

Air Cap & Nozzle Selection

(All Guns)

This page will help you in selecting the atomization set that is best for your application. The steps to follow are:

- 1) Select the fluid nozzle according to the viscosity of the material.
- 2) Find the required flow rate.
- 3) Select the air cap that is best for that nozzle size.

Viscosity #2 Zahn	Fluid Nozzle	Air Cap I.D. #											Fluid Flow Ounce/Min.	
		2	3	4	5	6	7	8	9	10	11	12		13
5-14	.021	████████████████████												0-6
10-22	.028	████████████████████												1-8
14-28	.036	████████████████████												3-10
16-30	.043	████████████████████											5-12	
20-35	.051						████████████████						7-15	
23-37	.061							████████████					8-18	
25-40	.072								██████████				10-20	
30-45	.084								██████████				15-30	
45+	.110									████████			20+	

Viscosity

Start by determining which fluid nozzles can be used with the viscosity of your coating. For example, if your coating has a viscosity of 20 seconds in a #2 Zahn cup, one of four nozzles can be used: .028; .036; .043; and, .051.

Flow Rate

Flow rate is used to select the actual fluid nozzle size. With the atomization air off, measure fluid flow into a beaker for one minute. For example, let's say it was 6 ounces per minute. As shown in the chart, four fluid nozzles can be used with this flow rate: .021; .028; .036; and, .043. However, .021 is not an option since it falls outside the viscosity range. Of the remaining three sizes, the .036 nozzle is recommended because 6 ounces falls in the middle of the 3 to 10 ounce range.

Air Cap Selection

Read across the chart from the fluid nozzle which has been selected. The grey bar indicates which air caps can be used with the selected nozzle. In our example, .036 nozzle can be used with #2 through #10 air caps. As a starting point, a #7 or #8 air cap is recommended.

Note:

This chart is intended as a guide in the selection process. If you require a slower rate of application, use a smaller nozzle. A larger nozzle will deliver a faster rate of application. Similarly, air caps can be changed depending on the desired degree of atomization. Use a smaller air cap for finer atomization. A larger air cap will deliver a more coarse finish.

Metric Conversion Chart

.021	.028	.036	.043	.051	.061	.072	.084	.110
▼	▼	▼	▼	▼	▼	▼	▼	▼
0.5mm	0.7mm	0.9mm	1.1mm	1.3mm	1.5mm	1.8mm	2.0mm	3.0mm