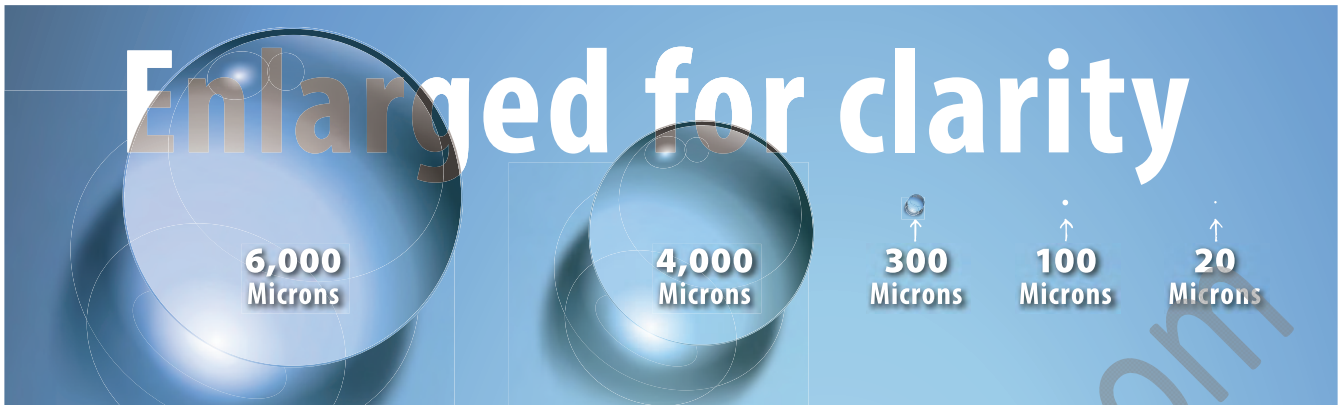


No Drip Atomizing Nozzles



Droplet Size

One of the primary reasons atomizing spray nozzles are used is because of their fine droplet size. Benefits of fine droplet size include even coating and liquid conservation. For reference, a large raindrop is around 6,000 microns (0.236") in diameter. Standard liquid nozzles produce droplet sizes ranging from 4,000 microns (0.157") down to 300 microns (0.012") in diameter. EXAIR's Atomizing Nozzles produce minuscule droplet sizes in the range of 100 microns (0.004") to 20 microns (0.0008")!

Droplet size can be adjusted by varying either the air or liquid pressure. An increase in air pressure or decrease in liquid pressure will generally produce a smaller droplet size. Below is a chart showing various models of atomizing air nozzles and their droplet sizes at selected pressures.

Droplet Size			
Model	Liquid Pressure	Air Pressure	Droplet Size μm^*
AN1020SS	20 PSI	40 PSI	71
	40 PSI	65 PSI	83
ER1020SS	5 PSI	40 PSI	39
	20 PSI	40 PSI	57
SR1020SS	4" Siphon Height	20 PSI	25
	4" Siphon Height	40 PSI	22

* Volume Median Diameter $D_v(50.0)$ of liquid droplets.
1 μm = 1 micron = 0.00004". All tests performed with water.

Spray Angle

The Spray Angle is the trigonometric angle created by the width of the spray pattern and the distance at which it is measured. This angle can vary greatly within a given family of atomizing nozzles depending on flow rates and pressures, but will generally fall into the ranges below:

Spray Angle		
Family	Minimum Angle	Maximum Angle
Internal Mix Narrow Angle Round Pattern - AN1010SS, AN2010SS, etc.	20	45
Internal Mix Wide Angle Round Pattern - AW1010SS, AW2010SS, etc.	50	90
Internal Mix Flat Fan Pattern - AF1010SS, AF2010SS, etc.	50	120
External Mix Round Pattern - ER1010SS, ER2010SS, etc.	25	60
External Mix Narrow Angle Flat Fan Pattern - EF1010SS, EF2010SS, etc.	35	70
External Mix Wide Angle Flat Fan Pattern - EB1010SS, EB2010SS, etc.	50	105
Siphon Fed Round Pattern - SR1010SS, SR2010SS, etc.	20	50
Siphon Fed Flat Fan Pattern - SF1010SS, SF2010SS, etc.	50	100

Atomizing Nozzles

Internal Mix Flat Fan Pattern - 1/2 NPT



Model: AF5010SS
Material: Type 303 Stainless Steel

Model AF5010SS and AF5020SS

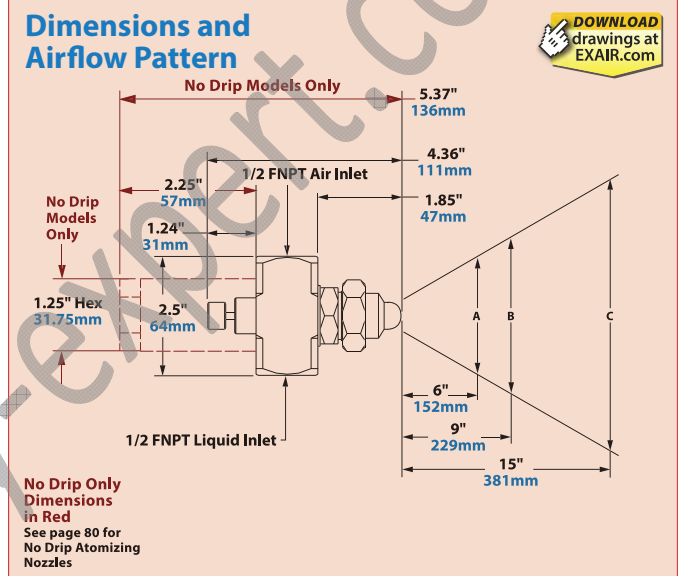
1/2 NPT internal mix flat fan pattern atomizing nozzles are designed with efficiency in mind. Especially good for vertical or horizontal assembly lines, the broad thin pattern of these larger atomizing nozzles makes efficient use of your expensive liquids. Their output can be adjusted for a very light film or a heavy coat of atomized liquid. Whether it's applying paint to hanging sheet metal, or using a water mist to cool a laminate web, flat fan atomizing nozzles cover a wide flat area, ideal for products moving on a conveyor.

For pressure fed applications not requiring independent air and liquid control.

Spray Nozzles



Model: AF5020SS
Material: Type 303 Stainless Steel



For more information about droplet size and spray angle, see page 83.

Need Help Choosing The Best Atomizing Nozzle For Your Application?

Not sure which atomizing nozzle is required?

Our Application Engineers can assist you in determining the correct model.

Call 1-800-903-9247 to speak with an Application Engineer.

Spray Dimensions

Model	Pressure				Width						Max. Depth feet/m	
	Air PSI/BAR		Liquid PSI/BAR		in A		in B		in C			
	in	cm	in	cm	in	cm	in	cm	in	cm		
AF5010SS	20	1.4	10	0.7	25	64	34	86	45	114	14	4.3
	40	2.8	20	1.4	28	71	36	91	46	117	18	5.5
	50	3.4	25	1.7	29	74	38	97	48	122	22	6.7
	70	4.8	40	2.8	32	81	42	107	51	130	27	8.2
AF5020SS	10	0.7	5	0.3	21	53	27	69	36	91	13	4.0
	20	1.4	15	1.0	34	86	42	107	52	132	15	4.6
	44	3.0	35	2.4	39	99	47	119	64	163	19	5.8
	64	4.4	55	3.8	40	102	50	127	68	173	20	6.1

Model	5 PSI/0.3 BAR Liquid					15 PSI/1.0 BAR Liquid					25 PSI/1.7 BAR Liquid					35 PSI/2.4 BAR Liquid					55 PSI/3.8 BAR Liquid									
	Air Pressure PSI/BAR	GPH/LPH	SCFM/SLPM	Air Pressure PSI/BAR	GPH/LPH	SCFM/SLPM	Air Pressure PSI/BAR	GPH/LPH	SCFM/SLPM	Air Pressure PSI/BAR	GPH/LPH	SCFM/SLPM	Air Pressure PSI/BAR	GPH/LPH	SCFM/SLPM	Air Pressure PSI/BAR	GPH/LPH	SCFM/SLPM	Air Pressure PSI/BAR	GPH/LPH	SCFM/SLPM									
AF5010SS	---	---	---	---	---	28	1.9	33.6	127	23.4	663	44	3.0	38.4	145	32.4	918	58	4.0	46.2	175	40.3	1141	---	---	---	---	---	---	
	---	---	---	---	---	30	2.1	25.2	95	25.3	716	48	3.3	35.8	136	36.2	1025	62	4.3	34.8	132	43.5	1232	---	---	---	---	---	---	
	---	---	---	---	---	34	2.3	12.6	48	28.7	813	50	3.4	18	68	38.0	1076	65	4.5	25.2	95	46.0	1303	---	---	---	---	---	---	
	---	---	---	---	---	36	2.5	11.5	44	31.2	884	60	4.1	3.5	13	46.0	1303	70	4.8	16.2	61	49.7	1408	---	---	---	---	---	---	
AF5020SS	10	0.69	18	68	18.0	510	18	1.2	87.6	332	15.6	442	26	1.8	150	568	17.9	507	36	2.5	177	670	22.3	632	54	3.7	231	874	29.3	830
	12	0.83	6	23	6.0	170	20	1.4	62.4	236	18.4	521	30	2.1	99	375	22.3	632	40	2.8	132	500	26.6	753	60	4.1	186	704	35.6	1008
	---	---	---	---	---	---	22	1.5	45.6	173	20.6	583	36	2.5	50.4	191	29.9	847	46	3.2	76.8	291	34.4	974	68	4.7	108	409	44.4	1257
	---	---	---	---	---	---	24	1.7	30.6	116	23.3	660	40	2.8	26.4	100	35.2	997	52	3.6	38.4	145	41.5	1175	76	5.2	66	250	53.13	1505