sufficient air pressure?
 - d. Do the fluid supplies need refilling?
2. If there is a process control problem, refer to your controller manual.

Common Causes

- The flow rate is too high.
- Highly unbalanced pressures from the fluid supply system.
- Slow actuation of component A or B dispense valves.
- System leaks.

Unbalanced Pressure

1. Check component A and B fluid supply pressures.
2. *If the fluid supply pressures are not about equal*, adjust their fluid pressure regulators, until the pressures are about the same.
3. *If the pressures are already about equal*, verify that the component A and B dispense valves are operating properly.

Dispense Valve Operation

Manually operate the dispense valves by actuating their solenoids. The valves should snap open and shut quickly. If the valves move slowly, it could be caused by:

- Air pressure to the valve actuators is too low.
- Valve actuating air constricted by dirt or water in the air supply.
- Solenoid or tubing restricted.
- Dispense valve packings are too tight or they need lubrication (see **Repair**, page 14).
- Air piston o-rings and packings are not lubricated. See **Removing Dispense or Purge Valves**, page 14,
- Dispense valve knob is turned out too far. See , page 11.

Repair

WARNING



Follow the **Pressure Relief Procedure** in your proportioning equipment manual before cleaning, checking, or servicing equipment. Read warnings, page 4.

CAUTION

Purge the mix manifold with solvent after repair to remove any excess grease that is used for lubricating parts.

Removing Dispense or Purge Valves

1. Relieve pressure.
2. Disconnect the fluid line (A or B) from the dispense valve (16^A or 16^B). FIG. 4.
3. Disconnect the two air lines (G).
4. Unscrew the dispense valve (16) from the fitting (18).



Part No. 248251 - follow instructions below.

5. See manual 310655 to service dispense or purge valve.

Part No. 248251 Only

See FIG. 5.

Dispense Valve A or B

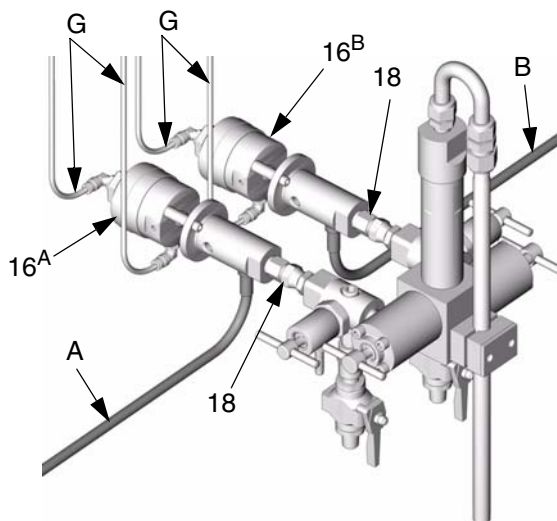
Remove cup (37), screw (34), and bracket (36).
Unscrew dispense valve (43^A or 43^B) from swivel (18).

Solvent Purge Valve

Unscrew solvent purge valve (16^D) from swivel (18).

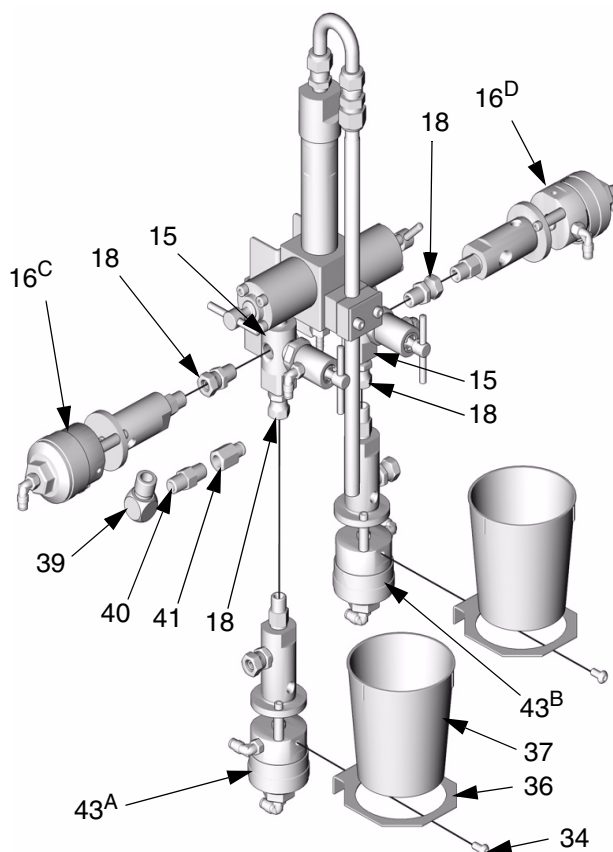
Air Purge Valve

Remove adapter (39), check valve (40), and connector (41) from the air purge valve (16^C). Unscrew the air purge valve from the swivel (18).



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FIG. 4: Part No. 234451/234592

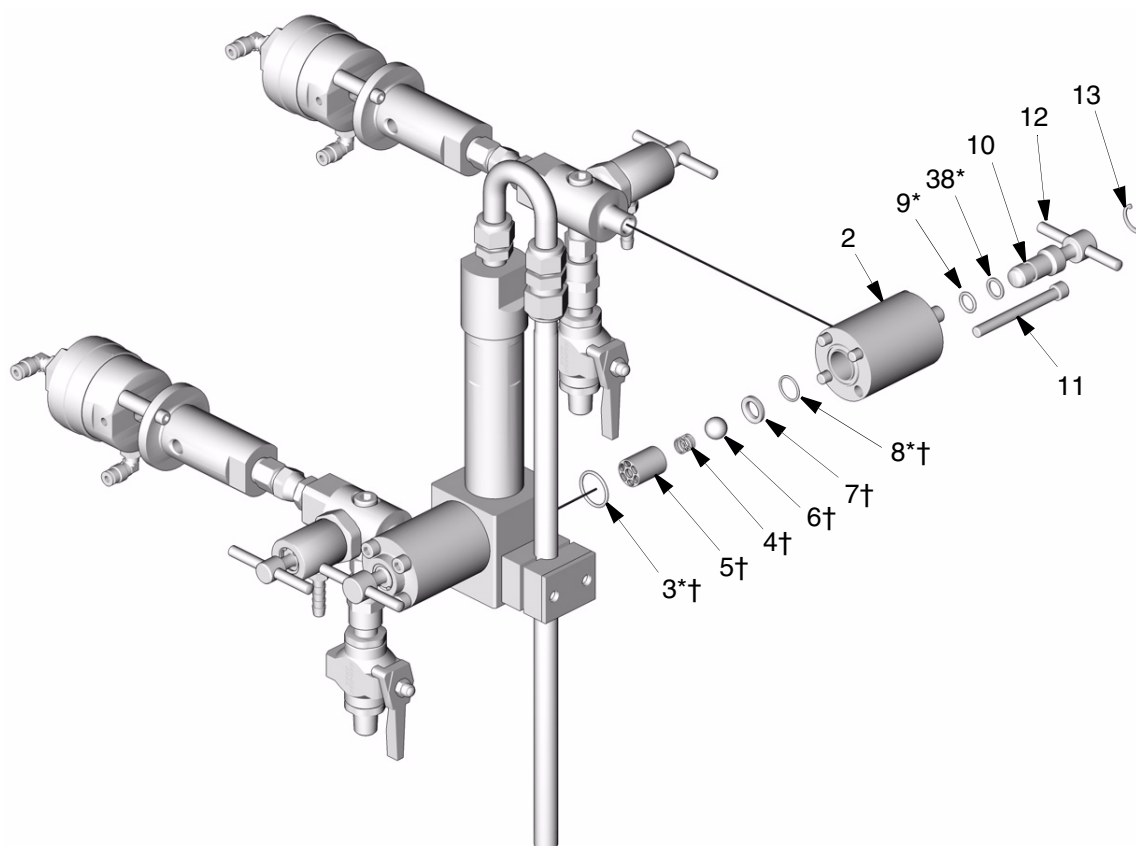


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FIG. 5: Part No. 248251

Servicing Shutoff Valves

1. Follow **Pressure Relief Procedure**, page 10.
2. Remove retaining ring (13).
3. Remove t-handle (12) and valve (10) from housing (2).
4. Remove and replace backup o-ring (38) and o-ring (9). Lubricate o-ring (9).
5. Remove 4 screws (11) and housing (2).
6. Remove and inspect check valve assembly (3, 4, 5, 6, 7, 8). Replace parts as needed.
7. Reassemble.



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* Parts included in Kit 248444 (purchase separately).

† Parts included in Kit 248430 (purchase separately).

FIG. 6: Part No 234451/234593 shown

Servicing Integrator and Static Mixer

See FIG. 7.



For part numbers 248251, 234451, and 234593 only.

1. Follow **Pressure Relief Procedure**, page 10.
2. Remove the screws (23), clamp cover (24) and clamp (25).

Static Mixer

3. Unscrew the static mixer tube (32) from the u-tube (26).
4. Carefully push the static mixer element (33) out of the threaded end of the tube (32) with a brass rod.

Integrator Mixer

5. **Part No. 248251 Only:** Drain the integrator manifold (1) by loosening the drain valve (14).

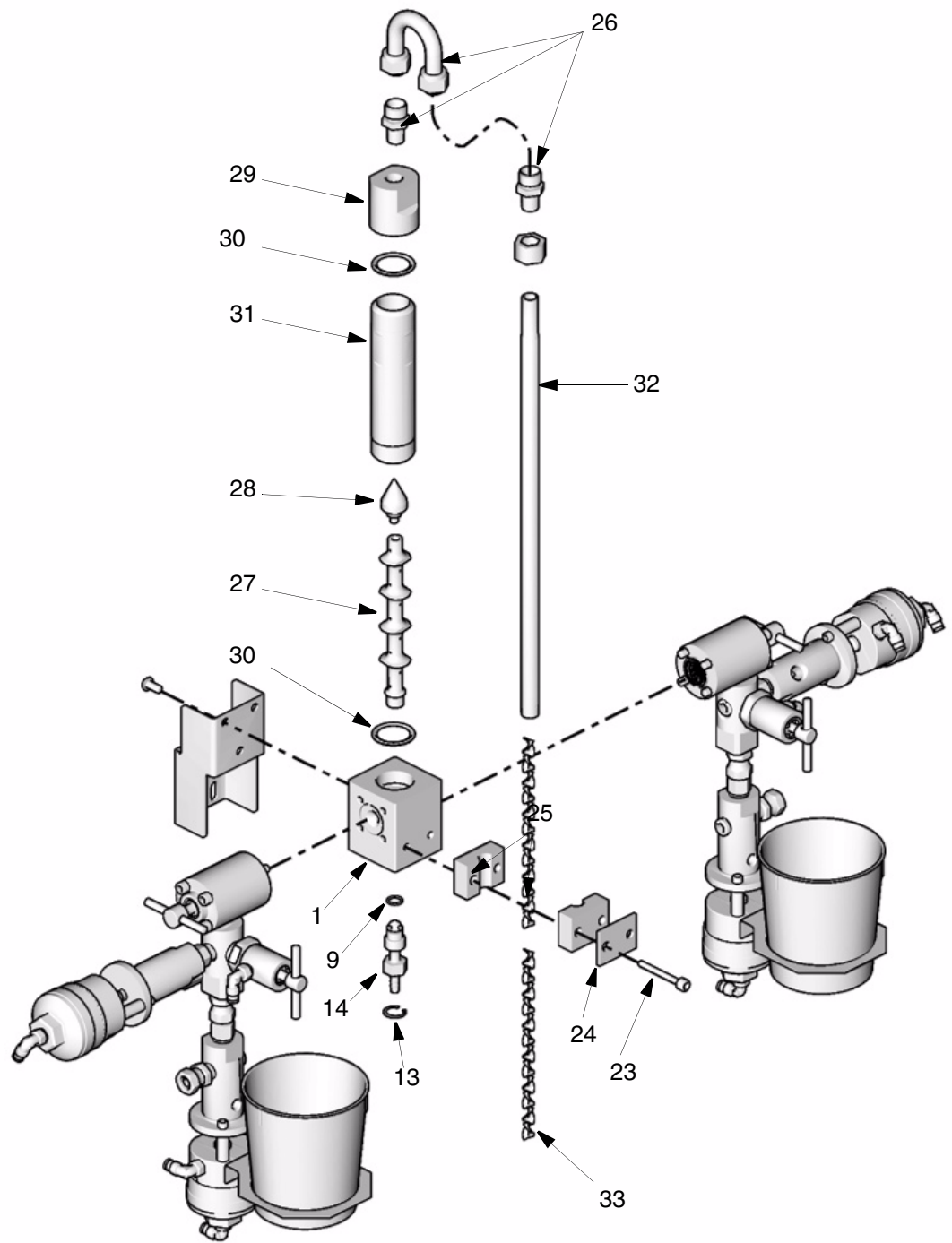
If the valve is leaking around its threads, remove the retaining ring (13) and drain valve (14). Lubricate and replace the valve o-ring (9).

6. Place wrench on integrator housing (31) flats and unscrew housing (31).
7. Remove u-tube (26), integrator housing cap (29), and o-rings (30).



To avoid leakage, replace o-rings (30). Lubricate new o-rings.

8. Place wrench on integrator mixer tube (27) flats and unscrew it.
9. Clean parts with a compatible solvent. Ensure that the integrator tube (27) distributor holes are not clogged.
10. Inspect and replace parts as needed.
11. Reassemble. Grease threads before installing parts.

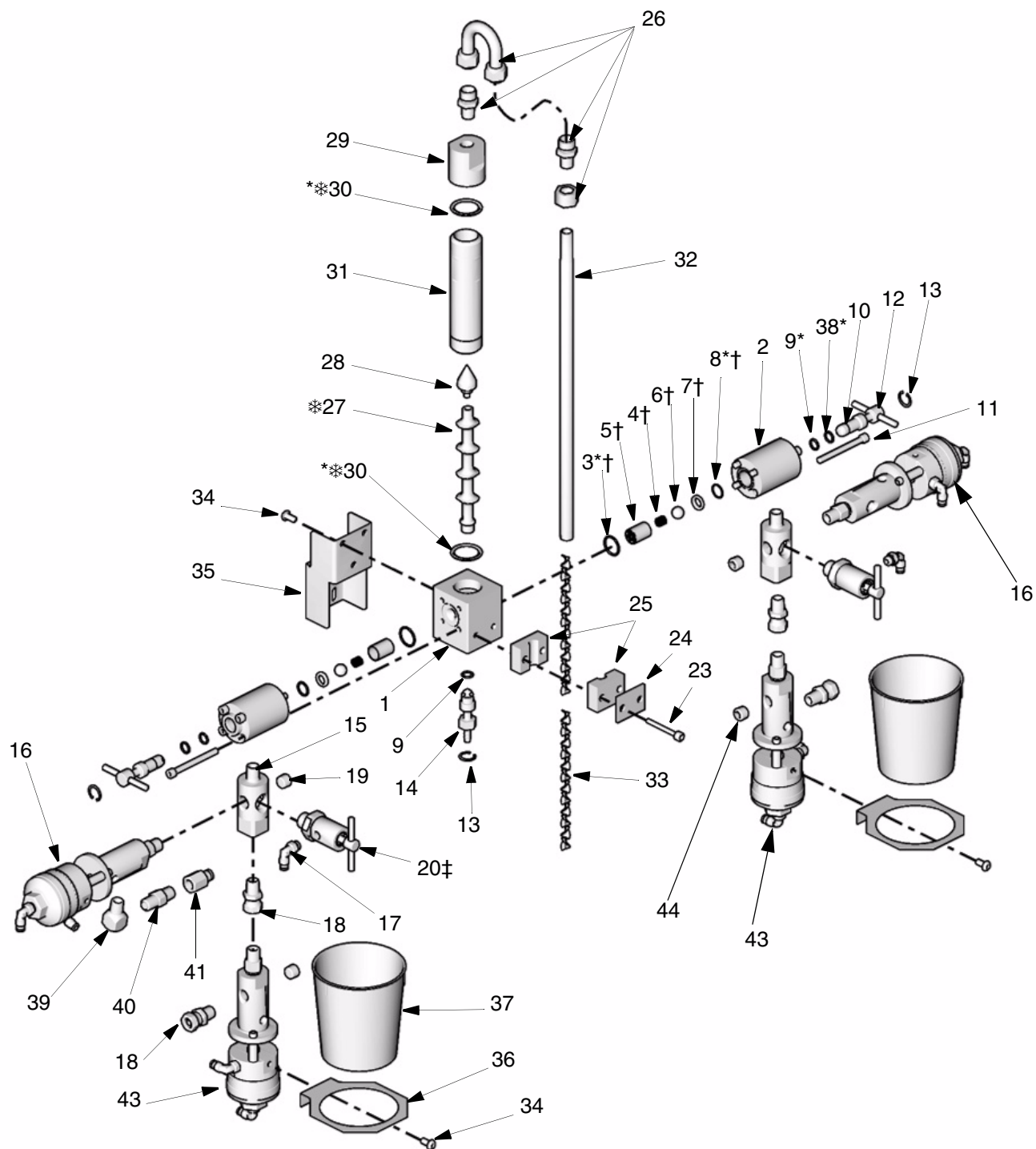


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FIG. 7: Part No. 248251 shown

Parts

Part No. 248251



TI7143A

Part No. 248251

Used with ProMix™ II and ProMix™ Auto (Wall Mount) Proportioners

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	15D982	Integrator Body	1	23	101885	Screw; 1/4-20 UNC x 1.75 in.	2
2	15D310	Manifold Housing	2	24	118831	Clamp Cover	1
3*†	110135	O-Ring; PTFE	2	25	118830	Tube Clamp	2
4†	117558	Spring	2	26	118823	U-tube	1
5†	15D312	Ball Guide Bushing	2	27*	15D637	Integrator Mixer, 50 cc	1
6†	105445	Ball; 1/2 in.	2	28	15D638	Mixer Cap, 50 cc	1
7†	196832	Seat	2	29	15D412	Integrator Cap, 50 cc	1
8*†	104319	O-Ring; PTFE	2	30**	110966	O-Ring; PTFE, 50 cc	2
9*	119348	O-Ring; perfluoroelastomer	3	31	15D389	Integrator Housing	1
10	15D311	Valve, stem	2	32	15D430	Static Mixer Tube	1
11	101950	Screw; 1/4-20 UNC x 2.5 in.	8	33	118822	Static Mixer Element	2
12	102915	Drive Pin	2	34	112925	Screw; 1/4-20 UNC x .375	5
13	110082	Retaining Ring	3	35	15D245	Mounting Bracket	1
14	15D983	Drain Valve	1	36	15D643	Beaker Bracket	2
15	15D336	Ratio Housing	2	37	114169	Beaker Cup	2
16	287222	Dispense Valve; see manual	4	38*	119187	O-Ring, backup; PTFE	2
	310655			39	166866	Elbow, street; 1/4-18 npt	1
17	114151	Elbow, swivel; 1/4 npt x 5/32 OD tube	2	40	501867	Check Valve	1
18	114339	Union, swivel; 1/4-18 npsm x 1/4-18 npt	4	41	114112	Connector; 1/4 npt x 1/4 OD tube	1
19	101970	Pipe Plug; 1/4-18 ptf	2	42	598095	Tube, nylon; 5/32 OD, 2 ft. (.61 m)	**
20‡	248191	Sampling Valve	2			(not shown)	
				43	287787	Dispense valve with dispense port; see manual 310655	2
				44	101970	Plug (part of 287787 assembly); see manual 310655	2

* Parts included in Kit 248444 (purchase separately).

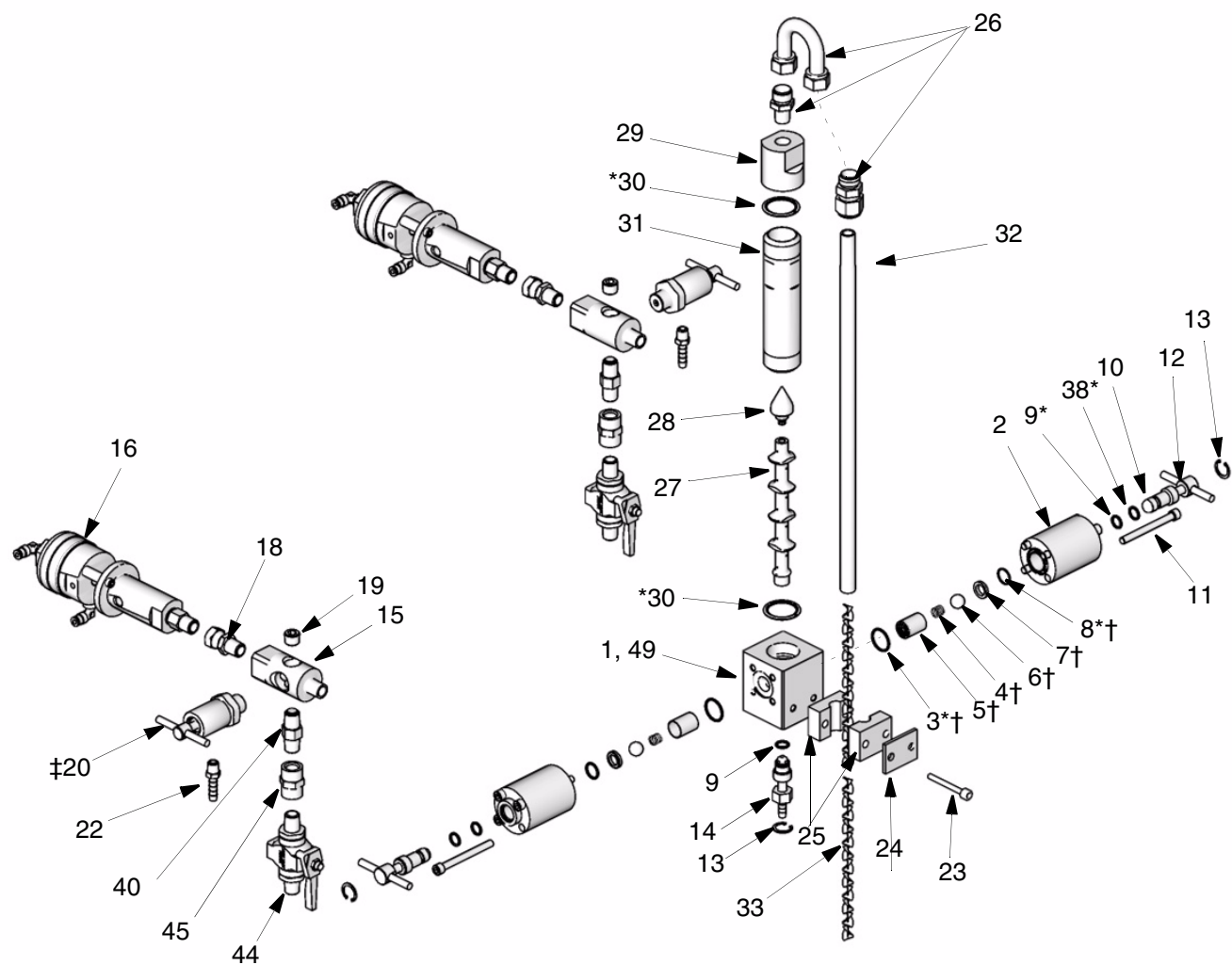
† Parts included in Kit 248430 (purchase separately).

‡ Part included in Kit 245145 (purchase separately).

* Parts included in Kit 248431 (purchase separately).

** Order length needed.

Part No. 234451 and 234593



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Part No. 234451

Used with ProMix Easy™ Proportioner (stainless steel)

Ref. No.	Part No.	Description	Qty.
1	15D239	Integrator Body	1
2	15D310	Manifold Housing	2
3*†	110135	O-Ring; PTFE	2
4†	117558	Spring	2
5†	15D312	Ball Guide Bushing	2
6†	105445	Ball; 1/2 in.	2
7†	196832	Seat	2
8*†	104319	O-Ring; PTFE	2
9*	119348	O-Ring; perfluoroelastomer	3
10	15D311	Valve	2
11	101950	Screw; 1/4-20 UNC x 2.5 in.	8
12	102915	Drive Pin	2
13	110082	Retaining Ring	3
14	15D983	Drain Valve	1
15	15D336	Ratio Housing	2
16	287222	Dispense Valve; see manual 310655	2
18	114339	Swivel Union; 1/4-18 npsm x 1/4-18 npt	2
19	101970	Pipe Plug; 1/4-18 ptf	2
20‡	248191	Sampling Valve	2
22	116746	Barbed Fitting	2
23	101885	Screw; 1/4-20 UNC x 1.75 in.	2
24	118831	Clamp Cover	1
25	118830	Tube Clamp	1
26	118823	U-tube	1
27	15D637	Integrator Mixer	1
28	15D638	Mixer Cap	1
29	15D412	Integrator Cap	1
30*	110966	O-Ring; PTFE	2
31	15D389	Integrator Housing	1
32	15D430	Static Mixer Tube	1
33	118822	Static Mixer Element	2
38*	119187	O-Ring; PTFE	2
40	501867	Check Valve	2
44	248271	Shutoff Valve	2
45	110336	Pipe Connector	2
49	C19364	Set Screw; 1/4 UNC x .75	2

* Parts included in Kit 248444 (purchase separately).

† Parts included in Kit 248430 (purchase separately).

‡ Part included in Kit 245145 (purchase separately).

Part No. 234593

Used with ProMix Easy™ Proportioner (carbon steel)

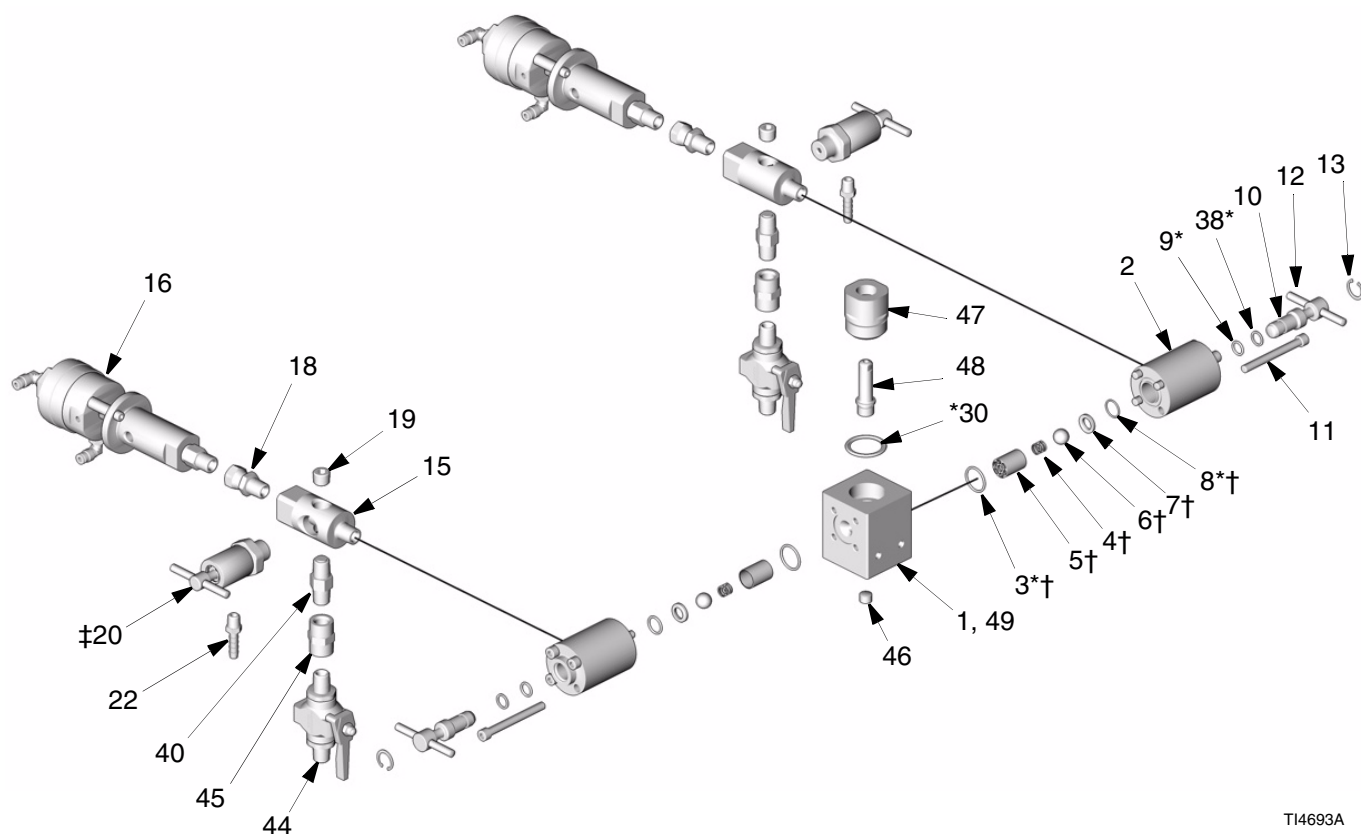
Ref. No.	Part No.	Description	Qty.
1	15D239	Integrator Body	1
2	15D310	Manifold Housing	2
3*†	110135	O-Ring; PTFE	2
4†	117558	Spring	2
5†	15D312	Ball Guide Bushing	2
6†	105445	Ball; 1/2 in.	2
7†	196832	Seat	2
8*†	104319	O-Ring; PTFE	2
9*	111316	O-Ring; chemical resistant fluo- roelastomer	3
10	15D311	Valve	2
11	101950	Screw; 1/4-20 UNC x 2.5 in.	8
12	102915	Drive Pin	2
13	110082	Retaining Ring	3
14	15D983	Drain Valve	1
15	15D336	Ratio Housing	2
16	287222	Dispense Valve; see manual 310655	2
18	156823	Swivel Union; 1/4-18 npt	2
19	101970	Pipe Plug; 1/4-18 ptf	2
20‡	245143	Sampling Valve	2
22	116746	Barbed Fitting	2
23	101885	Screw; 1/4-20 UNC x 1.75 in.	2
24	118831	Clamp Cover	1
25	118830	Tube Clamp	1
26	118823	U-tube	1
27	15D637	Integrator Mixer	1
28	15D638	Mixer Cap	1
29	15D412	Integrator Cap	1
30*	110966	O-Ring; PTFE	2
31	15D389	Integrator Housing	1
32	15D430	Static Mixer Tube	1
33	118822	Static Mixer Element	2
38*	119187	O-Ring; PTFE	2
40	501867	Check Valve	2
44	214037	Shutoff Valve	2
45	113093	Pipe Connector	2
49	C19364	Set Screw; 1/4 UNC x .75	2

* Parts included in Kit 248445 (purchase separately).

† Parts included in Kit 248430 (purchase separately).

‡ Part included in Kit 245145 (purchase separately).

Part No. 234450



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Part No. 234450

Used with ProMix Easy™ Air-assisted Applications

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	15D239	Integrator Body	1	19	101970	Pipe Plug; 1/4-18 ptf	2
2	15D310	Manifold Housing	2	20‡	245143	Sampling Valve	2
3*†	110135	O-Ring; PTFE	2	22	116746	Barbed Fitting	2
4†	117558	Spring	2	30*	110966	O-Ring; PTFE	1
5†	15D312	Ball Guide Bushing	2	38*	119187	O-Ring; PTFE	2
6†	105445	Ball; 1/2 in.	2	40	501867	Check Valve	2
7†	196832	Seat	2	44	214037	Shutoff Valve	2
8*†	104319	O-Ring; PTFE	2	45	113093	Pipe Connector	2
9*	111316	O-Ring; chemical resistant fluo- roelastomer	2	46	110208	Pipe Plug	1
10	15D311	Valve	2	47	15D414	Integrator Cover	1
11	101950	Screw; 1/4-20 UNC x 2.5 in.	8	48	15D413	Pipe	1
12	102915	Drive Pin	2	49	C19364	Set Screw; 1/4 UNC x .75	2
13	110082	Retaining Ring	2				
15	15D336	Ratio Housing	2				
16	287222	Dispense Valve; see manual 310655	2				
18	156823	Swivel Union; 1/4-18 npt	2				

* Parts included in Kit 234450 (purchase separately).

† Parts included in Kit 248430 (purchase separately).

‡ Part included in Kit 245145 (purchase separately).

Technical Data

Air Specifications

Maximum Air Input Pressure	100 psi (0.7 MPa, 7 bar)
Air supply	75-100 psi 0.5-0.7 MPa, 5.2-7 bar)
Air filtration	40 micron (minimum) filtration required
Air consumption	Depends on spray air

Fluid Specifications

Maximum Fluid Working Pressure	5000 psi (34.5 MPa, 345 bar) Maximum Working Pressure
Fluid outlet size	1/4 in. npt(m)
Fluid wetted parts	303, 304 SST, 17-4 SST, Tungsten carbide (with nickel binder), perfluoroelastomer, chemical resistant fluoroelastomer (part no. 234593, 234450 only), PTFE, carbon steel (part no. 234593, 234450 only), nylon
Fluids handled	Two-component epoxy or polyurethane paints
Viscosity range of fluid	20 to 5000 cps*
Fluid filtration	100 mesh minimum
Fluid flow rate (maximum)	0.7–128 oz./min. (20–3800 cc/min.)*
Mixing ratio range	0.1:1–30:1*

* Dependent on application. For more detailed information on viscosities, flow rates, or mixing ratios, consult your Graco distributor.

Graco Standard Warranty

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

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

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

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

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

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

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

FOR GRACO CANADA CUSTOMERS

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Graco Information

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

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211, **Fax:** 612-378-3505

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