

# Gun Flush Box Kit

310695 Rev.A

**Part No. 234588**

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

**For use with ProMix™ II system**



Read warnings and instructions.





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# Manual Conventions

**WARNING**




**WARNING:** a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Warnings in the instructions usually include a symbol indicating the hazard. Read the general **Warnings** section for additional safety information.





CAUTION
<p><b>CAUTION:</b> a potentially hazardous situation which, if not avoided, may result in property damage or destruction of equipment.</p>

**Note**




 Additional helpful information.

# Warnings

The following warnings include general safety information for this equipment. More specific warnings are included in the text where applicable.

 <b>WARNING</b>	
	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use and clean 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 lights on or off when flammable fumes are present.</li> <li>• Ground equipment, personnel, object being sprayed, and conductive objects in work area. See <b>Grounding</b> instructions.</li> <li>• Use only Graco grounded hoses.</li> <li>• Check gun resistance daily.*</li> <li>• If there is static sparking or you feel a shock, <b>stop operation immediately</b>. Do not use equipment until you identify and correct the problem.</li> <li>• Do not flush with gun electrostatics on. Do not turn on electrostatics until all solvent is removed from system.*</li> </ul>
	<p><b>PRESSURIZED EQUIPMENT HAZARD</b></p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.</li> </ul>
	<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 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 <b>Technical Data</b> in all equipment manuals. Read fluid and solvent manufacturer's warnings.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately.</li> <li>• Do not alter or modify equipment.</li> <li>• For professional use only.</li> <li>• Use equipment only for its intended purpose. Call your Graco distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not use hoses to pull equipment.</li> <li>• Comply with all applicable safety regulations.</li> </ul>

\* When using electrostatic gun.

 <b>WARNING</b>	
	<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 MSDS's 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>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Protective eyewear</li> <li>• Clothing and respirator as recommended by the fluid and solvent manufacturer</li> <li>• Gloves</li> <li>• Hearing protection</li> </ul>

# Installation

## WARNING



Do not bypass the gun flush box interlock sensors. they prevent the gun flush box from operating unless the gun is in position and the gun flush box door is locked.

## WARNING



### For Electrostatic Guns:

- Read warnings, page 3.
- Follow the warnings in your electrostatic gun manual.
- Always turn off electrostatics before placing the gun in the gun flush box.

## Intrinsically Safe Installation

Follow instructions in the ProMix™ II Operation manual.

## Ventilation

## WARNING



Read warnings, page 3-4.

Electrically interlock the gun flush box air supply (J) with ventilators, using a ventilation interlock valve (D), to prevent the box from operating when ventilating fans are not operating. See FIG. 6, page 8. Check and follow all applicable air exhaust velocity codes for your area and type of installation.

## Location

Locate the gun flush box in an area easily accessible to the operator, but far enough away from possible application over-spray.

## Mounting

The gun flush box (1) can be wall, stand, or drum mounted. See FIG. 1 for dimensions. Make sure the mounting surface will support the gun flush box, hoses, and stress of operation. Use the mounting holes as a template. Wall Mounting Kit 570133 is available.

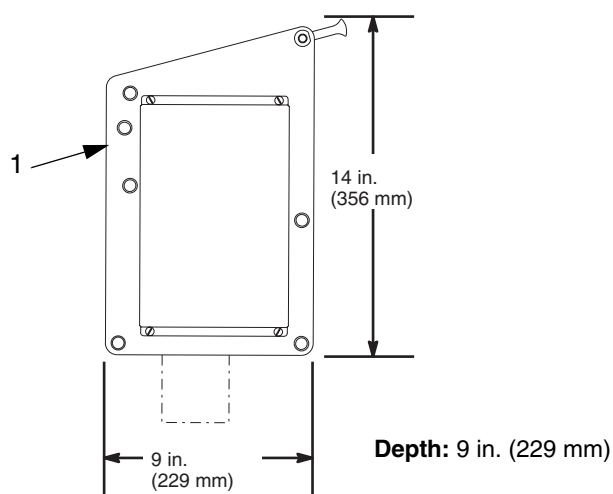


FIG. 1

## Enclosed Waste Container

To avoid splashing, connect a minimum of 2 ft. (0.6 m) of straight plastic or grounded metal pipe or tubing (T) between the gun flush box fluid outlet (S) and an enclosed solvent waste container (A). FIG. 2.

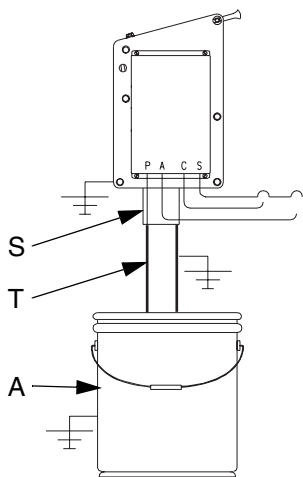


FIG. 2

## Grounding

### WARNING



Your system must be grounded. Read warnings on page 3 and in other system component manuals.

**Gun Flush Box:** Connect a ground wire to the grounding lug (A) on the box. Connect the ground clamp to a true earth ground. FIG. 3.

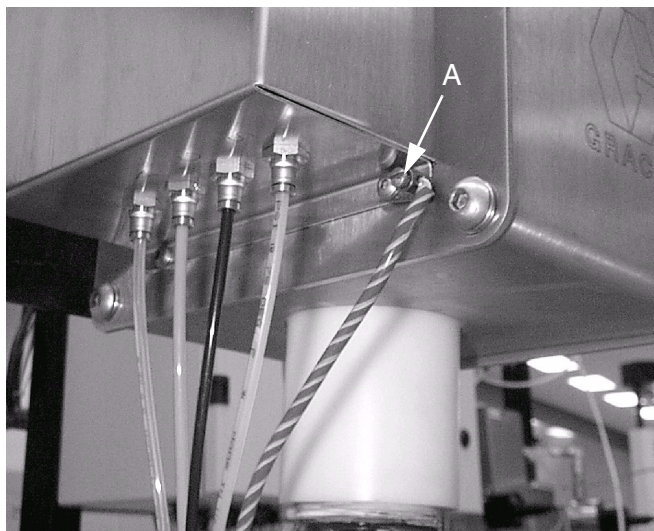


FIG. 3

**Waste Container:** Connect a ground wire and clamp between the waste container and a true earth ground. See FIG. 2.

**Spray Gun:** See your gun instruction manual.

**Flammable Liquids in the spray area:** Keep in approved, grounded containers. Do not store more than the quantity needed for one shift.

# Gun Flush Box Solenoid

1. Turn off EasyKey™ Display power, and shut off power at main circuit breaker.
2. Remove Smart Fluid Panel (G) cover.
3. Remove blank plate at gun flush box solenoid (4) location, and install the solenoid valve (4).
4. Connect solenoid wires to terminals as shown in FIG. 4.
5. Remove air manifold plug and install tube fitting connector (5). FIG. 5.

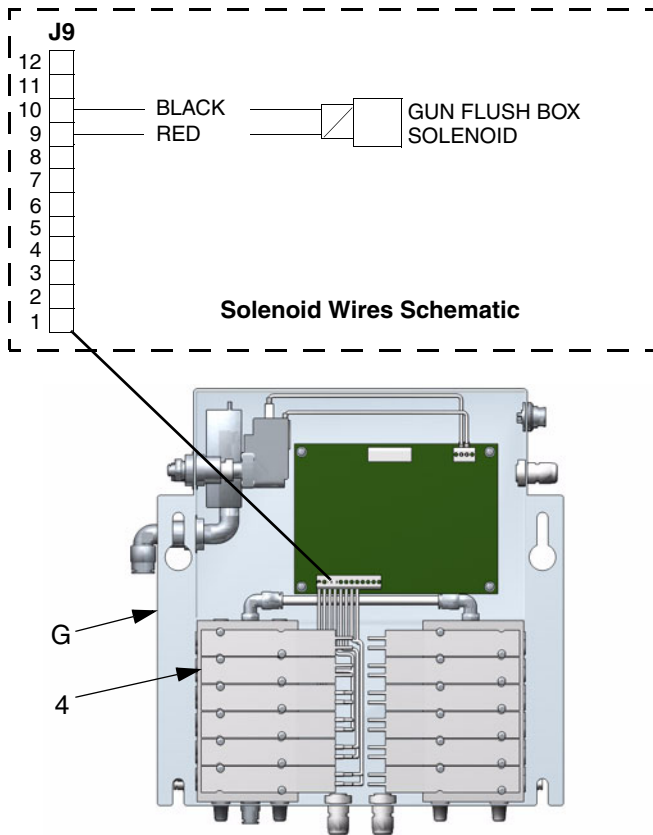


FIG. 4

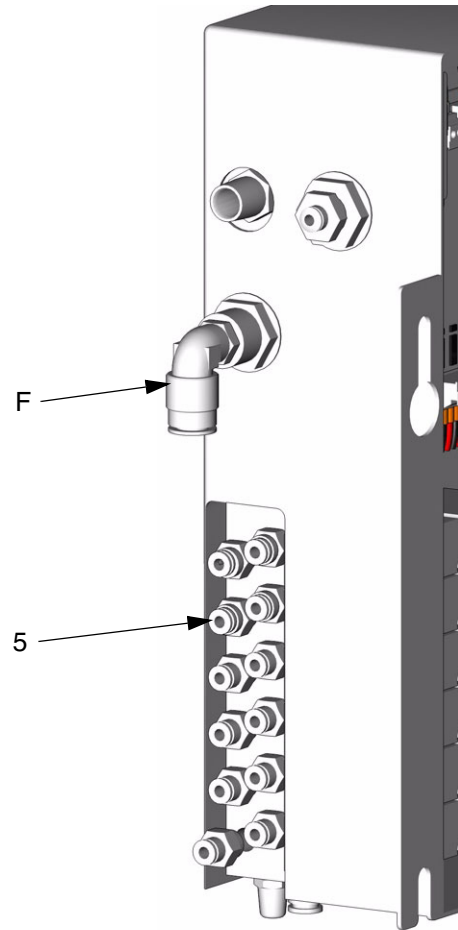
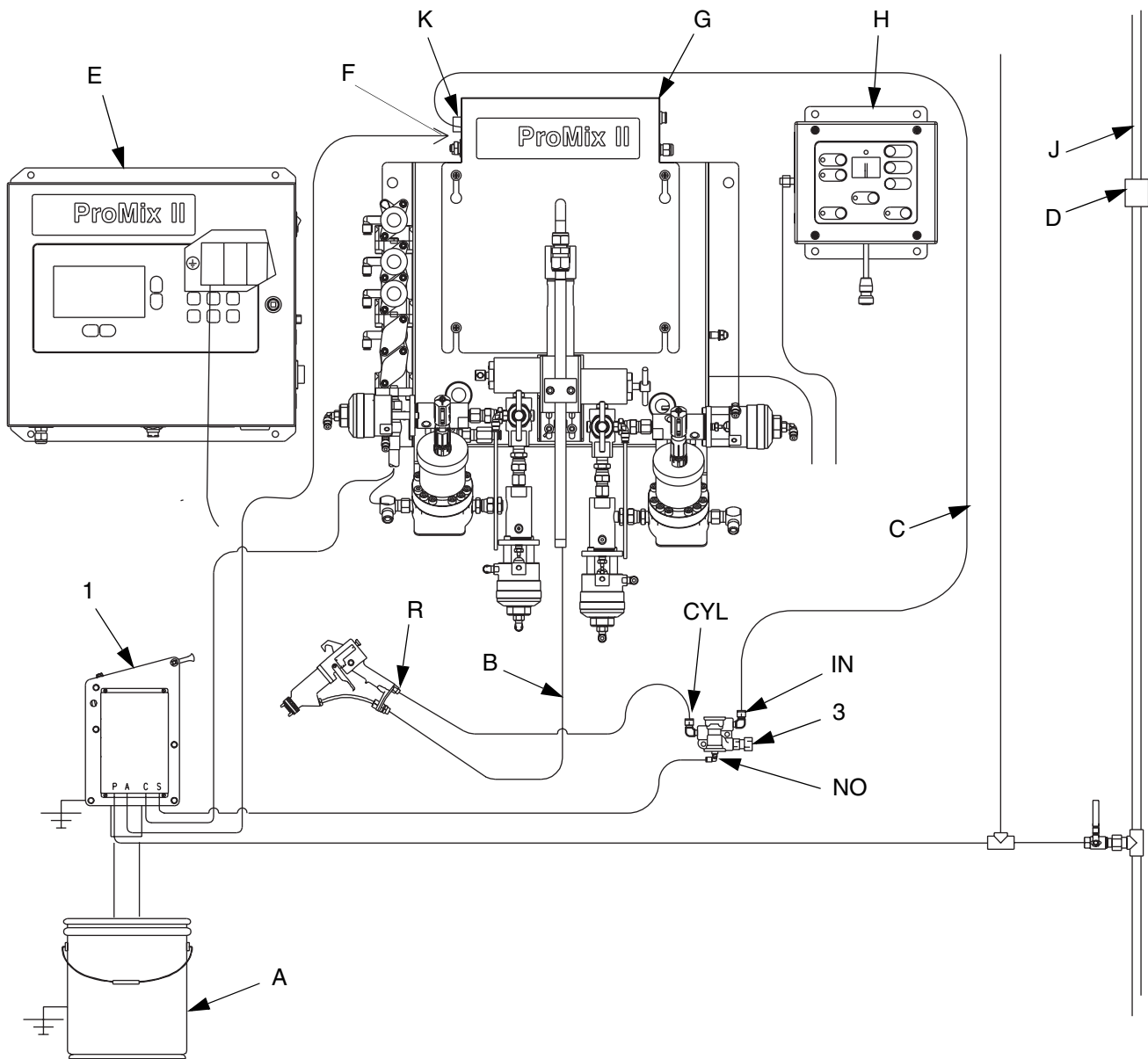


FIG. 5



**Key:**

- |   |                                      |     |  |
|---|--------------------------------------|-----|--|
| 1 | Gun Flush Box                        | G   | ProMix™ II Smart Fluid Panel                   |
| A | Waste Container                      | H   | ProMix™ II Operator Station                    |
| B | Fluid Supply to Gun                  | J   | Gun Flush Box Air Supply                       |
| 3 | Atomizing Air Safety Shutoff Valve   | K   | ProMix™ II Air Flow Switch                     |
| C | Atomizing Air Supply                 | IN  | Safety Shutoff Valve In Port                   |
| D | Ventilation Interlock Valve          | CYL | Safety Shutoff Valve Out Port to Gun           |
| E | EasyKey™ Display                     | NO  | Safety Shutoff Valve Out Port to Gun Flush Box |
| F | Fluid Panel Pressure Switch (FIG. 5) | R   | Gun Air Inlet                                  |

**FIG. 6: Typical Installation**



## Atomizing Air Safety Shutoff Valve

1. Mount the safety shutoff valve (3) securely. FIG. 7.
2. Connect the gun atomizing air from the ProMix™ II air flow switch (K) to the safety shutoff valve in (IN) port. FIG. 6.
3. Connect an air line from the safety shutoff valve out (CYL) port to the gun air inlet (R).

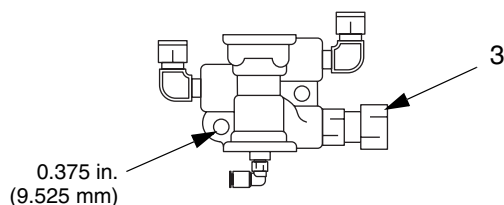


FIG. 7

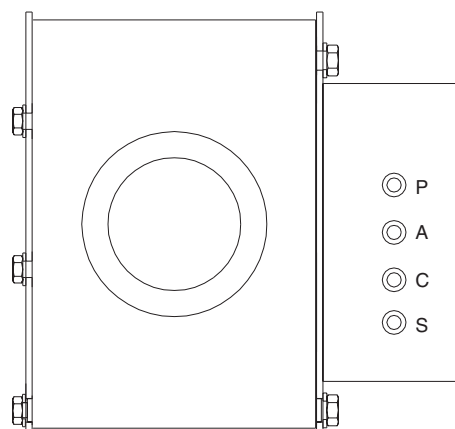
## Pneumatic Controls Tube Connection



You must connect safety interlock air to prevent atomizing air from turning on during flushing.

The 4 gun flush box air fittings are labeled as follows. See FIG. 8.

Label	Function
P	Supply air in
A	Return air/pressure switch signal
C	Gun trigger cylinders air (activates gun trigger)
S	Safety interlock (locks out atomizing air)



BOTTOM VIEW

FIG. 8



Use 5/32" (4 mm) OD tubing. Connect tubing as follows:

1. From the **P** fitting to the air supply (J - FIG. 6). Use a clean, dry air supply (filtered to 10 microns).
2. From the **A** fitting to the ProMix™ II pressure switch air input (K - FIG. 6).
3. From the **C** fitting to the ProMix™ II gun flush box solenoid (4 - FIG. 4) output.
4. From the **S** fitting to the atomizing air safety shutoff valve port (NO - FIG. 6).

# Trigger Height Adjustment

Adjust the trigger height to ensure the gun triggers during purging.

1. Insert the gun into the gun flush box.
2. Remove the four screws (M) holding the cover (N) to the gun flush box. FIG. 9.

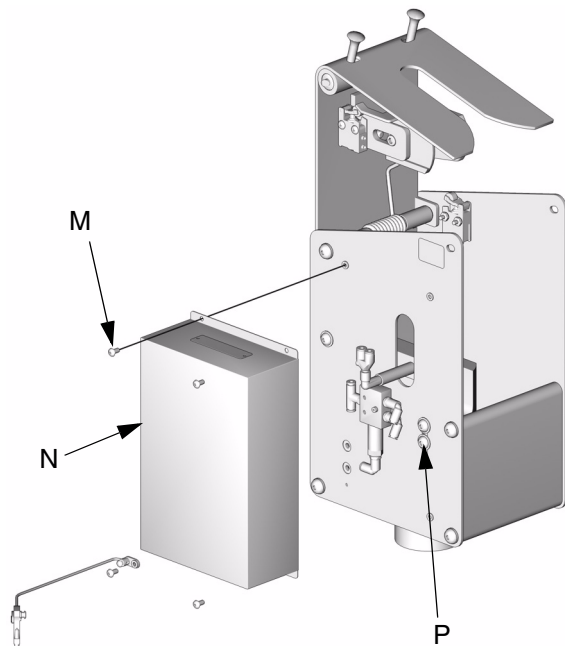


FIG. 9

3. Force the cylinder triggers on by connecting air to port C. FIG. 8, page 9. Turn on the air to extend both cylinders.
4. Loosen both screws (P) holding the cylinder block (Q). FIG. 9 and FIG. 10.
5. Position the cylinder block (Q) as needed to trigger the gun, then tighten the screws (P).

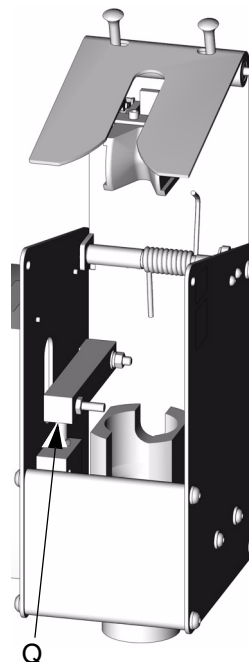


FIG. 10

## Operation

Follow the operating instructions in the ProMix™ II Operation manual.

# Maintenance

	Daily	Weekly	Every 2 weeks, minimum
<b>Gun Flush Box Enclosure</b>	Clean the inside with a compatible solvent.	Clean the inside and outside with a compatible solvent.	
<b>Door</b>	Clean hinge holes.		Grease hinges.
<b>Cylinders</b>			Pull the cylinder rod forward and coat with grease or petroleum jelly.
<b>Switches</b>			Clean and lubricate.
<b>Fluid Outlet tube</b>		Check for buildup of mix material and replace if restricted.	

## Troubleshooting

Problem	Cause	Solution
Gun is in gun flush box, but system will not purge or mix.	Air is shut off.	Turn on system air.
	Gun switch is not activating.	Test switch. Replace if damaged.
	Pressure switch is not working properly.	Check that correct ProMix™ II fluid panel circuit board input is activating (LED should be lit).
	Tubing is not installed correctly.	Check tubing connections, page 9.
Gun flush box fails to purge after pot life time ends.	Gun is not in gun flush box.	Place gun in gun flush box when it is not in use.
	Gun switch is not activating.	Test switch. Replace if damaged.
Gun trigger is not open when gun flush box controller activates it.	Tubing is not installed correctly.	Check tubing connections, page 9.
	Cylinder is dirty or damaged.	Clean cylinder rod or replace.
	Gun is not properly set in gun holder.	Check to make sure gun holder is not obstructed by buildup.
	Lower cylinder is out of adjustment.	Adjust cylinder block. See <b>Trigger Height Adjustment</b> , page 10.
Gun is out of gun flush box with door closed but atomizing air is off.	Lid switch or gun switch failure.	Check switches and replace if necessary.
	No air flow to gun flush box.	Check air supply and tubing.

# Accessories

## Gun Holder

Part No.	For Gun
198405	Graco PRO™ Xs3, PRO™ Xs4
198787	Graco PRO™ Xs2
196768	Graco PRO™ 3500, 3500hc, 4500
196769	Graco Delta Spray™ Gun
196770	Graco Alpha Gun
196771	Graco Alpha Plus, Alpha Plus with RAC Tip
196767	Devilbiss JGA/MSA*

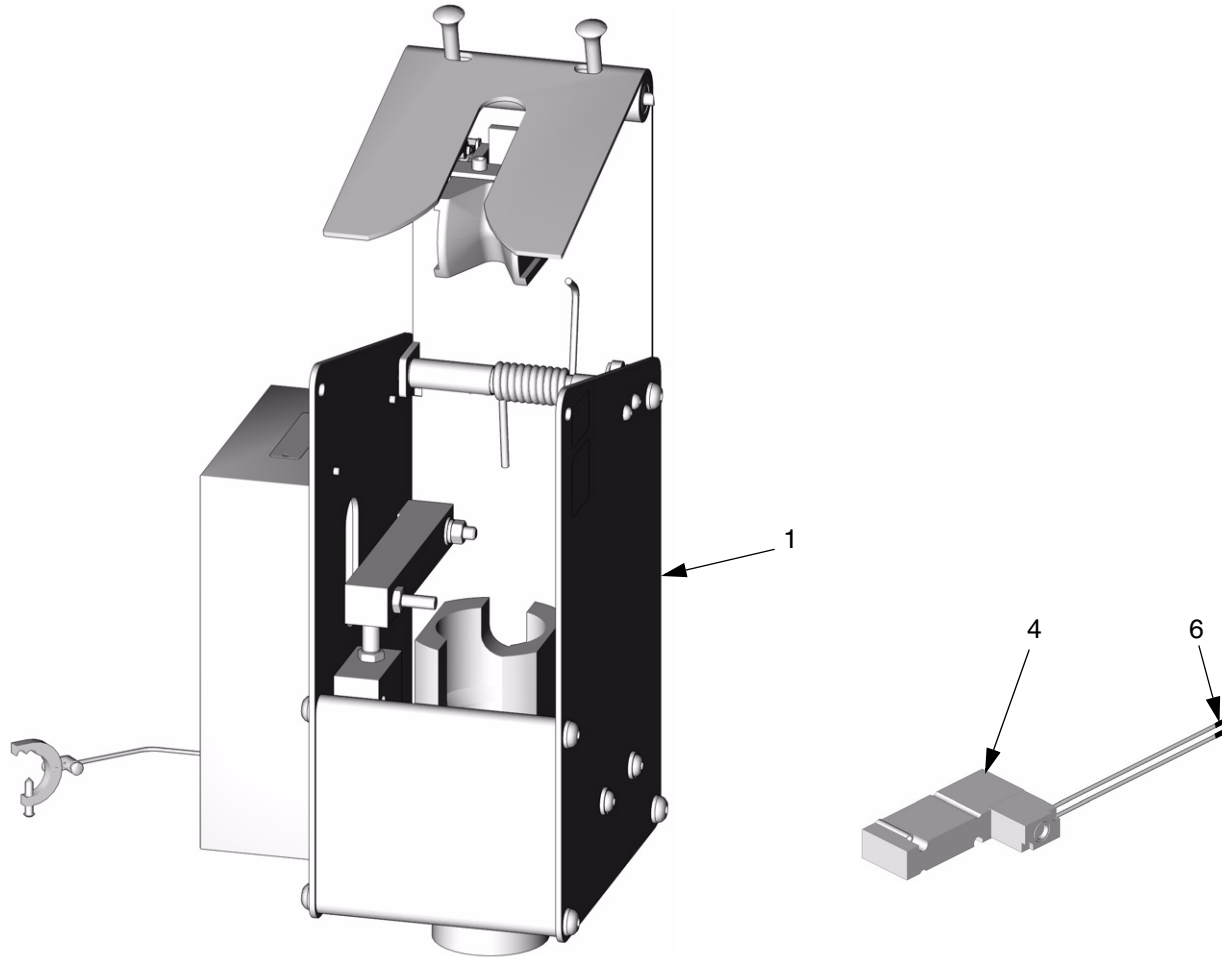
\* Brand names or marks are used for identification purposes and are trademarks of their respective owners.

## 570123 Wall Mount Kit

For mounting the gun flush box to the spray booth wall.

# Parts

## Part No. 234588

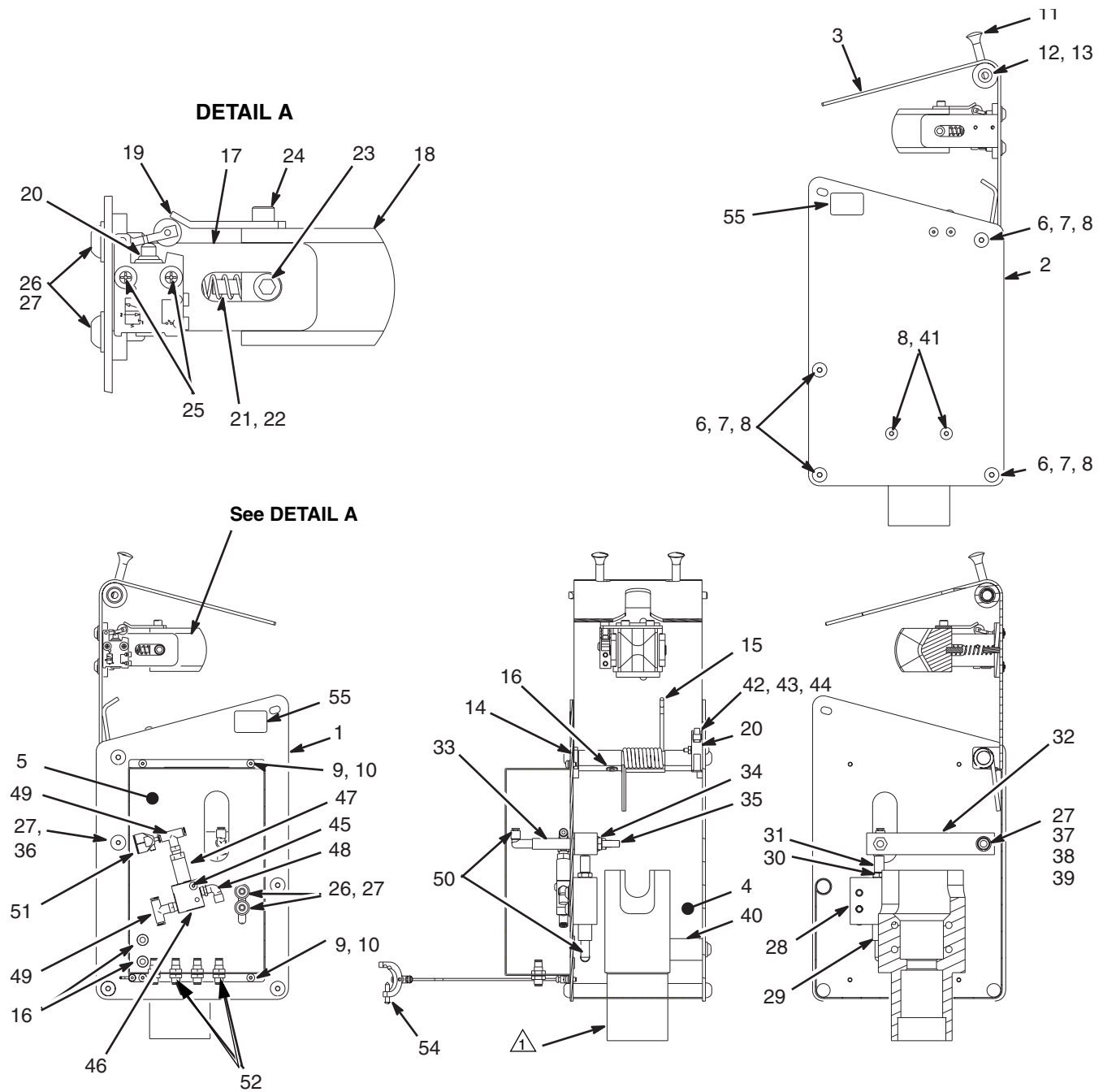


## Part No. 234588

Ref. No.	Part No.	Description	Qty.
1	244105	Gun Flush Box, see page 14	1
2	598095	Tube, nylon, 5/32 in. OD, 200 ft. (60.96 m) long (not shown)	*
3	570132	Safety Shutoff Valve (page 9)	1
4	117356	Solenoid Valve, 12 VDC, IS	1
5	114263	Fitting, 1/8 npt x 5/32 tube (page 7)	1
6	112512	Wire Ferrule	2

\* Order length needed.

Part No. 244105



⚠ Optional gun holder shown; not included with assembly. **Selection of correct gun holder required for proper operation.**

🔧 Grease all cylinders and sensors with grease.

**Part No. 244105**

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	196709	PANEL, cabinet, left	1	32	196708	ARM, lever	1
2	196710	PANEL, cabinet, right	1	33	551793	CYLINDER, air, 0.438 dia.	1
3	196711	COVER, cabinet	1	34	551890	NUT, jam, hex, 3/8-24	1
4	196712	WRAPPER, cabinet	1	35	626523	BUTTON, cylinder	1
5	626489	COVER, cylinder	1	36	551786	SCREW, cap, 5/16 x 2	1
6	626488	ROD, connecting	4	37	107542	WASHER, lock, split, no. 8	1
7	551789	SCREW, cap, 3/8 x 1	8	38	108946	NUT, hex, 5/16-18	1
8	103975	WASHER, lock, 3/8	10	39	626517	AXLE, support	1
9	551787	SCREW, cap, 10-32 x 0.38"	4	40	196766	BRACKET, mounting	1
10	551788	WASHER, lock, split, #10	4	41	116194	SCREW, cap, button hd, 3/8-16 x 2.5"	2
11	626495	KNOB, latch	2	42	116195	SCREW, cap, button hd, 8-32 x 1"	2
12	626496	PIN, latch	2	43	157021	WASHER, lock, internal tooth, no. 8	2
13	116174	SPRING, compression, 3.5"	1	44	102931	NUT, machine, hex, 8-32	2
14	551891	WASHER, 21/32 ID x 7/8 OD	2	45	C19964	SCREW, cap, 6-32 x 1"	1
15	196844	SPRING, torsion	1	46	502473	VALVE, air, 4-way, spring return	1
16	551849	GROMMET, 5/16 ID x 1/2 OD	3	47	501014	ACTUATOR, air, 1/8 npt(f)	1
17	196703	SUPPORT, yoke, upper	1	48	598140	ELBOW, 5/32 tube 1-1/8 npt(m)	3
18	196700	YOKE, gun, upper	1	49	598141	TEE, 5/32 tube x 1/8 npt	1
19	196704	SWITCH, flag	1	50	514581	CONNECTOR, 5/32" tube x 10-32	2
20	116172	SWITCH, limit, pneumatic	2	51	514896	TEE, 3-way, 5/32 OD (m x f)	1
21	116173	SPRING, compression, 2.25"	1	52	113284	FITTING, bulkhead, M10 x 1 x 5/32" tube	4
22	116193	PIN, dowel	2	53	551731	TUBE, 5/32 OD, polyethylene, white	*
23	108751	SCREW, cap, socket hd, 5/16 x 0.625"	2	54	222011	CLAMP, grounding	1
24	C19800	SCREW, cap, socket hd, 1/4-20 x 0.5"	2	55	180233	LABEL, warning, pinch point	2
25	112598	SCREW, machine, truss hd, 8-32 x 0.75"	2	57	C78216	CLAMP, Ty-Rap	1
26	112944	SCREW, cap, button hd, 5/16 x 0.75"	4	58	103473	STRAP, tie; wire	1
27	104034	WASHER, plain, 5/16	6				
28	626502	SUPPORT, cover	1				
29	551794	CYLINDER, air, 0.568 dia.	1				
30	551795	NUT, hex head, 7/16-20	1				
31	626504	BUTTON, cylinder	1				

\*Order length needed.

## Technical Data

Maximum Air Inlet Pressure . . . . .	100 psi (0.7 MPa, 7 bar)
Weight . . . . .	22 lbs. (9.6 kg)
Height . . . . .	14 in. (356 mm)
With door open . . . . .	21 in. (533 mm)
Width . . . . .	7 in. (178 mm)
Length . . . . .	11 in. (279 mm)
Outlet . . . . .	2 in. npt(f)
Wetted Parts . . . . .	Stainless steel, nylon, ultra high molecular weight polyeth- ylene

# 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.

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**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

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**Sales Offices:** Minneapolis

**International Offices:** Belgium, Korea, Hong Kong, Japan

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

[www.graco.com](http://www.graco.com)

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