

EZ~Spray[®] Jr.

Equipment Manual & Usage Guide



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EZ~Spray Jr. Gun Parts List



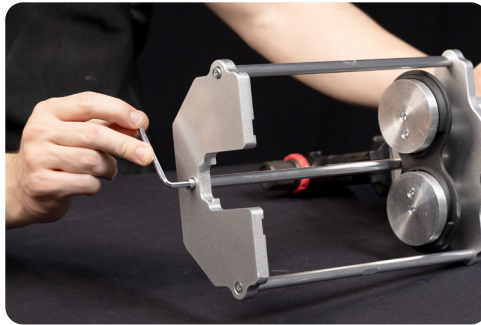
EZ~Spray Jr. Gun Main Body x1
Machine Screws x3
Small Allen Wrench x1
Large Allen Wrench x1
Air Pressure gauge x1
Airline Assembly x1
Support Strap x1
Support Rod x3
Face Plate x1
Stabilizer Handle x1

Tools not included:
Adjustable Wrench

Assembling the EZ~Spray Jr. Gun



1. Screw the three support rods to the main body of the EZ~Spray Jr. Gun.



2. Attach the front plate, smooth side facing out, with the three screws provided into the support rods. Small allen wrench provided.



3. Screw the stabilizer handle to the right or left side of the front plate using the holes provided.



4. Using the larger allen wrench, remove the stop screw on the handle's left side.



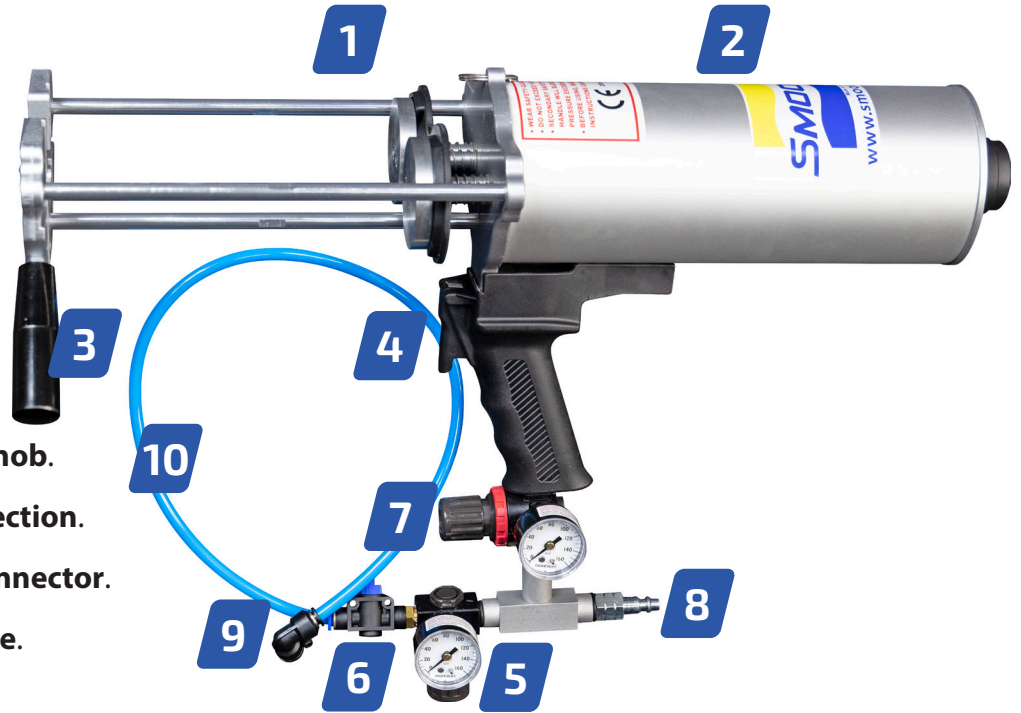
5. Remove the air pressure gauge from its box and screw it into the now available hole on the handle. Use an adjustable wrench (not provided) to ensure a tight seal.



6. Screw the airline assembly into the port on the bottom of the main body. The airline fitting should be facing the rear of the gun. The EZ~Spray Jr. Gun is now fully assembled.

Getting To Know The EZ~Spray Jr. Gun

1. Dual Cartridge Plunger.
2. Plunger Air Cylinder.
3. Stabilizer Handle.
4. Trigger.
5. Air Pressure Regulator.
6. Air Volume Control Lever.
7. Plunger Pressure Control Knob.
8. Compressor Air Hose Connection.
9. Spray Nozzle Air Supply Connector.
10. Spray Nozzle Air Supply Line.



Equipment Overview - What You Need

Before You Begin... Plan Ahead!

Have Necessary Materials On Hand Before You Start - Includes spray rubber, plastic and/or foam, adequate air supply, static mixing tubes, brushes, disposable cleaning rags, acetone (for cleaning) and 3" scraper.

Store Spray Materials At Room Temperature 72 °F / 23 °C. Work Area Should Be Above 65 °F / 18 °C.

Air Compressor:

- **Minimum Compressor Rating:** 5 CFM at 90 PSI
- **At least 5 Peak HP**
- **Operating Pressure:**
Min: 90 PSI, Max: 120 PSI

Important: Dry air is required to minimize the possibility of moisture contamination of sprayable urethanes. A compressor dryer is recommended.



Safety First!

- **Work Space Should Be Well Ventilated.**
- **Personal Protective Equipment** - Anyone in spray area must wear safety equipment, including gloves, eye wear and a NIOSH approved respirator.
- **No Smoking** - Do not smoke in the work area or in the presence of flammable solvents (such as acetone).



Loading EZ~Spray Material Cartridges



1. Place material cartridge on a level surface and remove black retaining ring.



2. Remove the manifold plug using pliers.



3. Place static mixing tube over the open manifold. Turn black retaining ring clockwise and firmly hand tighten.



4. Fit cartridge into gun with mixer nozzle facing upright. Facing sideways or down will cause material to run into mixer and cause possible curing before spraying is started.



5. Attach air supply connector to the spray nozzle at the end of the static mixing tube.

Removal & Disposal Of Empty Cartridge



1. **Once a material cartridge has been fully dispensed**, it can be removed from the EZ~Spray Jr. Gun and discarded. Disconnect the Spray Nozzle Air Supply Connector from the static mixing tube by positioning your forefinger and middle finger under the ring that locks the connector to the spray nozzle. Pull back the ring until it is flush with the Air Supply Connector. This will unlock the connector from the spray nozzle. **Without releasing the ring**, pull the Air Supply Connector up and away from the spray nozzle.



2. To remove the cartridge from the gun, the dual cartridge plunger must first be fully retracted. Press and hold the plunger retraction button until the plungers are fully retracted.



3. **Lift the empty material cartridge out of the gun.** The cartridge, static mixing tube and spray nozzle are fully disposable and can be discarded.

Spraying EZ~Spray Materials

Before proceeding, make sure that you have read the product Technical Bulletin and manual sections: **Getting To Know The Spray Gun & Equipment Overview**

Safety First!

Ensure the spray area is well ventilated. Anyone in the area must wear proper personal protective equipment:



Vinyl Gloves



Safety Glasses



Respirator

1. **Connect Air Supply** - Attach the airline from your air compressor to the EZ~Spray Jr. Gun.
2. **Set Air and Material Pressure** - Adjust both air regulators on the gun before spraying. These are baseline starting points; your final settings may vary depending on your compressor and airline setup.
 - **Air Volume Control Lever**
 - Set to **30 psi** when spraying urethane plastics & foams
 - Set to **60 psi** when spraying rubbers
 - **Plunger Pressure Control Knob**
 - Set to **50 psi** for urethane plastics & foams
 - Set to **80 psi** for rubbers
3. **Start Airflow** - Turn the Air Volume Control Lever toward the ON position until air begins to flow out of the spray nozzle.
4. **Check Material Output** - Aim the spray nozzle down into the inside wall of a waste bucket and pull the trigger to check material flow. The material should come out with a steady, medium flow.
 - If the flow is too fast or too slow, adjust the Plunger Pressure Control Knob.
 - **Important:** Low material flow can cause curing inside the static mixer, especially with fast-setting materials, due to insufficient movement through the mixer.
5. **Fine-Tune Spray Pattern** - Adjust the Air Volume Control Lever to achieve the desired spray pattern. Avoid over-atomizing - excess air leads to material waste. Material on the bucket wall should appear uniform in color and texture.
6. **Begin Spraying** - Without releasing the trigger, move from the waste bucket directly to the model surface to maintain consistent flow.
7. **Avoid Over-Pressurizing** - If you notice a visible vapor cloud while spraying, reduce the air pressure by adjusting the Air Volume Control Lever.



EZ~Spray Application Tips

Before You Begin Spraying

Seal & Release Spray Surfaces - Urethane rubber will bond to many surfaces. To prevent sticking, a sealing agent followed by a release agent must be applied to all surfaces before applying rubber. SuperSeal™ sealing agent followed by Ease Release™ 200 should be applied. Silicone rubber does not stick to most surfaces and release agent may be optional. However silicone can mechanically lock on to porous surfaces like dry plasters, stone, concrete, etc. Applying SuperSeal™ followed by Ease Release™ 200 will aid in releasing the rubber from these surfaces. Read the product technical bulletin for more information.

Once You Start Spraying

Do Not Stop Spraying until the material cartridge is empty or your project is finished.

Do not over spray in one position. Material will pool and drip downward. This may also entrap air which will be reflected in the finished mold.

Apply an initial thin layer - Initial layer should be thin so that air is not entrapped.

Brush rubber mold material - Have a helping pair of hands ready to brush material into detail and undercuts. Make sure breathing protection is worn.

Move spray gun to proper angles necessary to deliver material into surface detail and deep undercuts.

Adjust output as needed while spraying. Adjust the control knob or lever on the gun as necessary.

Making Molds

After applying final layer, check for holes and missed areas.

Minimum finished mold thickness: 3/8" (0.95 cm) of rubber.

Minimum finished support shell thickness: 1/4" (0.64 cm) of plastic.

If necessary, add support armature - Once support the shell has attained adequate thickness, a support armature (wood, metal conduit, etc.) can be quickly embedded in plastic.

Plastic Castings or Coatings

Move spray gun back and forth in a sweeping motion. Apply plastic in thin layers. Do not over spray in one position.

Minimum finished coating thickness: 1/4" (0.64 cm) of plastic.

Casting Foams

Minimum finished casting thickness: 1/4" - 1/2" (0.64 cm - 1 cm) of foam.

Making Reusable Vacuum Bags

Minimum finished bag thickness: 1/4" (0.64 cm) of rubber.

Maintenance and Troubleshooting

Maintenance

Your EZ~Spray Jr. Gun does not require regular maintenance. However, it is good practice to always remove cartridges once you are done spraying to prevent any material from affecting the operation of the plunger in the event of a leak or blowout.

If you do get material on the gun due to a leak or from handling the cartridges, you can use a solvent like 99% isopropyl alcohol to clean off the material before it fully cures.

You can also apply a light coat of Ease Release 200 to the gun to help prevent cured material from bonding to the gun. Remove the air hose before storing.

Troubleshooting

Atomized Material:

This is a result of air pressure going to the static mixer tip being set too high. Adjust the Air Volume Control Lever until an even spray pattern is achieved and the material is no longer atomized.

Uneven Spray Pattern:

An uneven spray pattern can be the result of a few things that you adjust to fix this issue.

- Low piston speed can cause the material to leave the static mixer too slowly resulting in an inconsistent pattern. Turn up the plunger pressure to increase the speed.
- There is too much or too little air flow going to the static mixer tip. Normally it is a result of too low but you also might have to adjust the piston speed as well.
- Make sure you are moving the gun in a steady back and forth sweeping motion. Linger in one spot too long or moving too quickly will affect your coverage.

Cartridge Blowout/Leaks:

Clogged cartridges are the most common reason for material to be leaking out the back of the gun. Since material cannot pass through the static mixer, the pressure builds up until the cartridge distorts and allows material to leak out. How to fix this problem:

- First make sure to keep the cartridge upright until you're ready to spray to keep material from prematurely mixing and setting up in the static mixer or cartridge.
- Make sure that you are working and storing your material at 73 °F/23 °C. These extremely fast setting materials can set up in fractions of a sec if they are too hot.
- Don't stop spraying until the cartridge is empty or your project is done.

The other cause can be the piston speed is set too high and the material can't leave the cartridge fast enough. This will also cause the cartridge to distort and cause a leak.

EZ~Spray® Jr.

Versatile, convenient and easy-to-use spray system for spraying the following EZ~Spray materials:

EZ~Spray™ Urethane Rubber - For making rubber molds used to cast concrete, plaster, wax, etc. Surface preparation, applying sealing agent & release agent, required.

EZ~Spray™ Silicone Rubber - For making fast rubber molds and reusable vacuum bags that have the best release properties for production casting of resins, plaster, etc. *Minimal surface preparation required.*

EZ~Spray™ Urethane Plastic - For spraying over cured rubber molds to make fast support shells / mother molds. Plastic can also be sprayed into rubber molds to make fast, lightweight castings.

StyroCoat™ Coating - Coat large areas of foam and other surfaces quickly with a plastic that is impact resistant & Flame Rated. Great for creating themed environments, theater and movie special effects.

EZ~Spray™ Foams - Make lightweight castings, create special effects or use for lightweight reinforcement.

**EZ~Spray Jr. vs.
Commercially Available
Spray Machine:
*What's The Advantage?***

Lower Cost (In The Short-Run)

No "up front" expense to buy a spray machine (\$25,000).

Convenient & Easier to Use

If you have a compressor, you can spray rubber, plastic or foam.

Time & Labor Savings

No Cleaning & No Maintenance.



For more information, visit www.smooth-on.com

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