3M™ Performance Spray Gun with 3M™ Bulk Spray Adhesives

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There are many different options regarding spray equipment for spraying 3M™ Bulk Spray Adhesives. There are also some very simple spray systems for doing short demonstrations for potential users or smaller applications in industry. To keep this as straight forward as possible, below is one example of a 3M spray system tested and found to adequately apply 3M™ Bulk Spray Adhesives from a gravity cup. For larger jobs there is also an option to connect to a pressure/bulk feed supply such as a pressure pot or low-pressure pump (<50psi) provided you need more material than a one or more spray cups which is explained further in the document.

3M™ Performance Spray Gun GRAVITY Applications:

3M™ Performance Spray Gun can be set up for use in gravity applications with a wide range of coatings including 3M™ Bulk Spray Adhesives. This easy-to-clean 3M™ Performance Spray Gun has simple-to-use replaceable atomizing heads which can speed up both cleaning and changeovers for different coating and adhesive viscosities. The spray gun is made from a durable and lightweight composite material with an emphasis on ergonomics. The atomizing heads (aka nozzles) directly connect with the 3M™ PPS™ Series 2.0 Spray Cups which are available in 5 different sizes. The Performance Spray Gun can be used with almost all 3M™ Bulk Spray Adhesives.

Helpful Content for the 3M™ Performance Spray Gun 26878 • 26778 • 26832 & 3M™ PPS™ Series 2.0 Spray Cups 26000

3M™ Performance Spray Gun Product Overview
3M™ PPS™ Series 2.0 Setup

Other helpful content

3M™ Performance Spray Gun – Adjusting the settings
3M™ Performance Spray Gun – Tips and Tricks

Initial Setting Recommendations[1]:

Below is a table that shows some helpful spray gun adjustment settings for the 3M™ Bulk Spray Adhesives with the 3M™ Performance Spray Gun (PSG) for gravity applications. The following information is only a starting point, as technicians will be able to dial in the spray gun to their preferred style of application[1]. For the purposes of these recommendations, a workable spray pattern was targeted to be approximately 6" tall at 8" from the substrate utilizing a size 1.8 (26718) gravity atomizing head. Before setting the spray gun to the recommendations, close the air valve, fluid knob, and fan knob by rotating them fully clockwise until they bottom out.

Fan Knob:
Each setting refers to rotating fan knob outward from the fully closed position the number of full rotations listed in the table.

Fluid Knob:
This setting refers to rotating the fluid knob outward from the fully closed position the number of full rotations listed in the table. If the technician is more comfortable feathering the trigger, that can also be done rather than restricting trigger travel with the fluid knob.

Setting the Air Pressure:
Make sure you are pulling the trigger on the PSG while setting the air pressure, this is a dynamic pressure reading, not static. In order to deliver adequate air, you will need to have a compressor sized appropriately to deliver ~13CFM of air or greater.

3M™ Performance Spray Gun Gravity Initial Settings – 1.8 Tip

IATD Adhesive	Solvent/ Water	Fan, turns out	Fluid, Turns out	Air, PSI
70	Solvent Base	1	2	30
74	Solvent Base	1/2	1 1/2	40
77	Solvent Base	1	2 1/2	20
90	Solvent Base	1/2	2	30
94 CA	Solvent Base	1/2	2	30
94 ET	Solvent Base	1/2	2	30
1357	Solvent Base	1	2	40
4491	Solvent Base	1	4	40
30NF	Water Base	1	2	2
FB 49	Water Base	1	3	35
FB 100NF	Water Base	1 1/2	1 1/2	20
FT 1000NF	Water Base	3	3	30

[1]These settings are starting points for the target pattern, which was described above, each user will have their own desired pattern and the spray gun can be adjusted accordingly to optimize the performance for their application.

3M™ Performance Spray Gun PRESSURE Applications[1]:

3M™ Performance Spray Gun can also be set up for use in pressure applications with a wide range of coatings including 3M™ Bulk Spray Adhesives. This easy-to-clean 3M™ Performance Spray Gun has simple-to-use replaceable atomizing heads which can speed up both cleaning and changeovers for different coating and adhesive viscosities. The spray gun is made from a durable and lightweight composite material with an emphasis on ergonomics. The pressure whip allows for connection of pressure fed atomizing heads to pressurized coating lines. The Performance Spray Gun can be used with all one-component 3M™ Bulk Spray Adhesives.

Fan Knob:
Each setting refers to rotating fan knob outward from the fully closed position the number of full rotations listed in the table.

Fluid Knob:
This setting refers to rotating the fluid knob outward from the fully closed position the number of full rotations listed in the table. If the technician is more comfortable feathering the trigger, that can also be done rather than restricting trigger travel with the fluid knob.

Setting the Air Pressure:
Make sure you are pulling the trigger on the PSG while setting the air pressure, this is a dynamic pressure reading, not static. In order to deliver adequate air, you will need to have a compressor sized appropriately to deliver ~13CFM of air or greater.

Setting the Fluid Pressure:
This setting is made at the source; ie pressure pot or low-pressure pump.

[1]These settings are starting points for the target pattern, which was described above, each user will have their own desired pattern and the spray gun can be adjusted accordingly to optimize the performance for their application.

Pressure-Fed Initial Setting Recommendations:

When applying enough material to warrant a larger supply of adhesive materials, pressure pots or low-pressure pump systems can be used (<50psi). The same settings apply for pressure fed applications as they do for gravity feed, but there is also a new adjustment unique to pressure-fed applications controlling the amount of pressure delivering the fluid, which is adhesive in this case. As was mentioned with gravity applications, these are only starting points and the technician can optimize their settings for their application[1]. A size 1.8 (26818) pressure fluid tip was used for all adhesives. Due to the nature of pressurized fluid lines, pressure can drop with hose length and elevation changes relative to the pressure-fed supply. For this reason, the flow rate[2] is also shown as a target for initial settings. If the user would like more material or less material, they are able to optimize this new setting as well.

Note: Some adhesives have two different desired pattern styles.
These spray patterns are described as either:

1. Web – which is best described by several adhesive strings being launched from the spray gun to ultimately look like a spider web when properly coated on the substrate. To achieve this, you generally operate at a lower atomizing air pressure.
2. Pebble – which is best described by droplets of adhesive atomized from the spray gun. The resulting coating looks like an even distribution of droplets all across the substrate.

3M™ Performance Spray Gun Pressure-fed Initial Settings – 1.8 Tip

IATD Adhesive	Solvent/ Water	Fan, turns out	Fluid, Turns out	Fluid Pressure, PSI	Air, PSI	Flow rate3, fl oz/min
70	Solvent Base	1	2	5	20	12
74	Solvent Base	1	2	7	20	10
77	Solvent Base	1/2	2	5	25	9
90	Solvent Base	1	1	5	20	10
94 CA	Solvent Base	1/2	2	9	30W-50P[3]	10
94 ET	Solvent Base	1/2	2	9	30W-50P[3]	10
1357	Solvent Base	2	1	9	60+	9
4491	Solvent Base	2	1	6	60+	4
30NF	Water Base	1	2	4	25	6
FB 49	Water Base	1	1.5	9	25	7
FB 100NF	Water Base	1	2	3	25	7
FT 1000NF	Water Base	1	2	8	20	7

[1]These settings are starting points for the target pattern, which was described above, each user will have their own desired pattern and the spray gun can be adjusted accordingly to optimize the performance for their application.

[2]Flow rate was measured at the settings shown at the same elevation with a 6-foot-long ¼" diameter fluid hose

[3]The W stands for web style patterns; The P stands for pebble style pattern.

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