

# Mortar Spray Applicators

332767B

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For air-assisted spraying of high viscosity materials, such as mortars, mastics, or epoxies. Compatible with solvent borne-materials and solvent flushing. For professional use only.

## Model 24T946, Series A

Pole Applicator

## Model 24T947, Series A

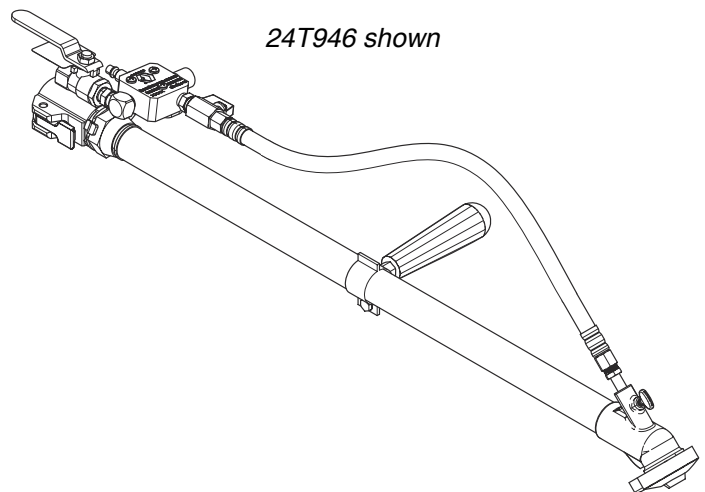
Flex Applicator

*1000 psi (7 MPa, 70 bar) Maximum Working Pressure  
150 psi (1.0 MPa, 10 bar) Maximum Air Pressure*



### Important Safety Instructions

Read all warnings and instructions in this manual and in all supplied manuals. Save all instructions.



24T946 shown


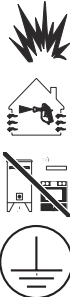

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# Warnings



The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 <h2 style="margin: 0;">WARNING</h2>	
	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use equipment only in well ventilated area.</li> <li>• Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.</li> <li>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are antistatic or conductive.</li> <li>• <b>Stop operation immediately</b> if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> </ul>
	<p><b>SKIN INJECTION HAZARD</b></p> <p>High-pressure fluid from dispensing device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not point dispensing device at anyone or at any part of the body.</li> <li>• Do not put your hand over the fluid outlet.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Follow the <b>Pressure Relief Procedure</b> when you stop dispensing and before cleaning, checking, or servicing equipment.</li> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses and couplings daily. Replace worn or damaged parts immediately.</li> </ul>

# ⚠ WARNING

 	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.</li> <li>• Do not leave the work area while equipment is energized or under pressure.</li> <li>• Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>• Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.</li> <li>• Make sure all equipment is rated and approved for the environment in which you are using it.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> </ul>
 	<p><b>TOXIC FLUID OR FUMES HAZARD</b></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"> <li>• Read MSDSs to know the specific hazards of the fluids you are using.</li> <li>• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.</li> </ul>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>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. This protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Protective eyewear, and hearing protection.</li> <li>• Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer</li> </ul>
	<p><b>PRESSURIZED ALUMINUM PARTS HAZARD</b></p> <p>Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.</p> <ul style="list-style-type: none"> <li>• Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.</li> <li>• Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.</li> </ul>
	<p><b>SUCTION HAZARD</b></p> <p>Powerful suction could cause serious injury.</p> <ul style="list-style-type: none"> <li>• Never place hands near the pump fluid inlet when pump is operating or pressurized.</li> </ul>




## Material Self-ignition

						
Some materials may become self-igniting if applied too thick. Read material manufacturer's warnings and material MSDS.						

## Changing Materials

<b>NOTICE</b>
Changing the material types used in your equipment requires special attention to avoid equipment damage and downtime.
<ul style="list-style-type: none"><li>• When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.</li><li>• Always clean the fluid inlet strainers after flushing.</li><li>• Check with your material manufacturer for chemical compatibility.</li><li>• When changing between epoxies and urethanes or polyureas, disassemble and clean all fluid components and change hoses.</li></ul>

## Grounding

						
The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Grounding provides an escape wire for the electric current.						

**Applicator:** ground through connection to a properly grounded fluid hose and pump.

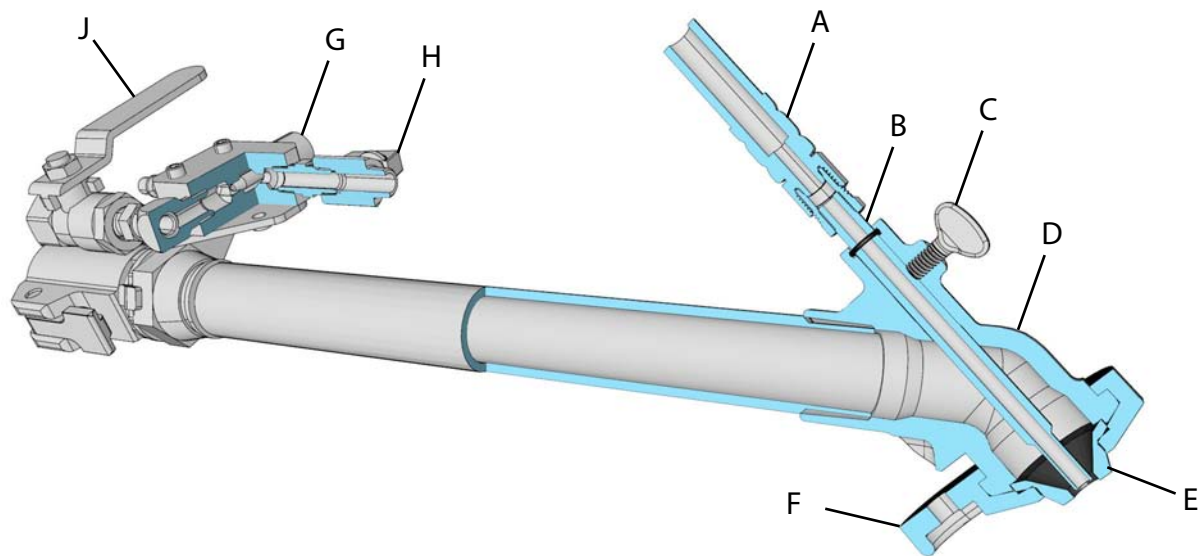
**Fluid supply container:** follow local code.

**Object being sprayed:** follow local code.

**Solvent pails used when flushing:** follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

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

# Component Identification



**FIG. 1**

**Key:**

- A Air Assist Air Line
- B Air Needle (adjustable position)
- C Air Needle Retaining Screw
- D Fluid Housing
- E Tip (Nozzle)
- F Rubber Tip Retainer
- G Needle Valve for Air Assist Flow Control
- H Air Assist Shutoff Ball Valve
- J Air Pilot Valve for Remote Pump Operation

## Flush Before Using Equipment

The equipment was tested with lightweight oil, which is left in the fluid passages to protect parts. To avoid contaminating your fluid with oil, flush the equipment with a compatible solvent before using the equipment. See **Grounding** on page 4.

## Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.



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

1. Shut off pump and sprayer.
2. Close applicator air valve.
3. Open applicator fluid ball valve.

## Setup

### Install Applicator Tip (Nozzle)

**NOTE:** See **Component Identification** on page 5 for part references.

1. Perform **Pressure Relief Procedure**.
2. Install tip (E) onto fluid housing (F) then install rubber tip retainer over it and secure to fluid housing.

# Spraying

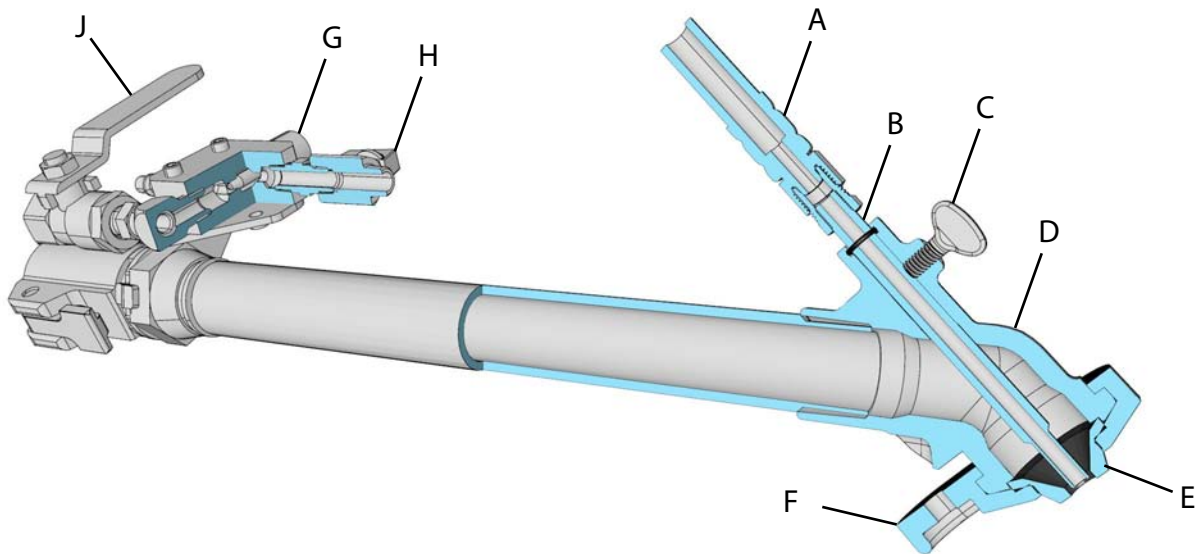


FIG. 2

## Key:

- A Air Assist Air Line
- B Air Needle (adjustable position)
- C Air Needle Retaining Screw
- D Fluid Housing
- E Tip (Nozzle)
- F Rubber Tip Retainer
- G Needle Valve for Air Assist Flow Control
- H Air Assist Shutoff Ball Valve
- J Air Pilot Valve for Remote Pump Operation

## General Adjustments

The spray pattern can be adjusted by changing:

- Tip (E) size
- Fluid flow
- Air flow, use needle valve (G)
- Air needle (B) position

**Adjust Air Flow:** Fully open the air assist valve (H), while adjusting the needle valve (G) for the minimum air flow necessary for a good pattern. Air bleeds from the applicator nozzle whenever the applicator air valve (H) is open. Close the valve to stop the air flow, if desired. Otherwise, the air valve can stay open during priming. Air must be on prior to fluid flow.

**Adjust Air Needle (B) position:** Ensure the air needle (B) slightly behind the tip (E).

**NOTE:** Installing needle (B) too far forward can restrict or completely block material flow. This can result in the retainer (F) blowing off. Installing the needle too far back can raise the pressure behind the fluid enough to blow the retainer (B) off and can cause dripping.

## Air Flow Valve Adjustment

To decrease air flow, turn valve knob (G) clockwise.

To increase air flow, turn valve knob (G) counterclockwise.

Check material and thin as needed to maintain the proper consistency. The material may thicken as it sits and could slow down application or affect the spray pattern.

Flush and dry applicator thoroughly at the end of each use. Tips and retainers must be cleaned by hand.

## Material Flow Adjustments

For a lighter spray pattern, adjust the air needle (B) closer to the fluid nozzle and/or reduce the fluid flow.

For a heavier spray pattern, adjust the air needle (B) farther back from the fluid tip and/or increase the fluid flow.

**NOTE:** Withdrawing needle (B) too far can force air back into fluid hose, stopping material flow.

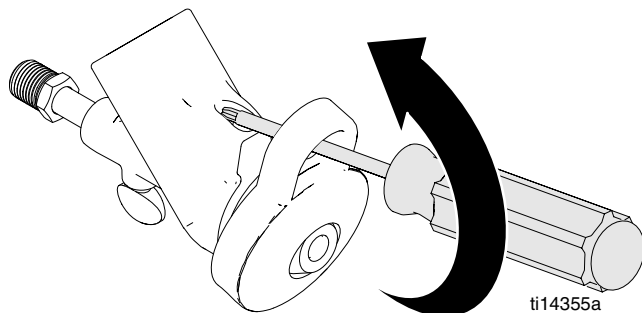
## Spray Techniques

1. Test the spray pattern on cardboard. Hold the applicator 6-18 in. (150-450 mm) from the surface. Use this spraying distance for most applications.
2. Adjust fluid flow until material flow is adequate.
3. Adjust the applicator air assist needle valve to achieve a uniform round spray pattern.
4. Consider the size of aggregate in the material and the coarseness of the spray pattern. Larger nozzles allow heavier patterns.
5. Overlap each stroke 50%. A circular overlapping pattern may give the best results, and is obtained by grasping the flex-head and swinging the head around as the hose flexes.

When spraying small confined areas use the valve and knob to make fine adjustments without adjusting the pump.

## Installing Nozzle Retaining Cap

1. Place nozzle retaining cap over top lip of applicator housing.
2. Insert screwdriver through hole in tab of nozzle retaining cap.
3. Push screwdriver head against notch on applicator tip and pry nozzle retaining cap over lip until it snaps into place.



## Material Compatibility

### NOTICE

To prevent the seals and rubber tip from swelling, do not leave solvent in the applicator when not in use.

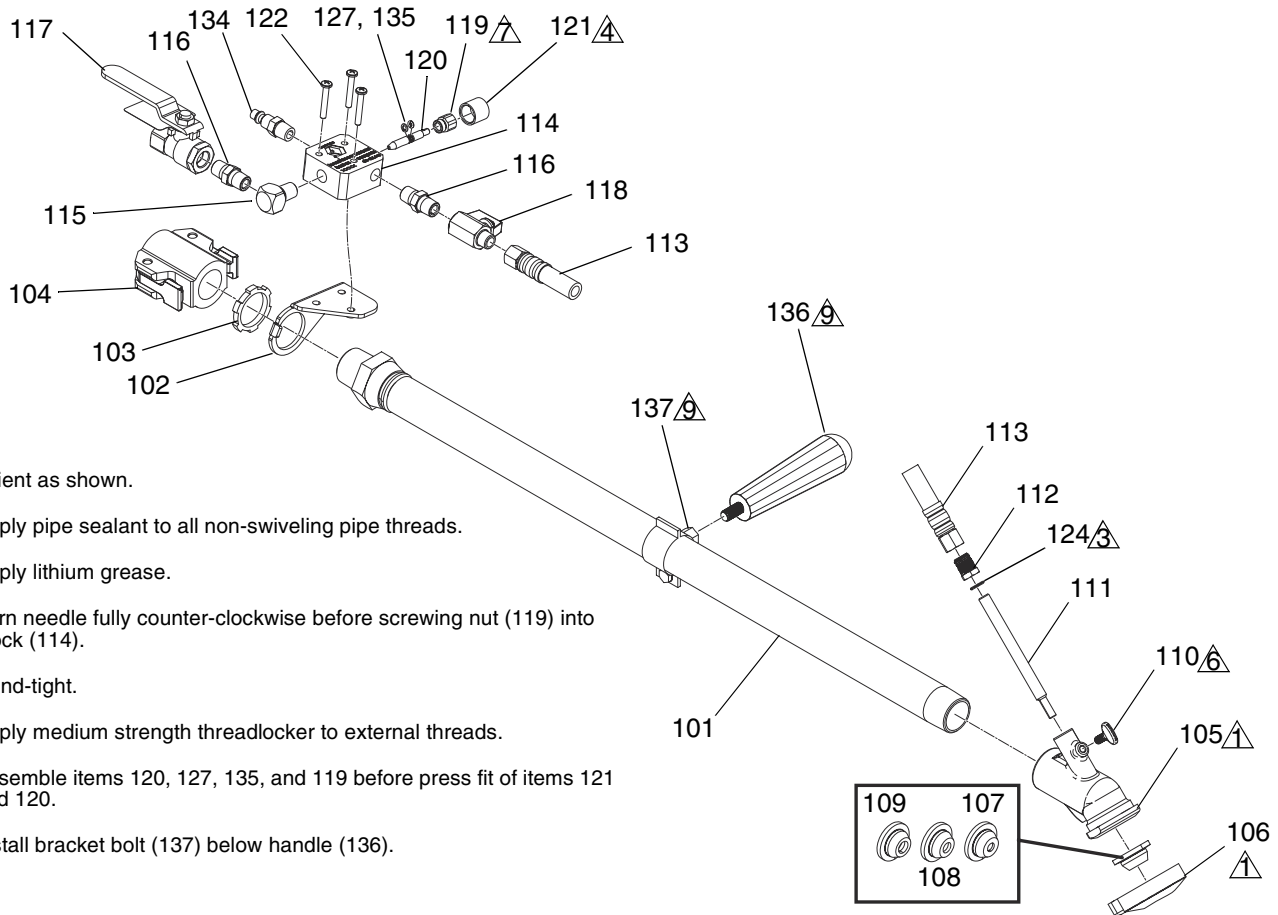
The nylon hose in the Flex Applicator is compatible with solvents. The rubber gasket in the cam and groove inlet fitting and the rubber nozzle retainer should be hand cleaned and dried after each use.





# Parts

## 24T947 Flex Kit and 24T946 Pole Kit



- 1 Orient as shown.
- 2 Apply pipe sealant to all non-swiveling pipe threads.
- 3 Apply lithium grease.
- 4 Turn needle fully counter-clockwise before screwing nut (119) into block (114).
- 6 Hand-tight.
- 7 Apply medium strength threadlocker to external threads.
- 8 Assemble items 120, 127, 135, and 119 before press fit of items 121 and 120.
- 9 Install bracket bolt (137) below handle (136).

Ref	Part	Description	Qty	Ref	Part	Description	Qty
101	191633	TUBE, coupled, 30 in. (model 24T946)	1	121	---	KNOB, adjusting	1
	24T322	TUBE, coupled, flexible, 1 in. ID, nylon core, 23 in. (model 24T947)	1	122	111235	SCREW, machine, panhead	3
102	16V985	BRACKET, manifold, air	1	124†	121399	PACKING, o-ring, 012, FX-75	1
103	113114	NUT, lock	1	127	157628	PACKING, o-ring, Buna-N	1
104	289874	KIT, repair, coupler	1	133	127311	FITTING, compress, 1/4 npt x 1/4 tube	1
104a	16W507	KIT, gasket, nitrile, 6-pack	1	134	169970	FITTING, line air	1
105†	16A247	HOUSING, head, applicator	1	135	166531	WASHER, non-metallic	1
106a†	16A405	CAP, retaining, nozzle, medium hardness	1	136	16W587	HANDLE, applicator (included with model 24T946 only)	1
106b†	16A421	CAP, retaining, nozzle, hard	1	137	16W588	CLAMP, handle (included with model 24T946 only)	1
107**	16A445	NOZZLE, applicator, 5/16 in., stainless steel	1				
108†	16A446	NOZZLE, applicator, 3/8 in., stainless steel	1				
109†	16A447	NOZZLE, applicator, 7/16 in., stainless steel	1				
110†	100085	SCREW, thumb	1				
111†	190947	NEEDLE, air	1				
112†	M70895	BUSHING, reducer	1				
113	113601	HOSE, air, coupled, 31.5 in. (model 24T946)	1				
	113377	HOSE, air, coupled, 21.0 in. (model 24T947)	1				
114	16V986	MANIFOLD, air	1				
115	100840	FITTING, elbow, street	1				
116	156971	FITTING, nipple, short	2				
117	113329	VALVE, ball, vented, 1/4 in.	1				
118	15B565	VALVE, ball	1				
119	---	NUT, packing	1				
120	---	NEEDLE, valve	1				

† Parts included in spare spray head kit 24B956 (purchase separately).

\*\* Optional nozzle sizes available:  
 16A443: 3/16 in.  
 16A444: 1/4 in.  
 16A448: 1/2 in.  
 16A449: 9/16 in.

◆ Parts included in needle valve kit 206264 (purchase separately). When received, unscrew assembly then install in manifold (114).

# Technical Data

<b>Texture Applicators</b>		
	<b>US</b>	<b>Metric</b>
Maximum Fluid Working Pressure	1000 psi	7 MPa, 70 bar
Maximum Air Working Pressure	150 psi	1.0 MPa, 10 bar
Maximum Air Required (100 psi, needle valve fully open)	30 standard cubic feet per minute	0.85 cubic meters per minute
Fluid Inlet Size	1 in.(m) cam and groove (Graco HP)	
Air Inlet Size	1/4 quick disconnect pin fitting	
Wetted Parts	Aluminum, stainless steel, nitrile, nylon, plated carbon steel, solvent resistant elastomer	
<b>Weight</b>		
Model 24T946	9 lb	4.1 kg
Model 24T947	7 lb	3.2 kg
<b>Sound Data with Air (applicator only):</b>		
Sound Pressure Level	118dB(A)*	
Sound Power Level	118dB(A)*	
<b>Notes</b>		
* <i>Spraying simulated acoustical texture under typical conditions as specified by the material manufacturer.</i>		

# Graco Standard Warranty

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

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

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

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

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

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

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

## **FOR GRACO CANADA CUSTOMERS**

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

# Graco Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

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

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

*All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.*

*For patent information, see [www.graco.com/patents](http://www.graco.com/patents).*

Original instructions. This manual contains English. MM 332767

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