

Proportioning Packages

310794E

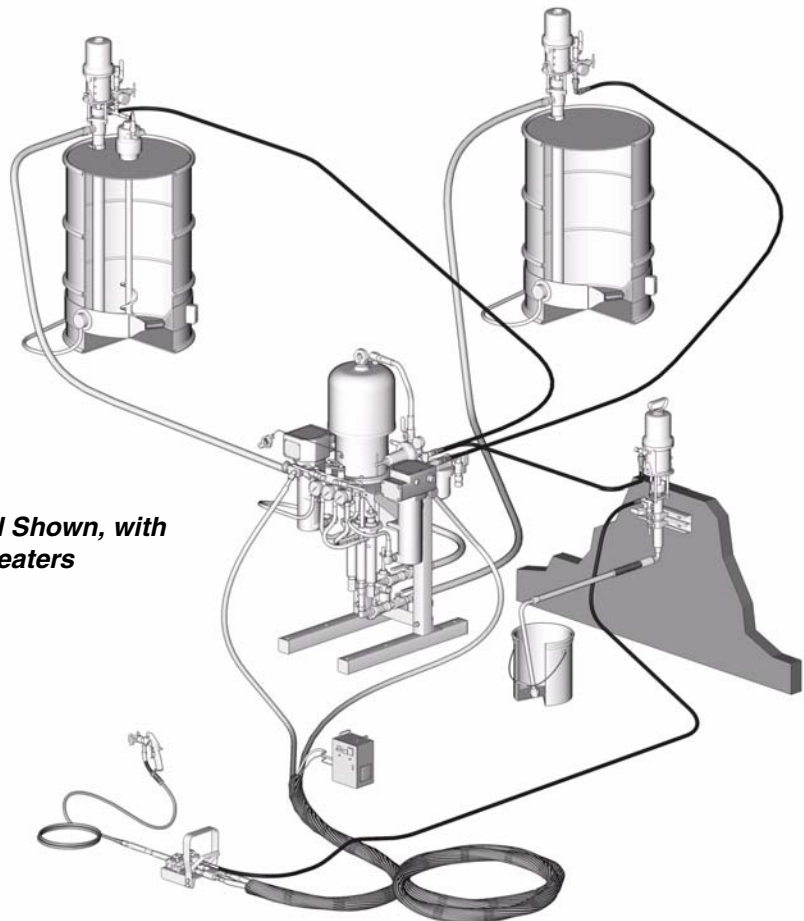
Complete packages for proportioning, mixing, and spraying 2 component quick setting materials.



Important Safety Instructions

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

***Hydra-Cat Model Shown, with
optional inline heaters***





T15726b

Contents

Manual Conventions	2
Isocyanate Hazard	2
Keep Resin and Hardener Separate	2
Supplied Manuals	3
Models	4
Warnings	5
Installation	7
Locate proportioner 7	
Install 248827 air supply kit 8	
Install 248826 solvent flush kit 9	
Install 248825 feed kits 10	
Install 248824 agitator kit 11	
Connect air lines 12	
Install inline heaters (optional) 13	
Install 15F028 drum heaters 14	
Connect fluid hose bundles 15	
Install hose heat control kit 15	
Install fluid temperature sensor (FTS) 15	
Connect remote mix manifold kit 16	
Connect static mixers and whip hose 16	
Connect spray gun 16	
Grounding 18	
Flush Before Using Equipment 18	
Operation/Maintenance	18
Troubleshooting/Repair	18
Parts	20
Technical Data	23
Graco Standard Warranty	24
Graco Information	24

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.

Isocyanate Hazard

						
<p>Spraying materials containing isocyanates creates potentially harmful mists, vapors, and atomized particulates.</p> <p>Read material manufacturer's warnings and material MSDS to know specific hazards and precautions related to isocyanates.</p> <p>Prevent inhalation of isocyanate mists, vapors, and atomized particulates by providing sufficient ventilation in the work area. If sufficient ventilation is not available, a supplied-air respirator is required for everyone in the work area.</p> <p>To prevent contact with isocyanates, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons, and goggles, is also required for everyone in the work area.</p>						

Keep Resin and Hardener Separate

CAUTION

To prevent cross-contamination of the wetted parts, do not interchange resin and hardener parts. Keep parts separate when cleaning the manifold. The manifold is shipped with the resin (high volume) side on the left and the hardener (low volume) side on the right.

Never leave hardener (isocyanate) wetted parts exposed to moisture in the air.

Supplied Manuals

The following manuals are shipped with the proportioning packages. Refer to these manuals for detailed equipment information. Manuals are available at www.graco.com.

Proportioning System	
Part No.	Description
310794	Proportioning System, Instructions-Parts Manual (English)
310858	Proportioning System, Instructions-Parts Manual (Spanish)
Hydra-Cat Proportioner	
310795	Hydra-Cat Proportioner, Operation Manual (English)
310859	Hydra-Cat Proportioner, Operation Manual (Spanish)
310796	Hydra-Cat Proportioner, Repair-Parts Manual (English)
310860	Hydra-Cat Proportioner, Repair-Parts Manual (Spanish)
Xtreme Mix Proportioner	
309535	Xtreme Mix Proportioner, Operation Manual (English)
309518	Xtreme Mix Proportioner, Repair-Parts Manual (English)






Remote Mix Manifold Kit	
310797	Instruction Manual (English)
Heated Hose Control	
310798	Instruction Manual (English)
Heated Hose	
309572	Instruction Manual (English)
Feed Pump Kit	
310863	Instruction Manual (English)
Solvent Flush Pump Kit	
310863	Instruction Manual (English)
Agitator Kit	
310863	Instruction Manual (English)
Air Supply Kit	
309827	Instruction Manual (English)
Air Regulator	
308167	Instruction Manual (English)
Airless Spray Gun	
309741	Instruction Manual (multilingual)






Models

Part No., Series	Maximum Fluid Working Pressure psi (MPa, bar)	Maximum Air Input Pressure psi (MPa, bar)	Description	Includes:
248835, A	4600 (31.7, 317)	100 (0.7, 7.0)	2:1 Volume Ratio, Stand Mount, Hydra-Cat® Proportioning System	<ul style="list-style-type: none"> • 234932 Proportioner • Feed Kits, Solvent Flush Kit, Agitator Kit, Air Supply Kit • Heated Hose, Hose Control, Fluid Temperature Sensor • Remote Mix Manifold • Static Mixer/Whip Hose • Airless Spray Gun
248836, A	5000 (34.5, 345)	100 (0.7, 7.0)	3:1 Volume Ratio, Stand Mount, Hydra-Cat® Proportioning System	<ul style="list-style-type: none"> • 234933 Proportioner • Feed Kits, Solvent Flush Kit, Agitator Kit, Air Supply Kit • Heated Hose, Hose Control, Fluid Temperature Sensor • Remote Mix Manifold • Static Mixer/Whip Hose • Airless Spray Gun
248841, A	5000 (34.5, 345)	73 (0.5, 5.0)	1:1 to 10:1 Volume Ratio, Cart Mount, Xtreme Mix™ Proportioning System	<ul style="list-style-type: none"> • 248842 Proportioner • Feed Kits, Solvent Flush Kit, Agitator Kit, Air Supply Kit • Heated Hose, Hose Control, Fluid Temperature Sensor • Remote Mix Manifold • Static Mixer/Whip Hose • Airless Spray Gun


Warnings

The following warnings include general safety information for this equipment. Further product specific warnings may be 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

 Contact your Graco distributor for assistance in designing your system. Be sure all accessories are adequately sized and pressure-rated to meet system requirements.

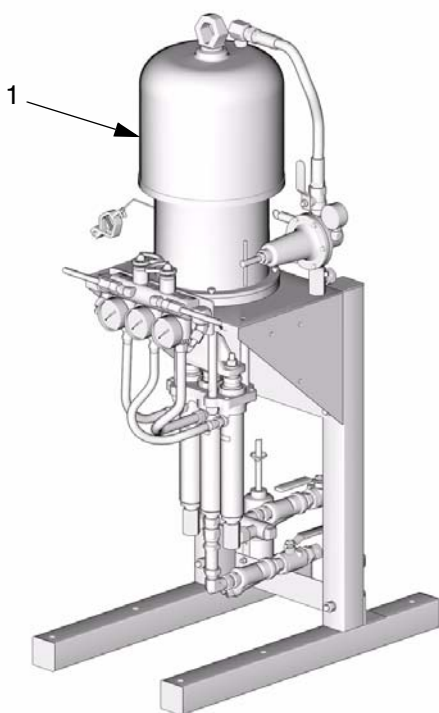
Reference numbers and letters in the text refer to numbers and letters in the figures. See **Parts**, page 20, for an overall system drawing.

1. Locate proportioner

- a.** Locate proportioner (1) on a level surface.

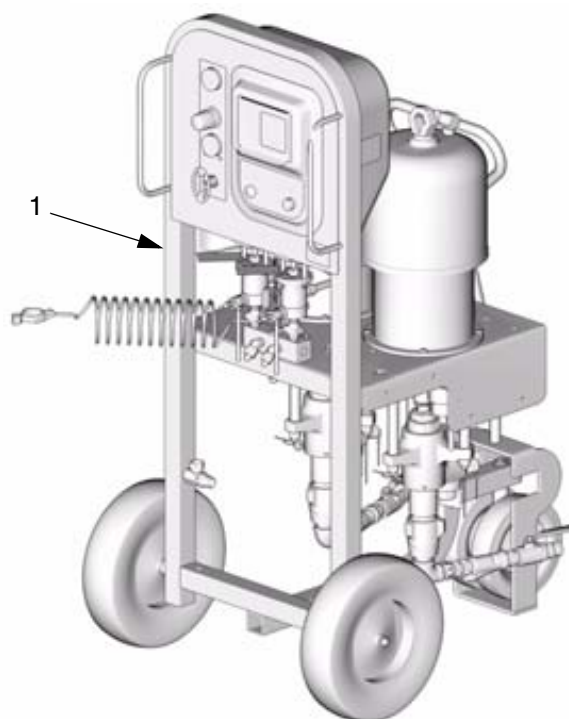
- b.** Position proportioner for convenient operator access and maintenance, safe routing of air and fluid lines, and easy connection of components and accessories.
- c.** For wall or stand mount proportioners, follow mounting instructions in proportioner operation manual.

Hydra-Cat Model



TI5619b

Xtreme Mix Model



TI5761a

FIG. 1: Proportioner

2. Install 248827 air supply kit

See FIG. 2. Air supply kit (4) includes:

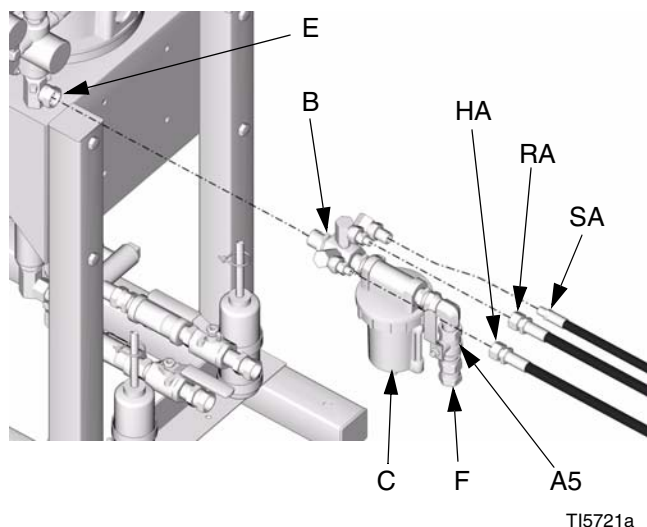
- **System bleed-type master air valve (A5):** shuts off all air to the system. Locate upstream from all other air line accessories.
- **Air manifold (B):** distributes air to proportioner pump and to feed pumps, solvent flush pump, and agitator.
- **Air line filter, with auto-drain (C):** removes harmful dirt and moisture from compressed air supply.

WARNING

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

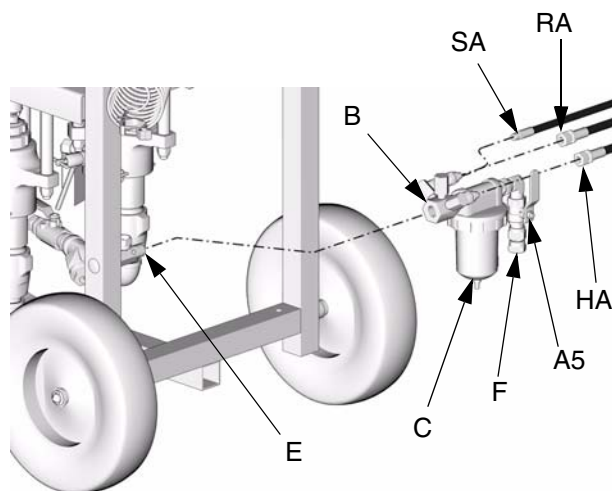
- Shut off master air valve (A5).
- Connect air supply kit manifold (B) to air inlet (E) of proportioner.
- Connect main air supply line to swivel inlet (F) of air supply kit. Do not turn on master air valve (A5).

Hydra-Cat Model



TI5721a


Xtreme Mix Model



TI5762a

FIG. 2: 248827 Air Supply Kit

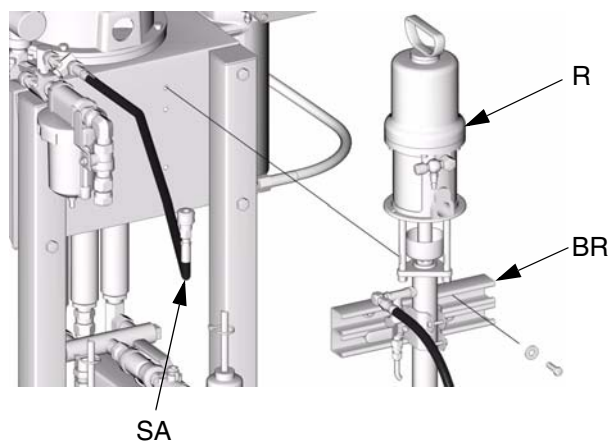
3. Install 248826 solvent flush kit

 For wall mount, ensure that wall is strong enough to support weight of equipment, fluid, hoses, and stress caused during operation. Mount at a convenient height for operation and maintenance, and so suction hose is not stretched tight. Ensure that equipment is level.

- a. See FIG. 3. Position solvent pump (R) so 48 in. (0.2 m) air supply line (SA) reaches solvent pump and 30 in. (0.75 m) siphon hose reaches 5 gal. (19 l) pail.
- b. Install pump using mounting bracket (BR) and hardware supplied. Mount bracket on wall, back of Hydra-Cat stand, or on the side of Xtreme Mix frame.

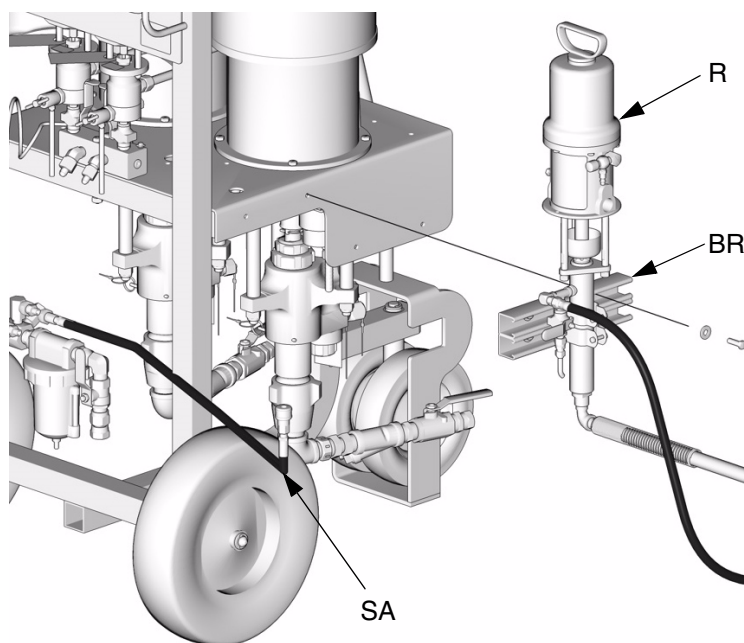
- c. Connect suction hose to pump inlet. Place suction tube in container of solvent.

Hydra-Cat Model



TI5675a

Xtreme Mix Model



TI5764a

FIG. 3: 248826 Solvent Flush Kit

4. Install 248825 feed kits

System includes two feed kits (3), one for resin and one for hardener.

- a.** Position resin and hardener drums so 15 ft (4.6 m) air supply lines (RA, HA, FIG. 2) reach feed pumps, and 10 ft (3.05 m) fluid hoses (RH, HH) reach proportioner.
- b.** See FIG. 4. Install resin feed pump (RP) in resin drum and secure with bung adapter (BA). Repeat for hardener feed pump (HP).

- c.** Install air control kits (AC) on both pumps.
- d.** Screw swivel union (SU) into resin pump fluid outlet. Connect resin hose (RH) to swivel. Repeat for hardener hose (HH).
- e.** Close resin and hardener fluid inlet valves (G1, G2). Connect resin and hardener hoses (RH, HH).

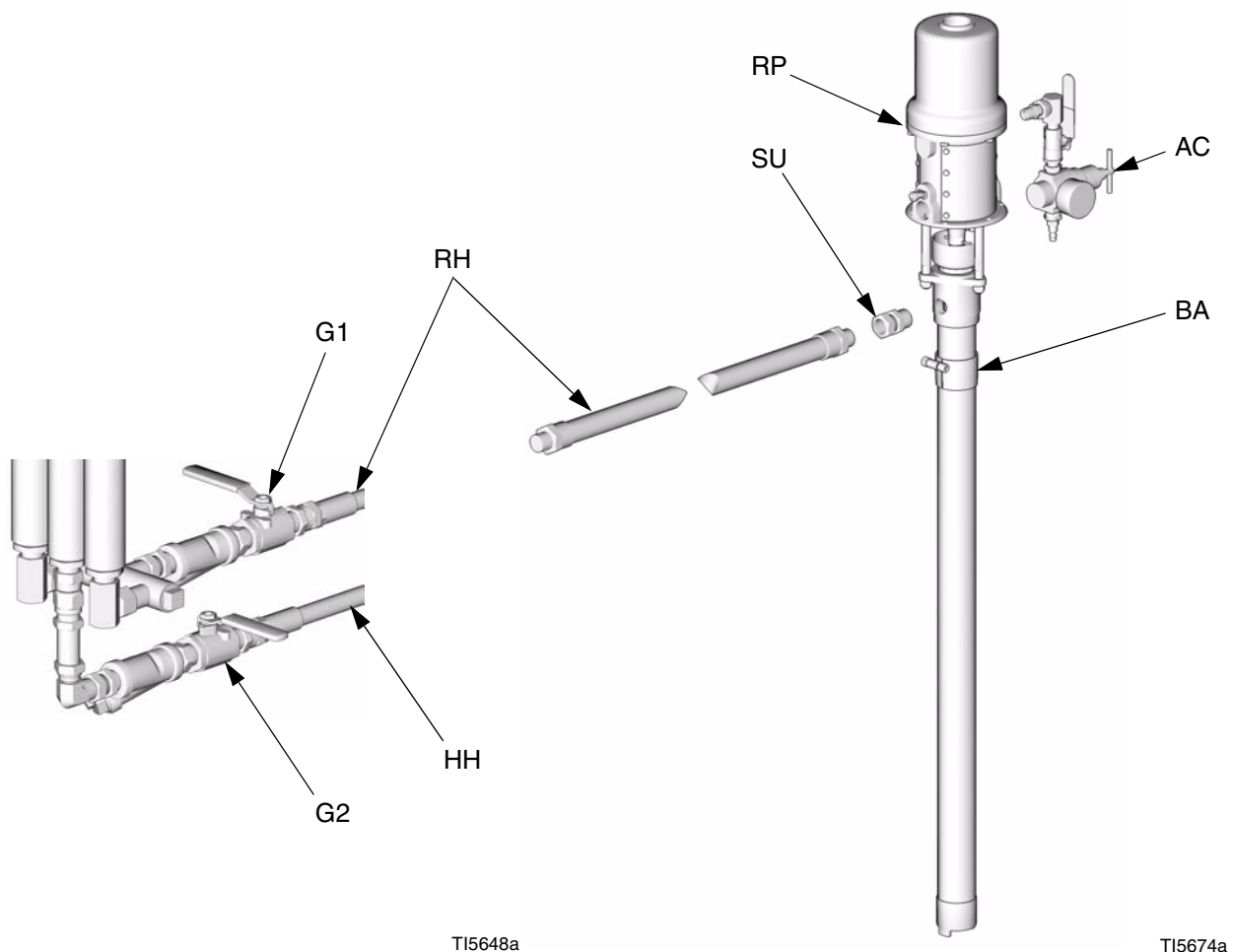
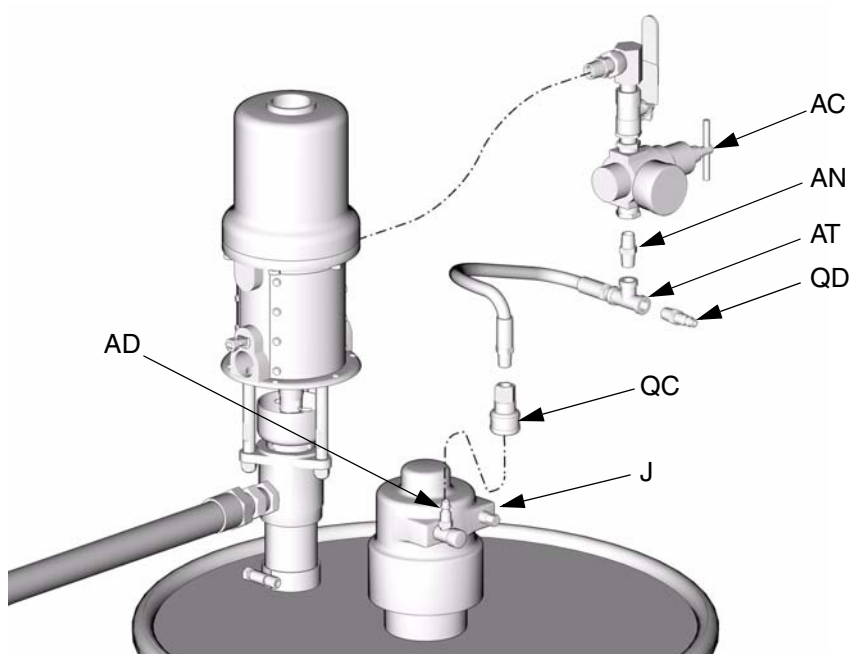


FIG. 4: 248825 Feed Kit

5. Install 248824 agitator kit

- a.** See FIG. 5. Install agitator (J) in resin drum.
- b.** Remove quick disconnect fitting (QD) from resin feed pump air control kit (AC) and screw it into tee (AT) of agitator kit.
- c.** Screw nipple (AN) of agitator kit into resin feed pump air control kit (AC).
- d.** Remove agitator quick disconnect fitting (AD) from quick coupler (QC) and screw it into agitator inlet. Reconnect quick coupler (QC) to fitting (AD).

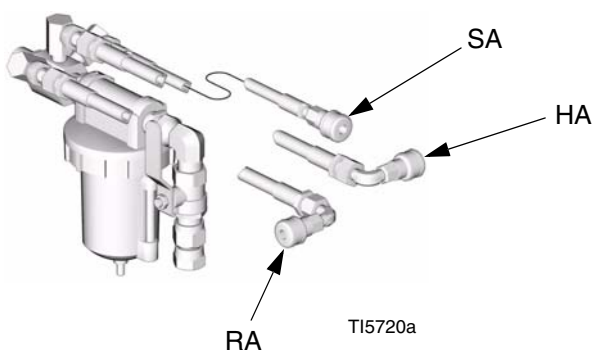


T15720a

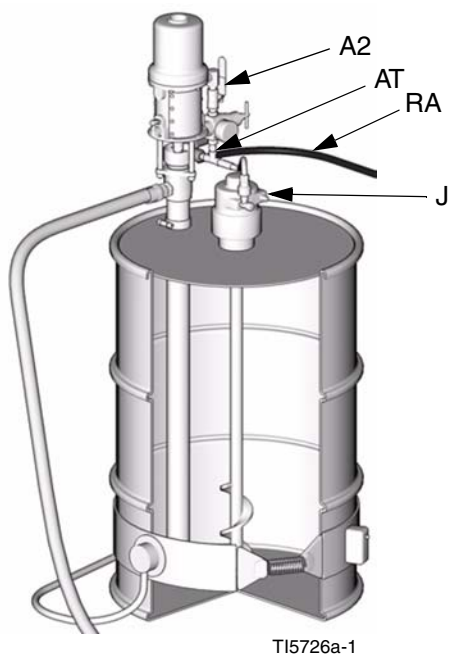
FIG. 5: 248824 Agitator Kit

6. Connect air lines

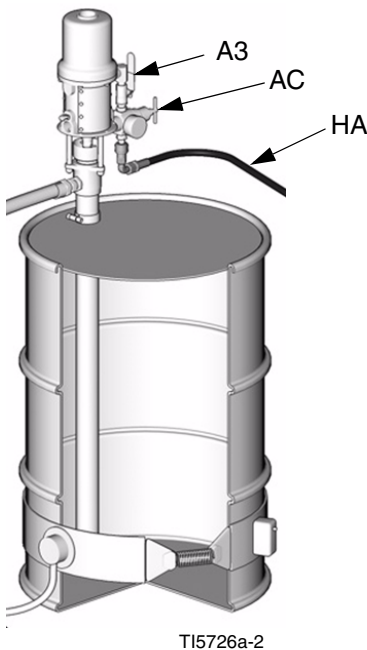
- a.** See FIG. 6. Shut off air valves (A2, A3) at feed pumps.
- b.** Connect 15 ft (4.6 m) resin feed pump air line (RA) to quick disconnect fitting at tee (AT). This line supplies air to resin feed pump (RP) and agitator (J).
- c.** Connect 15 ft (4.6 m) hardener feed pump air line (HA) to quick disconnect fitting (QD) at hardener feed pump air control kit (AC). This line supplies air to hardener feed pump (HP).
- d.** Connect 48 in. (0.2 m) solvent air line (SA) to solvent pump (SP) air inlet.



Resin Feed Pump



Hardener Feed Pump



Solvent Flush Pump



FIG. 6: Connect Air Lines

7. Install inline heaters (optional)

An inline fluid heater may be installed downstream of the fluid manifold (FM), for one or both fluids. Heaters must be ordered separately, depending on the desired voltage. To setup a heated system, contact your Graco distributor for assistance. Order the following parts:

Ref.	Part No.	Description	Qty.
AA		VISCON HP HEATER; order desired voltage; see 309524	2
AB	246306	HOSE, fluid, high pressure; 1/2 npsm (fbe); 45 in. (1.14 m)	2
AC	158491	NIPPLE; 1/2 npt	2
AD	158683	ELBOW; 1/2 npt	2
AE	15B159	BRACKET (Xtreme Mix model only)	2
AF	100133	LOCKWASHER; 3/8 (Xtreme Mix model only)	8
AG	100131	NUT; 3/8-16 unc (Xtreme Mix model only)	8

a. Ensure that electric power supply meets heater requirements. Install power cord; see 309524.

b. **Hydra-Cat models:** Install a heater (AA) on each side of the proportioner's mounting bracket (W), using screws (X) and lockwashers (Y) supplied with heater. See FIG. 7.

Xtreme Mix model: Install a heater (AA) on each bracket (AE) with screws (X) and lockwashers (Y) supplied with heater. Top surface of bracket (AE) should extend over top of heater. Use lower mounting hole pattern for resin side heater, and upper mounting hole pattern for hardener side heater. Install brackets (AE) on mounting studs of cart, and secure with lockwashers (AF) and nuts (AG).

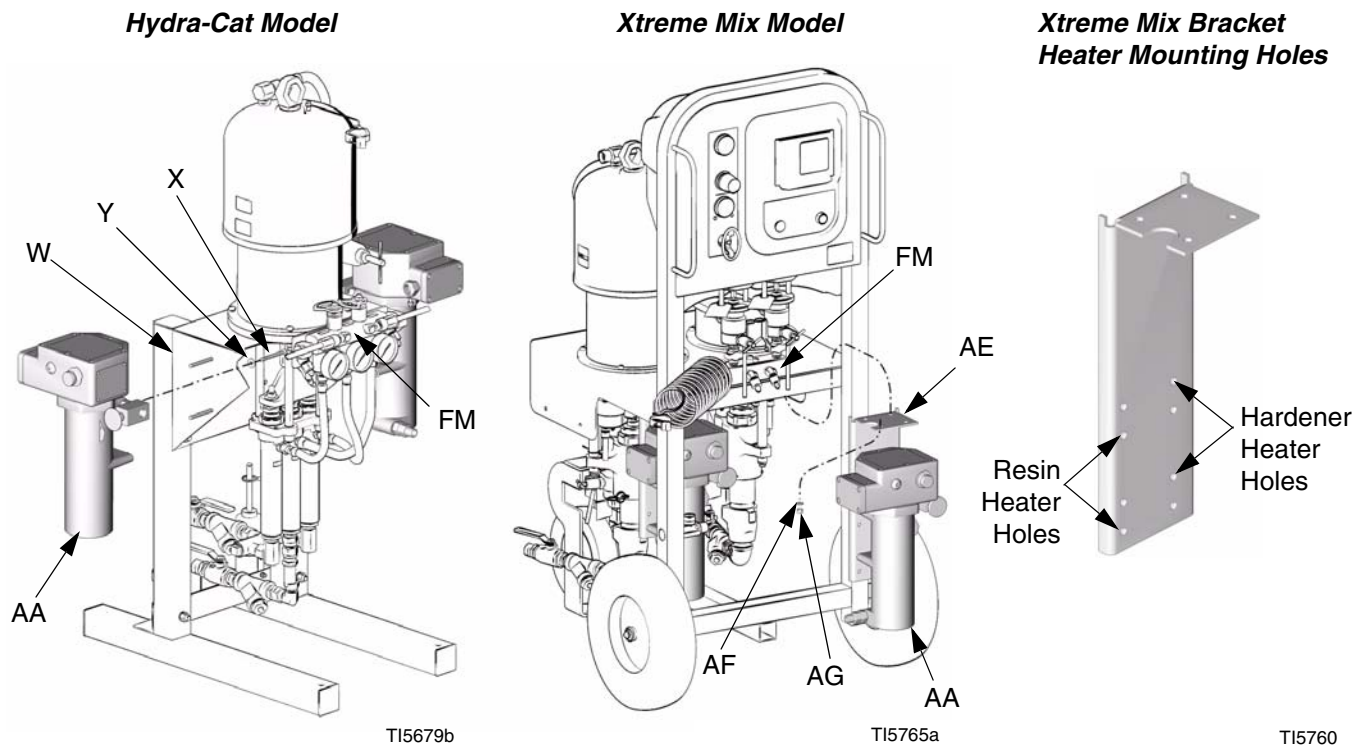
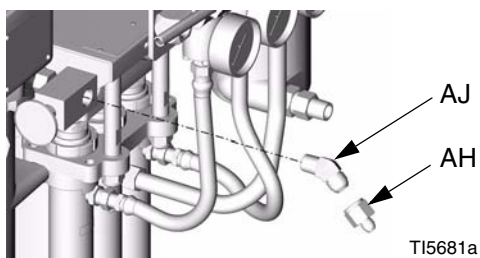
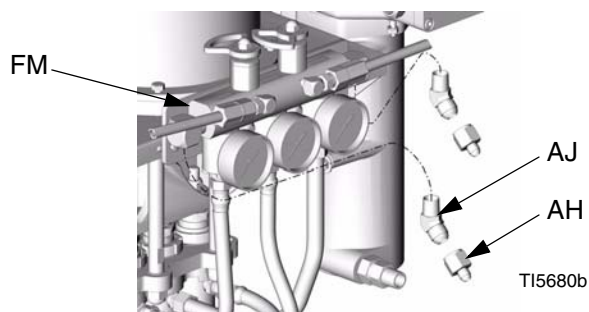


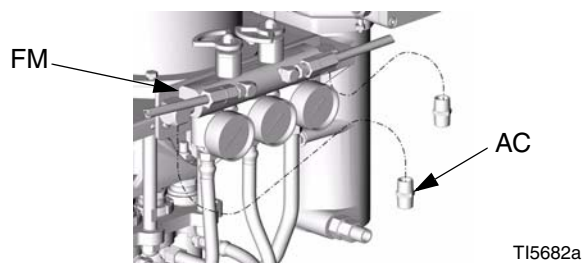
FIG. 7: Install Heater

- c.** Remove fittings (AH, AJ) from resin side of fluid manifold (FM). Install in resin heater outlet. Repeat on hardener side.

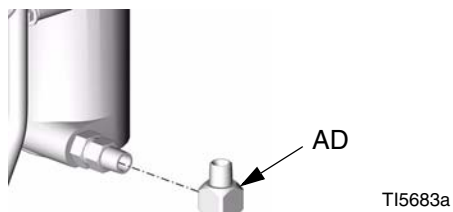
Hydra-Cat Model Shown



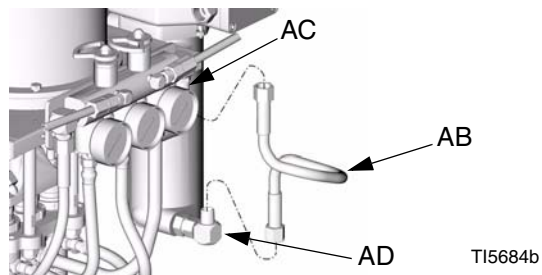
- d.** Install nipple (AC) in resin side of fluid manifold (FM). Repeat on hardener side.



- e.** Install elbow (AD) on resin heater inlet. Repeat on hardener side.



- f.** Connect hose (AB) between nipple (AC) at resin outlet of fluid manifold (FM) and elbow (AD) at inlet of resin side heater. Repeat for hardener side.

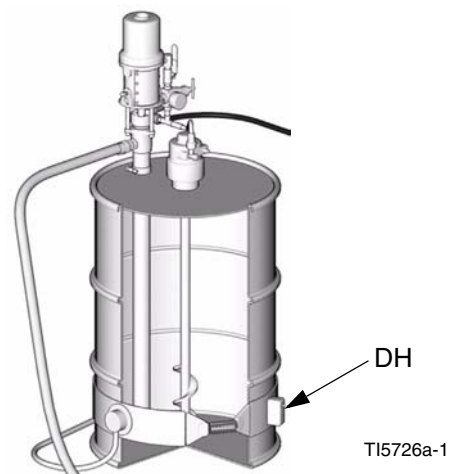


8. Install 15F028 drum heaters

Using a drum heater with an agitator effectively conditions fluid in the drum by mixing in all resin fillers while lowering viscosity. In cool conditions a drum heater may also be used for the hardener.

- a.** Drum heater is 230 V, 1000 W. Wire heater according to local code. Do not plug in until heater is installed on drum. See instruction supplied with heater.

- b.** Wrap heater (DH) around drum. Pull it tight and slip a coil of spring over latch hook to hold securely.



9. Connect fluid hose bundles

Hose lengths are 50 ft (15.2 m) long. The maximum combined hose length is 210 ft (94.5 m).

- a.** See FIG. 8. Connect desired lengths of hose (7). Secure all connections as explained in manual 309572.
- b.** Connect resin and hardener hoses to resin and hardener outlets on proportioner fluid manifold. Fittings are sized to prevent connection errors.

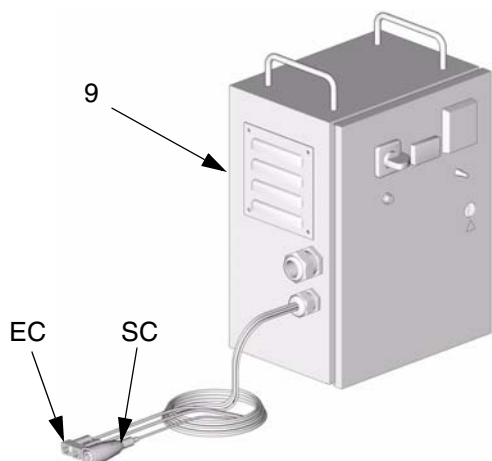


If inline heaters are installed, connect resin and hardener hoses to fittings at resin and hardener heater outlets.

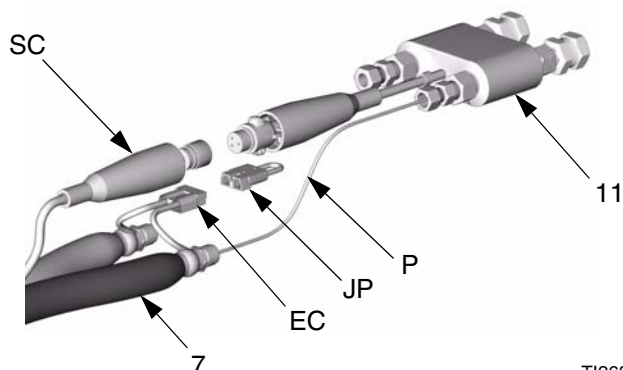
10. Install hose heat control kit

The hose heat control kit includes a control box and a jumper for the hose electrical connector. See manual 310798.

- a.** See FIG. 8. Install jumper (JP) in electrical connector (EC) at last length of heated hose. Tie wrap connectors together.



TI5688a



TI2684b

FIG. 8: Fluid Hoses, Hose Heat Control, and Fluid Temperature Sensor

- b.** Plug sensor cable (SC) and electrical connector (EC) from hose heat control (9) into mating connectors on first length of heated hose. Be sure cables have slack when hose bends. Wrap cable and electrical connections with electrical tape.
- c.** Check that transformer wire tap inside control box matches length of hose being used. See 310798.

11. Install fluid temperature sensor (FTS)

- a.** See FIG. 8. Carefully extend FTS probe (P). Do not bend or kink probe. Insert in major volume (resin) side of heated hose.
- b.** Connect resin and hardener hoses to FTS (11) inlets. Connect hose sensor cable (SC) to FTS cable.

12. Connect remote mix manifold kit

- a.** See FIG. 9. Connect fluid temperature sensor (11) to inlets on remote mix manifold (6). Resin and hardener fittings are sized to prevent connection errors.
- b.** Connect solvent flush line (SL) to center ball valve (SV) of remote mix manifold (6). This valve prevents material from contaminating solvent system, and isolates solvent system for service.

13. Connect static mixers and whip hose

- a.** See FIG. 9. Connect two static mixer tubes (10a) with mixer elements (10b), using swivel union (10f). Screw into mix manifold (6) outlet. Ensure that the flow arrows point downstream.

- b.** Connect two lengths of whip hose (10c) using nipple (10d, not shown). Screw whip hose onto adapter (10e), then screw adapter onto static mixer tubes (10a).

14. Connect spray gun

- a.** See FIG. 9. Connect gun swivel (8d) and gun (8a) to whip hose (10c).



Use of gun swivel (8d) is optional. If used, remove spring guard (SG) from gun handle.

- b.** Do not install the spray tip (8b) until the equipment is flushed and primed. See the proportioner operation manual.



Spray gun is supplied with a 517 RAC X tip, suitable for epoxy primers or detail work. To spray higher flows and topcoats, use the HD RAC tip guard (8c) and GHD531 tip (8b) supplied.

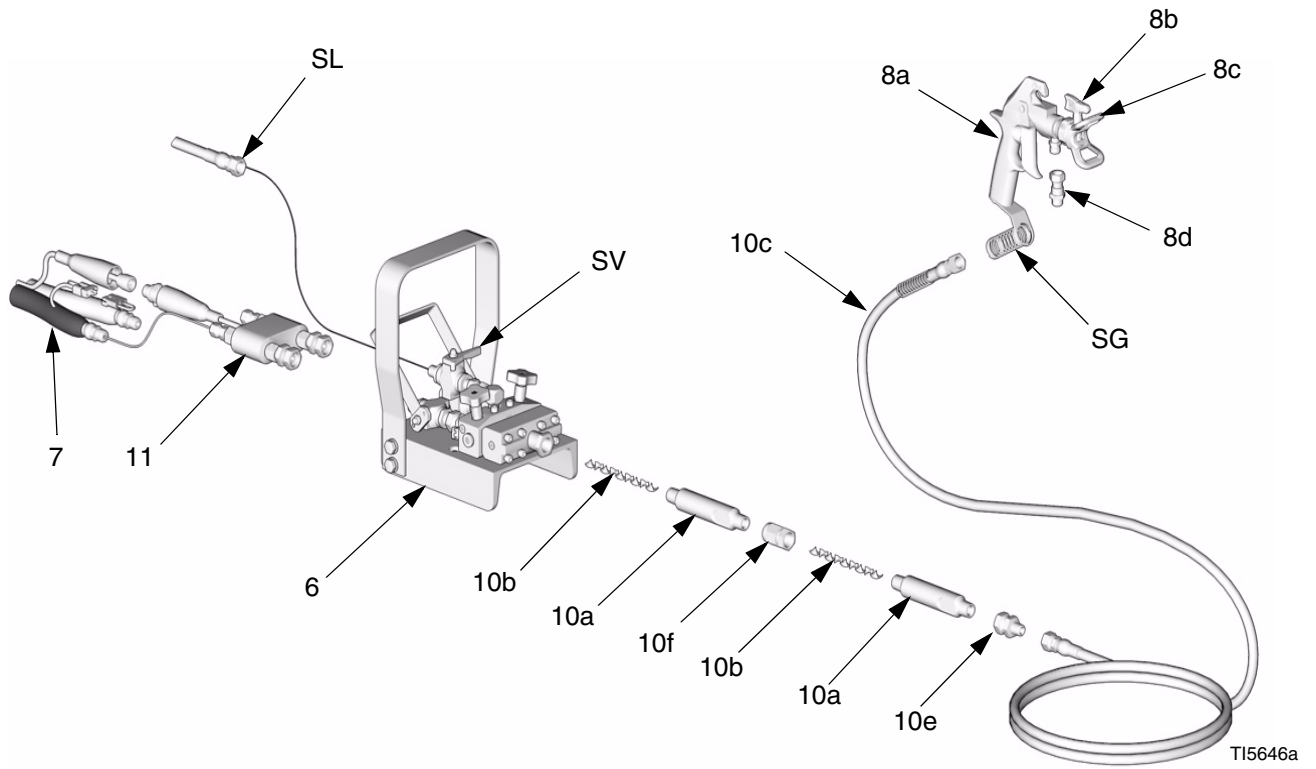


FIG. 9: Remote Mix Manifold, Static Mixers, Whip Hose, and Gun

15. Grounding

WARNING

Your system must be grounded. Read warnings, page 5.

- **Proportioner pump:** follow instructions in proportioner operation manual.
- **Air and fluid hoses:** use only electrically conductive hoses.
- **Air compressor:** follow manufacturer's recommendations.
- **Spray gun:** ground through connection to a properly grounded fluid hose and pump.
- **Feed pumps and solvent pump:** follow instructions in feed pump manual.
- **Hose heat control (if used):** follow local code.
- **Object being sprayed:** follow local code.
- **Solvent pails used when flushing:** follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts grounding continuity.

- **To maintain grounding continuity when flushing or relieving pressure:** hold metal part of the spray gun/dispense valve firmly to the side of a grounded metal pail, then trigger the gun/valve.

16. Flush Before Using Equipment

The equipment was tested with lightweight oil, which is left in the fluid passages to protect parts. To avoid contaminating your fluid with oil, flush the equipment with a compatible solvent before using the equipment. See **Flushing the System** in the proportioner operation manual.

Operation/Maintenance

Refer to the applicable component manual for operation and maintenance instructions. See **Supplied Manuals**, page 3.

Troubleshooting/Repair

Refer to the applicable component manual for troubleshooting and repair instructions. See **Supplied Manuals**, page 3.

[illegible]

Parts

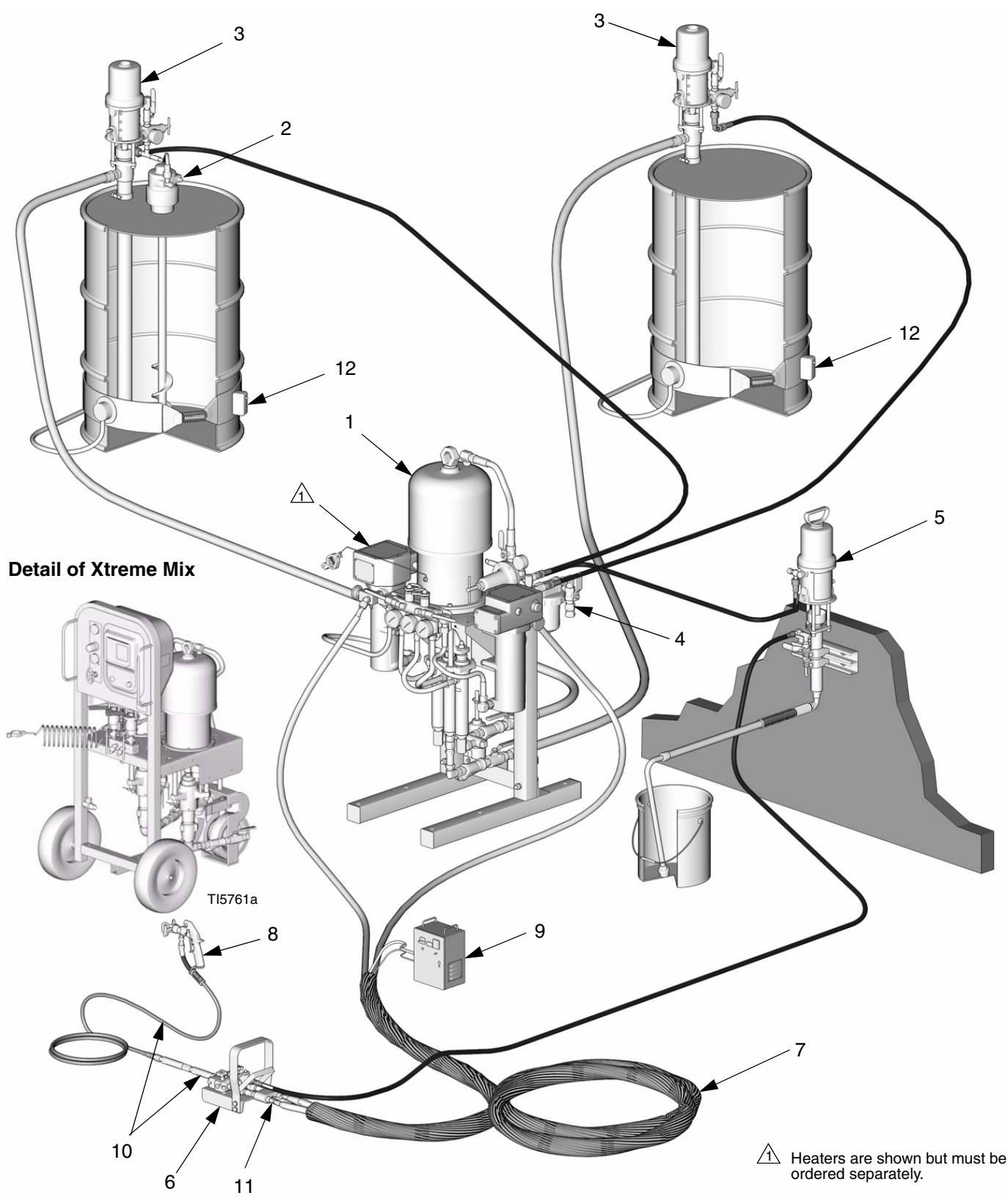
248835 Series A, 2:1 Mix Ratio Hydra-Cat System (shown)

248836 Series A, 3:1 Mix Ratio Hydra-Cat System

248841 Series A, 360 Xtreme Mix System

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	234932	PROPORTIONER, King, 2:1; see 310795, 310796; 248835 only	1	8d	189018	. SWIVEL, gun	1
	234933	PROPORTIONER, King, 3:1; see 310795, 310796; 248836 only	1	9	248921	KIT, control, heated hose; see 310798	1
	248842	PROPORTIONER, Xtreme Mix; see 309518, 309535	1	10	248925	KIT, static mixer/whip hose; includes items 10a-10f	1
2	248824	KIT, agitator; see 310863	1	10a	15E592	. TUBE, static mixer	2
3	248825	KIT, feed pump; see 310863	2	10b	248927	. MIXER, static; package of 25	1
4	248827	KIT, air supply; see 309827	1	10c	H52506	. HOSE, whip, fluid; nylon; 1/4 in. (6.3 mm) ID; 1/4 npsm(fbe); 6 ft (1.8 m)	2
5	248826	KIT, flush, solvent; see 310863	1	10d	162453	. NIPPLE; 1/4 npt x 1/4 npsm	1
6	248923	KIT, mix manifold, remote; see 310797	1	10e	157705	. ADAPTER, swivel; 1/4 npt(m) x 3/8 npsm(f)	1
7	248907	HOSE, heated; see 309572	1	10f	156173	. UNION, swivel; 3/8 npt(f) x 3/8 npsm(f)	1
8	248844	KIT, gun; includes items 8a-8d	1	11	248926	SENSOR, fluid temperature	1
8a	246468	. GUN, spray, airless; see 309741	1	12	15F028	HEATER, drum; 230 Vac; 1000 W	2
8b	GHD531	. TIP, spray	1				
8c	222674	. KIT, tip guard, HD RAC	1				

248835, 2:1 Mix Ratio Hydra-Cat System shown





Handwriting practice lines consisting of 20 horizontal lines.

Technical Data

Maximum fluid feed pressure	500 psi (3.5 MPa, 35 bar)
Maximum fluid working pressure	<i>Models 248836 and 248841:</i> 5000 psi (34.5 MPa, 345 bar) <i>Model 248835:</i> 4600 psi (31.7 MPa, 317 bar)
Maximum air input pressure	<i>Model 248841:</i> 70 psi (0.43 MPa, 4.3 bar) <i>Models 248835 and 248836:</i> 100 psi (0.7 MPa, 7.0 bar)
Maximum air consumption	<i>Model 248841:</i> 160 scfm <i>Models 248835 and 248836:</i> 120 scfm
Mix ratio by volume	<i>Model 248835:</i> 2:1 fixed ratio <i>Model 248836:</i> 3:1 fixed ratio <i>Model 248841:</i> 0.1:1 to 10:1, at settable increments
Maximum fluid temperature	180°F (82°C)
Electrical requirements	230 Vac, 50/60 Hz, 1 phase 11 A for 50 ft heated hose and two 1000 W drum heaters, plus 2.2 A per each 50 ft hose up to 200 ft total
Sound pressure	See component manuals, page 3
Sound power	See component manuals, page 3
Wetted parts	See component manuals, page 3

All other brand names or marks are used for identification purposes and are trademarks of their respective owners.

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

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

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

*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.*

This manual contains English. MM 310794

Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

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

Copyright 2004, Graco Inc. is registered to I.S. EN ISO 9001

www.graco.com

Revised 7/2008