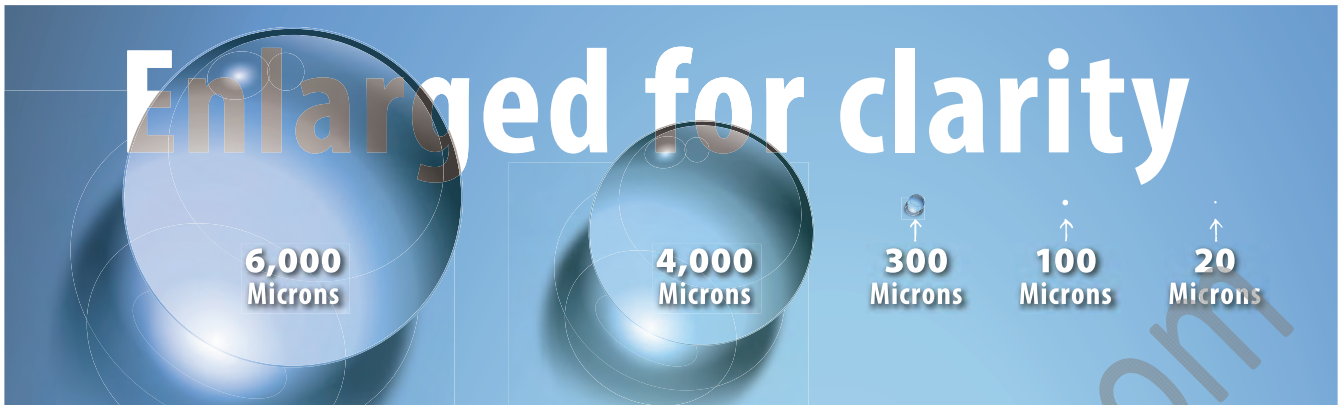


No Drip Atomizing Nozzles



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

Siphon Fed Round Pattern - 1/2 NPT



Model: SR5010SS
Material: Type 303 Stainless Steel

Model SR5010SS

1/2 NPT siphon fed round pattern nozzles are great where no liquid pressure is available and a heavy coating is needed at a specific area. Flow rate of these larger atomizing nozzles is adjustable via the adjusting valve. Siphon nozzles work best with a suction height of 24" or less. Since these nozzles are siphon fed, the compressed airflow draws the liquid in and mixes it internally. Liquid flow is dependent both on the gravity or suction height and the airflow. 1/2 NPT Siphon fed round pattern nozzles provide the most liquid flow of any siphon fed nozzle.

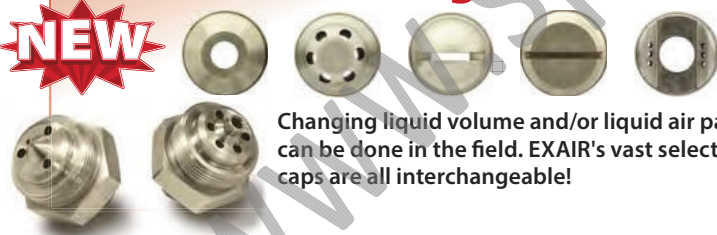
Siphon or gravity fed for non-pressurized applications.



Spray Nozzles

Use a siphon fed nozzle when no liquid pressure is available.

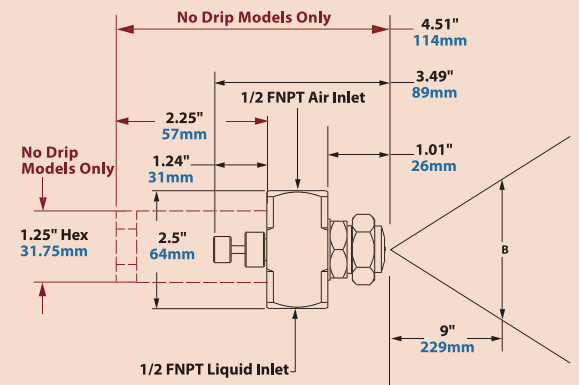
Air and Liquid Caps are Interchangeable!



Changing liquid volume and/or liquid air pattern can be done in the field. EXAIR's vast selection of caps are all interchangeable!

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	Liquid Flow in GPH/LPH																Spray Dimensions at 8" (20cm) Siphon Height						
	Air		Gravity Head					Siphon Height									Air		Width		Max. Depth feet/m		
	Pressure PSI/BAR	SCFM/SLPM	18"	46cm	12"	30cm	6"	15cm	4"	10cm	8"	20cm	12"	30cm	24"	61cm	Pressure PSI/BAR	B in	B cm				
SR5010SS	20	1.4	19.3	547	---	---	---	---	---	22.1	84	14.3	54	---	---	---	20	1.4	6	15	22	6.7	
	30	2.1	25.2	714	---	---	---	---	---	28.6	108	25.7	97	12.3	47	---	30	2.1	6	15	25	7.6	
	40	2.8	32.8	929	---	---	56.8	215	41	155	31.5	119	28.4	107	19.6	74	---	40	2.8	6	15	28	8.5
	50	3.4	36.7	1039	61	231	57.4	217	42.8	162	32.1	121	30.2	114	21.8	83	---	50	3.4	6	15	29	8.8
	60	4.1	42.2	1195	59.1	224	57.4	217	43.8	166	33.1	125	33	125	25.7	97	9.9	60	4.1	6	15	31	9.4
	70	4.8	47.7	1351	66	250	58.6	222	43.8	166	35.3	134	35.3	134	29.7	112	12.5	70	4.8	6	15	35	10.7
	80	5.5	52.9	1498	68.3	259	59.1	224	44.5	168	44.6	169	36.9	140	31.5	119	17.5	80	5.5	6	15	37	11.3