

# AL - Air Atomizing Nozzles

## Product Guide AL SERIES

Delavan's Air Atomizing nozzles give you total control.



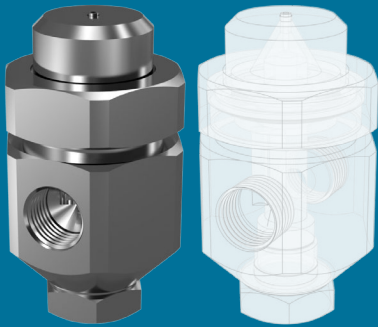
**TEXTRA**  
NOZZLES

**DELAVAN**<sup>®</sup>  
SPRAY TECHNOLOGIES

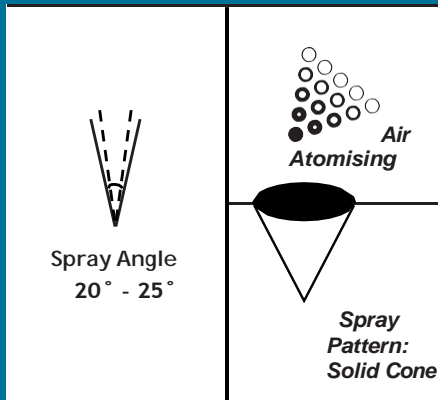
Our nozzles  
come with  
technical  
expertise.

# AL Series Atomising Nozzles

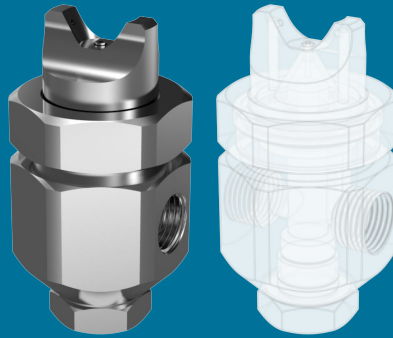
AL



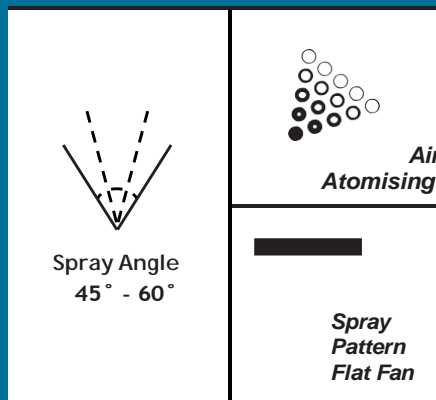
Multiple option fed external mix solid cone spray nozzle. Allows control of the atomization without changing liquid flow.



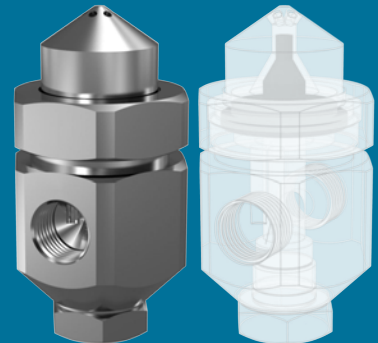
AL 15



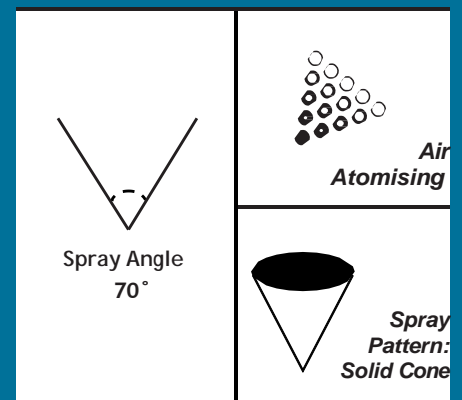
An external mix, flat fan spray nozzle where a change in air or liquid pressure will result in a change of flow or atomization.



AL 30



Pressure-fed internal mix solid cone spray nozzle. Allows control of the atomization without changing liquid flow.



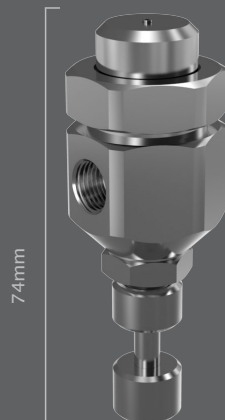
## AL Series Body Styles

AL Series nozzles are available in different body styles to fit your application process

AL Standard Body



AL - A Body



AL 2C, 3C, 3D, 4D & 4F Body

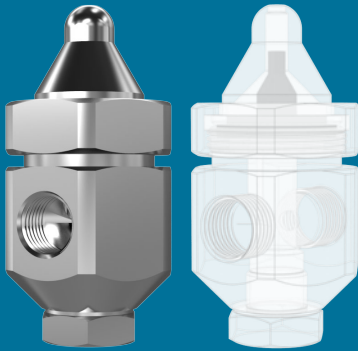


AL 5F Body

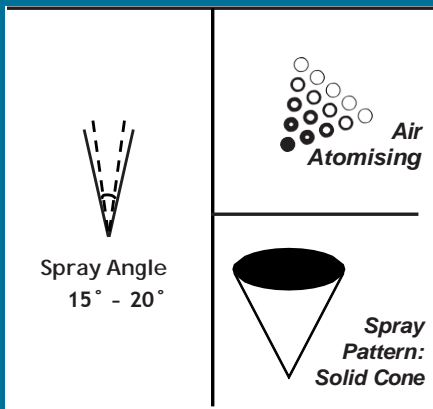




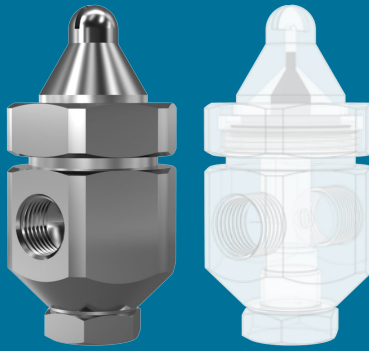
## AL 45



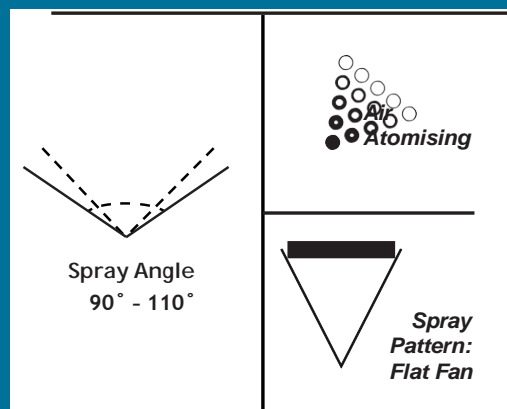
Pressure-fed internal mix solid cone spray nozzle. Where change in air or liquid pressure will result in a change of flow or atomization.



## AL 60



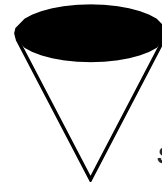
Pressure-fed internal mix flat fan spray nozzle. Where change in air or liquid pressure will result in a change of flow or atomization.



# AL External Mix



Spray Angle  
20° - 25°



Spray  
Pattern:  
Solid Cone

The Delavan AL air atomizing series spray nozzles offer the user a wide variety of spray patterns, flow rates and atomization. Unlike hydraulic or pressurized nozzles where the energy from the pressure of the liquid is used to atomize, the AL series of nozzles use the energy of a pressurized gas (typically air) to atomize the liquid. This allows the liquid to be fed under lower pressure and still achieve fine atomisation. This is also advantageous for abrasive or high viscosity liquids.

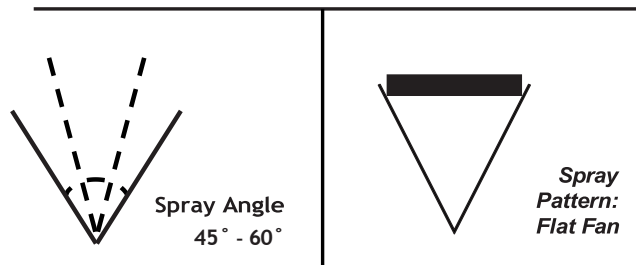
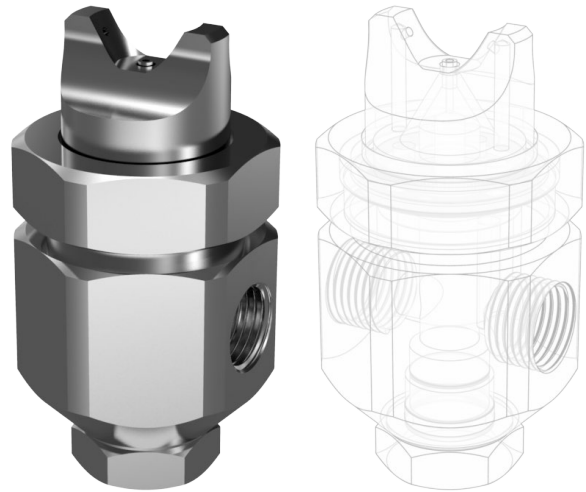
### Standard AL Siphon

Metering Set Number	Capacities at Siphon Height of 15cm	Air Pressure in Bar G										Spray Angle (°)@15 Bar
		0.35	0.70	1.00	1.50	1.75	2.00	3.00	4.00	6.00	7.00	
AL-01	Air Capacity Liters/Min	15	20	23	29	32	35	44	58	78	91	20
	Liq. Capacity Liters/Hr	1.36	2.27	3.12	3.41	3.72	4.08	4.64	5.90	7.10	8.30	
AL-02	Air Capacity Liters/Min	26	32	38	47	52	58	73	96	126	151	20
	Liq. Capacity Liters/Hr	2.50	4.54	5.90	7.00	7.90	9.10	10.70	13.60	16.60	19.50	
AL-03	Air Capacity Liters/Min	33	42	49	60	67	75	94	125	164	195	20
	Liq. Capacity Liters/Hr	3.18	5.40	7.30	8.90	10.20	11.80	14.80	20.90	26.80	32.70	
AL-04	Air Capacity Liters/Min	43	54	63	77	86	96	120	162	210	250	20
	Liq. Capacity Liters/Hr	3.63	6.40	8.60	10.70	12.50	14.10	17.50	24.10	30.90	37.70	
AL-05	Air Capacity Liters/Min	49	61	71	86	97	108	135	182	236	281	20
	Liq. Capacity Liters/Hr	4.22	7.40	10.00	12.40	14.50	16.40	20.30	28.00	35.90	43.80	

### Standard AL Gravity Fed

Metering Set Number	Atomising Air		Liquid Capacity L/Hr Gravity Fed				Liquid Capacity L/Hr Siphon Height				Spray Angle
	Air Press. Bar.G.	Air Flow L/Min	10 cm	15 cm	30 cm	45 cm	20 cm	30 cm	60 cm	90 cm	
AL-06	0.70	11.30	0.87	1.10	1.30	1.50	0.68	0.53	-	-	18
	1.50	17.00	1.30	1.50	1.70	1.80	1.20	1.10	0.62	-	18
	3.00	28.00	1.50	1.70	1.90	2.10	1.40	1.30	1.10	0.76	18
	4.00	36.00	1.60	1.80	2.00	2.20	1.50	1.40	1.20	0.87	18
AL-07	0.70	13.30	1.50	1.70	2.10	2.40	1.20	0.79	-	-	18
	1.50	20.00	2.10	2.40	2.60	2.80	1.90	1.60	0.91	-	18
	3.00	32.00	2.80	2.90	3.10	3.40	2.60	2.40	1.70	1.10	18
	4.00	41.00	3.10	3.30	3.40	3.70	2.90	2.70	2.10	1.50	19
AL-08	0.70	23.00	1.60	2.00	2.30	2.50	1.40	1.10	-	-	18
	1.50	36.00	2.20	2.50	2.80	2.90	2.00	1.70	0.89	-	18
	3.00	58.00	2.90	3.20	3.30	3.40	2.80	2.50	1.90	1.20	19
	4.00	74.00	3.40	3.50	3.60	3.70	3.30	3.00	2.50	2.00	20
AL-09	0.70	23.00	1.60	2.00	2.30	2.50	1.40	1.10	-	-	21
	1.50	31.00	3.50	4.40	4.90	5.30	2.90	3.50	2.80	1.90	22
	3.00	50.00	4.40	5.00	5.60	6.00	4.00	3.40	2.40	1.20	21
	4.00	65.00	4.20	5.00	5.40	5.70	3.90	3.50	2.80	1.90	22
AL-10	1.50	58.00	12.30	16.30	19.90	22.00	10.50	8.30	2.80	-	17
	3.00	88.00	16.70	19.50	23.00	25.00	14.20	11.50	6.40	2.80	18
	4.00	111.00	18.40	21.00	24.00	26.00	15.70	12.90	7.90	4.50	18
	5.60	147.00	19.70	22.00	24.00	26.00	17.00	14.60	9.80	6.10	19
AL-11	2.00	144.00	27.00	-	-	-	22.00	16.80	-	-	20
	3.00	190.00	30.00	-	-	-	26.00	21.00	-	-	20
	4.00	240.00	31.00	40.00	43.00	-	28.00	23.00	11.00	-	21
	5.60	315.00	31.00	39.00	42.00	44.00	28.00	24.00	16.70	8.30	22

# AL 15 – External Mix



The AL 15 series is a pressure-fed external mix flat fan spray nozzle. The external mix feature allows control of the atomization without changing liquid flow. The lighter the air pressure, the higher the atomization for a given liquid pressure. The spray pattern is a function of pressure. The higher the air pressure, the longer the spray pattern.



### AL 15 Siphon / Gravity Fed

Metering Set	Liquid Tip & Aircap	Capacities as Siphon Height of 15 cm	Air Pressure in Bar. G.										Spray Angle at 1.5 BAR
			0.4	0.7	1.0	1.5	1.75	2.0	3.0	4.0	6.0	7.0	
15-01	LIQUID TIP W05736-1 AIRCAP W01234-1	Air Capacity Liters/Min Liq. Capacity Liters/Min	40.00 1.36	51.00 2.27	54.00 3.12	57.00 3.41	62.00 3.72	66.00 4.08	74.00 4.64	88.00 5.90	95.00 7.10	108.00 8.30	45
15-02	LIQUID TIP W05736-2 AIRCAP W01234-2	Air Capacity Liters/Min Liq. Capacity Liters/Min	44.00 2.50	57.00 4.54	64.00 5.90	71.00 7.00	75.00 7.90	79.00 9.10	89.00 10.70	105.00 13.60	113.00 16.60	122.00 19.50	50
15-03	LIQUID TIP W05736-3 AIRCAP W01234-3	Air Capacity Liters/Min Liq. Capacity Liters/Min	54.00 3.18	68.00 5.40	78.00 7.30	85.00 8.90	94.00 10.20	99.00 11.80	110.00 14.80	127.00 20.90	139.00 26.80	151.00 32.70	55
15-04	LIQUID TIP W05736-4 AIRCAP W01234-4	Air Capacity Liters/Min Liq. Capacity Liters/Min	57.00 3.63	78.00 6.40	89.00 8.60	99.00 10.70	108.00 12.50	116.00 14.10	127.00 17.50	153.00 24.10	163.00 30.90	177.00 37.70	60
15-05	LIQUID TIP W05736-5 AIRCAP W01234-5	Air Capacity Liters/Min Liq. Capacity Liters/Min	63.00 4.22	85.00 7.40	97.00 10.00	108.00 12.40	119.00 14.50	128.00 16.40	142.00 20.30	173.00 28.00	189.00 35.90	208.00 43.80	60

# AL 15 – External Mix

## AL 15 Siphon Pump Fed

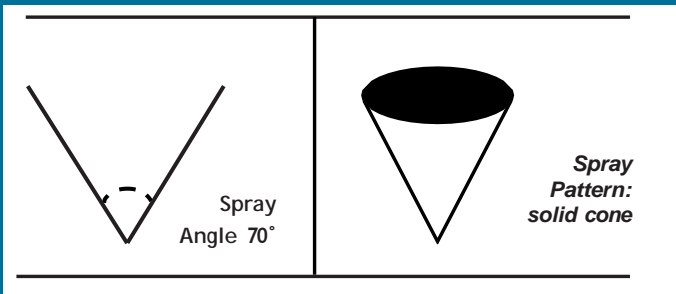
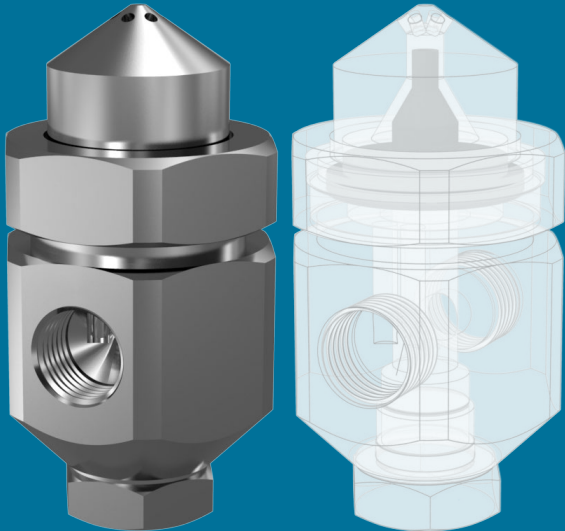
Liquid Pressure Bar. G.

Metering Set	Liquid Tip & Aircap	0.2 Bar			0.3 Bar			0.7 Bar			1.5 Bar			3.0 Bar		
		Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr
15-06	LIQUID TIP W13154-1	0.20	25.20	2.80	0.35	26.30	3.50	0.70	31.20	5.30	1.40	45.30	7.80	2.80	73.60	11.00
		0.35	26.30		0.70	31.20		1.05	39.60		1.75	53.80				
		0.70	31.20		1.05	39.60		1.40	45.30		2.10	59.40				
	1.05	39.60	1.40		45.30	1.75		53.80	2.80		73.60					
	1.40	45.30	1.75		53.80	2.10		59.40	3.50		85.00					
	1.75	53.80	2.10		59.40	2.80		73.60	3.50		85.00					
15-07	LIQUID TIP W13154-1	0.35	22.00	2.80	0.35	22.00	3.50	0.40	25.00	5.30	0.60	28.00	7.80	0.70	34.00	11.00
		0.40	25.00		0.40	25.00		0.60	28.00		0.70	34.00				
		0.50	27.50		0.60	28.00		0.70	34.00		0.85	40.00				
	0.60	28.00	0.70		34.00	0.85		40.00	1.10		45.00					
	1.10	45.00	1.40		54.00	1.40		54.00	2.50		79.00					
	2.50	79.00	2.50		79.00	2.50		79.00	2.50		79.00					
15-08	LIQUID TIP W13154-2	0.35	26.30	4.50	0.70	31.20	5.50	1.05	39.60	8.30	1.75	53.80	12.20	3.15	82.00	16.60
		0.70	31.20		1.05	39.60		1.40	45.30		2.10	59.40				
		1.05	39.60		1.40	45.30		1.75	53.80		2.80	73.60				
	1.40	45.30	1.75		53.80	2.10		59.40	3.50		85.00					
	1.75	53.80	2.10		59.40	2.80		73.60	4.20		102.00					
	2.10	59.40	2.80		73.60	3.50		85.00	4.90		119.00					
15-09	LIQUID TIP W13154-2	0.35	22.00	4.50	0.35	22.00	5.50	0.60	28.00	8.30	0.70	34.00	12.20	1.10	45.00	17.20
		0.60	28.00		0.70	34.00		0.70	34.00		1.40	54.00				
		0.70	34.00		1.10	45.00		1.40	54.00		2.10	71.00				
	1.10	45.00	1.40		54.00	2.10		71.00	2.50		79.00					
	2.50	79.00	2.50		79.00	2.50		79.00	2.50		79.00					
	2.50	79.00	2.50		79.00	2.50		79.00	2.50		79.00					
15-10	LIQUID TIP W13154-3	0.70	31.20	8.50	1.05	39.60	10.40	1.40	45.30	15.90	2.50	68.00	23.00	3.50	85.00	33.00
		1.05	39.60		1.40	45.30		1.75	53.80		2.80	73.60				
		1.40	45.30		1.75	53.80		2.10	59.40		3.50	85.00				
	1.75	53.80	2.10		59.40	2.80		73.60	4.20		102.00					
	2.10	59.40	2.80		73.60	3.50		85.00	4.90		119.00					
	2.80	73.60	3.50		85.00	4.20		102.00	5.60		139.00					
15-11	LIQUID TIP W13154-3	0.40	25.00	8.50	0.40	25.00	10.40	0.40	25.00	15.90	0.70	34.00	23.00	1.40	54.00	33.00
		0.50	27.50		0.60	28.00		0.60	28.00		0.85	40.00				
		0.60	28.00		0.65	31.00		0.70	34.00		1.10	45.00				
	0.70	34.00	0.70		34.00	0.85		40.00	1.40		54.00					
	1.40	54.00	1.40		54.00	1.40		54.00	2.50		79.00					
	2.50	79.00	2.50		79.00	2.50		79.00	2.50		79.00					
15-12	LIQUID TIP W13154-4	0.70	85.00	13.40	1.00	102.00	16.40	1.40	116.00	25.00	2.50	178.00	37.00	3.20	212.00	52.00
		1.00	102.00		1.40	116.00		1.80	139.00		2.80	195.00				
		1.40	116.00		1.80	139.00		2.10	156.00		3.50	227.00				
	1.80	139.00	2.10		156.00	2.50		178.00	4.20		266.00					
	2.10	156.00	2.80		195.00	3.50		227.00	4.90		312.00					
	2.80	195.00	3.50		227.00	4.20		266.00	5.60		360.00					

## AL 15 Siphon Pump Fed

Liquid Pressure Bar. G.																		
Metering Set	Liquid Tip & Aircap	0.2 Bar			0.3 Bar			0.7 Bar			1.5 Bar			3.0 Bar				
		Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr		
15-13	LIQUID TIP W13154-4	0.60 0.70	91.00 102.00	13.40	0.70 1.10	102.00 130.00	16.40	1.40 2.10	156.00 210.00	25.00	2.10 2.80	210.00 260.00	37.00	3.20 4.20	285.00 360.00	52.00		
	AIRCAP W13159-4	1.10 1.40	130.00 156.00		1.80 2.10	184.00 210.00		2.50 2.80	235.00 260.00		3.50 4.20	310.00 360.00		5.30 5.60	430.00 455.00			
15-14	LIQUID TIP W13154-5  AIRCAP W13159-3	0.70	85.00	17.60	1.40	116.00	22.00	1.80	139.00	33.00	2.80	195.00	48.00	3.50	232.00	68.00		
		1.00	102.00		1.80	139.00		2.10	156.00		2.10	156.00		2.10	156.00		3.20	212.00
		1.40	116.00		2.10	156.00		2.50	178.00		2.50	178.00		2.50	178.00		3.50	227.00
		1.80	139.00		2.50	178.00		2.80	195.00		2.80	195.00		2.80	195.00		4.20	266.00
		2.10	156.00		2.80	195.00		3.50	227.00		3.50	227.00		3.50	227.00		4.90	312.00
		2.80	195.00		3.50	227.00		4.20	266.00		4.20	266.00		4.20	266.00		5.60	360.00
3.50	227.00	4.20	266.00	4.90	312.00	4.90	312.00	4.90	312.00	6.30	411.00							
6.60	428.00	6.60	428.00	6.60	428.00	6.60	428.00	6.60	428.00	6.60	428.00	6.60	428.00	6.60	428.00			
15-15	LIQUID TIP W13154-5	0.60 1.10	91.00 130.00	17.60	0.70 1.40	102.00 156.00	22.00	1.10 1.80	130.00 184.00	33.00	2.50 3.20	235.00 285.00	48.00	3.50 4.60	310.00 380.00	68.00		
	AIRCAP W13159-4	1.40 1.80	156.00 184.00		1.80 2.10	184.00 210.00		2.50 2.80	235.00 260.00		3.90 4.20	330.00 360.00		6.00 6.70	475.00 525.00			
15-16	LIQUID TIP W13154-6	0.70 1.10	102.00 130.00	36.00	1.10 1.40	130.00 156.00	45.00	1.80 2.10	184.00 210.00	68.00	3.20 3.50	285.00 310.00	100.00	5.30 6.00	430.00 475.00	141.00		
	AIRCAP W13159-4	1.40 1.80	156.00 184.00		2.10 2.50	210.00 235.00		2.80 3.20	260.00 285.00		4.90 5.90	405.00 455.00		6.70 7.00	525.00 550.00			
15-17	LIQUID TIP W13154-6  AIRCAP W13159-3	1.00	102.00	36.00	1.80	139.00	45.00	2.50	178.00	68.00	3.20	212.00	100.00	3.90	255.00	141.00		
		1.40	116.00		2.10	156.00		2.80	195.00		3.50	227.00						
		1.80	139.00		2.50	178.00		3.20	212.00		3.90	246.00						
		2.10	156.00		2.80	195.00		4.20	266.00		4.20	266.00						
		2.50	178.00		3.20	212.00		4.90	312.00		4.90	312.00						
		2.80	195.00		3.50	227.00		5.60	360.00		5.60	360.00						
3.50	227.00	4.20	266.00	5.60	360.00	5.60	360.00	6.30	411.00	7.00	453.00							
15-18	LIQUID TIP W13154-8  AIRCAP W13159-5	1.80	235.00	36.00	1.80	235.00	45.00	2.50	300.00	68.00	3.90	410.00	100.00					
		2.10	260.00		2.10	260.00		2.80	330.00		4.20	445.00						
		2.50	300.00		2.50	300.00		3.20	355.00		4.60	480.00						
		2.80	330.00		2.80	330.00		3.50	380.00		4.90	529.00						
		3.20	355.00		3.20	355.00		3.90	410.00		5.30	565.00						
		3.50	380.00		3.50	380.00		4.20	445.00		5.60	600.00						
4.20	445.00	4.20	445.00	4.90	520.00	6.30	685.00											
15-19	LIQUID TIP W13154-9  AIRCAP W13159-5	2.10	260.00	64.00	2.80	330.00	78.00	3.90	410.00	119.00	4.90	520.00	175.00					
		2.50	300.00		3.20	355.00		4.20	445.00		5.30	565.00						
		2.80	330.00		3.50	380.00		4.60	480.00		5.60	600.00						
		3.20	355.00		3.90	410.00		4.90	520.00		6.00	640.00						
		3.50	380.00		4.20	445.00		5.30	565.00		6.30	685.00						
		4.20	445.00		4.90	520.00		5.60	600.00		6.30	685.00						
4.90	520.00	5.60	600.00	6.30	685.00	6.30	685.00											
15-20	LIQUID TIP W13154-10  AIRCAP W13159-5	2.80	330.00	102.00	3.50	380.00	125.00	4.60	480.00	192.00	5.60	600.00	280.00					
		3.20	355.00		3.50	410.00		4.90	520.00		6.00	640.00						
		3.50	380.00		4.20	445.00		5.30	565.00		6.30	685.00						
		3.90	410.00		4.60	480.00		5.60	600.00		6.30	685.00						
		4.20	445.00		4.90	520.00		6.00	640.00		6.30	685.00						
		4.60	480.00		5.30	565.00		6.30	685.00		6.30	685.00						
4.90	520.00	5.60	600.00	6.30	685.00	6.30	685.00											

# AL 30 - Internal Mix



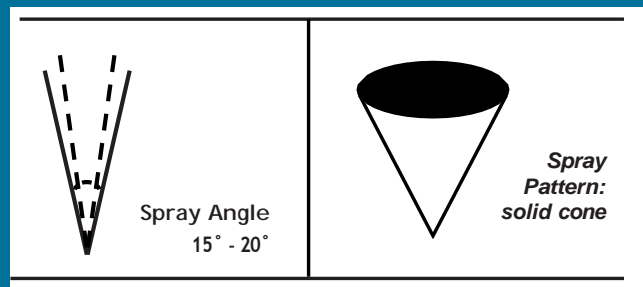
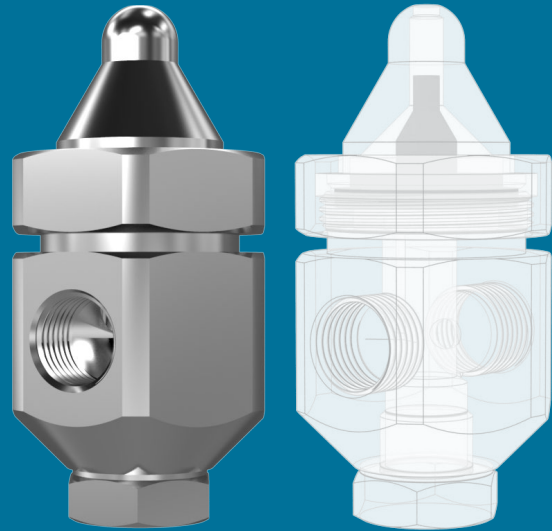
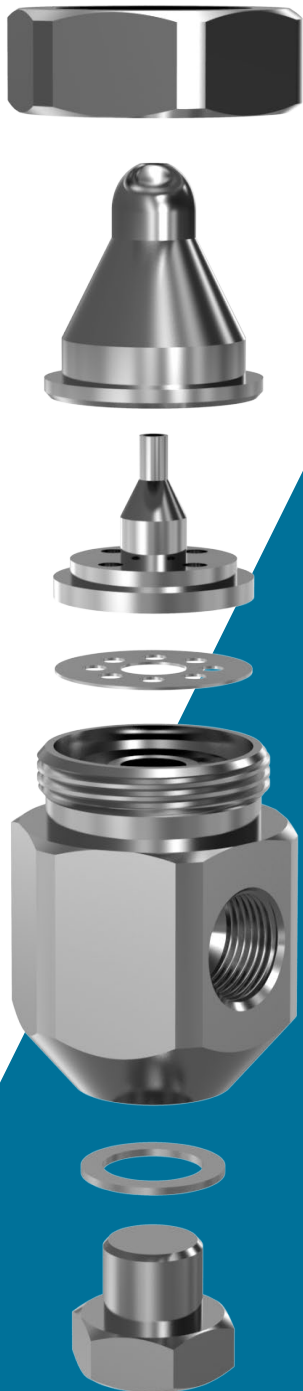
The AL 30 series produces a wide, round spray pattern with a nominal angle of 70°. This is an internal mix nozzle, where a change in air or liquid pressure will result in a change of flow or atomization. Increasing air pressure decreases flow and increases atomization. Increasing liquid pressure increases flow and decreases atomization.

## AL 30 Wide Angle Internal Mix

Liquid Pressure Bar. G.

Metering Set	Liquid Tip & Aircap	0.7 Bar			1.5 Bar			2.0 Bar			3.0 Bar			4.0 Bar			
		Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	
30-01	LIQUID TIP W13154-2  AIRCAP W13157-1	0.6	10.2	5.3	1.1	13.3	8.1	1.5	16.4	8.1	2.4	22.0	8.9	3.1	24.0	10.5	
		0.7	12.2	4.3	1.3	15.0	7.0	1.8	21.0	6.6	2.7	26.0	8.1	3.4	28.0	9.7	
		0.9	14.2	3.0	1.4	17.0	6.4	2.1	25.0	4.9	3.0	30.0	6.4	3.9	36.0	7.8	
		1.0	17.0	1.7	1.5	19.0	5.5	2.4	29.0	3.2	3.2	34.0	4.9	4.2	42.0	6.1	
							1.7	22.0	4.5			3.4	37.0	4.2	4.6	47.0	4.4
					1.8	24.0	3.5			3.5	40.0	3.4	4.9	54.0	2.8		
30-02	LIQUID TIP W13154-5  AIRCAP W13157-3	0.9	50.0	7.0	1.7	68.0	13.2	2.0	68.0	18.5	2.8	84.0	25.0	3.7	96.0	31.0	
		1.0	62.0	2.1	1.8	79.0	9.8	2.1	76.0	15.1	3.0	92.0	22.0	3.8	105.0	28.0	
									2.2	85.0	11.7	3.1	101.0	18.5	3.9	113.0	26.0
												3.2	109.0	15.1	4.1	122.0	23.0
												3.4	119.0	12.1	4.2	130.0	20.0
										3.5	130.0	9.1	4.6	153.0	13.6		
										3.7	142.0	6.1	4.9	183.0	6.8		
30-03	LIQUID TIP W13154-6  AIRCAP W13157-3	0.7	32.0	24.0	1.4	37.0	43.0	2.1	66.0	33.0	2.8	65.0	52.0	3.7	68.0	63.0	
		0.9	44.0	13.6	1.5	49.0	35.0	2.2	78.0	26.0	3.0	76.0	46.0	3.8	79.0	58.0	
		1.0	57.0	7.6	1.7	61.0	28.0	2.4	89.0	18.9	3.1	87.0	39.0	3.9	101.0	52.0	
					1.8	71.0	21.0	2.5	100.0	11.7	3.2	99.0	33.0	4.2	111.0	41.0	
											3.4	110.0	26.0	4.6	138.0	27.0	
										3.5	122.0	19.5	4.9	166.0	16.0		
										3.7	133.0	13.2					
30-04	LIQUID TIP W13154-6  AIRCAP W13157-4	1.3	85.0	36.0	2.1	116.0	57.0	3.1	156.0	53.0	4.2	197.0	64.0	5.6	245.0	74.0	
		1.5	102.0	29.0	2.4	130.0	51.0	3.2	163.0	50.0	4.9	230.0	51.0	6.0	260.0	68.0	
		1.8	117.0	23.0	2.7	143.0	45.0	3.4	170.0	47.0	5.6	265.0	40.0	6.3	280.0	62.0	
		2.0	125.0	19.7	3.0	157.0	39.0	3.5	177.0	45.0	6.0	285.0	34.0	6.7	295.0	56.0	
		2.1	133.0	16.7	3.2	170.0	33.0	3.9	194.0	38.0	6.3	300.0	28.0	7.0	315.0	51.0	
2.3	142.0	14.0	3.5	185.0	28.0	4.6	230.0	25.0	6.7	320.0	22.0						
2.4	149.0	11.4	4.2	220.0	13.6	4.9	245.0	18.5	7.0	335.0	17.8						
30-05	LIQUID TIP W13154-5  AIRCAP W13157-2	1.1	40.0	12.3	2.2	62.0	16.3	2.7	69.0	21.0	4.2	100.0	19.3	5.6	130.0	22.0	
		1.3	45.0	9.9	2.5	71.0	12.1	3.0	78.0	16.3	4.6	113.0	14.6	6.0	142.0	17.6	
		1.4	50.0	7.9	2.8	79.0	8.9	3.2	86.0	12.3	4.9	124.0	10.8	6.3	152.0	14.0	
		1.5	54.0	6.1	3.0	83.0	7.6	3.4	91.0	10.7	5.3	135.0	8.1	6.7	163.0	11.4	
		1.7	58.0	4.9	3.1	87.0	6.4	3.5	94.0	9.3	5.6	146.0	6.2	7.0	174.0	9.1	
1.8	62.0	3.9	3.2	91.0	5.5	3.9	105.0	6.4	6.0	157.0	4.9						
2.0	67.0	3.1	3.4	95.0	4.7	4.2	115.0	4.7	6.3	167.0	4.0						
30-06	LIQUID TIP W13154-10  AIRCAP W13157-5	1.7	156.0	25.0	3.0	230.0	39.0	3.4	250.0	50.0	4.6	320.0	62.0	6.0	395.0	93.0	
		1.8	167.0	19.7	3.1	240.0	33.0	3.5	260.0	43.0	4.9	345.0	47.0	6.3	425.0	77.0	
		2.0	178.0	15.1	3.2	255.0	27.0	3.7	275.0	41.0	5.3	375.0	36.0	6.7	460.0	62.0	
		2.1	193.0	11.4	3.4	265.0	23.0	3.9	300.0	27.0	5.6	405.0	26.0	7.0	495.0	52.0	
		2.3	205.0	7.6	3.5	280.0	18.5	4.1	310.0	23.0	6.0	435.0	18.9				
			3.7	290.0	14.8	4.2	320.0	18.9	6.3	460.0	13.6						
							4.4	335.0	15.9								

# AL 45 - Internal Mix



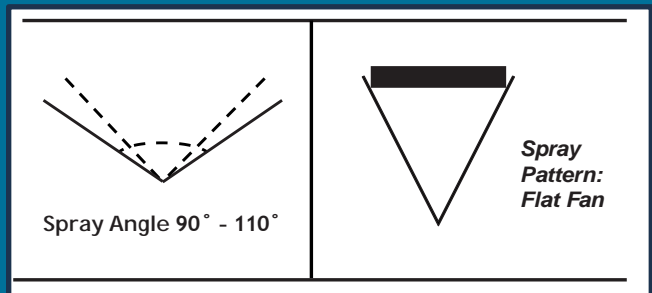
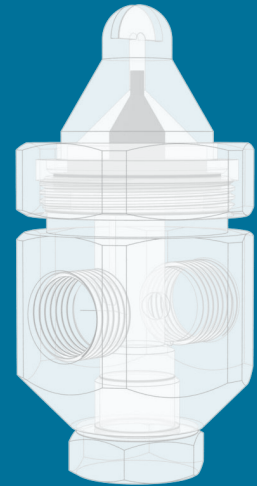
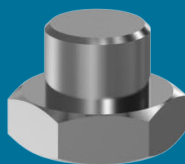
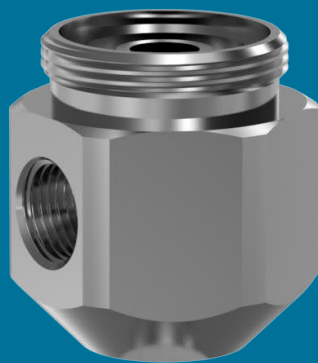
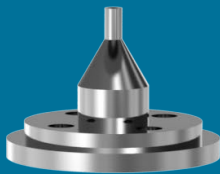
The AL 45 series produces a narrow angle spray pattern with a nominal angle of 15°–20°. This is an internal mix nozzle, where a change in air or liquid pressure will result in a change of flow or atomization. Increasing air pressure decreases flow and increases atomization. Increasing liquid pressure decreases flow and increases atomization. Increasing liquid pressure increases and decreases atomization.

## AL 45 Narrow Angle Internal Mix

Liquid Pressure Bar. G.

Metering Set	Liquid Tip & Aircap	0.7 BAR			1.5 BAR			2.0 Bar			3.0 Bar			4.0 Bar			
		Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	
45-01	LIQUID TIP W13154-2	0.7	15.6	2.5	1.1	11.9	6.4	1.4	13.9	6.4	2.7	23.0	6.2	3.5	28.0	7.8	
		0.9	19.0	1.8	1.4	15.0	5.0	1.7	16.7	5.5	2.8	25.0	5.7	3.7	29.0	7.3	
		1.0	22.0	1.4	1.7	18.7	4.1	2.0	19.8	4.5	3.0	27.0	5.2	3.9	33.0	6.4	
	AIRCAP W13156-1				1.8	20.0	3.4	2.2	24.0	3.4	3.1	29.0	4.7	4.2	38.0	5.5	
					2.0	23.0	3.0	2.4	26.0	3.0	3.2	31.0	4.3	4.5	43.0	4.5	
					2.1	25.0	2.6	2.5	28.0	2.5	3.4	33.0	3.9	4.6	45.0	4.1	
45-02	LIQUID TIP W13154-2	0.7	18.7	2.5	1.4	27.0	5.7	1.7	29.0	6.7	2.2	34.0	9.2	2.8	39.0	11.9	
		0.9	22.0	2.0	1.5	29.0	5.2	1.8	31.0	6.4	2.5	39.0	8.2	3.1	43.0	11.0	
		1.0	26.0	1.6	1.7	32.0	4.8	2.0	34.0	5.9	2.8	44.0	7.2	3.4	47.0	11.0	
	AIRCAP W13156-2				1.8	35.0	4.3	2.1	37.0	5.2	3.0	47.0	6.7	3.7	52.0	9.2	
					2.0	37.0	3.9	2.2	40.0	4.8	3.1	49.0	6.3	3.9	58.0	8.4	
					2.1	40.0	3.4	2.4	43.0	4.3	3.2	52.0	5.9	4.2	58.0	7.6	
45-03	LIQUID TIP W13156-2	0.9	21.0	4.8	1.7	31.0	8.4	2.0	33.0	10.7	2.7	37.0	16.5	3.4	43.0	20.0	
		1.1	27.0	4.1	1.8	35.0	7.5	2.1	37.0	9.8	2.8	38.0	15.4	3.7	47.0	18.4	
		1.4	33.0	3.4	2.0	37.0	7.0	2.4	42.0	8.2	3.1	43.0	13.6	3.9	50.0	16.8	
	AIRCAP W13156-2	1.5	35.0	3.1	2.2	44.0	5.7	2.7	48.0	6.8	3.4	49.0	11.8	4.2	55.0	15.2	
		1.7	39.0	3.0	2.5	49.0	4.8	3.0	55.0	5.9	3.7	55.0	10.4	4.5	60.0	13.8	
		1.8	41.0	2.9	2.8	54.0	4.1	3.2	59.0	5.0	3.9	61.0	9.1	4.8	65.0	12.4	
45-04	LIQUID TIP W13154-5	2.0	44.0	2.8	3.1	59.0	3.6	3.5	65.0	4.1	4.2	65.0	7.9	4.9	68.0	11.8	
		1.1	76.0	13.0	2.2	116.0	17.8	2.8	136.0	20.0	3.4	149.0	32.0	4.6	193.0	37.0	
		1.4	91.0	8.9	2.5	130.0	13.1	3.1	149.0	16.3	3.9	170.0	25.0	5.3	220.0	29.0	
	AIRCAP W13156-3	1.5	98.0	7.2	2.8	143.0	9.5	3.4	163.0	11.9	4.6	205.0	15.9	5.6	235.0	25.0	
		1.7	105.0	5.8	3.1	157.0	7.0	3.9	187.0	7.0	5.3	240.0	9.1	6.0	250.0	21.0	
		1.8	112.0	4.7	3.4	171.0	4.9	4.2	205.0	4.7	5.6	255.0	6.8	6.3	270.0	17.4	
45-05	LIQUID TIP W13154-6	2.0	119.0	3.6	3.5	178.0	4.2	4.6	220.0	3.0	6.0	275.0	5.0	6.7	290.0	14.0	
		2.1	127.0	2.7													
		0.9	57.0	31.0	1.4	69.0	61.0	2.1	96.0	53.0	2.7	103.0	80.0	3.8	135.0	88.0	
	AIRCAP W13156-3	1.0	66.0	25.0	1.5	76.0	54.0	2.4	96.0	41.0	3.0	117.0	69.0	4.2	156.0	73.0	
		1.1	75.0	18.5	1.7	85.0	48.0	2.7	127.0	31.0	3.2	130.0	59.0	4.6	176.0	61.0	
		1.3	85.0	12.9	1.8	93.0	41.0	2.8	136.0	26.0	3.5	146.0	49.0	4.9	196.0	48.0	
45-06	LIQUID TIP W13154-10				2.0	102.0	35.0	3.0	144.0	22.0	3.7	154.0	44.0	5.3	215.0	39.0	
					2.1	110.0	30.0				3.8	161.0	37.0	5.6	240.0	31.0	
					2.2	119.0	25.0				3.9	170.0	35.0	6.0	260.0	23.0	
	AIRCAP W13156-4	1.0	86.0	44.0	1.4	19.0	125.0	2.0	108.0	123.0	2.2	88.0	199.0	3.0	99.0	250.0	
		1.1	102.0	32.0	1.5	91.0	106.0	2.1	119.0	108.0	2.5	110.0	174.0	3.2	120.0	225.0	
					1.7	105.0	87.0	2.2	130.0	95.0	2.8	133.0	146.0	3.5	141.0	205.0	
			1.8	118.0	70.0	2.4	143.0	79.0	3.1	154.0	121.0	3.8	163.0	182.0			
			2.0	130.0	55.0	2.5	155.0	64.0	3.2	166.0	108.0	4.1	184.0	159.0			
						2.7	166.0	52.0	3.4	176.0	95.0	4.6	225.0	121.0			
						2.8	178.0	42.0	3.5	187.0	84.0	4.9	255.0	93.0			

# AL 60 - Internal Mix



The AL 60 series produces a wide angle flat fan spray pattern with a nominal angle of 90°–110°. This is an internal mix nozzle, where a change in air or liquid pressure will result in a change of flow or atomization. Increasing air pressure decreases flow and increases atomization. Increasing liquid pressure increases flow and decreases atomization.



## AL 60 Flat Spray Internal Mix

Liquid Pressure Bar. G.

Metering Set	Liquid Tip & Aircap	0.7 BAR			1.5 BAR			2.0 Bar			3.0 Bar			4.0 Bar		
		Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr	Air Press. BAR	Air L/Min	Liquid L/Hr
60-01	LIQUID TIP W13154-2  AIRCAP W13158-2	0.7	24.0	5.5	1.3	31.0	9.1	2.0	42.0	8.6	2.7	52.0	11.2	3.9	69.0	12.0
		0.9	27.0	4.7	1.5	36.0	7.7	2.2	47.0	7.5	3.0	56.0	10.1	4.6	81.0	9.7
		1.0	31.0	4.1	1.8	42.0	6.5	2.5	52.0	6.2	3.2	62.0	9.1	5.3	93.0	7.5
		1.1	34.0	3.5	2.1	47.0	5.4	2.8	57.0	5.2	3.5	66.0	8.1	6.0	104.0	5.3
		1.3	37.0	3.0	2.4	52.0	4.3	3.1	63.0	4.2	4.2	79.0	5.4	6.3	110.0	4.3
		1.4	40.0	2.5	2.7	57.0	3.3	3.2	65.0	3.7	4.6	85.0	4.2	6.7	116.0	3.3
60-02	LIQUID TIP W13154-3  AIRCAP W13158-2	1.5	44.0	2.0	2.8	60.0	2.8	3.4	68.0	3.2	4.9	91.0	3.1	7.0	122.0	2.4
		0.9	19.8	8.2	1.4	27.0	14.4	2.1	36.0	13.5	2.7	42.0	19.1	4.6	69.0	16.1
		1.0	23.0	6.8	1.7	32.0	11.9	2.4	42.0	11.4	3.0	46.0	17.1	4.9	76.0	13.8
		1.1	27.0	5.5	2.0	37.0	9.5	2.7	47.0	9.2	3.2	52.0	15.1	5.3	83.0	11.5
		1.3	30.0	4.1	2.1	40.0	8.3	3.0	53.0	7.1	3.5	57.0	13.1	5.6	90.0	9.3
		1.4	34.0	2.9	2.2	43.0	7.1	3.2	59.0	5.0	4.2	72.0	8.1	6.0	97.0	7.3
60-03	LIQUID TIP W13154-3  AIRCAP W13158-3	2.4	46.0	6.1	3.4	63.0	4.0	4.8	79.0	5.9	6.3	104.0	5.6	6.3	104.0	5.6
		2.5	49.0	5.1	3.5	66.0	3.3	4.9	86.0	4.0	6.7	112.0	4.3	6.7	112.0	4.3
		1.0	25.0	9.0	2.0	41.0	10.4	2.4	48.0	11.6	3.1	56.0	15.6	4.2	73.0	17.1
		1.1	30.0	7.8	2.1	45.0	9.3	2.5	51.0	10.4	3.2	59.0	14.6	4.6	80.0	15.0
		1.3	32.0	6.6	2.2	48.0	8.2	2.7	54.0	9.4	3.4	62.0	13.7	4.9	87.0	12.8
		1.4	36.0	5.2	2.5	55.0	6.1	3.0	61.0	7.3	3.8	71.0	10.8	5.3	94.0	11.0
60-04	LIQUID TIP W13154-3  AIRCAP W13158-1	1.7	44.0	3.1	2.8	62.0	4.3	3.2	68.0	5.5	4.2	82.0	8.5	5.6	103.0	9.4
		2.0	50.0	2.0	3.1	69.0	3.0	3.5	75.0	4.1	4.9	98.0	5.2	6.3	119.0	7.2
		2.2	56.0	1.1	3.4	75.0	2.0	3.8	81.0	2.9	6.0	120.0	2.3	7.0	134.0	6.1
		1.3	30.0	3.9	2.1	40.0	7.4	3.0	52.0	6.1	3.9	60.0	9.4	5.3	78.0	10.2
		1.4	33.0	3.0	2.4	45.0	5.3	3.1	54.0	5.3	4.2	67.0	7.2	5.6	84.0	8.3
		1.5	35.0	2.3	2.5	47.0	4.4	3.2	57.0	4.5	4.6	73.0	5.3	6.0	89.0	6.6
60-05	LIQUID TIP W13154-6  AIRCAP W13158-5	1.7	38.0	1.8	2.7	50.0	3.7	3.4	59.0	3.8	4.9	80.0	3.8	6.3	98.0	5.1
		1.8	41.0	1.3	2.8	52.0	3.1	3.5	62.0	3.2	4.9	80.0	3.8	6.3	98.0	5.1
		2.0	44.0	1.0	3.0	55.0	2.6	3.9	68.0	1.8	3.9	62.0	3.2	4.9	80.0	5.1
		3.1	57.0	2.1	3.1	57.0	2.1	3.9	68.0	1.8	3.9	62.0	3.2	4.9	80.0	5.1
		1.0	23.0	17.0	2.0	44.0	24.0	2.4	51.0	28.0	3.4	72.0	38.0	3.9	75.0	65.0
		1.1	27.0	11.0	2.1	50.0	18.9	2.5	59.0	23.0	3.5	80.0	33.0	4.2	89.0	53.0
60-06	LIQUID TIP W13154-5  AIRCAP W13158-4	1.3	33.0	7.6	2.2	56.0	14.4	2.7	66.0	18.9	3.7	89.0	28.0	4.6	108.0	40.0
		1.4	40.0	3.2	2.4	63.0	10.6	2.8	74.0	15.1	3.8	97.0	23.0	4.9	127.0	30.0
		2.5	71.0	7.2	3.0	79.0	7.2	3.0	79.0	11.7	3.9	105.0	19.7	5.3	149.0	21.0
		4.2	120.0	13.1	4.6	138.0	7.2	4.6	138.0	7.2	4.6	138.0	7.2	6.3	225.0	3.2
		1.1	54.0	11.2	2.1	79.0	18.0	2.7	93.0	19.6	3.5	112.0	27.0	4.6	137.0	33.0
		1.3	60.0	8.5	2.2	84.0	15.8	2.8	98.0	17.3	3.7	116.0	25.0	4.9	149.0	28.0
60-07	LIQUID TIP W13154-6  AIRCAP W13158-4	1.4	65.0	6.5	2.4	89.0	13.6	3.0	103.0	15.2	3.8	121.0	23.0	5.3	161.0	24.0
		1.5	71.0	5.0	2.5	95.0	11.6	3.1	109.0	13.2	3.9	128.0	21.0	5.6	174.0	19.7
		1.7	77.0	3.8	3.2	114.0	11.4	3.2	114.0	11.4	4.1	132.0	18.9	6.0	187.0	15.7
		4.2	137.0	17.0	4.2	137.0	17.0	4.2	137.0	17.0	4.2	137.0	17.0	6.3	200.0	12.4
		0.9	33.0	27.0	1.8	55.0	38.0	2.1	67.0	39.0	3.2	76.0	58.0	4.6	106.0	59.0
		1.0	38.0	20.0	2.1	66.0	28.0	2.2	77.0	30.0	3.5	87.0	47.0	5.3	132.0	140.0
60-08	LIQUID TIP W13154-10  AIRCAP W13158-6	1.1	45.0	15.9	2.2	71.0	24.0	2.4	87.0	24.0	3.8	97.0	38.0	5.6	145.0	125.0
		1.1	48.0	12.5	2.4	76.0	21.0	2.5	98.0	17.8	3.9	103.0	34.0	6.0	158.0	89.0
		1.3	56.0	10.2	2.5	82.0	17.8	2.7	103.0	15.1	4.2	113.0	27.0	6.3	172.0	58.0
		1.4	62.0	7.6	2.7	87.0	15.1	2.7	109.0	12.9	4.6	126.0	20.0	6.7	185.0	34.0
		1.5							114.0	10.6	4.9	140.0	14.8	7.0	198.0	16.7
		1.0	90.0	29.0	1.8	117.0	56.0	2.1	119.0	100.0	3.0	140.0	126.0	4.1	181.0	140.0
60-08	LIQUID TIP W13154-10  AIRCAP W13158-6	1.1	108.0	18.9	2.0	133.0	40.0	2.2	133.0	79.0	3.1	151.0	110.0	4.2	193.0	125.0
		2.4	147.0	62.0	2.4	147.0	62.0	2.4	147.0	62.0	3.2	163.0	95.0	4.2	225.0	89.0
		2.5	162.0	48.0	2.5	162.0	48.0	2.5	162.0	48.0	3.4	184.0	78.0	4.9	165.0	58.0
		2.7	177.0	36.0	2.7	177.0	36.0	2.7	177.0	36.0	3.5	193.0	62.0	5.3	305.0	34.0
		3.7	210.0	48.0	3.7	210.0	48.0	3.7	210.0	48.0	3.7	210.0	48.0	5.6	340.0	16.7
		3.8	225.0	37.0	3.8	225.0	37.0	3.8	225.0	37.0	3.8	225.0	37.0	5.6	340.0	16.7



## **About TEXTRA Nozzles**

Since 1994, Textra Nozzles has been a leading supplier of high-quality spray technologies, specializing in the development and supply of precision nozzles for various industrial applications. With years of experience and expertise in the industry, Textra Nozzles offers innovative solutions tailored to the specific needs of our customers.

We believe in a customer-centric approach, working closely with our customers to provide customized solutions that meet their specific requirements. Our expert teams of engineers and technicians are on hand to offer advice and support in selecting the right nozzle for each application.

## **About delavan**

Delavan®, part of R.W. Beckett, is a world leader in the design and manufacture of high quality spray nozzles and fluid handling systems. Since 1935, Delavan has grown to be one of the leading spray nozzle manufacturers. Operating from dedicated manufacturing facilities, Delavan® now supplies more than 30,000 different components to thousands of customers in virtually every manufacturing and processing industry..

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