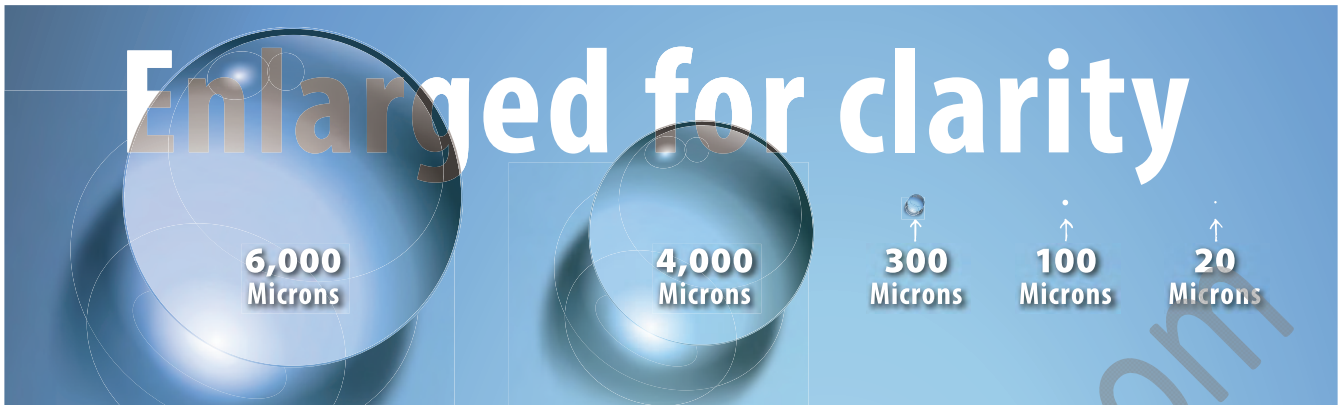


# No Drip Atomizing Nozzles



## 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 $\mu\text{m}^*$
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  $\mu\text{m}$  = 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

## External Mix Narrow Angle Flat Fan Pattern - 1/2 NPT



**NEW**

**Model: EF5010SS**  
**Material:** Type 303 Stainless Steel

### Model EF5010SS

1/2 NPT external mix narrow angle flat fan pattern nozzles are great where a high volume of liquid is needed over a concentrated area. Since they are external mix, airflow and liquid flow can be controlled independently. External mix narrow angle flat fan pattern nozzles are the best choice where thicker liquids for a heavy coating are needed over a narrow band, such as a paint line.

For pressure fed applications with independent air and liquid control.



External mix narrow angle flat fan nozzles provide a high volume of liquid in a concentrated area.

Spray Nozzles

## Mounting Brackets For Your Atomizing System

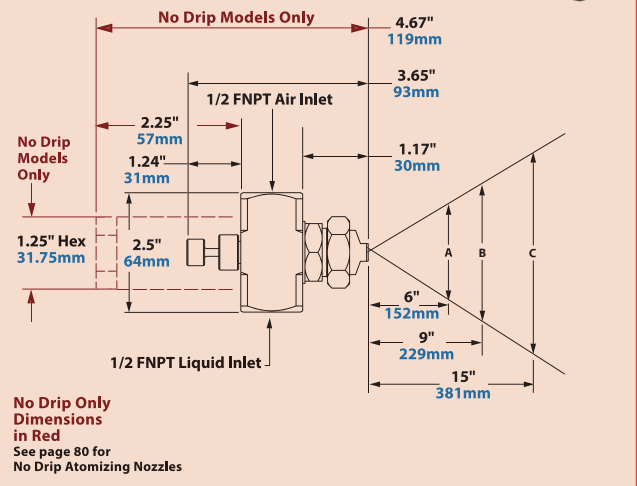


EXAIR's Model 901556 Mounting Bracket allows for easy positioning of all EXAIR 1/2 NPT Atomizing Nozzles.

**NEW**

## Dimensions and Airflow Pattern

DOWNLOAD drawings at EXAIR.com



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

Model	3 PSI/0.2 BAR Liquid			5 PSI/0.3 BAR Liquid			7 PSI/0.5 BAR Liquid			10 PSI/0.7 BAR Liquid			15 PSI/1.0 BAR Liquid			Spray Dimensions																									
	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	Pressure		Width			Max. Depth feet/m																				
																Air PSI/BAR	Liquid PSI/BAR	A	B	C																					
EF5010SS	30	2.1		30.2	854		40	2.8		36.6	1037		45	3.1		39.9	1130		55	3.8		46.4	1314		80	5.5		56.0	1586	35	2.4	3	0.2	15	38	18.5	47	22	56	25	7.6
	35	2.4		34.0	961		45	3.1		40.4	1144		55	3.8		47.0	1331		60	4.1		49.75	1409		85	5.9		60.0	1699	50	3.4	5	0.3	15	38	19	48	23	58	31	9.4
	40	2.8	141 534	37.3	1055		55	3.8	186 704	47.4	1342		60	4.1	218 825	49.5	1402		70	4.8	264 999	52.84	1496		90	6.2	303 1147	61.4	1739	70	4.8	10	0.7	15	38	20	51	25	64	33	10.1
	45	3.1		40.8	1155		60	4.1		50.0	1416		70	4.8		56.8	1609		80	5.5		59.7	1691		100	6.9		67.6	1914	90	6.2	15	1.0	15	38	20	51	25	64	35	10.7