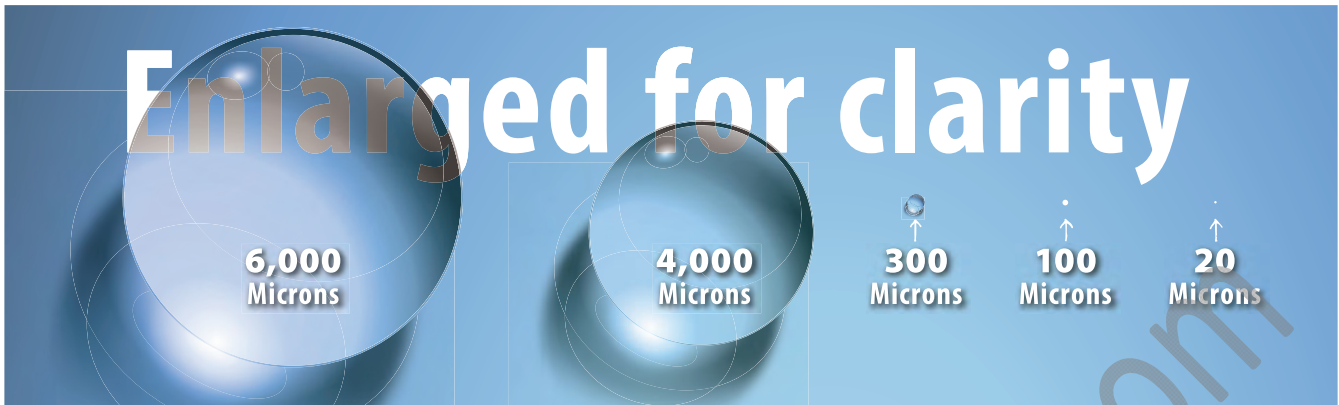


# No Drip Atomizing Nozzles



## 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 Wide Angle Flat Fan Pattern - 1/4 NPT



**Model: EB1010SS**  
Material: Type 303 Stainless Steel



**Model: EB1020SS**  
Material: Type 303 Stainless Steel



**Model: EB1030SS**  
Material: Type 303 Stainless Steel



**Model: EB1040SS**  
Material: Type 303 Stainless Steel

### Model EB1010SS, EB1020SS, EB1030SS and EB1040SS

1/4 NPT external mix wide angle flat fan pattern nozzles are great where a high volume of liquid is needed over a wide area such as a conveyor line. Because they are external mix, airflow and liquid flow can be controlled independently. Common applications are those which require a moderate application of liquid over a broad area, such as cooling or coating wide webs.

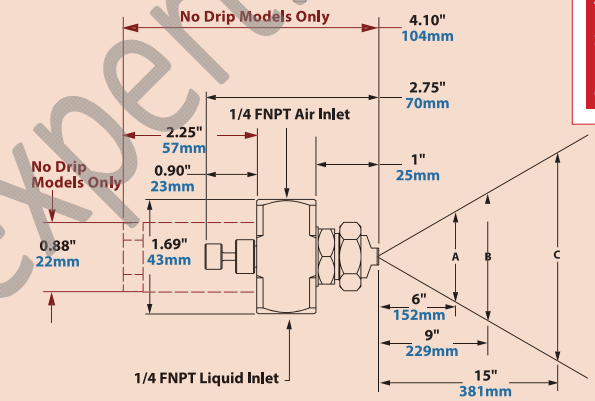
For pressure fed applications with independent air and liquid control.



(2) Model EB1040SS nozzles are used to rinse wine bottles after capping.

### Dimensions and Airflow Pattern

DOWNLOAD drawings at EXAIR.com



No Drip Only Dimensions In Red See page 80 for No Drip Atomizing Nozzles

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			10 PSI/0.7 BAR Liquid			20 PSI/1.4 BAR Liquid			40 PSI/2.8 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																						
EB1010SS	5	0.3		0.9	25.5		5	0.3		0.9	25.5		8	0.6		1.1	31.1		10	0.7		1.3	36.8		15	1.0		1.7	48.1	10	0.7	5	0.3	8.0	20.3	11.0	27.9	14.0	35.6	9	2.7	
	8	0.6		1.1	31.1		10	0.7		1.3	36.8		10	0.7		1.3	36.8		20	1.4		2.0	56.6		20	1.4		2.0	56.6	15	1.0	10	0.7	9.0	22.9	12.0	30.5	17.0	43.2	11	3.4	
	10	0.7	1.0	3.8	1.3	36.8	15	1.0	1.4	5.3	1.7	48.1	20	1.4	1.9	7.2	2.0	56.6	2.7	30	2.1	2.7	73.6	3.8	14.4	3.0	85.0	2.6	73.6	20	1.4	20	1.4	9.3	23.6	14.0	35.6	19.0	48.3	11	3.4	
	15	1.0			1.7	48.1	20	1.4			2.0	56.6	30	2.1			2.6	73.6		35	2.4		3.0	85.0			3.0	85.0	25	1.7	40	2.8	11.0	27.9	15.0	38.1	21.0	53.3	14	4.3		
EB1020SS	6	0.4		1.0	28.3		6	0.4		1.0	28.3		6	0.4		1.0	28.3		10	0.7		1.3	36.8		20	1.4		2.0	56.6	8	0.6	5	0.3	11.0	27.9	16.0	40.6	19.0	48.3	8	2.4	
	7	0.5	2.5	9.5	1.1	31.1	8	0.6	3.2	12.1	1.1	31.1	8	0.6	4.3	16.3	1.1	31.1	5.9	22.3		1.5	42.5	7.5	28.4	2.3	65.1	15	1.0	20	1.4	11.0	27.9	16.0	40.6	21.0	53.3	11	3.4			
	8	0.6			1.1	31.1	9	0.6			1.2	34.0	10	0.7			1.3	36.8		15	1.0		1.7	48.1			2.6	74.0	20	1.4	20	1.4	12.0	30.5	17.0	43.2	22.0	55.9	12	3.7		
	10	0.7			1.3	36.8	10	0.7			1.3	36.8	12	0.8			1.5	42.5		20	1.4		2.0	56.6			3.0	85.0	25	1.7	30	2.1	13.0	33.0	18.0	45.7	24.0	61.0	12	3.7		
EB1030SS	8	0.6		3.4	96.3	10	0.7			3.8	108	15	1.0			4.8	136		35	2.4		8.4	238			50	3.4		11.0	311	15	1.0	3	0.2	11.0	27.9	17.0	43.2	21.0	53.3	13	4.0
	15	1.0	4.4	16.7	4.8	136	20	1.4	5.5	20.8	5.9	167	25	1.7	7.6	28.8	6.7	190	11.0	41.6		10.1	286	14.0	53.0	12.3	348	25	1.7	10	0.7	12.0	30.5	18.0	45.7	23.0	58.4	16	4.9			
	20	1.4			5.9	167	25	1.7			6.7	190	35	2.4			8.4	238		55	3.8		11.7	331			15.7	445	45	3.1	20	1.4	13.0	33.0	19.0	48.3	24.0	61.0	21	6.4		
	25	1.7			6.7	190	30	2.1			7.6	215	40	2.8			9.3	263		60	4.1		12.0	340			16.8	476	60	4.1	30	2.1	14.0	35.6	18.0	45.7	24.0	61.0	26	7.9		
EB1040SS	10	0.7		3.8	108	15	1.0			4.8	136	25	1.7			6.7	190		45	3.1		10.1	286			7.5	5.2		13.7	388	30	2.1	5	0.3	13.0	33.0	19.0	48.3	24.0	61.0	17	5.2
	15	1.0	10.0	37.9	4.8	136	20	1.4	13.5	51.1	5.9	167	30	2.1	18.8	71.2	7.6	215	27.6	104		11.0	311	31.0	117	15.7	445	45	3.1	20	1.4	14.0	35.6	20.0	50.8	26.0	66.0	19	5.8			
	20	1.4			5.9	167	30	2.1			7.6	215	40	2.8			9.3	263		70	4.8		13.4	379			16.8	476	65	4.5	20	1.4	15.0	38.1	21.0	53.3	27.0	68.6	23	7.0		
	25	1.7			6.7	190	35	2.4			8.4	238	45	3.1			10.1	286		80	5.5		14.8	419			18.3	518	80	5.5	20	1.4	15.0	38.1	22.0	55.9	28.0	71.1	26	7.9		