

WB100 Isolation System

3A2496L

EN

Isolation system for use when electrostatically spraying conductive, waterborne fluids that meet at least one of the conditions for non-flammability listed on page 3. For professional use only.

WB100 (24N580)

Waterborne Isolation Enclosure 233825

WB100 (24P629)

Waterborne Isolation Enclosure 233825

WB100 (233825)

Waterborne Isolation Enclosure for shielded hoses

WB100 (24P734)

Waterborne Isolation Enclosure 233825

100 psi (0.7 MPa, 7.0 bar) Maximum Fluid Working Pressure

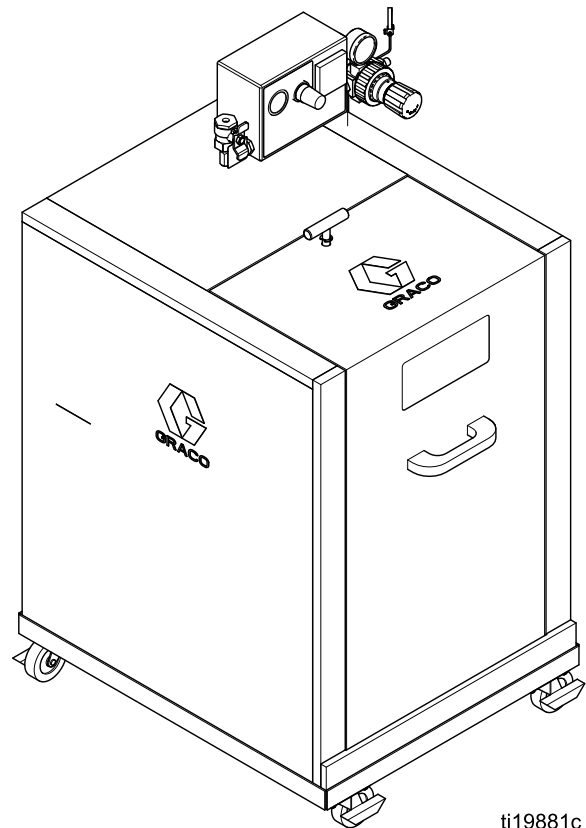
100 psi (0.7 MPa, 7.0 bar) Maximum Air Working Pressure

See page 3 for additional model information.



Important Safety Instructions

Read all warnings and instructions in this manual before using the equipment. Be familiar with the proper control and usage of the equipment. Save these instructions.



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Related Manuals

English Manual Number	Description
3A7504	Pro Xp™ 60 WB Gun, Instructions - Parts
309455	Text fixture, High Voltage Probe, and KV Meter, Instructions from the previous revision
333012	Pro Xp Auto Waterborne Air Spray Gun, Instructions
309303	TRITON® 1:1 Diaphragm Pump, Instructions - Parts List

Models



FM approved for use with Pro Xp WB applicators spraying fluids that meet the following condition:

Material does not sustain burning in accordance with the Standard Test Method for Sustained Burning of Liquid Mixtures, ASTM D4206.



Models Compliant with EN 50059 when used with Pro Xp WB applicators spraying fluids that meet the following criteria:





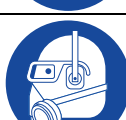

Material is classified as non-ignitable as defined by EN 50059: 2018. For more information, see **Ignitability of Coating Materials**, page 35.


Part	Model	Description
24N580	WB100	Waterborne Isolation Enclosure 233825 with standard electrostatic air spray gun L60T18, grounded air hose 235070, and shielded waterborne fluid hose 24M732.
24P629	WB100	Waterborne Isolation Enclosure 233825 with smart electrostatic air spray gun L60M18, grounded air hose 235070, and shielded waterborne fluid hose 24M732.
233825	WB100	Waterborne Isolation Enclosure for shielded hoses. Does not include hoses and gun.
24P734	WB100	Waterborne Isolation Enclosure 233825 with MRG smart electrostatic air spray gun L60M19, grounded air hose 235070, and shielded waterborne fluid hose 24M732.
L60T18	Pro Xp 60 WB	Standard Electrostatic Air Spray Gun, for waterborne coatings.
L60M18	Pro Xp 60 WB	Smart Electrostatic Air Spray Gun, for waterborne coatings.
L60M19	Pro Xp 60 WB MRG	Smart Electrostatic Air Spray Gun, for mold release applications.
24M732	-----	Shielded Waterborne Fluid Hose Assembly, 25 ft (7.6 m).
25N916	-----	Shielded Waterborne Fluid Hose Assembly, 50 ft (15.2 m).

Safety Symbols

The following safety symbols appear throughout this manual and on warning labels. Read the table below to understand what each symbol means.



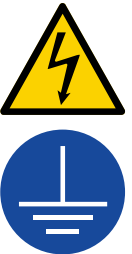
Symbol	Meaning
	Cleaning Solvent Hazard
	Electric Shock Hazard
	Equipment Misuse Hazard
	Fire and Explosion Hazard
	Pressurized Equipment Hazard
	Splatter Hazard
	Splash Hazard

Symbol	Meaning
	Toxic Fluid or Fumes Hazard
	Ground Equipment
	Follow Pressure Relief Procedure
	Ventilate Work Area
	Wear Personal Protective Equipment
	Eliminate Ignition Sources









	<p>Safety Alert Symbol</p> <p>This symbol indicates: Attention! Become Alert! Look for this symbol throughout the manual to indicate important safety messages.</p>
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Warnings

The following warnings apply throughout this manual. Read, understand, and follow the warnings before using this equipment. Failure to follow these warnings can result in serious injury.

 <h2 style="margin: 0;">WARNING</h2>	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>Combustible dust in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Fluids used must meet the following flammability requirements: <ul style="list-style-type: none"> • FM, FMc Approved: Material does not sustain burning in accordance with the Standard Test Method for Sustained Burning of Liquid Mixtures, ASTM D4206. • CE-EN 50059 Compliant: Material is classified as non-ignitable as defined by EN 50059: 2018. • Stop operation immediately if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem. • Check gun resistance, hose resistance, and electrical grounding daily. • Use and clean equipment only in well ventilated area. • Interlock the gun air supply to prevent operation unless ventilation air flow is above the minimum required value. • Only use non-flammable solvents when flushing or cleaning equipment. • Always turn the electrostatics off when flushing, cleaning or servicing equipment. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Keep spray area free of debris, including solvent, rags and gasoline. • Keep a working fire extinguisher in the work area.
	<p>ELECTRIC SHOCK HAZARD</p> <p>Improper grounding, setup, or usage of an isolated waterborne system can result in electric shock. To help prevent electric shock:</p> <ul style="list-style-type: none"> • Ground all equipment, personnel, object being sprayed, and conductive objects in or close to spray area. See Grounding instructions. • Connect the electrostatic gun to a voltage isolation system that will discharge the system voltage when not in use. • All components of the isolation system that are charged to high voltage must be contained within an isolation enclosure that prevents personnel from making contact with the high voltage components before the system voltage is discharged. • Follow the Fluid Voltage Discharge and Grounding Procedure when instructed to discharge the voltage; before cleaning, flushing, or servicing the system; before approaching the front of the gun; and before opening the isolation enclosure for the isolated fluid supply. • Do not enter a high voltage or hazardous area until all high voltage equipment has been discharged. • Do not touch the gun nozzle or electrode, or come within 4 in. (102 mm) of the electrode during gun operation. Follow the Fluid Voltage Discharge and Grounding Procedure. • Interlock the gun air supply with the voltage isolation system to shut off the air supply anytime the isolation system enclosure is opened. • Only use the red-colored Graco electrically conductive gun air hose with this gun. Do not use black or gray-colored Graco air hoses. • Do not splice hoses together. Install only one continuous Graco waterborne fluid hose between the isolated fluid supply and the spray gun.

WARNING

  	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the equipment, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow the Pressure Relief Procedure when you stop spraying/dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
 	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Specifications in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Specifications in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer. • Do not leave the work area while equipment is energized or under pressure. • Turn off all equipment and follow the Pressure Relief Procedure when equipment is not in use. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. • Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards. • Make sure all equipment is rated and approved for the environment in which you are using it. • Use equipment only for its intended purpose. Call your distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not kink or over bend hoses or use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.
 	<p>PLASTIC PARTS CLEANING SOLVENT HAZARD</p> <p>Many cleaning solvents can degrade plastic parts and cause them to fail, which could cause serious injury or property damage.</p> <ul style="list-style-type: none"> • Use only compatible solvents to clean plastic structural or pressure-containing parts. • See Technical Specifications in all equipment manuals for materials of construction. Consult the solvent manufacturer for information and recommendations about compatibility.
	<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 Safety Data Sheets (SDSs) 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.



WARNING



PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Gun Overview

How the Electrostatic Spray Gun Works

The air hose supplies air to the spray gun. Part of the air operates the alternator turbine and the rest of the air atomizes the fluid being sprayed.

The alternator generates power, which is converted by the power cartridge to supply high voltage to the gun's electrode.

The pump supplies fluid to the fluid hose and gun, where the fluid is electrostatically charged as it passes the electrode. The charged fluid is attracted to the grounded workpiece, wrapping around and evenly coating all surfaces.

Spraying Waterborne Fluids Electrostatically

This electrostatic air spray gun is designed to spray only waterborne fluids which meet the following flammability requirements:

- **FM, FMc Approved:**

Material does not sustain burning in accordance with the Standard Test Method for Sustained Burning of Liquid Mixtures, ASTM D4206.

- **CE-EN 50059 Compliant:**

Material is classified as non-ignitable as defined by EN 50059: 2018.

For more information see **Ignitability of Coating Materials**, page 35.

When connected to a voltage isolation system, all of the fluid in the spray gun, fluid hose, and isolated fluid supply is charged to high voltage, which means that the system has more electrical energy than a solvent-based system. Therefore, only non-flammable fluids (as defined under **Models**, page 3 can be sprayed with the system or be used to clean, flush, or purge the system.

Precautions must be taken when using electrostatic waterborne equipment to avoid potential shock hazards. When the spray gun charges the isolated fluid to high voltage, it is similar to charging a capacitor or a battery. The system will store some of the energy while spraying and retain some of that energy after the spray gun is shut off. Do not touch the gun nozzle or come within 4 in. (102 mm) of the electrode until the stored energy is discharged. The amount of time it takes to discharge the energy depends on the system design. Follow the **Fluid Voltage Discharge and Grounding Procedure**, page 17, before approaching the front of the gun.

NOTE: The Graco warranty and approvals are void if the electrostatic spray gun is connected to a non-Graco voltage isolation system or if the gun is operated above 60 kV.

Components

The Pro Xp WB100 System includes the following components.

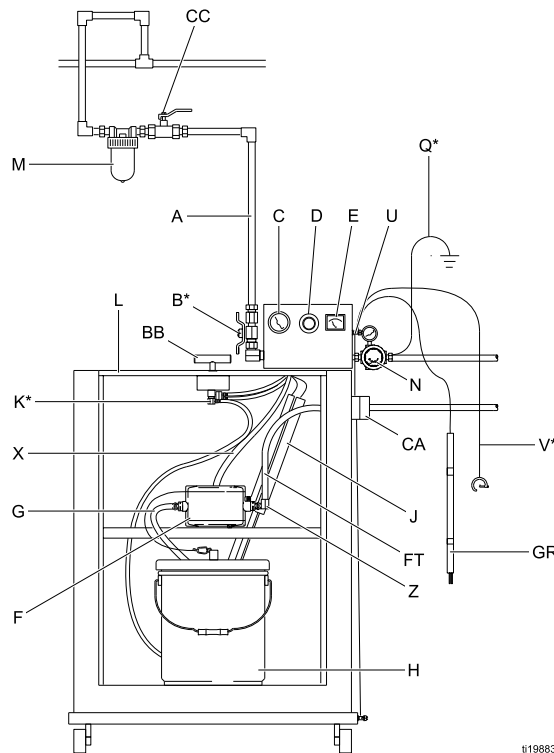





FIG. 1: Pro Xp WB100 Waterborne System

Key:

- | | | | |
|----|--|---|---|
| A | Main Air Supply Line. | GR | Grounding Rod. |
| B* | Bleed-Type Air Shutoff Valve. | U | Ground Terminal. |
| C | Pump Air Pressure Gauge. | V* | Main Ground Wire. |
| D | Pump Air Pressure Regulator. | CA | Strain Relief Fitting. |
| E | kV Meter. | X | Pump Air Supply Line. |
| F | Pump. | Y | Grounding Cylinder. |
| G | Pump Suction Hose. | Z | Pump Fluid Outlet Fitting. |
| H | Paint Container. | AA | Isolated Enclosure Door (not shown, to illustrate internal components. Door must be closed and locked to operate system). |
| J | Bleed Resistor. | BB | Enclosure T-Handle Locking Screw (part of door assembly). |
| K | Enclosure Safety Interlock. | CC | Accessory Bleed-Type Air Shutoff Valve. |
| L | Isolated Enclosure. | * These items are required for safe operation. They are included with the WB100 system. | |
| M | Gun Air Line Filter. | | |
| N | Gun Air Pressure Regulator. | | |
| P* | Graco Red Grounded Air Hose (left-hand threads). | | |
| Q* | Gun Air Hose Ground Wire. | | |
| FJ | Graco Waterborne Fluid Hose. | | |
| AS | Waterborne Electrostatic Air Spray Gun. | | |

Installation

System Requirements

				
<p>The use of multiple guns with one isolation cabinet may cause electric shock, fire, or explosion. To help prevent injury or equipment damage, use only one gun per isolation cabinet.</p>				

NOTICE
<p>The system should not have any severe arcing occurring when the isolation mechanism opens and closes. Severe arcing will shorten the life of the system components.</p>

NOTE: The Graco warranty and approvals are void if the electrostatic spray gun is connected to a non-Graco voltage isolation system or if the gun is operated above 60 kV.

Warning sign

Mount warning signs in the spray area where they can easily be seen and read by all operators. An English Warning Sign is provided with the gun.

Install the system







				
<p>Installing and servicing this equipment requires access to parts which may cause electric shock or other serious injury if work is not performed properly.</p> <ul style="list-style-type: none"> Do not install or service this equipment unless you are trained and qualified. Comply with all local codes and regulations. 				

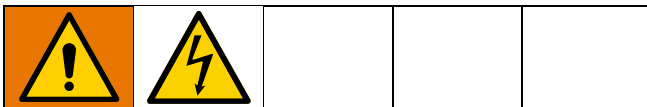
Fig.1 shows a typical waterborne system. It is not an actual system design. For assistance in designing a system to suit your particular needs, contact your Graco distributor.

Ventilate the Spray Booth

				
<p>Do not operate the gun unless ventilating air flow is above the minimum required value. Provide fresh air ventilation to avoid the buildup of flammable or toxic vapors when spraying, flushing, or cleaning the gun. Interlock the gun air and fluid supply to prevent operation unless ventilating air flow is above the minimum required value.</p>				

The spray booth must have a ventilation system. Electrically interlock the gun air and fluid supply with the ventilators to prevent gun operation any time that the ventilation air flow falls below minimum values. Check and follow all local codes and regulations regarding air exhaust velocity requirements. Verify the operation of the interlock at least once a year.

Air Supply Line



To reduce the risk of electric shock, the air supply hose must be electrically connected to a true earthground. **Use only Graco Grounded Air Supply Hose.**

To reduce the risk of electric shock or other serious injury, you must use the red-colored Graco Electrically Conductive Air Hose for the gun air supply, and you must connect the hose ground wire to a true earth ground. Do not use the black or gray-colored Graco air hoses.

1. See Fig.1, Install an air line filter/water separator (M) on the main air supply line to ensure a dry, clean air supply to the gun. Dirt and moisture can ruin the appearance of your finished workpiece and can cause the gun to malfunction.
2. The WB100 system includes a bleed-type air regulator (N) on the gun air supply line (P), to control air pressure to the gun.
3. Connect the red-colored Graco Electrically Conductive Air Hose (P) between the gun air regulator (N) and the gun's air inlet. The gun air inlet fitting has a left-hand thread. Connect the air supply hose ground wire (Q) to a true earth ground.



Trapped air can cause the fluid supply unit to cycle unexpectedly, which can result in serious injury, including splashing fluid in the eyes or on the skin. Do not operate the equipment without the bleed-type air valve (B) installed.

4. The WB100 system includes a bleed-type air valve (B). The bleed-type air valve is required to shut off all air to the system and relieve air trapped between the valve and the fluid supply unit after the air regulator is shut off. Connect the main air supply line (A) to the bleed valve.
5. Install an additional bleed-type air valve (CC) upstream of the air filter (M) to isolate the filter for servicing.

Ground the Cabinet

Connect the main ground wire (V) to a true earth ground.

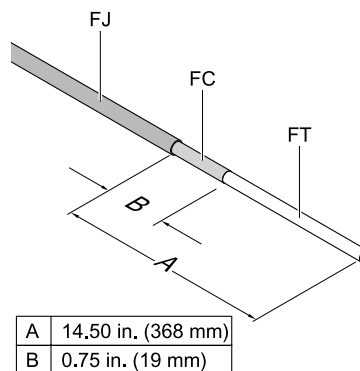
Connect the Waterborne Fluid Hose

Follow the directions in the spray gun manual for connecting the fluid hose to the spray gun.

1. Connect the other end of the hose to the isolated fluid supply. Slide the hose through the strain relief fitting (CA). Ensure conductive layer (C) has passed through the fitting. Tighten to 55 in-lb (6.2 N•m). Pull back on the hose to check it is secure.

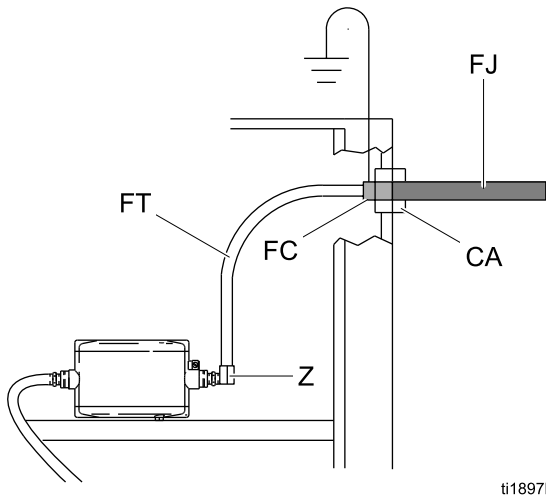


Conductive hose layer (FC) must be grounded through its connection to the isolation system's strain relief fitting (CA). To maintain grounding continuity, the conductive hose layer (FC) must be engaged in the ferrule when the strain relief nut is tightened. Failure to properly install the hose in the strain relief could result in an electric shock.



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FIG. 1: Shielded Hose 24M732 Dimensions at WB100 Enclosure



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FIG. 2: Shielded Hose 24M732 Connection at WB100 Enclosure

2. Connect the end of the tube (FT) to the pump fluid outlet fitting (Z).

NOTE: The Graco warranty and approvals are void if the electrostatic spray gun is connected to a non-Graco voltage isolation system or if the gun is operated above 60 kV.

Grounding



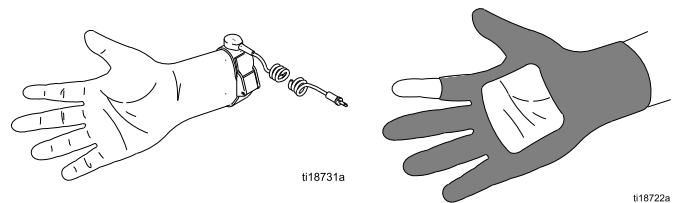
The equipment must be grounded to reduce the risk of static sparking and electric shock. Electric or static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Ground all equipment, personnel, objects being sprayed, and conductive objects in or close to the spray area. The resistance must not exceed 1 megohm. Grounding provides an escape wire for the electric current.

When operating the electrostatic gun, any ungrounded objects (such as people, containers, and tools) in the spray location can become electrically charged.

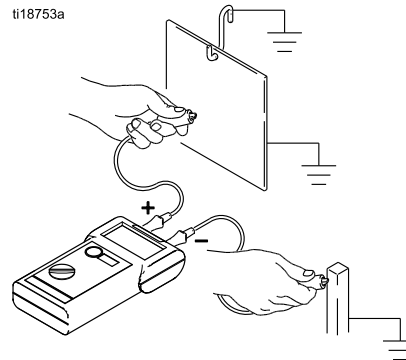
The following are minimum grounding requirements for a basic electrostatic system. Your system may include other equipment or objects which must be grounded. Your system must be connected to a true earth ground. Check ground connections daily. Check your local

electrical codes and regulations for detailed grounding instructions.

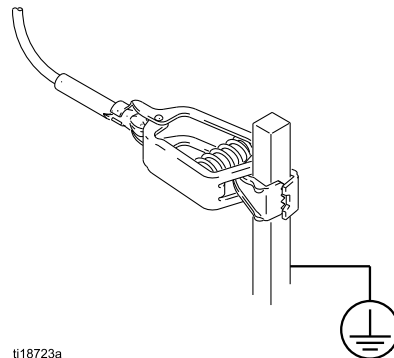
- *All persons entering the spray area:* must wear shoes having conductive soles such as leather, or wear personal grounding straps. Do not wear shoes with non-conductive soles such as rubber or plastic. If gloves are necessary, wear the conductive gloves supplied with the gun. If non-Graco gloves are worn, cut off fingers or palm area of gloves to ensure your hand contacts the grounded gun handle.



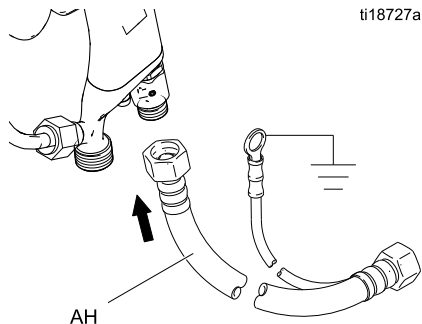
- *Object being sprayed:* Keep the workpiece hangers clean and grounded at all times.



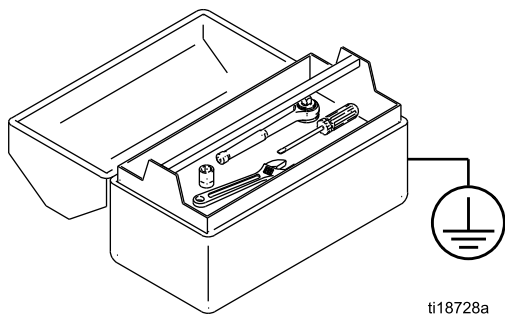
- *Voltage Isolation System:* Electrically connect the voltage isolation system to a true earth ground. See **Ground the Cabinet**, page 11.



- **Electrostatic Air Spray Gun:** Ground the gun by connecting the red-colored Graco Grounded Air Hose to the gun, and connecting the air hose ground wire to a true earth ground.

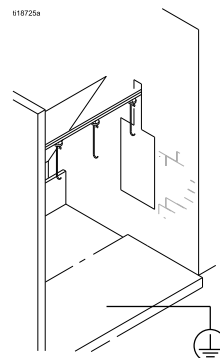


- **Graco Shielded Waterborne Fluid Hose (24M732):** The hose is grounded through the conductive layer. Install as instructed under **Connect the Waterborne Fluid Hose**, page 11.
- **All electrically conductive objects or devices in the spray area:** must be properly grounded.

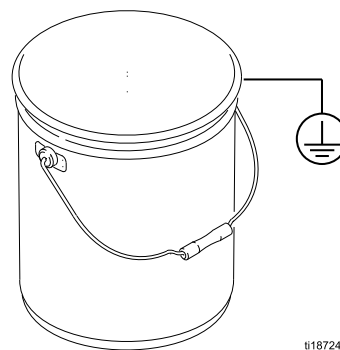


- **Fluid and waste containers:** Ground all fluid and waste containers in the spray area. Do not use pail liners unless they are conductive and grounded. When flushing the spray gun, the container used to catch the excess fluid must be electrically conductive and grounded.

- **Air compressors:** Ground the equipment according to the manufacturer's recommendations.
- **All air lines** must be properly grounded. Use only grounded hoses with a maximum of 100 feet (30.5 m) combined hose length to ensure grounding continuity.
- **The floor of the spray area:** must be electrically conductive and grounded. Do not cover the floor with cardboard or any non-conductive material which would interrupt grounding continuity.



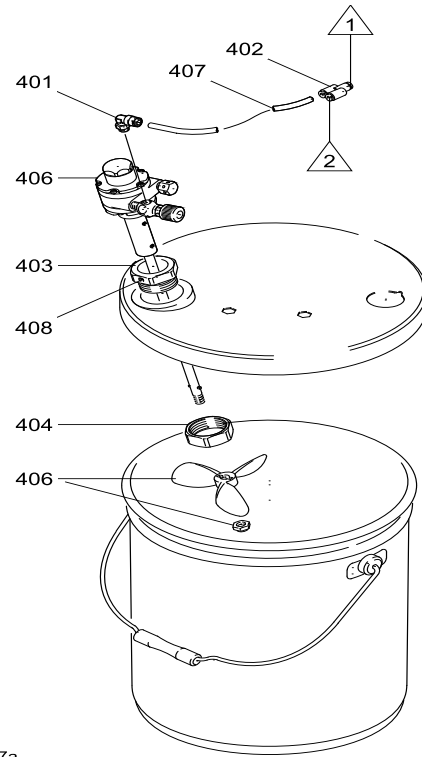
- **All solvent pails:** Use only approved, grounded metal containers, which are conductive. Do not use plastic containers. Use only non-flammable solvents. Do not store more than the quantity needed for one shift.



Agitator Kit Accessory

To add an agitator to the Graco isolation system, order Part No. 245895. See **245895 Agitator Kit**, page 33, for the kit parts list.

1. Discharge the system voltage (see **Fluid Voltage Discharge and Grounding Procedure**, page 17).
2. Follow **Pressure Relief Procedure**, page 16.
3. Open the isolated enclosure door.
4. Remove the back of the control box (258).
5. Remove tube (A2) from elbow (282) at the air manifold; see **Tubing and Wiring**, page 31. Install the Y fitting (402) into the elbow. Install tubes (A2) and (407) into the Y fitting. Route the agitator tube (407) into the cabinet.
6. Replace the back of the control box (258).
7. Return the system to service.



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FIG. 3: 245895 Agitator Kit

Fluid Regulator Kit Accessory

To add a fluid regulator to the Graco isolation system, order Part No. 245944. See **245944 Fluid Regulator Kit**, page 34 for the kit parts list.

1. Discharge the system voltage (see **Fluid Voltage Discharge and Grounding Procedure**, page 17).
2. Follow **Pressure Relief Procedure**, page 16.
3. Open the isolated enclosure door.
4. Remove the 1/4 in. (6 mm) OD tube (A1) from the pump air inlet; see **Tubing and Wiring**, page 31.
5. Remove the waterborne fluid hose from the pump fluid outlet fitting (231) and remove the fitting.
6. Unscrew the two pump mounting screws (S) and remove the pump from the isolation enclosure.
7. Remove the back of the control box (258).
8. Remove tube (A2) from elbow (282) at the air manifold; see **Tubing and Wiring**, page 31. Install the Y fitting (506) in the elbow. Install tubes (A2) and (507) into the Y fitting. Route the tube (507) into the cabinet.
9. Replace the back of the control box (258).
10. Assemble the fluid regulator kit as shown.
11. Reinstall the pump in the isolation enclosure. Use the two mounting holes to the left of the holes used previously, to allow clearance for the fluid regulator.
12. Connect tube (A1) to the air inlet of fluid regulator (504). Connect tube (507) to the pump air inlet.
13. Connect the waterborne fluid hose to the fluid regulator outlet fitting (501).
14. Return the system to service.

NOTE: The cabinet air regulator and gauge (216, 217) will now operate the air piloted fluid regulator (504). The pump will now operate at the inlet air pressure.

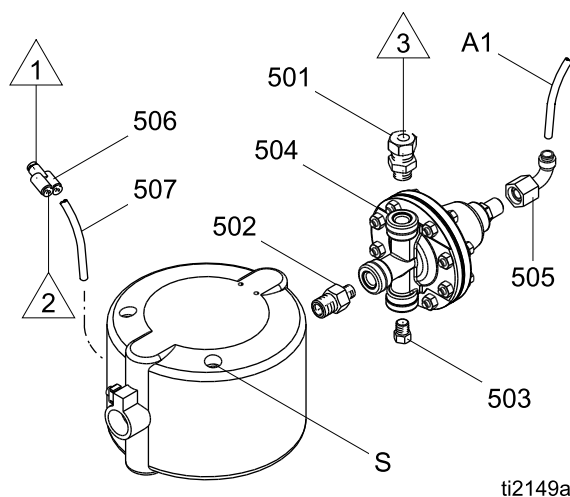


FIG. 4: 245944 Fluid Regulator Kit

Operation

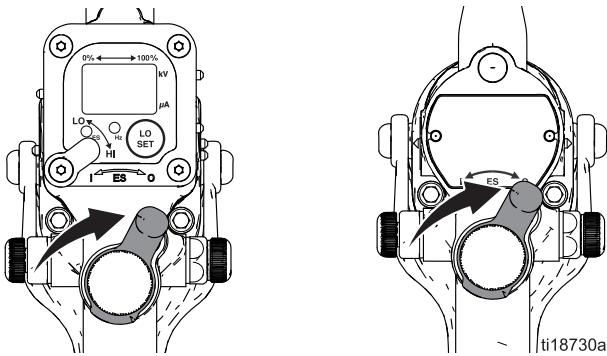
Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.

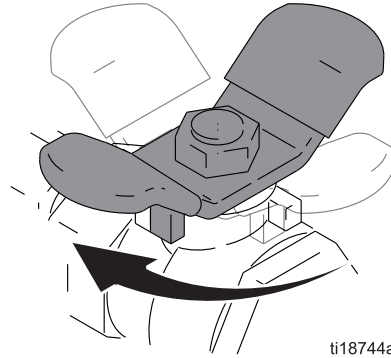
<p>This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as splashing, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.</p>				

1. Turn OFF (O) the ES On/Off switch.

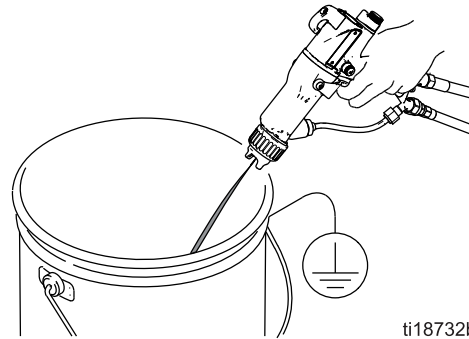


2. Follow the **Fluid Voltage Discharge and Grounding Procedure**, page 17.

3. Turn off the air bleed valves to the fluid source and to the gun.





4. Trigger the gun into a grounded metal waste container to relieve the fluid pressure.

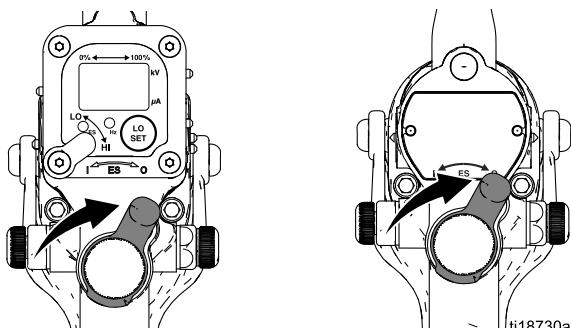


5. Relieve fluid pressure in the fluid supply unit as instructed in your fluid supply unit manual.

Fluid Voltage Discharge and Grounding Procedure

				
<p>The fluid supply is charged with high voltage until the voltage is discharged. Contact with the charged components of the voltage isolation system or spray gun electrode will cause an electric shock. To avoid an electric shock, follow the Fluid Voltage Discharge and Grounding Procedure:</p> <ul style="list-style-type: none"> • whenever you are instructed to discharge the voltage • before cleaning, flushing, or servicing the system equipment • before approaching the front of the gun • or before opening the isolation enclosure for the isolated fluid supply. 				

1. Turn the ES ON/OFF valve OFF and wait 30 seconds.



2. Fully unscrew the door T-handle locking screw. This will shut off the air to the gun and trigger the grounding cylinder to discharge any remaining electrical charge.

3. Use the grounding rod to touch the pump and supply pail. If you see any arcs, see **Electrical Troubleshooting**, page 26.

Fill the Fluid Supply

1. Follow the **Fluid Voltage Discharge and Grounding Procedure**, page 17.
2. Follow **Pressure Relief Procedure**, page 16.
3. Open the isolated enclosure door.
4. Remove the pail cover from the pail, holding a rag over the suction tube strainer to prevent any fluid from dripping into the isolated enclosure. Place the cover and suction tube outside the enclosure.
5. Remove the supply pail from the enclosure.

NOTICE

Be sure to wipe up all fluid spills in the isolated enclosure. Fluid can create a conductive path and cause the system to short out.

6. Clean up any fluid spills in the enclosure, using a soft cloth and a non-flammable, compatible solvent.
7. Fill the supply pail with fluid and return it to the enclosure. Clean up any spills.
8. Reinstall the pail cover, holding a rag over the suction tube strainer to prevent fluid spills while you place the pump suction tube in the pail.
9. Close the isolated enclosure door and fasten securely with the T-handle locking screw.

Startup

Before operating the system, check the following list daily to ensure safe, efficient operation.

- All operators are properly trained to safely operate an electrostatic waterborne air spray system as instructed in this manual.
- Follow **Pressure Relief Procedure**, page 16.
- The electrostatics are turned off and system voltage is discharged according to the **Fluid Voltage Discharge and Grounding Procedure**, page 17, before any person enters the isolation enclosure, before cleaning, and before performing any maintenance or repair.
- The warning sign provided with the gun is mounted in the spray area where it can be easily seen and read by all operators.
- The system is thoroughly grounded and the operator and all persons entering the spray area are properly grounded. See **Grounding**, page 12.
- The Graco waterborne fluid hose is in good condition with no cuts or abrasions of the PTFE layer. Replace hose if damaged.
- The condition of the gun's electrical components has been checked as instructed in **Electrical Tests**, page 21.
- Ventilation fans are operating properly
- Workpiece hangers are clean and grounded.
- All debris (including flammable fluids and rags) is removed from the spray area




- All flammable fluids in the spray booth are in approved, grounded containers.
- All conductive objects in the spray area are electrically grounded and the floor of the spray area is electrically conductive and grounded.
- Fluids used must meet the following flammability requirements
 - **FM, FMc Approved:**
Material does not sustain burning in accordance with the Standard Test Method for Sustained Burning of Liquid Mixtures, ASTM D4206.
 - **CE-EN 50059 Compliant:**
Material is classified as non-ignitable as defined by EN 50059: 2018. For more information, see **Ignitability of Coating Materials**, page 35.

Shutdown

				
To reduce the risk of an injury, follow the Pressure Relief Procedure , page 16 whenever you are instructed to relieve the pressure.				

1. Discharge the system voltage, see **Fluid Voltage Discharge and Grounding Procedure**, page 17.
2. Flush the gun, see **Flushing**, page 19.
3. Follow **Pressure Relief Procedure**, page 16.

Maintenance

				
<p>To reduce the risk of an injury, follow the Pressure Relief Procedure, page 16, whenever you are instructed to relieve the pressure.</p>				




Daily Care and Cleaning Checklist

Check the following list daily upon completion of equipment usage.

- Flush the gun. See **Flushing**, page 19.
- Clean the fluid and air line filters.
- Clean the outside of the gun.
- Clean the air cap and fluid nozzle daily, at a minimum. Some applications require more frequent cleaning. Replace the spray tip and air cap if they are damaged.
- Check the electrode and replace if broken or damaged.
- Check for fluid leakage from the gun and fluid hoses. Tighten fittings or replace equipment as needed.
- Check electrical grounding. See **Grounding**, page 12.

Flushing

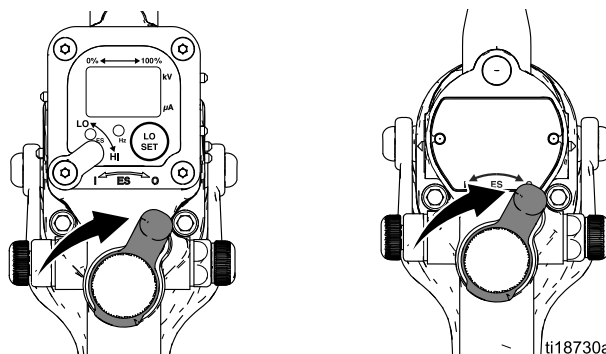
- Flush before changing fluids, before fluid can dry in the equipment, at the end of the day, before storing, and before repairing equipment.
- Flush at the lowest pressure possible. Check connectors for leaks and tighten as necessary.

				
<p>To reduce the risk of fire, explosion, or electric shock, turn OFF (O) the ES On-Off switch before flushing the gun.</p> <p>Follow the Fluid Voltage Discharge and Grounding Procedure, page 17, before flushing.</p> <p>Only flush, purge, or clean the gun with fluids that meet the following flammability requirements:</p> <ul style="list-style-type: none"> • FM, FMc Approved: Material does not sustain burning in accordance with the Standard Test Method for Sustained Burning of Liquid Mixtures, ASTM D4206. • CE-EN 50059 Compliant: Material is classified as non-ignitable as defined by EN 50059: 2018. For more information, see Ignitability of Coating Materials, page 35. 				

NOTICE

Do not use methylene chloride as a flushing or cleaning solvent with this gun as it will damage nylon components.

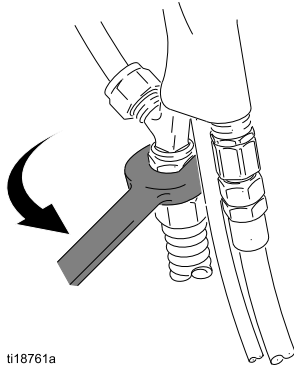
1. Turn OFF (O) the ES On-Off switch. Wait 30 seconds for the voltage to bleed off.



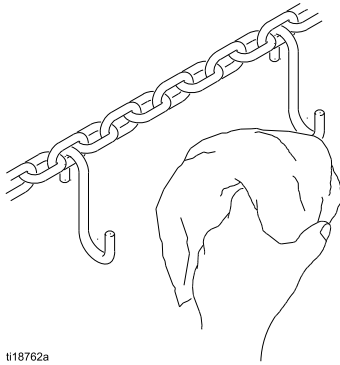
2. Discharge the system voltage. See **Fluid Voltage Discharge and Grounding Procedure**, page 17.

Daily System Care

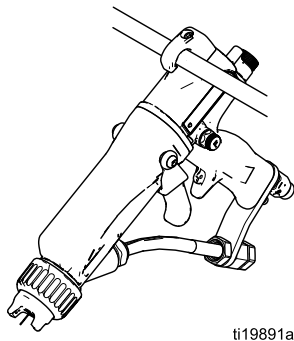
1. Follow the **Pressure Relief Procedure**, page 16.
2. Clean the fluid and air filters.
3. Check for fluid leaks. Tighten all fittings.



4. Clean workpiece hangers. Use non-sparking tools.

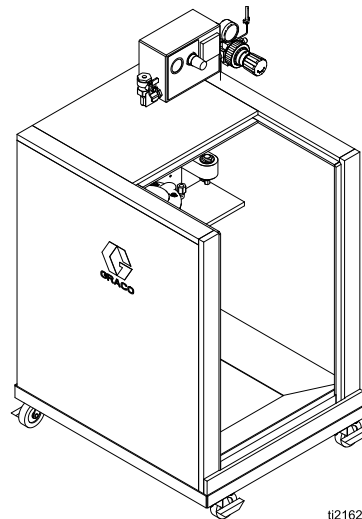


5. Check the movement of the trigger and valves. Lubricate if necessary.
6. Check **Grounding**, page 12.
7. Hang the gun from its hook, with the nozzle pointing down. Be sure to keep the gun from grounding out.



8. Clean the cabinet:




- Inspect the cabinet and clean up any spilled paint. Conductive paint residue allowed to contact grounded parts may short out the electrostatics.
- Keep the inside of the cabinet clean, for proper operation.
- Inspect the door T-handle locking screw regularly, to ensure the threads are well greased. Apply silicone-free grease to the threads when necessary.
- Visually inspect the ground strip (240) for damage. Replace if needed. Measure the resistance weekly. See **Test Ground Strip Resistance**, page 21.



Electrical Tests

Electrical components inside the gun affect performance and safety. Use the following procedures to test the condition of the power supply and gun body, and electrical continuity between components.

Use megohmmeter Part No. 241079 (AA) and an applied voltage of 500 V. Connect the leads as shown.

				
<p>Megohmmeter Part No. 241079 (AA-see Fig. 25) is not approved for use in a hazardous area. To reduce the risk of sparking, do not use the megohmmeter to check electrical grounding unless:</p> <ul style="list-style-type: none"> • The gun has been removed from the hazardous area; • Or all spraying devices in the hazardous area are turned off, ventilation fans in the hazardous area are operating, and there are no flammable vapors in the area (such as open solvent containers or fumes from spraying). <p>Failure to follow this warning could cause fire, explosion, and electric shock and result in serious injury and property damage.</p>				

Test Ground Strip Resistance

Using an ohmmeter, measure the resistance between the latch housing (206) and the ground lug (214). The ground strip is grounded through the cart back to the ground lug. Resistance must be less than 100 ohms. If greater than 100 ohms, replace the ground strip (240).

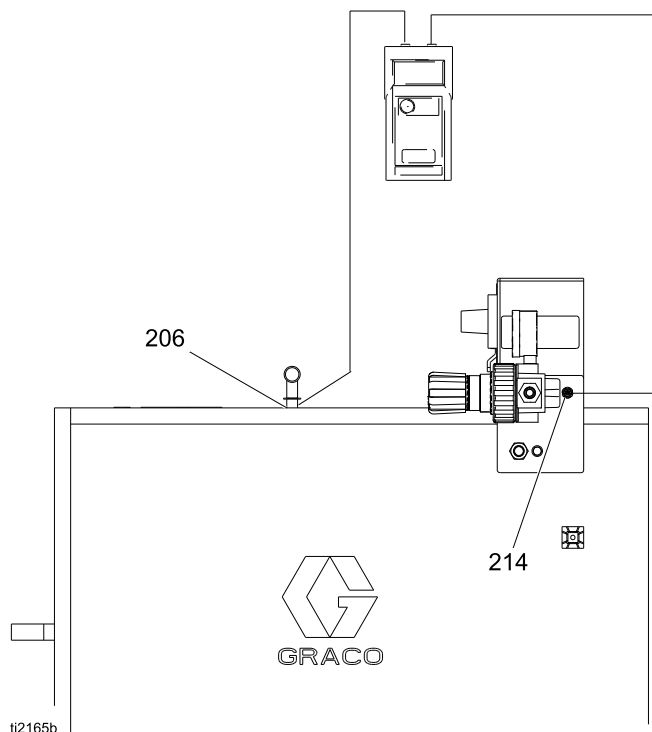
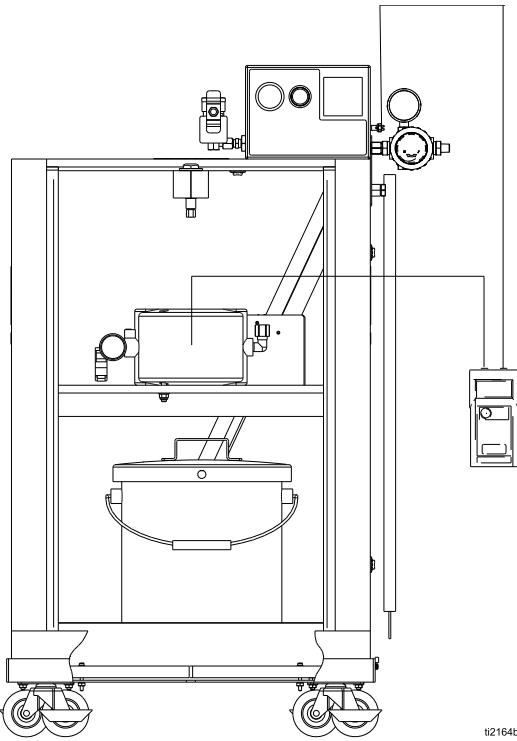


FIG. 5: Test Ground Strip Resistance

Test Cylinder Resistance



Remove the enclosure door. Using an ohmmeter, measure the resistance from the pump (209) to the ground lug (214). Resistance must be less than 100 ohms. If greater than 100 ohms, replace the grounding cylinder (227).







t2164b

FIG. 6: Test Cylinder Resistance

Troubleshooting

				
<p>Installing and servicing this equipment requires access to parts which may cause an electric shock or other serious injury if the work is not performed properly. Do not install or repair this equipment unless you are trained and qualified.</p> <p>Follow the Fluid Voltage Discharge and Grounding Procedure, page 17 before checking or servicing the system and whenever you are instructed to discharge the voltage.</p>				

				
<p>To reduce the risk of an injury, follow the Pressure Relief Procedure, page 16, whenever you are instructed to relieve the pressure.</p>				

Check all possible remedies in the Troubleshooting Chart before disassembling the gun.

Voltage Loss Troubleshooting

Normal spraying voltage for a system using the waterborne gun is 45-55 kV. The system voltage is lower due to spraying current demands and voltage isolation system losses.

A loss of spraying voltage can be caused by a problem with the spray gun, fluid hose, or voltage isolation system, since all of the system components are

electrically connected through the conductive, waterborne fluid.

Before troubleshooting or servicing the voltage isolation system itself, you need to determine which component in the system is most likely causing a problem. Possible causes include the following:

Spray Gun

- Fluid leakage
- Dielectric breakdown at the fluid hose connection or fluid packings.
- Not enough air pressure for the alternator turbine.
- Faulty power supply.
- Excessive overspray on gun surfaces.
- Fluid in the air passages.

Waterborne Fluid Hose

- Dielectric failure of the hose (pin-hole leak in the PTFE layer)
- Air gap in the fluid column between the gun and the isolated fluid supply, causing a low voltage reading on the isolation system voltage meter.

Voltage Isolation System

- Fluid leakage
- Dirty interior

Visual Checks

First, check the system for any visible faults or errors to help isolate whether the spray gun, fluid d for some of the troubleshooting tests that followhose or voltage isolation system has failed. A voltage probe and meter, part no. 245277, is helpful for diagnosing voltage problems and is require.

1. Check that all of the air and fluid tubes and hoses are properly connected.
2. Check that the voltage isolation system valves and controls are properly set for operation.
3. Check that the interior of the isolated enclosure is clean.
4. system have sufficient air pressure.
5. Check that the gun ES ON/OFF valve is in the ON position and that the gun ES indicator light is on. If the ES indicator light is not on, remove the spray gun for service and complete the **Electrical Tests**, page 21.
6. Check that the voltage isolation system's enclosure door is closed and that any safety interlocks are engaged and working properly.
7. Make sure the voltage isolation system is in the "isolate" mode, where it is isolating the fluid voltage from ground.
8. To eliminate air gaps in the fluid column, spray enough fluid to purge the air out between the voltage isolation system and the spray gun. An air gap in the fluid hose can break the electrical continuity between the spray gun and the isolated fluid supply and cause a low voltage reading on a voltage meter connected to the isolated fluid supply.
9. Check the spray gun cover and barrel for accumulated overspray. Excessive overspray can create a conductive path back to the grounded gun handle. Install a new gun cover and clean the exterior of the gun.

10. Inspect the entire system for any visible fluid leakage and repair any fluid leaks that are found. Pay special attention to the following areas:
 - Packing area of the spray gun.
 - Fluid hose: check for leakage or any bulges in the outer cover, which may indicate an internal leak.
 - Internal voltage isolation system components.

Tests

If you still have no voltage, separate the spray gun and hose from the voltage isolation system and check whether the gun and hose alone will hold voltage with the following test.

1. Flush the system with water and leave the lines filled with water.
2. Discharge the system voltage (see **Fluid Voltage Discharge and Grounding Procedure**, page 17).
3. Follow **Pressure Relief Procedure**, page 16.
4. Disconnect the fluid hose from the voltage isolation system.

Avoid allowing any water to leak out of the fluid hose as that could cause a significant air gap in the fluid column up to the gun electrode, which can break the conductivity path and conceal a potential failure area.
5. Position the end of the hose as far as possible away from any grounded surface. The end of the hose must be at least 1 ft. (0.3 m) from any ground. Make sure that no one is within 3 ft. (0.9 m) of the end of the hose.
6. Turn the ES ON/OFF valve to ON and trigger the gun just enough to turn on the air to the gun but not the fluid. Measure the voltage at the gun electrode with a voltage probe and meter.
7. Discharge the system voltage by waiting 30 seconds and then touching the gun electrode with a grounded rod.

8. Check the meter reading:
 - If the meter reading is 45 to 55 kV, the gun and fluid hose are okay, and the problem is in the voltage isolation system.
 - If the meter reading is below 45 kV, the problem is in the gun or fluid hose.
9. Flush the fluid hose and gun with enough air to dry out the fluid passages.
10. Turn the ES ON/OFF valve to ON and trigger the gun. Measure the voltage at the gun electrode with a voltage probe and meter.
 - If the meter reading is 45-55 kV, the gun power supply is okay, and there is probably a dielectric breakdown somewhere in the fluid hose or gun. Continue with step 11.
 - If the meter reading is below 45 kV, do the **Electrical Tests**, page 21, to check the gun and power supply resistance. If those tests show the gun and power supply are okay, continue with step 11.
11. A dielectric breakdown is most likely in one of the following three areas. Repair or replace the component that is failing.
 - a Fluid hose:
 - Check for leakage or any bulges in the outer cover, which may indicate a pin-hole leak through the PTFE layer. Disconnect the fluid hose from the gun, and look for signs of fluid contamination on the outside of the PTFE portion of the fluid tube.
 - Inspect the end of the hose connected to the voltage isolation system. Look for cuts or nicks.
 - Make sure the hose is properly stripped (see **Connect the Waterborne Fluid Hose**, page 11). Restrip or replace the hose.
 - b Fluid packings:

Remove the packing assembly from the gun, and look for signs of fluid leakage or any blackened areas, which would indicate arcing is occurring along the packing rod.
 - c Fluid hose connection to the spray gun:




A breakdown at the fluid hose connection joint would be caused by fluid leaking past the o-ring seals on the end of the hose. Remove the hose at the gun connection and look for signs of fluid leakage along the PTFE tube.
12. Before reassembling the gun, clean and dry the gun fluid inlet tube. Repack the inner spacer of the fluid packing rod with dielectric grease and reassemble the gun.
13. Reconnect the fluid hose.
14. Check the gun voltage with the voltage probe and meter before filling the gun with fluid.

Electrical Troubleshooting

Problem	Cause	Solution
Voltage still present at gun after following the Fluid Voltage Discharge and Grounding Procedure , page 17.	ES On/Off switch is not turned OFF (O)	Turn OFF (O)
	Did not wait long enough for voltage to discharge.	Wait longer before touching electrode with grounding rod. Check for bleed resistor failure.
	Air pocket in fluid line leaves fluid near gun isolated.	Determine cause and correct. Purge air from fluid line.
	Voltage isolation system failed.	Service voltage isolation system.
	Grounding cylinder not operating.	See Test Cylinder Resistance , page 22, Replace if needed.
Poor wrap.	Spilled paint, dried paint, or other contaminants inside the WB100 Enclosure, causing a short circuit.	Clean interior of enclosure.
ES or Hz indicator is not lit.	ES On/Off switch is OFF (O).	Turn ON (I).
	No power	Check power supply, alternator, and alternator ribbon cable.
Operator gets shock from workpiece.	Workpiece not grounded.	Resistance must be 1 megohm or less. Clean workpiece hangers.

Repair





Prepare the Gun for Service

				
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Installing and repairing this equipment requires access to parts that may cause electric shock or other serious injury if the work is not performed properly. Do not install or service this equipment unless you are trained and qualified. To reduce the risk of fire, explosion, or electric shock, before flushing the gun:

- Follow the **Fluid Voltage Discharge and Grounding Procedure**, page 17, and turn OFF (O) the ES On-Off switch before flushing, checking, or servicing the system and whenever you are instructed to discharge the voltage.
- Clean all parts with a non-flammable fluid as defined under **Models**, page 3.
- Do not touch the gun nozzle or come within 4 in. (102 mm) of the nozzle during gun operation or until you perform the **Fluid Voltage Discharge and Grounding Procedure**, page 17.

1. Follow the **Fluid Voltage Discharge and Grounding Procedure**, page 17.
2. Flush the gun. See **Flushing**, page 19.
3. Blow the fluid lines dry with air.
4. Relieve the pressure. See **Pressure Relief Procedure**, page 16.
5. Disconnect the gun air and fluid lines at the isolation system.

				
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To reduce the risk of an injury, follow the **Pressure Relief Procedure**, page 16, before checking or servicing any part of the system and whenever you are instructed to relieve the pressure.

- Check all possible remedies in **Troubleshooting**, page 23, before disassembling the gun.
- Use a vise with padded jaws to prevent damage to plastic parts.
- Lightly lubricate o-rings and seals with non-silicone grease. Order Part No. 111265 Lubricant. Do not over-lubricate.
- Only use genuine Graco parts. Do not mix or use parts from other Pro Gun models.

Parts

Isolation Enclosure

Part No. 233825 Waterborne Isolation Enclosure, for use with shielded waterborne fluid hose.

Part No. 246511 Waterborne Isolation Enclosure, for use with unshielded waterborne fluid hose.

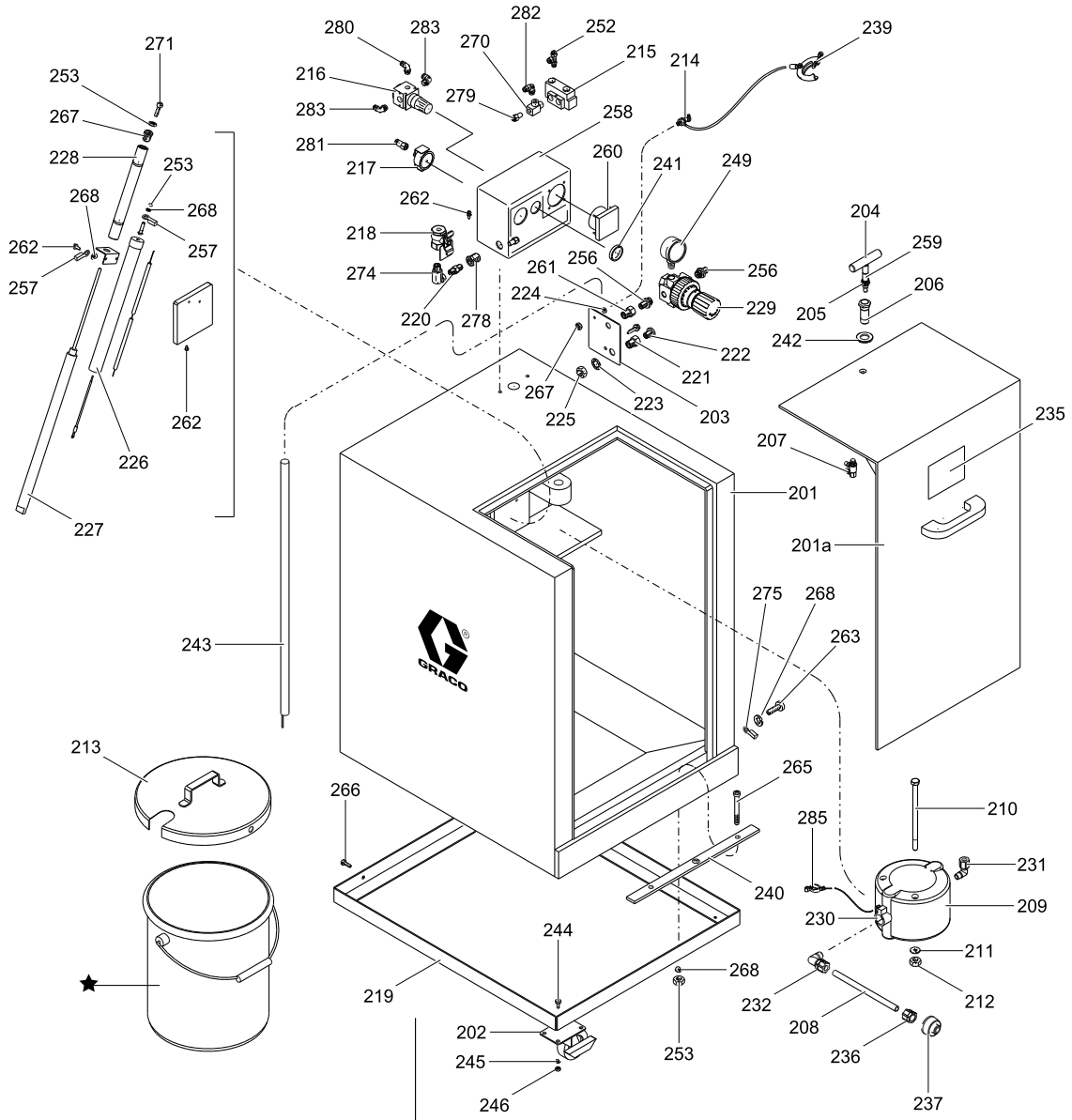


FIG. 7: Isolation Enclosure

ti19902c

Ref. No.	Part No.	Description	Qty
201	— — —	CABINET, enclosure; includes 201a	1
201a	15A947	DOOR, cabinet	1
202	116993	CASTER, brake	4
203	15A660	PLATE	1
204	15A551	T-HANDLE, latch	1
205	15A545	STEM, handle, door	1
206	15A524	HOUSING, latch	1
207	113061	SWITCH, push, air	1
208	— — —	TUBE; 1/2 in. (13 mm) OD; polyethylene	A/R
209	233501	PUMP, diaphragm; sst; see 309303	1
210	— — —	SCREW, hex hd cap; 5/16–18 x 5.5 in. (140 mm)	2
211	— — —	WASHER, plain; 0.344 in. ID	2
212	— — —	NUT, lock; 5/16–18	2
213	241005	COVER, pail	1
214	104029	LUG, ground	1
215	116989	VALVE, air	1
216	111804	REGULATOR, air	1
217	113060	GAUGE, air; 1/8 npt	1
218	116473	NIPPLE; 1/4 npt x 1/4 npsm	1
221	185547	FERRULE, housing; for 24N580, 24P629, and 233825	1
	15B932	FERRULE, housing; for 24P630, 24P631, and 246511	1
222	198663	FERRULE; for 24N580, 24P629, and 233825	1
	190863	FERRULE; for 24P630, 24P631, and 246511	1
223	101390	WASHER, lock, internal tooth	1
224	154636	WASHER, plain; 0.625 in. ID	2
225	185548	NUT	1
226	190410	RESISTOR, bleed	1
227	116988	CYLINDER ROD	1
228	15A518	HOUSING, cylinder rod	1
229	104267	REGULATOR, air	1
230	— — —	BUSHING; plastic; 3/4 x 1/2 npt	1
231	114456	ELBOW, tube; 3/8 npt x 3/8 in. (10 mm) OD tube	1
232	116315	ELBOW, tube; 3/8 npt x 1/2 in. (13 mm) OD tube	1
235▲	15A682	LABEL, warning	1

Ref. No.	Part No.	Description	Qty
236	116316	FITTING, tube; 1/2 npt x 1/2 in. (13 mm) OD tube	1
237	218798	STRAINER, 16 mesh; sst	1
238	114958	STRAP, tie	3
239	222011	GROUND WIRE; 25 ft (7.6 m)	1
240	234018	STRIP, grounding; aluminum	1
241	110209	NUT, regulator	11
242	114051	WASHER, shim, ;atch	1
243	210084	ROD, ground	1
244	— — —	SCREW, hex hd; 1/4–20 x 5/8 in. (16 mm)	16
245	— — —	WASHER, plain; 1/4 in. (6 mm)	16
246	— — —	NUT, hex; 1/4–20	16
247	107257	SCREW, thread-forming	1
248	— — —	TUBE; 1/4 in. (6 mm) OD; nylon	A/R
249	160430	GAUGE, air	1
251	— — —	WIRE, 10 gauge; green with yellow stripe	1
252	— — —	CONNECTOR, swivel tee; 1/8 npt x 5/32 in. (4 mm) tube	1
253	— — —	NUT, hex; 10–32	1
256	162449	NIPPLE, reducing; 1/2 npt x 1/4 npt	2
257	101874	TERMINAL, ring	5
258	116990	BOX, control	1
259	113983	RING, retaining; 1/2 in. (13 mm)	1
260	237933	METER, 0–90 kV	1
261	113336	ADAPTER; 1/4 npt	1
262	— — —	SCREW, pan hd; 10–32 x 5/8 in. (16 mm)	4
263	— — —	SCREW, pan hd; 10–32 x 1/4 in. (6 mm)	1
264	— — —	HOLDER, tie	3
265	— — —	SCREW, button hd; 10–24 x 1.5 in. (38 mm)	2
266	— — —	SCREW, button hd; 10–32 x 1.0 in. (25 mm)	2
267	— — —	NUT, hex; M5 x 0.8	2
268	— — —	WASHER, lock; no. 10	9
270	116991	TEE, run, manifold	1
271	203953	SCREW, hex hd cap with patch; 10–24 x 3/8 in. (10 mm)	1
272	— — —	WIRE, 14 gauge; red	A/R

Parts

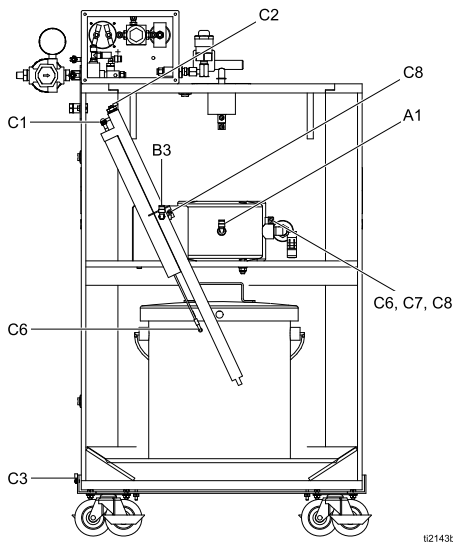
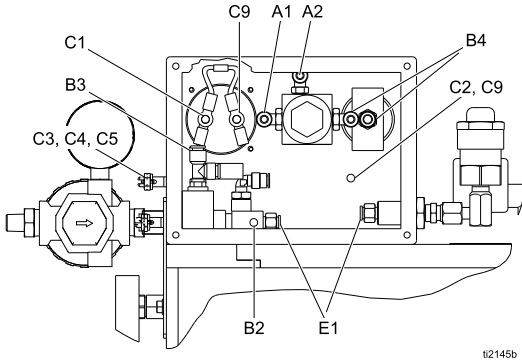
Ref. No.	Part No.	Description	Qty
273	— — —	WIRE, ground, 14 gauge; green with yellow stripe	A/R
274	155541	UNION, swivel; 1/4 npt	1
275	114261	TERMINAL, ring; no. 10	1
276	15A780	PLUG, hex hd	1
278	117314	BULKHEAD CONNECTOR; 1/4 npt	1
279	113319	CONNECTOR, tube; 1/4 npt x 3/8 in. (10 mm) OD tube	2
280	— — —	ELBOW, tube	1
281	— — —	FITTING, tube; 1/8 npt x 5/32 in. (4 mm) OD tube	1
282	— — —	SWIVEL, tube; 1/4 npt x 1/4 in. (6 mm) OD tube	4
283	— — —	SWIVEL, tube; 1/8 npt x 5/32 in. (4 mm) OD tube	2
285	112791	CLAMP	1
286	— — —	TUBE; 3/8 in. (10 mm) OD	A/R

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

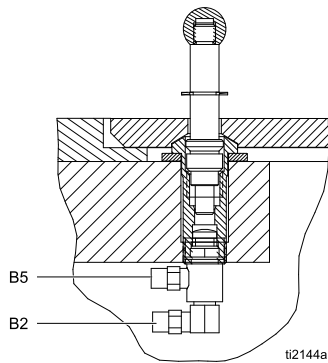
* The pail is shown for illustrative purposes but is not included.

Tubing and Wiring

Detail Views of Control Box



Detail View of Door Interlock Switch



Tubing and Wiring Chart

Use the diagrams to find the connection points for the tubing and wiring listed below.

Code	Ref. No.	Length in. (mm)	Description
A1	248	20 (508)	1/4 OD tube, regulator (216) to pump
A2	248	9 (229)	1/4 OD tube, regulator (216) to manifold
B2	249	17 (432)	5/32 OD tube, manifold air to door interlock switch
B3	249	20 (508)	5/32 OD tube, valve tee to cylinder
B4	249	5 (127)	5/32 OD tube, regulator (216) to gauge (217)
B5	249	22 (559)	5/32 OD tube, valve tee to door interlock switch
C1	272	9 (229)	red 14 gauge wire from top of bleed resistor to meter
C2	251	8 (204)	green/yellow 14 gauge wire from internal box ground lug to cylinder cap
C3	273	34 (864)	green/yellow 10 gauge wire from external ground lug to cart
C4	239	n/a	green/yellow 25 ft (7.6 m) ground wire with clamp, from external ground lug to true earth ground
C5	243	n/a	green/yellow 10 gauge wire from external ground lug to ground probe
C6	226	n/a	red wire from bleed resistor to pump
C7	272	16 (407)	red 14 gauge wire from pump to pail cover with clamp
C8	272	12 (305)	red 14 gauge wire from pump (209) to ground on cylinder bracket
C9	251	n/a	green/yellow 10 gauge wire from meter (+) to internal box ground lug
E1	286	4 (102)	3/8 OD tube, bulkhead to manifold

Repair Kits and Accessories

Signs

Part No.	Description
16P802	English Warning Sign, available at no charge from Graco
16P798	English Daily Care Sign
16P799	English Setup Sign

System Accessories

Part No.	Description
222011	Ground Wire and Clamp.
24N528	Gun Flush Box Adapter for 60 kV and 85 kV guns. To convert existing gun flush boxes to hold Pro Xp guns. See manual 309227.
24P312	Gun Washer Kit. To convert existing gun washers to clean Pro Xp guns. See manual 308393.

Hoses

Grounded Air Hoses

100 psi (0.7 MPa, 7 bar) Maximum Working Pressure
0.315 in. (8 mm) ID; 1/4 npsm(f) x 1/4 npsm(f) left-hand thread.

Part No.	Description
Grounded Air Hose with stainless steel braid ground path (Red)	
235068	6 ft (1.8 m)
235069	15 ft (4.6 m)
235070	25 ft (7.6 m)
235071	36 ft (11 m)
235072	50 ft (15 m)
235073	75 ft (23 m)
235074	100 ft (30.5 m)

Fluid Hoses

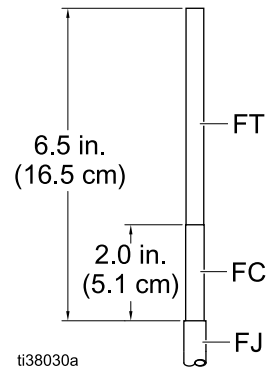
225 psi (1.4 MPa, 14 bar) Maximum Working Pressure
1/4 in. (6 mm) ID; 3/8 npsm(fbe); nylon.

Part No.	Description
24M732	Shielded Waterborne Fluid Hose, 25 ft (7.6 m), sold separately for gun model L60T18
25N916	Shielded Waterborne Fluid Hose Assembly, 50 ft (15.2 m)

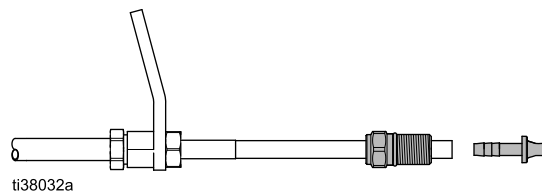
Fluid Hose Assembly and Repair

The Graco shielded waterborne hose has three layers. An outer jacket (FJ), a conductive layer (FC), and an inner FEP tube (FT). The hose must be stripped to the dimensions shown at each end.

At the gun end:



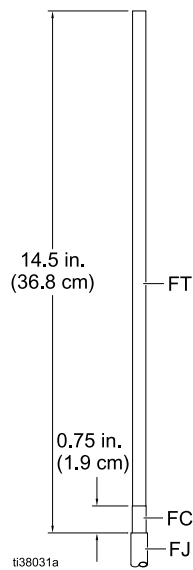
After stripping the hose, loosely assemble the gun bracket and strain relief fitting in the orientation shown.



Slide the barrel inlet fitting onto the hose, and then press in the barbed fitting until it bottoms out on the shoulder.

At the isolation system:

(WB100)



NOTICE

Be careful not to cut into the inner tube (FT) of the hose when stripping the hose. Nicks or cuts in the FEP tube will cause premature hose failure.

245895 Agitator Kit

To keep fluid mixed and prevent settling out. Includes items 401–408.

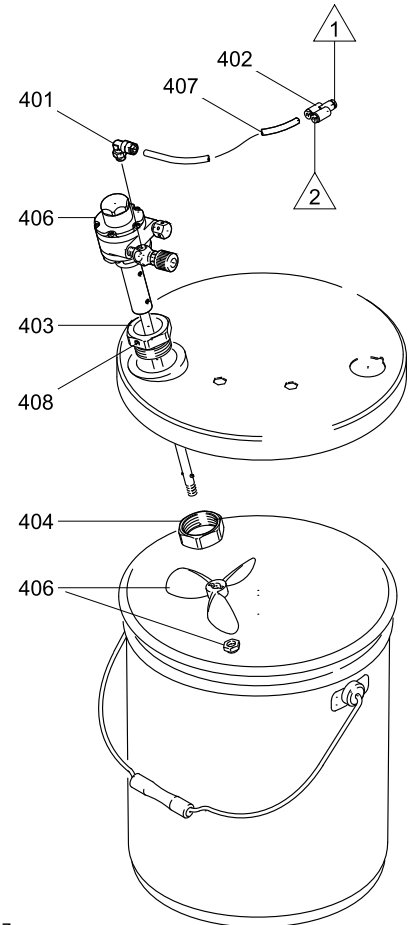
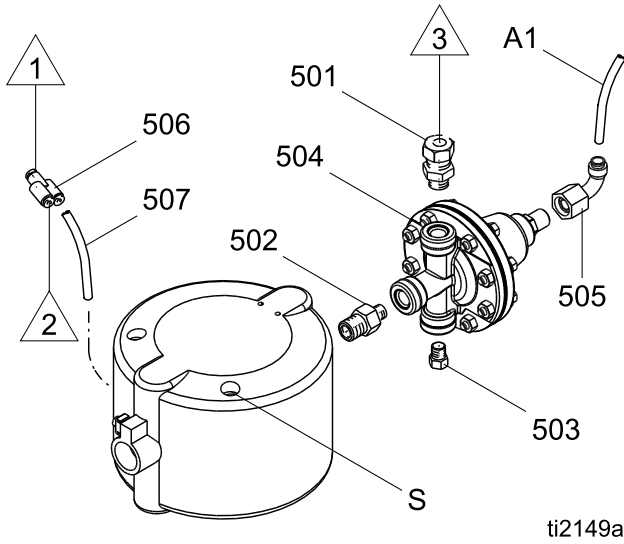


FIG. 8: 245895 Agitator Kit

Ref. No.	Part No.	Description	Qty
401	112698	ELBOW, swivel; 1/8 npt(m) x 1/4 in. (6 mm) OD tube	1
402	114158	FITTING, adapter, Y; 1/4 in. (6 mm) OD tube; mxxf	1
403	193315	COLLAR, mounting, agitator	1
404	193316	NUT, collar, agitator	1
405	197298	COVER, pail; 5 gal. (19 liter)	1
406	224571	AGITATOR; see manual 306565	1
407	Purchase locally	TUBE, nylon; 1/4 in. (6 mm) OD; 4 ft (1.22 m)	1
408	110272	SCREW, set, socket hd; 1/4–20 x 1/4 in. (6 mm)	1

245944 Fluid Regulator Kit

To allow precise fluid pressure regulation at the gun.
Includes items 501–507.



Ref. No.	Part No.	Description	Qty
501	110078	FITTING, tube, fluid; 1/4 npt(m) x 3/8 in. (10 mm) tube	1
502	113070	NIPPLE, reducer; 3/8 npt x 1/4 npt	1
503	113576	PLUG; 1/4 npt	1
504	236281	REGULATOR, fluid; see manual 308325	1
505	C20350	ELBOW, 90°; 1/4 npt(f) x 1/4 in. (6 mm) OD tube	1
506	114158	FITTING, adapter, Y; 1/4 in. (6 mm) OD tube; mxxf	1
507	Purchase locally	TUBE, nylon; 1/4 in. (6 mm) OD; 4 ft (1.22 m)	1

FIG. 9: 245944 Fluid Regulator Kit

Ignitability of Coating Materials

Per EN 50059

From the Physikalisch-Technische Bundesanstalt,
Braunschweig, Germany, June 26, 2019.

General

The fire and explosion protection of spraying systems can be facilitated considerably when processing coating materials with a low portion of solvents and a high flash point (generally water-based paints), provided that the spray cloud of the coating materials are considered to be non-ignitable. Substantial research has shown that the ignitability of spray clouds depends on the composition of the coating materials made mainly of water, solvents, and solids. The following classification has been established:

Non-ignitable coating materials

Coating materials of this group have the following composition:

$[\% \text{H}_2\text{O}] > 1,70 + [\% \text{LM}] + 0,96 \times [\% \text{ORG}]$, (all in % by weight) where.

H₂O: water;

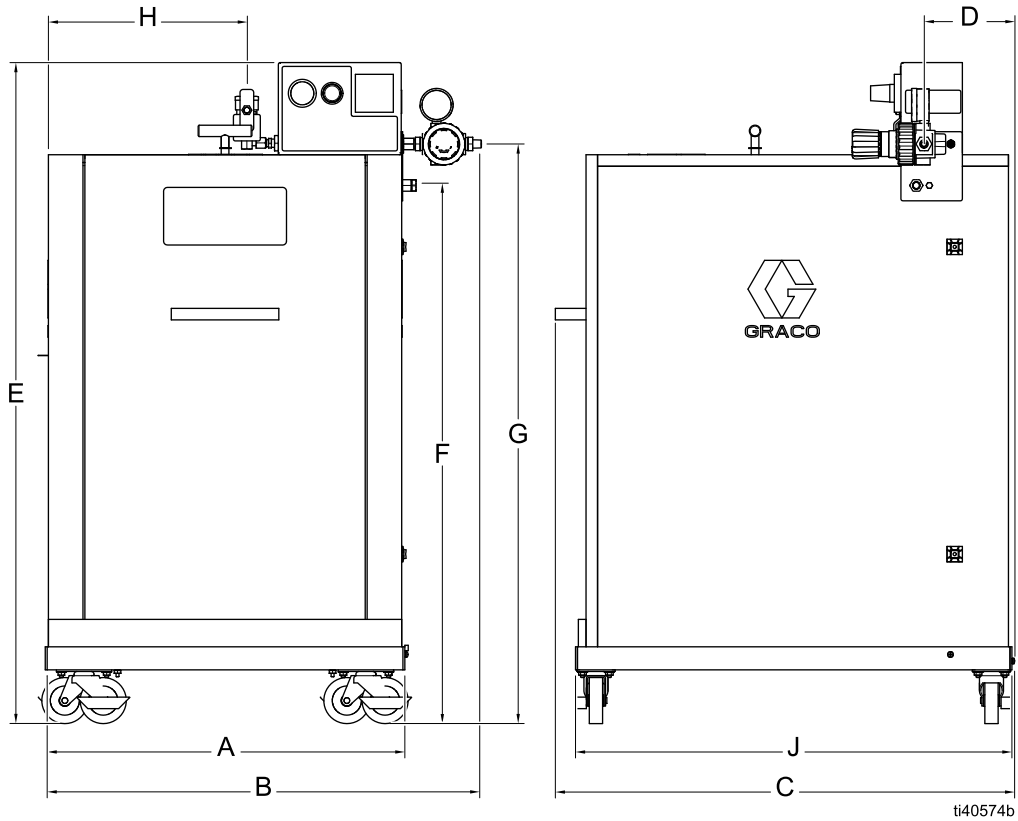
LM: the entire liquid phase, including liquids with flash points above 60 °C and those liquids not listed in the safety data sheet, in which case the entire liquid phase is ignitable in the sprayed state;

ORG: solid phase which is ignitable in the sprayed state (ignitable inorganic or ignitable organic solids) including the solids which have an ignitable inorganic or ignitable organic coating.

Non-ignitable coating materials act like water in the liquid phase and in the sprayed state. If the rinsing and thinner liquids correspond to this category, too, no explosion protection is necessary. Coating materials of this group are classified as being non-ignitable liquid coating material.

A fire extinguishing equipment is not required for spraying systems processing coating materials which are classified to be non-ignitable. However, this does not affect the fire protection as a whole. Even these coating materials may resume ignitability after being partially dried. Moreover, water-based coating materials will burn when strongly exposed to a fire which had been initiated by other sources, and thus present a certain fire load.

Dimensions



ti40574b

Key:

- A 23.410 (596.614) in. (mm)
- B 27.803 (706.196) in. (mm)
- C 29.723 (754.964) in. (mm)
- D 5.500 (139.7) in. (mm)
- E 42.910 (1089.914) in. (mm)
- F 30.035 (762.889) in. (mm)
- G 37.735 (958.469) in. (mm)
- H 12.920 (328.168) in. (mm)

Technical Specifications

WB100 Isolation System		
	US	Metric
Maximum fluid working pressure	100 psi	0.7 MPa, 7 bar
Maximum working Air pressure	100 psi	0.7 MPa, 7 bar
Pump air consumption	See pump manual	
Maximum Fluid Operating Temperature	120°F	48°C
Voltage Output	L60T18: 60 kV L60M18 and L60M19: 30–60 kV	
Isolation Enclosure Air Inlet Fitting	1/4 npt	
Isolation Enclosure Fluid Outlet Fitting	3/8 in. OD tube fitting.	10 mm OD tube fitting
Wetted Parts	Waterborne Fluid Hose: PTFE Suction Tube: Polyethylene, Stainless Steel Triton Pump: See manual 309303	
Maximum fluid conductivity	2000 microsiemens	

California Proposition 65

CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – www.P65warnings.ca.gov.

Graco Pro Xp 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.

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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.

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For the latest information about Graco products, visit www.graco.com.

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

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

Toll Free Phone Number: 1-800-328-0211

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.

Original instructions. This manual contains English. MM

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