

# 43PA Airless Gun

MODEL: 6370-0001-1

## DESCRIPTION

The Binks Model 43PA is a plural component (spray and/or pour) dispensing device designed specifically for an automatic manipulator.

The 43PA, a companion of the widely used 43P (hand version), uses the opposed internal orifices principle with no moving parts.

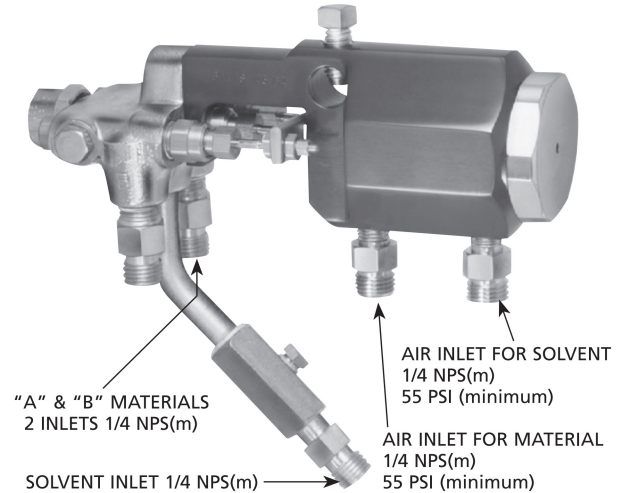
Spray patterns are by nozzle selection.

Gun output is dependent upon nozzle and impingement orifices in conjunction with applied fluid pressures. Impingement orifices usually are matched but may be dissimilar to “balance” divergent viscosities and/or ratios.

The integral air piston has a pneumatic-mechanical interlock to insure the resin valves are closed if the built-in solvent purge is energized. The interlock is biased in favor of the purge. Thus if the gun receives two simultaneous air signals, only the purge will energize. If a purge signal is received when dispense is in progress, the resin valves will close and the purge will energize.

The 18-8 stainless steel head is designed with cross-drilled ports for ease of maintenance. The ports allow access to remove impacted cured resins. Immersion in solvent will not affect the PTFE seals.

Both resin (1/4 NPS) ports have check valves. The needle valves share common parts (springs, housing, take-up nuts, packings and followers) for simplicity. The resin and purge needles are ball type.



The anodized aluminum gun cylinder has u-cup piston seals and o-ring rod seals. The 1/2" diameter mounting hole has a set screw for locking. The 1/8 NPT cylinder ports are fitted with DM nipples (1/4 NPS).

## OPERATING INSTRUCTIONS

### READ AND UNDERSTAND ALL WARNINGS ON PAGE 2 BEFORE USING THIS EQUIPMENT.

Your Binks 43PA Automatic Airless Spray Gun has been thoroughly tested before leaving the factory. No adjustment is required prior to its operation other than installing the nozzle tip.

### 1. GUN MOUNTING

A screw (8) is provided to secure the gun to the gun mounting rod. After material calibrations are made, position gun so that it is at correct distance from the work piece and that spray pattern is correctly aimed.

Connect air lines to piston fittings, 1/4 NPS(m), on gun body as shown. Make sure air piston(s) are operating correctly by actuating fluid needles and solvent needle.

### 2. SOLVENT HOOK-UP

Hook up the solvent line and check to insure proper purging/flushing. Open 3-way valve and allow air to enter the rear (solvent) cylinder port. Activate valve on-off and observe needle movement and solvent spray emitting from front of gun. (A mechanical inter-lock prevents opening of “A” and “B” needle valves and solvent needle at the same time. Opening the solvent needle valve automatically closes the materials “A” and “B” needle valves.) It is important that solvent purge be available in case of incorrect resin-hardener hook-up, reacting fluids, or mixed resins remaining in gun mix chamber.

### 3. GUN HOOK-UP

Remove nut (1), nozzle (2), plug (4), and orifice (5). Connect material lines to gun. Run system to insure material flows through gun. Shut gun off and allow system to run to stall. Check for leaks at all connections.

### 4. MATERIAL FLOW CHECK

*Aim gun into a suitable waste container* or place waste container under front of gun head. Operate formulator and open gun needles until both fluids flow freely from front of gun head. 1:1 systems should appear equal in volume. (Off-ratio systems will visibly be unequal.)

## NOTE

Purge/flush gun with solvent at end of material flow check.

### 5. CALIBRATION

To check for correct proportioning of two fluids, the simplest method is to take two containers of equal capacity (approximately 4 ounces) and fill them simultaneously.

## NOTE

When a heated system is used be sure materials are pre-heated approximately 1 hour prior to calibrating.

Deviation from volumetric ratio of 1:1 can be attributed to a malfunctioning pump or to excessive high changes in viscosity of either one or both components. The ratio check must be made at the output rate (pounds/minute) intended for spraying. Taking ratios at other output rates can throw the spraying ratio off.

### 6. SHUT-DOWN

When spraying is discontinued for extended periods of time (lunch, overnight, weekends) the following procedure is recommended.

- Remove spray gun nozzle assembly—nut (1), nozzle (2), insert (19) and gasket (20)—and place them in clean solvent. Pack mixing chamber with petroleum jelly.
- Leave gun connected to the hoses and formulator under pressure.

## NOTE

If you wish to disconnect fluid hoses, you must first shut off main air supply to formulator and to gun and you must bleed off all fluid material pressure BEFORE removing any hoses.

- For long shut-down periods, it is necessary to flush system completely (use solvent recommended by the material supplier) and to replace materials with solvent. Pump solvent through system until all traces of material are removed. Pack gun mixing chamber with petroleum jelly.

In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

**⚠ WARNING**  
 Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

**⚠ CAUTION**  
 Hazards or unsafe practices which could result in minor personal injury, product or property damage.

**NOTE**  
 Important installation, operation or maintenance information.

**⚠ WARNING**

Read the following warnings before using this equipment.



**READ THE MANUAL**

Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



**WEAR SAFETY GLASSES**

Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



**DE-ENERGIZE, DEPRESSURIZE, DISCONNECT AND LOCK OUT ALL POWER SOURCES DURING MAINTENANCE**

Failure to De-energize, disconnect and lock out all power supplies before performing equipment maintenance could cause serious injury or death.



**OPERATOR TRAINING**

All personnel must be trained before operating finishing equipment.



**EQUIPMENT MISUSE HAZARD**

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



**KEEP EQUIPMENT GUARDS IN PLACE**

Do not operate the equipment if the safety devices have been removed.



**HIGH PRESSURE CONSIDERATION**

High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the spray gun, hose leaks, or ruptured components can inject fluid into your body and cause extremely serious injury.



**GET IMMEDIATE MEDICAL ATTENTION**

To prevent contact with the fluid, please note the following:

- Never point the gun/valve at anyone or any part of the body.
- Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- Always have the tip guard on the spray gun before spraying.
- Always ensure that the gun trigger safety operates before spraying.
- Always lock the gun trigger safety when you stop spraying.



**PRESSURE RELIEF PROCEDURE**

Always follow the pressure relief procedure in the equipment instruction manual.



**MEDICAL ALERT**

Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Show the doctor this medical information or the medical alert card provided with your airless spray equipment.
- Tell the doctor what kind of fluid you were spraying or dispensing.
- Refer to the Material Safety Data Sheet for specific information.



**TOXIC FLUID & FUMES**

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids you are using.



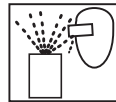
**WEAR RESPIRATOR**

Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Material Safety Data Sheet.



**ELECTRIC SHOCK / GROUNDING**

Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



**PROJECTILE HAZARD**

You may be injured by venting liquids or gases that are released under pressure, or flying debris.



**FIRE AND EXPLOSION HAZARD**

Improper equipment grounding, poor ventilation, open flame or sparks can cause hazardous conditions and result in fire or explosion and serious injury.



**STATIC CHARGE**

Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



**PROP 65 WARNING**

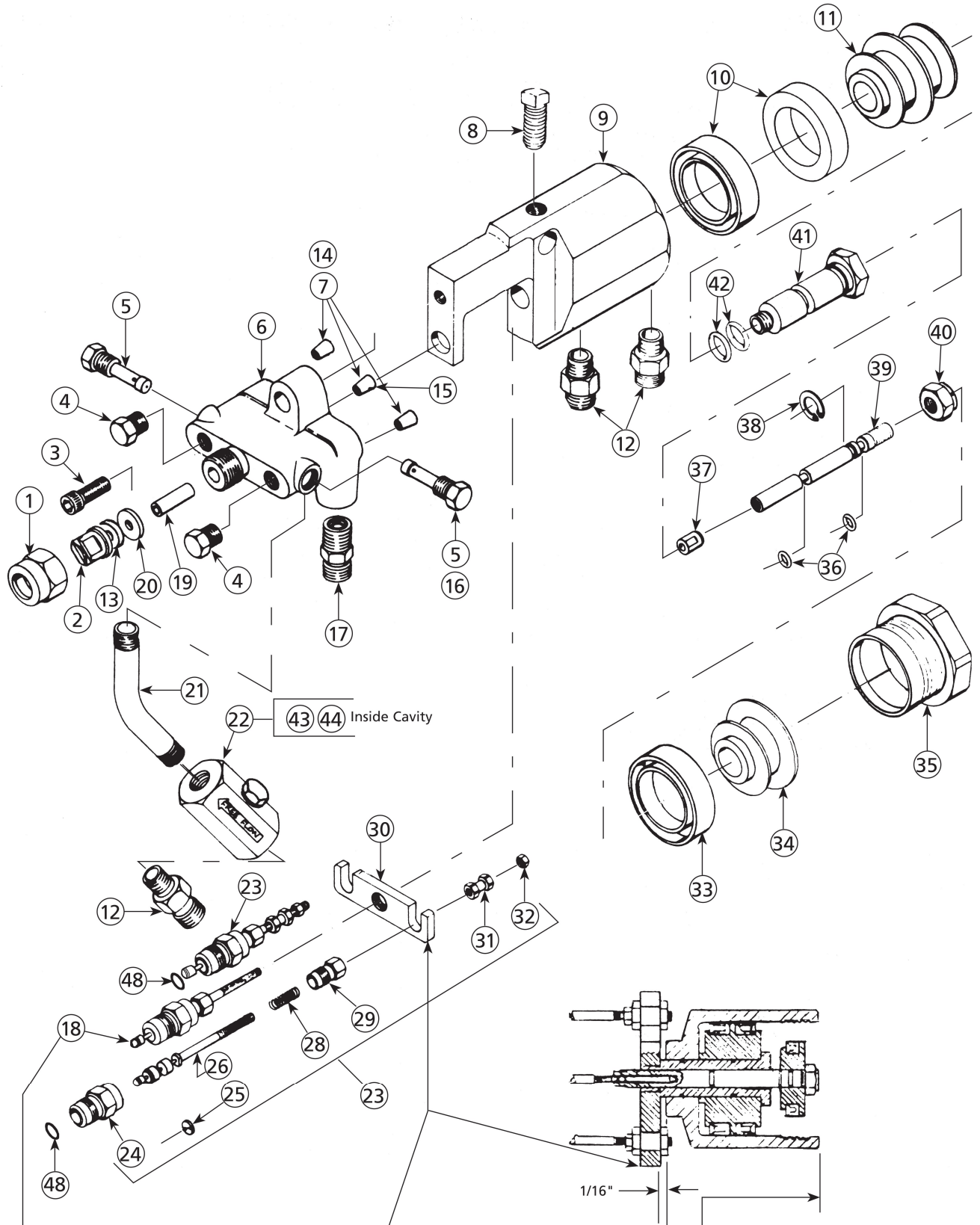
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT.

FOR FURTHER SAFETY INFORMATION REGARDING BINKS AND DEVILBISS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).

## Binks MODEL 43PA AIRLESS GUN

READ AND UNDERSTAND ALL WARNINGS ON PAGE 2 BEFORE USING THIS EQUIPMENT.



**Special Option:**  
Tapered tip purge needle available. With needle (18), order Items 15, 24, 28 & 29.

When gun cylinder is not energized the yoke (30) must be loose ("rock" freely) within groove in spool nuts (31).

Surfaces (end of rod, end of stop nut, end of body) must be flush when cap (35) is removed.

## Binks MODEL 43PA AIRLESS GUN PARTS LIST

When ordering, please specify Part No.

ITEM NO.	PART NO.	DESCRIPTION	QTY.	ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	102-3327	NUT.....	1	25	102-1756	PACKING.....	3
2	■	NOZZLE.....	1	26	102-1757•	NEEDLE ASSEMBLY.....	3
3	20-2195-1	SCREW 1/4-20.....	1	28	102-1891•	SPRING.....	3
4	102-1716	PLUG.....	2	29	102-1726	GLAND.....	3
5	102-1720•	ORIFICE .035".....	2	30	102-1802	YOKE.....	1
6	102-1808	HEAD.....	1	31	54-1663	NUT.....	2
7	102-1765•	SEAT.....	3	32	52-487	NUT.....	2
8	54-335	SCREW 3/8-16.....	1	33	20-3931•	U-RING.....	1
9	102-2202	BODY.....	1	34	102-1804	PISTON.....	1
10	20-3723•	U-RING.....	2	35	102-1803	CAP.....	1
11	102-1806	PISTON.....	1	36	20-2227•	O-RING.....	2
12	72-792	NIPPLE 1/8 NPT x 1/4 NPS.....	3	37	102-1805	NUT.....	1
13	■	PRE-ORIFICE (Optional).....	-	38	20-3513-1	RING Retainer.....	1
14	109-74	SEAT T/C (Optional).....	-	39	102-1809	ROD.....	1
15	102-1708	SEAT (Optional).....	-	40	20-3141	STOPNUT 1/4-20.....	1
16	102-1721	ORIFICE .013" (Optional).....	-	41	102-1807	ROD.....	1
17	102-1780•	CHECK VALVE.....	2	42	20-2369•	O-RING.....	2
18	102-1796	NEEDLE Purge Tapered Tip (Optional)...	-	43	20-2183	BALL Stainless Steel, 3/16 (Ref. only)....	1
19	102-1738•	INSERT (1 loose in envelope).....	2	44	102-2012	SPRING (Ref. only).....	1
20	54-1439•	GASKET.....	1	45	20-1576	ALLEN WRENCH (Not Shown).....	1
21	102-1766	NIPPLE.....	1	47	OMX-88	BRUSH (Not Shown).....	1
22	107-1181	CHECK VALVE.....	1	48	102-3335	GASKET.....	3
23	102-1759	NEEDLE ASSEMBLY.....	3				
24	102-1725	RETAINER.....	3				

•106-1118 Spare Parts Kit Includes:

ITEM	5	7	10	17	19	20	26	28	33	36	42	48
QTY.	2	3	2	2	2	2	2	3	1	2	2	3

■ Specify No. stamped or size desired. (Not part of gun, order separately.)

### ACCESSORIES

#### Static Mixers

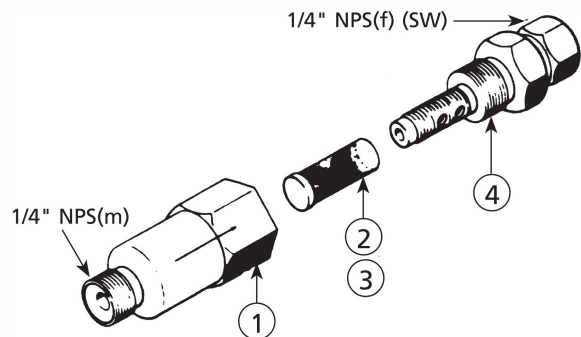
(1/4 disposable)      101-319 (for pour)  
(1/4 disposable)      101-419 (for spray)

**MODEL 102-2160 FILTER  
(100 mesh, in-line)  
MODEL 102-2176 FILTER (200 mesh)**

### PARTS LIST

(When ordering, please specify Part No.)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	102-2159	SUMP.....	1
2	102-2161	ELEMENT (100 mesh).....	1
3	102-2177	ELEMENT (200 mesh).....	1
4	102-2158	STEM ASSEMBLY.....	1



#### WARRANTY

This product is covered by Binks' 1 Year Limited Warranty.



**Binks Sales and Service: [www.binks.com](http://www.binks.com)**

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77-2065R-8 Revisions: (P1) PTFE reference update;  
(P4) Updated contact information.