INSTRUCTIONS - PARTS LIST



This manual contains **IMPORTANT WARNINGS and INSTRUCTIONS** READ AND RETAIN FOR REFERENCE

Precision Dose

Model: 974-247 P-DOS-D-P-S-15M-120

CE

Maximum Fluid Working Pressure: 3000 psi (20 Mpa, 207 bar) Maximum Air Inlet Pressure: 90 psi (6 Mpa, 6.3 bar)

WARNING

PRIMING PISTON HAZARD

This pump has a priming piston which extends below the foot valve during operation. This piston could pinch or amputate your fingers or hands as it moves up, into the cylinder. To reduce the risk of injury, keep your fingers and hands all tools away from the priming piston during operation and whenever the air and fluid pressure in the pump is not **fully relieved**.

CAUTION

CONNECTING HARDWARE FRACTURE HAZARD

The intended use of this unit is to run both pumps together, not one at a time. By running one pump alone, after disconnecting the other pump, or by allowing one pump to run out of material; a great amount of stress is placed on the hardware that connects the air motor to the displacement pumps. This connecting hardware can fracture; thus taking your unit out of operation.

WARNING ·

HAZARD OF USING FLUIDS CONTAINING HALOGENATED HYDROCARBONS

Never use 1, 1, 1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in this equipment. Such use could result in a serious chemical reaction, with the possibility of explosion, which could cause death, serious bodily injury and/or substantial property damage.

Consult your fluid suppliers to ensure that the fluids being used are compatible with aluminum and zinc parts.

WARNING -

PLURAL COMPONENT MATERIALS HAZARD

Graco Inc. does not manufacture or supply any of the reactive chemical components that are used in this equipment and is not responsible for their effects. Because of the vast number of chemicals that could be used and their varying chemical reactions, the buyer and user of this equipment should determine all facts relating to the materials used, including any of the potential hazards involved. Particular injury and investigation should be made into potential dangers relating to toxic fumes, fires, explosions, reaction times and exposure of human beings to the individual components to their resultant mixtures. Graco assumes no responsibility for loss, damage, expense, or claims for bodily injury or property damage, direct or consequential, arising from use of such chemical components.

GRACO INC.

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SAFETY WARNINGS

HIGH PRESSURE EQUIPMENT CAN CAUSE SERIOUS INJURY. FOR PROFESSIONAL USE ONLY. OBSERVE ALL WARNINGS. Read and understand all instruction manuals before operating equipment.

Fluid Injection Hazard

General Safety

This equipment generates very high fluid pressure. Spray from the gun, leaks or ruptured components can inject fluid through your skin and into your body and cause extremely serious bodily injury, including the need for amputation. Also, fluid injected or splashed into the eyes or on the skin can cause serious damage.

NEVER point the spray gun at anyone or at any part of the body.

NEVER put hand or fingers over the spray tip. NEVER try to "blow back" paint; this is NOT an air spray system.

ALWAYS have the tip guard in place on the spray gun when spraying.

ALWAYS follow the **Pressure Relief Procedure**, below, before cleaning or removing the spray tip or servicing any system equipment.

NEVER try to stop or deflect leaks with your hand or body.

Be sure equipment safety devices are operating properly before each use.

Medical Alert - Airless Spray Wounds

If any fluid appears to penetrate your skin, get EMERGENCY MEDICAL CARE AT ONCE. DO NOT TREAT AS A SIMPLE CUT. Tell the doctor exactly what fluid was injected.

Note to Physician: Injection in the skin is a traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the blood stream. Consultation with a plastic surgeon or reconstructive hand surgeon may be advisable.

Spray Tip and Nozzle Safety

Use extreme caution when cleaning or changing spray tips/nozzles. If the spray tip/nozzle clogs while spraying, engage the gun safety latch/knob immediately. ALWAYS follow the **Pressure Relief Procedure** and then remove the spray tip to clean it.

NEVER wipe off build-up around the spray tip until pressure is fully relieved and the gun safety latch/knob is engaged.

Spray Gun and Dispensing Valve Safety Devices

Be sure all gun/valve safety devices are operating properly before each use. Do not remove or modify any part of the gun/valve; this can cause a malfunction and result in serious bodily injury.

Safety Latch

Whenever you stop spraying, even for a moment, always set the gun safety latch in the closed or "safe" position, making the gun inoperative. Failure to set the safety latch can result in accidental triggering of the gun/valve.

Diffuser (on spray guns only)

The gun diffuser breaks up spray and reduces the risk of fluid injection when the tip is not installed. Check diffuser operation regularly. Follow the **Pressure Relief Procedure**, below, then remove the spray tip. Aim the gun into a metal pail, holding the gun firmly to the pail. Using the lowest possible pressure, trigger the gun. If the fluid emitted is not diffused into an irregular stream, replace the diffuser immediately.

Tip Guard (on spray guns)

ALWAYS have the tip guard in place on the gun while spraying. The tip guard alerts you to the fluid injection hazard and help reduce, but does not prevent, the risk of accidentally placing your fingers or any part of your body close to the spray tip.

Trigger Guard

Always have the trigger guard in place on the gun when spraying to reduce the risk of accidentally triggering the gun if it is dropped or bumped.

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including fluid injection, splashing fluid or solvent in the eyes or on the skin, or injury from moving parts or electric shock, always follow this procedure whenever you shut off the sprayer, when checking or servicing any part of the spray system, when installing, cleaning or changing spray tips, and whenever you stop spraying.

- 1. Engage the gun safety latch
- 2. Turn off the air to the motor
- 3. Close the bleed-type master air valve (required)
- 4. Disengage the gun safety latch.
- 5. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
- 6. Engage the gun safety latch.
- Open the pressure drain valve, having a container ready to catch the drainage. Leave the valve open until you are ready to spray again.
- 8. Leave the drain valve open until you are ready to spray again.

If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, wrap a rag around the tip guard retaining nut or hose end coupling and VERY SLOWLY loosen the part to relieve pressure gradually, then loosen completely. Now clear the tip or hose.

Equipment Misuse Hazard

General Safety

Any misuse of the spray equipment or accessories, such as overpressurizing, modifying parts, using incompatible fluids and chemicals, or using worn or damaged parts, can cause them to rupture and result in injection or other serious bodily injury, fire, explosion or property damage.

NEVER alter or modify any part of this equipment; doing so could cause it to malfunction.

CHECK all spray equipment regularly and repair or replace worn or damaged parts immediately.

Read and follow the fluid and solvent manufacturers recommendations regarding the use of protective clothing and equipment.

System Pressure

NEVER exceed the maximum air pressure to the motor as stated on the front cover, and NEVER exceed the stated maximum working pressure of the pump or of the lowest rated component in your system. Refer to your separate pump instruction manual.

Be sure that all spray equipment and accessories are rated to withstand the maximum working pressure of this system.

Fluid Compatibility

BE SURE that all fluids and solvents used are chemically compatible with the wetted parts shown in the Technical Data on the back cover. Always read the fluid and solvent manufacturer's literature before using them in this sprayer.

Fire or Explosion Hazard

Static electricity is created by the high velocity flow of fluid through the pump and hose. If every part of the spray equipment is not properly grounded, sparking may occur, and the system may become hazardous. Sparking may also occur when plugging in or unplugging a power supply cord. Sparks can ignite fumes from solvents and the fluid being sprayed, dust particles and other flammable substances, whether you are spraying indoors or outdoors, and can cause a fire or explosion and serious bodily injury and property damage. Do not plug in or unplug any power supply cords in the spray area when there is any chance of igniting fumes still in the air. If you experience any static sparking or even a slight shock while using this equipment, **STOP SPRAYING IMMEDIATELY**. Check the entire system proper grounding. Do not use the system again until the problem has been identified and corrected.

Grounding

To reduce the risk of static sparking, ground the sprayer and all other spray equipment used or located in the spray area. CHECK your local electrical code for detailed grounding instructions for your area and type of equipment. BE SURE to ground all of this spray equipment:

- 1. Pump: use a ground wire and clamp as instructed at the right.
- 2. Air hoses: use only grounded air hoses.
- 3. Fluid hoses: use only grounded fluid hoses.
- 4. Air compressor: follow manufacturer's recommendations.
- 5. Spray gun or dispensing valve: grounding is obtained through connection to a properly grounded fluid hose and pump.
- 6. Fluid supply container: according to your local code.
- 7. Object being sprayed: according to your local code
- 8. All solvent pails used when flushing: according to local code. Use only metal pails, which are conductive, placed on a grounded surface. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.
- 9. To maintain grounding continuity when flushing or relieving pressure: always hold a metal part of the gun/valve firmly to the side of a grounded metal pail, then trigger the gun/valve.

Moving Parts Hazard

The piston in the air motor, located behind the air motor plates, moves when air is supplied to the motor. Moving parts can pinch or amputate your fingers or other body parts. KEEP CLEAR of moving parts when starting or operating the sprayer. Follow the **Pressure Relief Procedure**, below, before checking or servicing the sprayer to prevent it from starting accidentally.



To ground the air motor, loosen grounding lug locknut (A) and washer (B). Insert one end of a 12 ga (1.5 mm^2) minimum ground wire (D) into slot in lug (C) and tighten locknut securely.

Connect the other end of the wire to a true earth ground. Always check your local code. See ACCESSORIES for an available ground wire and clamp.

Flushing Safety

Reduce the risk of fluid injection injury, static sparking, or splashing, follow the Pressure Relief Procedure and remove the spray tip (spray guns or spray valves only) before flushing. Hold a metal part of the gun firmly to the side of a metal pail and use the lowest possible fluid pressure during flushing.

Hose Safety

High pressure fluid in the hoses can be very dangerous. If the hose develops a leak, split or rupture due to any kind of wear, damage or misuse, the high pressure spray emitted from it can cause a fluid injection injury or other serious bodily injury or property damage.

ALL FLUID HOSES MUST HAVE SPRING GUARDS ON BOTH ENDS! The spring guards help protect the hose from kinks or bends at or close to the coupling which can result in hose rupture.

TIGHTEN all fluid connections securely before each use. High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling. NEVER use a damaged hose. Before each use, check entire hose for cuts, leaks, abrasion, bulging cover, or damage or movement of the hose couplings. If any of these conditions exist, replace the hose immediately. DO NOT try to recouple high pressure hose or mend it with tape or any other device. A repaired hose cannot contain the high pressure fluid.

HANDLE AND ROUTE HOSES CAREFULLY. Do not pull on hoses to move equipment. Do not use fluids or solvents which are not compatible with the inner tube and cover of the hose. DO NOT expose Graco hose to temperatures above 180°F (82°C) or below -40°F (-40°C).

Hose Grounding Continuity

Proper hose grounding continuity is essential to maintaining a grounded spray system. Check the electrical resistance of your air and fluid hoses at least once a week. If your hose does not have a tag on it which specifies the maximum electrical contact the hose resistance. supplier or manufacturer for the maximum resistance limits. Use a resistance meter in the appropriate range for your hose to check the resistance. If the resistance exceeds the recommended limits, replace it immediately. An ungrounded or poorly grounded hose can make your system hazardous. Also read FIRE OR EXPLOSION HAZARD.

IMPORTANT

United States Government safety standards have been adopted under the Occupational Safety and Health Act. Theses standards-particularly the General Standards, Part 1910, and the Construction Standards, Part 1926 - should be consulted.

TERMS

WARNING: Alerts user to avoid or correct conditions that could cause bodily injury.

CAUTION: Alerts user to avoid or correct conditions that could cause damage to or destruction of equipment.

NOTE: Identifies essential procedures or extra information.

Graco Precision Dose Urethane Booster Systems Operating Instructions

1. Introduction

This system was designed for dispensing Sikaflex polyurethane structural adhesive with an injection of 2% by volume of a booster paste. The major volume is provided in either 23-litre pails or 55-gallon drums and the minor volume is provided in either 600ml sausage packs or a 23-litre pails.

2. Description

The adhesive is pumped from a pail or drum out to a hand held or automatic dispense gun. At the gun, booster paste is injected into the center of a disposable mixer on the gun outlet. Whenever adhesive flows at the gun in the run mode, booster paste is metered into the mixer.

3. Theory of Operation

When the gun is actuated, an electric switch is closed activating the air operated gun, and the air operated adhesive pump. As the positive displacement pump moves, an encoder sends pulses to the control box processor. The processor in turn fires a severe duty precision dosing valve which injects metered shots into the mixer. When the trigger is released, the motor stops, and the dual valve dispense gun is closed.

Name	Description
Power Light	This light will be on when there is power to the system and the master start button has been pressed. The light will turn off when the " <i>Master Stop</i> " button is pressed.
Master Start	Pressing this button will apply power to the system during initial start-up or after the " <i>Master Stop</i> " button has been pressed.
Master Stop	Pressing this button will remove power from the control panel components and discontinue any dispense cycle. Power will still be live in the panel until the power cord is disconnected.
Purge A / Run / Purge B	 This three position selector switch is used to select the mode of operation. Run - Normal position for operation Purge A - Engages the air motor solenoid and allows material to be purged through the gun without firing the dosing valve. The "Purge A" light will also illuminate. Purge B - Cycles the dosing valve and will dispense only the booster paste through the open gun or until the high pressure limit is reached with a closed gun. The "Purge B" light will also illuminate.

4. Lights and Switches



Purge A Light	Illuminates when the mode switch is in the "Purge A" position.
Purge B Light	Illuminates when the mode switch is in the "Purge B" position.
A Empty Light	Illuminates when the Urethane supply is nearly empty. Normal operation should be suspended and the material container should be changed after finishing the current cycle to prevent cavitation of the pump.
B Empty Light	Illuminates when the booster supply is nearly empty. Normal operation should be suspended and the material pack should be changed after finishing the current cycle. If the " <i>B Empty</i> " and the " <i>B Low Pressure</i> " lights are on, normal operation will be suspended.
B Low Pressure Light	Illuminates when the material pressure of the B material is below 100 psi. Indicates that there is a lack of supply pressure to the dosing valve.
B High Pressure Light	Illuminates when the material pressure of the B material is above 2000 psi. Normal operation will be suspended if this light is on. Indicates that the tip is plugged or that some type of blockage is preventing the B component from reaching the mix head.
Dosing Rate High Light	Illuminates if the frequency of the dosing valve exceeds 5 Hz. The dosing valve is designed to operate below 5 Hz.
Fault Beacon	Illuminates whenever a fault exists. Including "A Empty", "B Empty", "B Low Pressure", "B High Pressure" and "Dosing Rate High"



5. Initial Material Loading

- Initial loading of material should be done with the mixer removed from the dispense gun.
- Load the booster first, and then load the Urethane.

5.1 Sausage Pack Supply Booster

- Connect air and power to the system.
- Press the "Master Start" button.
- Lower the extrusion cylinder by pushing the lever arm in the down position.
- Loosen the black union nut at the top end of the cylinder tube.
- Take the cylinder tube out.
- Open one end of a foil bag sausage pack using a sharp razor blade. Cut approximately 1" off of one end and discard. Insert an opened foil bag with the opened end facing outward into the opposite end of the tube and fasten the union nut.
- Put the hand lever valve into the upward position.
- Open the bleed valve on the top of the dosing valve and allow material to bleed from the valve into a waste container.
- Close the bleed valve.
- Place the mode selector switch into the "*Purge B*" position and allow the dosing valve to fire until the valve shuts off. The "*B High Pressure*" light will also illuminate.
- Open the gun until the booster paste exits the gun.

5.2 Pail Supply Booster

- Connect air and power to the system.
- Press the "Master Start" button.
- With approximately 40 psi on the ram air gauge, raise the ram by placing the lever arm in the up position.
- Lubricate the follower plate seal with petroleum jelly.
- Prepare a new pail of material as recommended and described by Sika.
- Loosen the follower plate bleed stick.
- Lower the ram into the new pail.
- When the follower plate has rested on the surface of the material, tighten the bleed stick.
- Place approximately 60 psi of air on the air motor.
- Open the bleed valve on the top of the dosing valve and allow material to bleed from the valve into a waste container.
- Close the bleed valve.
- Place the mode selector switch into the "*Purge B*" position and allow the dosing valve to fire until the valve shuts off. The "*B High Pressure*" light will also illuminate.
- Open the gun until the booster paste exits the gun.



5.3 Pail Supply Urethane

- Connect air and power to the system.
- Press the "Master Start" button.
- With approximately 40 psi on the ram air gauge, raise the ram by placing the lever arm in the up position.
- Lubricate the follower plate seal with petroleum jelly.
- Prepare a new pail of material as recommended and described by Sika.
- Loosen the follower plate bleed stick.
- Lower the ram into the new pail.
- When the follower plate has rested on the surface of the material, tighten the bleed stick.
- Adjust the ram air pressure to approximately 80 psi.
- Adjust the air motor pressure to approximately 40 psi.
- Place the mode selector switch into the "Purge A" position.
- Hold the dispense gun over a material waste container and pull the trigger until the major volume material exits the gun.
- The mixer can now be mounted. The system is ready for operation.

5.4 Drum Supply Urethane

- Connect air and power to the system.
- Press the "Master Start" button.
- With approximately 40 psi on the ram air gauge, raise the ram by placing the lever arm in the up position.
- Lubricate the follower plate seal with petroleum jelly.
- Prepare a new pail of material as recommended and described by Sika.
- Loosen the follower plate bleed stick.
- Lower the ram into the new pail.
- When the follower plate has rested on the surface of the material, tighten the bleed stick.
- Adjust the ram air pressure to approximately 80 psi.
- Place approximately 40 psi of air on the air motor.
- Place the mode selector switch into the "Purge A" position.
- Hold the dispense gun over a material waste container and pull the trigger until the major volume material exits the gun.
- The mixer can now be mounted. The system is ready for operation.



6. Start-up Procedures

- Connect air and power to the system.
- Press the "Master Start" button.
- Place the mode selector switch in the "Purge B" position for approximately 5 seconds to allow pressure build up on the catalyst side.
- Place the modes selector switch in the "Run" position.
- Trigger the dispense gun and adjust air to the air motor until the desired flow rate is achieved. The desired flowrate must not require the dosing valve to cycle more than 5 times per second.
- Perform a ratio check as required to ensure an accurate mix ratio

7. Changing Material Containers

7.1 Sausage Pack Supply Booster

- Lower the foil bag extrusion cylinder by pushing the hand lever valve downwards.
- Loosen the black union nut at the top end of the cylinder tube.
- Take the cylinder tube out.
- Remove the empty foil bag from the tube and wipe any excess material from the tube.
- Insert a new foil bag into the opposite end of the tube and fasten the union nut.
- Put the hand lever valve into the upward position.
- Open the material bleed ball valve on the material manifold until the trapped air escapes.

7.2 23-Litre Pail Supply Booster

- Adjust the ram air pressure to approximately 40 psi, raise the ram by placing the lever arm in the up position and cycling the air blow-off push button.
- Remove the empty pail.
- Prepare a new pail of material as recommended and described by Sika.
- Loosen the follower plate bleed stick and clean around the vent hole.
- Lower the ram into the new pail.
- When the follower plate has rested on the surface of the material, tighten the bleed stick.
- Open the material bleed valve at the rear of the pump.
- With a waste container placed under the material bleed valve and bleed material from the pump until all of the entrapped air escapes.



7.3 23-Litre Pail Supply Urethane

- Adjust the ram air pressure to approximately 40 psi, raise the ram by placing the lever arm in the up position and cycling the air blow-off push button.
- Remove the empty pail
- Prepare a new pail of material as recommended and described by Sika.
- Loosen the follower plate bleed stick and clean around the vent hole.
- Lower the ram into the new pail.
- When the follower plate has rested on the surface of the material, tighten the bleed stick.
- Adjust the ram air pressure to approximately 60 psi.
- Open the material bleed valve at the rear of the pump.
- With a waste container placed under the material bleed valve, place the mode selector switch into the "*Purge A*" position.
- Dispense material until any trapped air escapes from the pump.

7.4 55-Gallon Drum Supply Urethane

- Adjust the ram air pressure to approximately 40 psi, raise the ram by placing the lever arm in the up position and cycling the air blow-off push button.
- Remove the empty drum.
- Prepare a new drum of material as recommended and described by Sika.
- Loosen the follower plate bleed stick and clean around the vent hole.
- Lower the ram into the new pail.
- When the follower plate has rested on the surface of the material, tighten the bleed stick.
- Adjust the ram air pressure to approximately 60 psi.
- Open the material bleed valve at the rear of the pump.
- With a waste container placed under the material bleed valve, place the mode selector switch into the "*Purge A*" position.
- Dispense material until any trapped air escapes from the pump.



8. Ratio Check Procedures

- Individually weigh two empty material containers and record the weights.
- Shut off dosing valve outlet ball valve. This will prevent catalyst material from dispensing through the gun.
- Hold a material container under the catalyst ratio check outlet.
- Hold the dispense gun over the second material container.
- Open the gun at the same time the ratio check ball valve is opened and collect at least 1/2 litre of resin material.
- Close the dispense gun and the ratio check ball valve at the same time.
- Weigh the materials individually with a gram scale and deduct the weight of the containers.
- Calculate the percentage of the booster paste and adjust the preset number if required.
- Repeat this procedure until the share of booster paste is approx. 2%. Should the share of booster paste be far under the theoretical value, bleed material from the top of the dosing valve to allow any trapped air to escape.

9. Adjusting The Ratio

The ratio is adjusted by changing the preset number in the PLC. The theoretical number for this system is 22, which means that for every 22 pulses received from the pump encoder, the dosing valve will fire one time. If there is too much catalyst in the mix, increase this number and likewise, decrease this number if there is a lack of catalyst in the mix.

To adjust the number:

- Plug the pendant into the PLC.
- Press "1" Pulse Preset
- Key in the new number.
- Press enter.

Note: The theoretical and default number for a 2% mix is 22

10. Catalyst Pressure build-up

In order to guarantee a sufficient dosing of booster paste after a longer standstill, the pressure in the system is raised to working level with the help of the "*Purge B*" switch before work is started. Turn the mode selector switch to the "*Purge B*" position for approximately 5 seconds, or until the pressure on the booster gauge is equal to the normal running pressure, and then switch back to the "*Run*" position.

11. Starting work after a longer break

Remove and/or replace the mixer and clean the mix head of any cured material. Screw on the new mixer. After a break of several days, first build up pressure as described in Section 10.



12. Pressure Switch Adjustment

After the material flow rates and dosing pressure has been established, it may be necessary to adjust the pressure switches for proper alarm operation. The pressure switches are located on each side of the dosing valve, one is for sensing high pressure and one is for sensing low pressure. The pressure ratings are printed on the tag located on the pressure switch. The low pressure switch is adjustable from 150 to 600 psi and the high pressure is adjustable from 1000 to 3000 psi. The factory settings on the pressure switches are 200 psi on the low pressure switch and 2000 psi on the high pressure switch. Each pressure switch has a removable cover that will expose an adjustment screw, turning the screw counter-clockwise will decrease the setting and turning the adjustment screw clockwise will increase the pressure setting.

NOTE: DO NOT SET THE HIGH PRESSURE SWITCH ABOVE 2000 PSI.

NOTE: Make the adjustments while the booster line is pressurized to normal running pressure.

Low pressure switch.

- 1. Verify that the pressure gauge is reading normal system operating pressure
- 2. Remove cover on pressure switch
- 3. Turn adjustment screw clockwise until the low pressure light illuminates
- 4. Turn the adjustment screw approximately 1/4 turn counter-clockwise

High pressure switch.

- 1. Verify that the pressure gauge is reading normal system operating pressure
- 2. Remove cover on pressure switch
- 3. Turn adjustment screw counter-clockwise until the high pressure light illuminates
- 4. Turn the adjustment screw approximately 1/4 turn clockwise

NOTE: If the high or low pressure lights illuminate during normal operating conditions after making this adjustment, widen the tolerance by making adjustments in 1/8 - 1/4 turn increments. Clockwise for high pressure nuisance faults and counter-clockwise for low pressure nuisance faults.



Figure 1. Pressure Switch Adjustment



Graco Precision Dose Repair Kits and Recommended Spare Parts List

Supply Modules

Component	Form / Drawing Number	Component Part Number	Repair Kit Part Number
Pump Lower, 65:1 CheckMate	308-351	236-611	222-864
Pump Lower, 5:1 Monark	307-430 /	215-932 /	(1) 215-336, (1) 605-285, (1)
NOTE: Base pump is 215-932	965-084	965-084	605-281, (1) 605-286, (1)
			605-287
Air Motor, King	306-968	207-647	207-730
Air Motor, Monark	307-043	205-997	206-728
Ram, Two Post 6.5"	310-523	C32410	918-432 Ram 918-312 Follower Plate Seals
Ram, Two Post 3"	310-525	918-405	918-439 Ram Follower Plate Seal
Ram, Single Post 3" / Follower Plate	306-838 / 308-049	206-450 / 222-909	N/A - Refer to list in form
Encoder	570-153 570-154	514-221	N/A - Purchase whole part
Sausage housing	965-740	N/A	Piston - 626-627 O-Ring - 156-633

Dosing Valve

Component	Form / Drawing Number	Component Part Number	Repair Item Part Numbers
Dosing Valve	308-288 / 570-150	236-930 / 570-150	948-591
NOTE: Base valve is 236-930			
High Pressure Switch	N/A	552-007	N/A - Purchase whole
			part
Low Pressure Switch	N/A	552-008	N/A - Purchase whole
			part



Graco Precision Dose Repair Kits and Recommended Spare Parts List

Dispense Valve

Component	Instruction Manual	Component Part Number	Repair Kit Part Number
2K Gun	684-009	570-151	Rebuild Kit - 949-634
NOTE: Base Valve is 965-533			Fluid Section Kit - 949-633

TECHNICAL DATA

Booster Stand & Control Panel

Electrical Power Requirements	120 VAC, 1 phase, 50-60 Hz, 2 A
Ambient Temperature Range	40° F - 120 °F (5° C- 50°C)
Dimensions	31 in W x 18 in D x 72 in H
	(79 cm W x 46 cm D x 183 cm H)
Weight	150 lbs (68 kg)
Floor mount dimensions	22 in W x 16 in D
4 x .53" (13.46mm) dia. holes	(55.9 cm W x 40.6 cm D)

** Note: Dimensions and weight are without mounting hardware, cables, hoses, etc.

Ram/Pump Assemblies

	200-liter, 6.5" two post
Part Number	918-313
Approximate Weight	800 lbs (363 Kg)
Dimensions, Ram Down	59 in W x 29 in D x 68.2 in H (150 cm W x 74 cm D x 173 cm H)
Dimensions, Ram Up	59 in W x 29 in D x 108.2 in H (150 cm W x 74 cm D x 275 cm H)
Maximum Working Air Pressure	90 psi (6.2 bar)
Air Inlet Connection	¾" npt (f)
Maximum Working Fluid Pressure	5850 psi (403 bar)
Fluid Outlet Connection	¾" npt (f)
Floor mount dimensions	42 in W x 25 in D
4 x .53" (13.46mm) dia. holes	



Graco Precision Dose Repair Kits and Recommended Spare Parts List

TECHNICAL DATA

Ram/Pump Assemblies

	23-liter, 3" two post
Part Number	918-372
Approximate Weight	300 lbs
	(136 Kg)
Dimensions, Ram Down	24 in W x 18 in D x 57.2 in H
	(61 cm W x 45 cm D x 214 cm H)
Dimensions, Ram Up	24 in W x 18 in D x 72.2 in H
•	(61 cm W x 45 cm D x 252 cm H)
Maximum Working Air Pressure	90 psi (6.2 bar)
Air Inlet Connection	¾" npt (f)
Maximum Working Fluid Pressure	5850 psi (403 bar)
Fluid Outlet Connection	¾" npt (f)
Floor mount dimensions	22 in W x 16 in D
	(55.9 cm W x 40.6 cm D)
4 x .53" (13.46mm) dia. holes	

	23-liter, 3" single post
Part Number	953-350
Approximate Weight	lbs
	(Kg)
Dimensions, Ram Down	
	(cm W x cm D x cm H)
Dimensions, Ram Up	in W x in D x in H
· •	(cm W x cm D x cm H)
Maximum Working Air Pressure	90 psi (6.2 bar)
Air Inlet Connection	½" npt (f)
Maximum Working Fluid Pressure	psi (bar)
Fluid Outlet Connection	½" npt (f)
Floor mount dimensions	in W x in D
	(cm W x cm D)
4 x .53" (13.46mm) dia. holes	(



Graco Precision Dose Repair Kits and Recommended Spare Parts List

TECHNICAL DATA

Dispense Gun

	2K Gun
Part Number	570-151
Approximate Weight	1.43 lbs (650 g)
Air Open Inlet Connection	1/8" npt (f)
Air Close Inlet Connection	1/8" npt (f)
Fluid Inlet Connections	1/4" npt (f)
Fluid Outlet Connection	G-1/2 (f)
Maximum Working Fluid Pressure	3000 psi (209 bar)
Maximum Working Air Pressure	120 psi (8 bar)

