

# Instructions – Parts List



AIR-DRIVEN, STAINLESS STEEL

## Agitators

306565H

100 psi (0.7 MPa, 7 bar) Maximum Working Pressure



### Important Safety Instructions

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

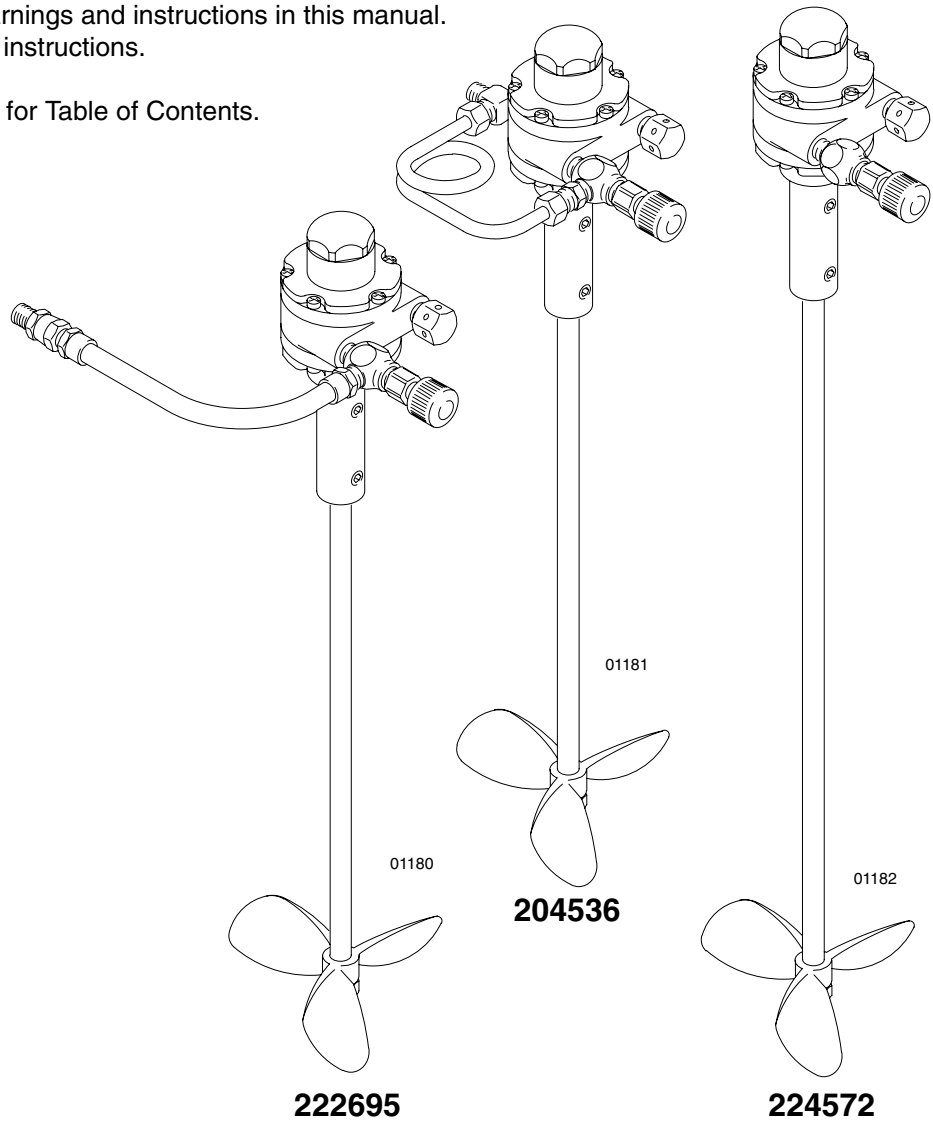
See page 2 for Table of Contents.

**MODEL 222695**  
For 5-gallon pails

**MODEL 204536**  
For 5-gallon pails

**\*MODEL 224571**  
For 5-gallon pails

**\*MODEL 224572**  
For 10-gallon pails



PROVEN QUALITY. LEADING TECHNOLOGY.



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# Table of Contents

Warning .....	2
Installation .....	4
Operation .....	5
Service .....	6
Parts Drawing .....	8
Parts List .....	9
Technical Data .....	10
Dimensions .....	11
Graco Standard Warranty .....	12
Graco Information .....	12

## Symbols

### Warning Symbol





This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

### Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

 <b>WARNING</b>	
 <small>INSTRUCTIONS</small>	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.</p> <ul style="list-style-type: none"> <li>● This equipment is for professional use only.</li> <li>● Read all instruction manuals, tags, and labels before operating the equipment.</li> <li>● Use the equipment only for its intended purpose. If you are not sure, call Graco Technical Assistance at 1-800-543-0339.</li> <li>● Do not alter or modify this equipment.</li> <li>● Check equipment daily. Repair or replace worn or damaged parts immediately.</li> <li>● Do not exceed the maximum working pressure of the lowest rated component in your system. This equipment has a <b>100 psi (0.7 MPa, 7 bar) maximum working pressure</b>.</li> <li>● Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the <b>Technical Data</b> section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.</li> <li>● Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.</li> <li>● Comply with all applicable local, state, and national fire, electrical, and safety regulations.</li> </ul>

# WARNING



## FIRE AND EXPLOSION HAZARD

Improper grounding, poor ventilation, open flames or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- Ground the equipment and the object being sprayed. Refer to **Grounding** on page 4.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop spraying immediately**. Do not use the equipment until you identify and correct the problem.
- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in aluminum pumps. Such use could result in a serious chemical reaction, with the possibility of explosion.
- Do not use kerosene or other flammable solvents or combustible gases to flush the unit.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being sprayed.
- Keep the spray area free of debris, including solvent, rags, and gasoline.
- Before operating this equipment, electrically disconnect all equipment in the spray area.
- Before operating this equipment, extinguish all open flames or pilot lights in the spray area.
- Do not smoke in the spray area.
- Do not turn on or off any light switch in the spray area while spraying or while there are any fumes in the air.
- Do not operate a gasoline engine in the spray area.
- Keep a fire extinguisher in the work area.



## MOVING PARTS HAZARD

Moving parts, such as the rotating blades of the agitator, can pinch or amputate your fingers or other body parts and can cause splashing in the eyes or on the skin.

- Keep clear of all moving parts when starting or operating the agitator.
- Always shut off the agitator and disconnect the air line before adjusting the angle of the agitator, removing the agitator from the drum or checking or repairing any part of the agitator.



## HAZARDOUS VAPORS

Hazardous fluids or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, swallowed, or inhaled. When flushing the air motor, keep your face away from the exhaust port.

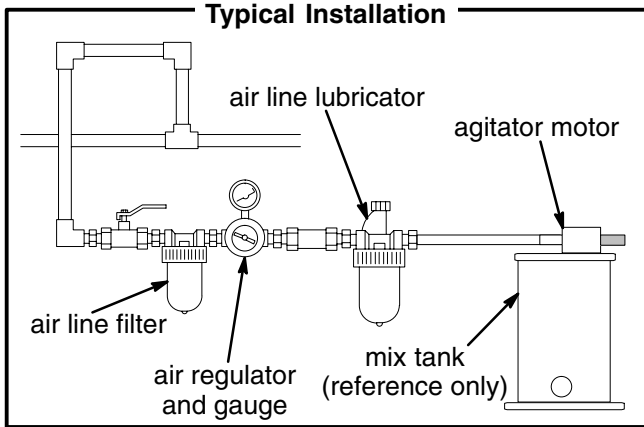
# Installation

## ⚠ WARNING



### FIRE AND EXPLOSION HAZARD

Always maintain a minimum of 1 in. clearance between rotating agitator parts and container to prevent sparks from contact.



**NOTE:** Reference numbers and letters in parentheses in the text refer to the **Parts Drawing** and figures.

## Air Requirements

For continuous use, the 1/4 HP (187 W) agitator air motor typically requires 2 cfm (0.06 m<sup>3</sup>/min.) of air.

## Air Line Accessories

Install an air line filter to remove harmful dirt and moisture from the air supply. *To order a 3/8" npt (20-micron element, 5 oz. bowl, without gauge) air line filter, order Part No. 106148.*

## ⚠ CAUTION

Not lubricating the air motor will cause air motor failure.

Downstream from the filter, install an air line lubricator for automatic air motor lubrication. Set the lubricator feed rate at 1 drop of oil per minute for high speed or continuous duty usage. Do not overfeed oil or exhaust air may become contaminated. To manually lubricate the air motor, see **Lubricating the Air Motor** on page 6. *To order a 3/8 in. npt air line lubricator, order Part No. 214847.*

Attach an air line quick disconnect or ball valve for main air shutoff to the air line. *Order Part No. 208536, quick disconnect coupler, and Part No. 169969, 1/8 npt(m) fitting.*

## Preparing the Agitator for Use

1. Remove the nut (5), lockwasher (4), blade (10), and pin (6) from the shaft (12 or 13). See the **Parts Drawing** on page 8.

2. Install the agitator on the container cover by inserting the shaft through the cover bung hole.
3. Position the air motor so the air line (A) can be attached easily and will not obstruct any other system components. See Fig. 2.
4. Two recessed areas are machined into the air motor hub. To secure the air motor to the cover, tighten a cover setscrew into one of the recessed areas.
5. Install the pin (7), blade (12), lockwasher (5), and nut (6) onto the agitator shaft (11). See the **Parts Drawing**.

## Model 204536

Screw the straight tube fitting (14a) into the needle valve's (2) 1/8 npt inlet. See Fig. 2. Screw the elbow fitting (14b) into the 1/8 npt air supply manifold outlet.

## Model 222695

Screw the air hose coupling (B) into the needle valve's (2) 1/8 npt inlet. See Fig. 2. Screw the air hose swivel stud (C) into the 1/8 npt air supply manifold outlet.

## Model 224572

Attach the air line between the needle valve's (2) 1/8 npt inlet and the 1/8 npt air supply manifold outlet. Refer to Fig. 2.

## Grounding

Proper grounding is an essential part of maintaining a safe system.

To reduce the risk of static sparking, the mounting cover and all electrically conductive objects or devices in the spray area **must** be properly grounded. Check your local electrical code for detailed grounding instructions for your area and type of equipment.

**To ground the agitator,** remove the grounding screw (A) and lockwasher (B). See Fig. 1. Secure the ground wire terminal (C) to the agitator with the screw and lockwasher. Connect the other end of the ground wire to a true earth ground. Order Part No. 237569, Ground Wire and Clamp.

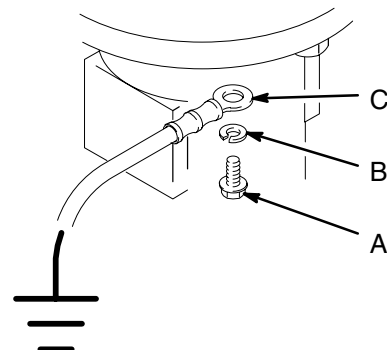


Fig. 1

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# Operation

## Finding the Proper Agitator Speed

### **⚠ WARNING**



#### **MOVING PARTS HAZARD**

To reduce the risk of serious injury, including cuts, amputation of fingers, and splashing in the eyes or on the skin, always shut off the agitator and disconnect the air line before checking or repairing the agitator.

**NOTE:** Attach ground wire before using agitator.

1. Fill the fluid supply container to about 3 or 4 inches (75 to 100 mm) above the agitator blade.
2. Start the agitator and gradually increase the speed by turning the needle valve (2) until a vortex begins to form in the paint.
3. Reduce the speed slightly, then fill the fluid container.

**NOTE:** If an air shut-off valve is installed in the supply line and used to stop the agitator, the same agitator speed will be set each time the agitator is used without repeating the above procedure. Order **air shut-off valves** by the part numbers listed below:

**208390** 1/4 npt(m) x 1/4 npt(m)

**208391** 3/8 npt(m) x 3/8 npt(f)

**208392** 3/8 npt(f) x 1/4 npt(m)

**208393** 3/8 npt(m) x 3/8 npt(m)

## Operating the Agitator

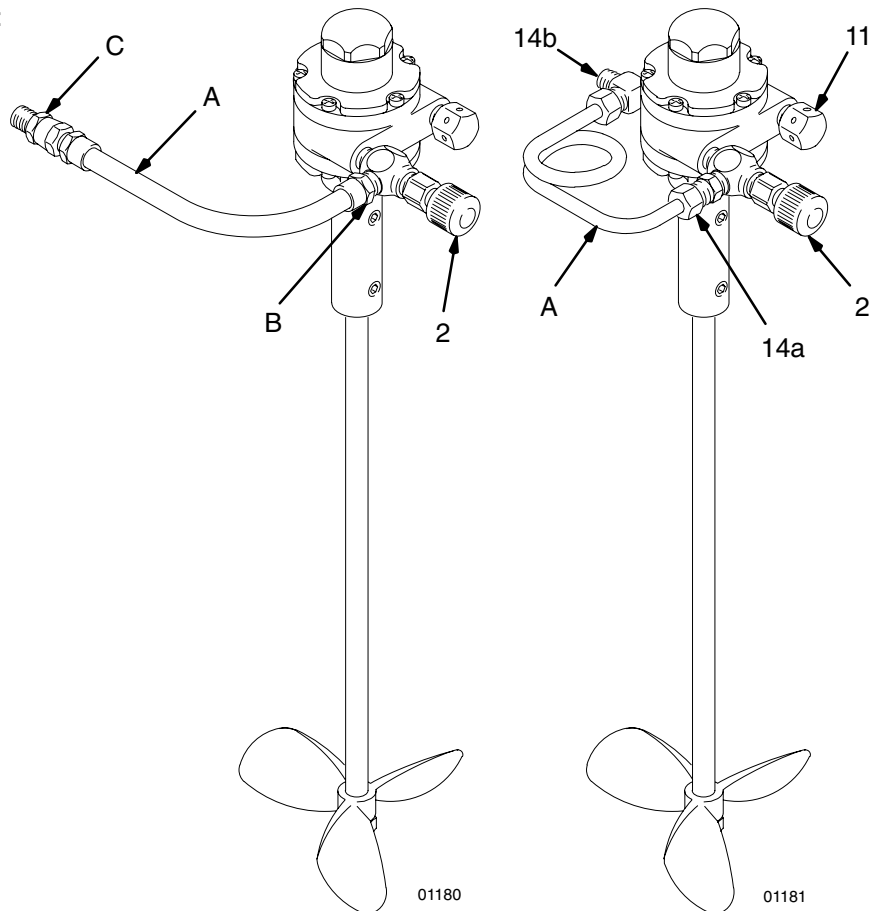
### **⚠ CAUTION**

Do not operate the agitator at a high speed for a long period of time. Excessive agitator speed can cause the paint to foam and increase the wear on the agitator parts.

Operate the agitator continuously while supplying paints or other fluids to the system. Use the needle valve (2) to regulate the agitator speed. Set the agitator speed to thoroughly mix the paint, using the lowest speed possible.

To stop the agitator, close the air valve in the air supply line if you have one, or close the needle valve (2).

Turn the agitator off before removing from pail.



### **KEY**

- A** Air line
- B** Air hose coupling
- C** Air hose swivel stud
- 2** Needle valve
- 11** Muffler
- 14a** Straight fitting
- 14b** Elbow fitting

**Fig. 2**

# Service

## Flushing the Air Motor

### WARNING



#### FIRE AND EXPLOSION HAZARD

Do not use kerosene or other flammable solvents to flush the air motor. Flushing with flammable solvents could cause fire or explosion and result in serious injury or property damage.

### WARNING



#### HAZARDOUS VAPORS

Hazardous fluids or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, swallowed, or inhaled. When flushing the air motor:

- Keep your face away from the exhaust port.
- Wear the appropriate protective clothing, gloves, eyewear and respirator.

If the motor is sluggish or inefficient, flush it with non-flammable solvent in a well ventilated area.

The recommended solvent for air motors and lubricated pumps is Gast® Flushing Solvent (Part No. AH255 or AH255A) or Inhibisol® Safety Solvent.

1. Disconnect the air line and muffler.
2. Add several teaspoons of solvent or spray the solvent directly into the motor.
3. Rotate the shaft by hand in both directions for a few minutes.
4. Reconnect the air line and slowly apply pressure until there is no trace of solvent in the exhaust air.
5. Re-lubricate the motor with a squirt of light-weight oil in the chamber.

## Servicing

- If the unit requires more than installation of a service kit, it is usually quickest and easiest to send the unit to the Graco distributor for repair or replacement.
- If the vanes need replacing or foreign material is present in the motor chamber, an experienced mechanic may remove the end plate opposite the drive shaft end. *Do not pry with a screwdriver.* It will dent the surface of the plate and body, causing leaks. Use a puller tool, which will remove the end plate while maintaining the position of the shaft.
- New vanes should have the edges with cut corners (or the notched edges, if the vanes are reversible) pointing toward the bottom of the vane slot.

## Lubricating the Air Motor

### CAUTION

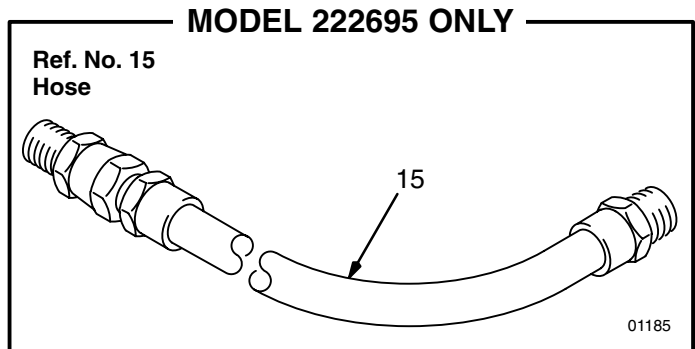
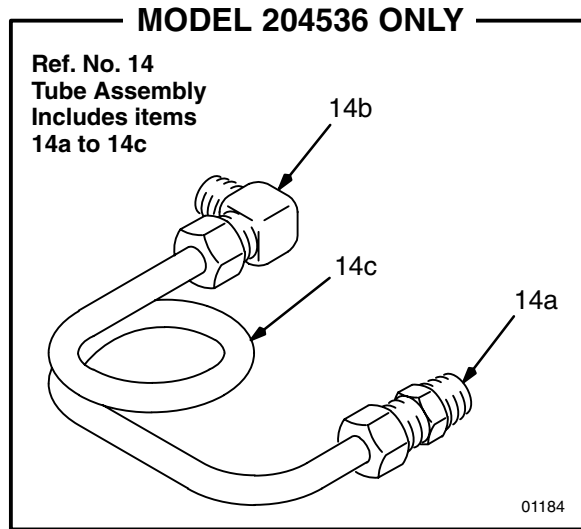
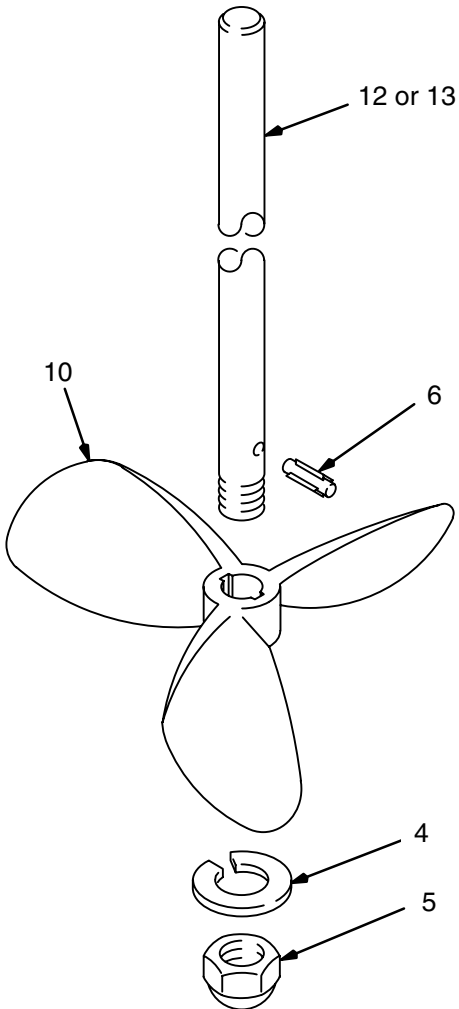
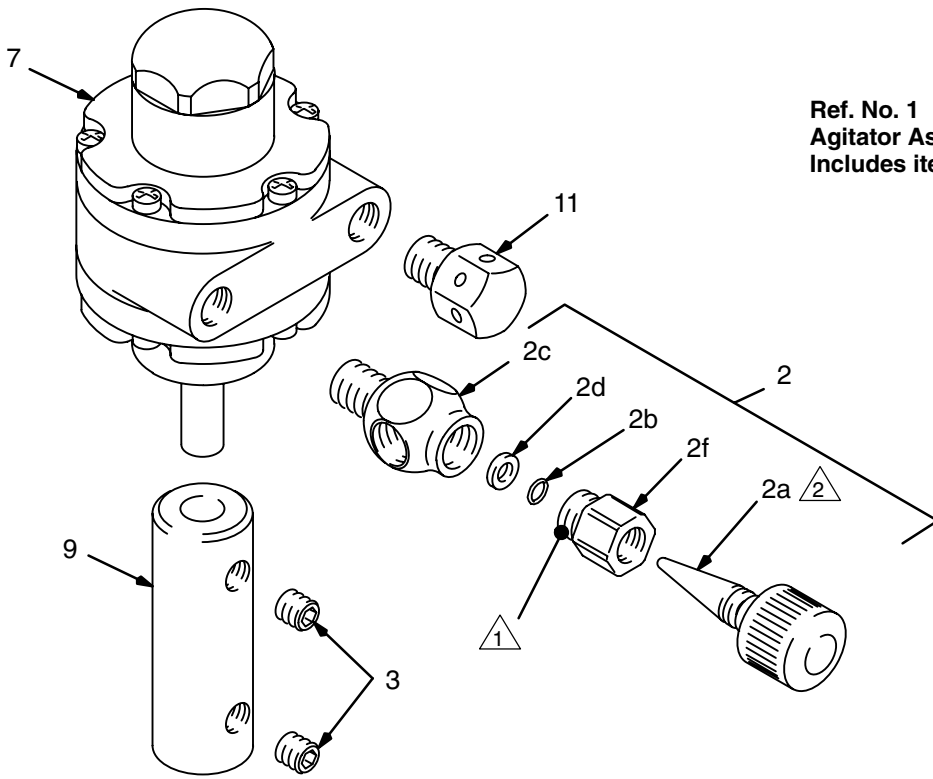
Not lubricating the air motor will cause air motor failure.



If an air line lubricator is not installed, the air motor must be manually lubricated every 8 hours. Lubricate the agitator air motor by placing 10–20 drops of SAE #10 light oil in the motor's air inlet. Run the agitator for about 30 seconds.



# Parts Drawing

**Ref. No. 1**  
**Agitator Assembly**  
 Includes items 2 to 12



-  Apply medium grade sealant to external threads.
-  Press fit.

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# Parts List

## Model 204536 Agitator Assembly

For 5-gallon pail; Includes items 1 and 14

## Model 222695 Agitator Assembly

For 5-gallon pail; Includes items 1 and 15

## Model 224572 Agitator

For 10-gallon pail; Includes items 2 to 11 and 13

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	224571	AGITATOR ASSEMBLY; Includes items 2 to 12	1	12	187265	SHAFT, agitator; SST; <i>Model 204536 and 222695 only</i>	1
2	205528	NEEDLE VALVE ASSEMBLY; Includes items 2a to 2f	1	13	187266	SHAFT, agitator; SST; <i>Model 224572 only</i>	1
2a†	166530	• NEEDLE, valve	1	14	224953	TUBE ASSEMBLY; <i>Model 204536 only;</i> Includes items 14a to 14c	1
2b✓	157628	• O-RING, nitrile rubber	1	14a	100112	• FITTING, male straight tube;1/4 in. tube x 1/8 npt	1
2c	164700	• BODY, valve	1	14b	100113	• FITTING, male elbow tube;1/4 in. tube x 1/8 npt	1
2d✓	166531	• WASHER, nylon	1	14c	161414	• TUBE	1
2e†	*	• KNOB, adjustment <i>* Cannot be ordered separately</i>	1	15	164724	HOSE; cpld 1/8 npt(m); swivel one end; 1/4 ID; 10 in. (254 mm) long; <i>Model 204536 only</i>	1
2f†	166532	• NUT, packing	1	16▲	290154	TAG, warning (not shown)	1
3	110272	SET SCREW, schd, cup pt; 1/420 x 1/4; SST	2				
4	103975	LOCKWASHER, spring; 3/8 in. SST	1				
5	110271	NUT, hex cap; 3/8–16 npt; SST	1				
6	111440	PIN; SST	1				
7	101687	AIR MOTOR	1				
8	101690	WRENCH, allen (not shown)	1				
9	187267	COUPLING, drive shaft; SST	1				
10	180733	BLADE, agitator; SST	1				
11	161415	MUFFLER, exhaust	1				

† Reference Numbers 2a, 2e, and 2f can be ordered together as Part No. 205587.

✓ Keep these spare parts on hand to reduce down time.

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

# Technical Data

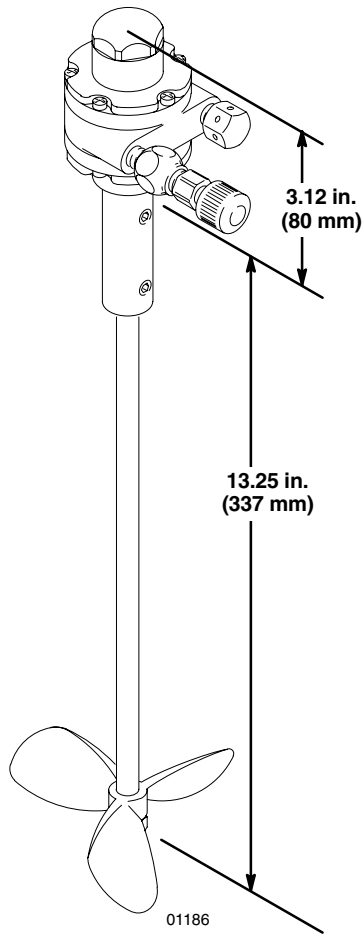
Maximum working pressure . . . . . 100 psi  
(0.7 MPa, 7 bar)  
Agitator motor . . . . . 1/4 HP (187 W)  
Air motor requirement . . . . . 2 cfm (0.06 m<sup>3</sup>/min.)  
Wetted parts . . . . . stainless steel  
Weight . . . . . 2.42 lb (1.1 kg)

- \* Noise level at 100 psi (0.7 MPa, 7 bar), at normal load,  
at 800 rpm: Sound pressure . . . . . 65.3 dB(A)  
Sound power . . . . . 78.6 dB(A)
- \* Noise level at 100 psi (0.7 MPa, 7 bar), at no load,  
at max rpm: Sound pressure . . . . . 87.3 dB(A)  
Sound power . . . . . 100.7 dB(A)

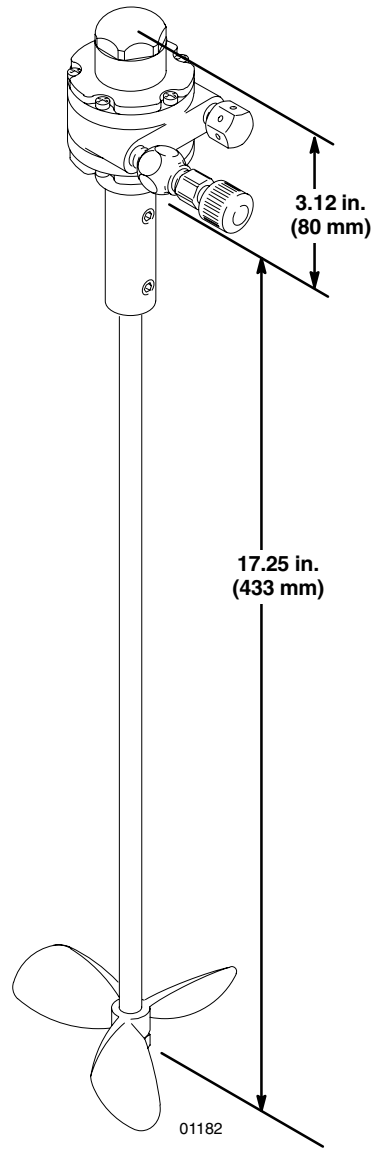
\* Tested to CAGI-PNEUROP-1969

*Gast® is a registered trademark of Gast Manufacturing.  
Inhibisol® is a registered trademark of Penetone Corp.*

# Dimensions



**MODELS 204536 & 222695**  
Agitators for 5-gallon pail



**MODEL 224572**  
Agitator for 10-gallon pail

# Graco Standard Warranty

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

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

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

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

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

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

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

## **FOR GRACO CANADA CUSTOMERS**

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

## Graco Information

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

**1-800-328-0211 Toll Free**

**612-623-6921**

**612-378-3505 Fax**

*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.*

MM 306565

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