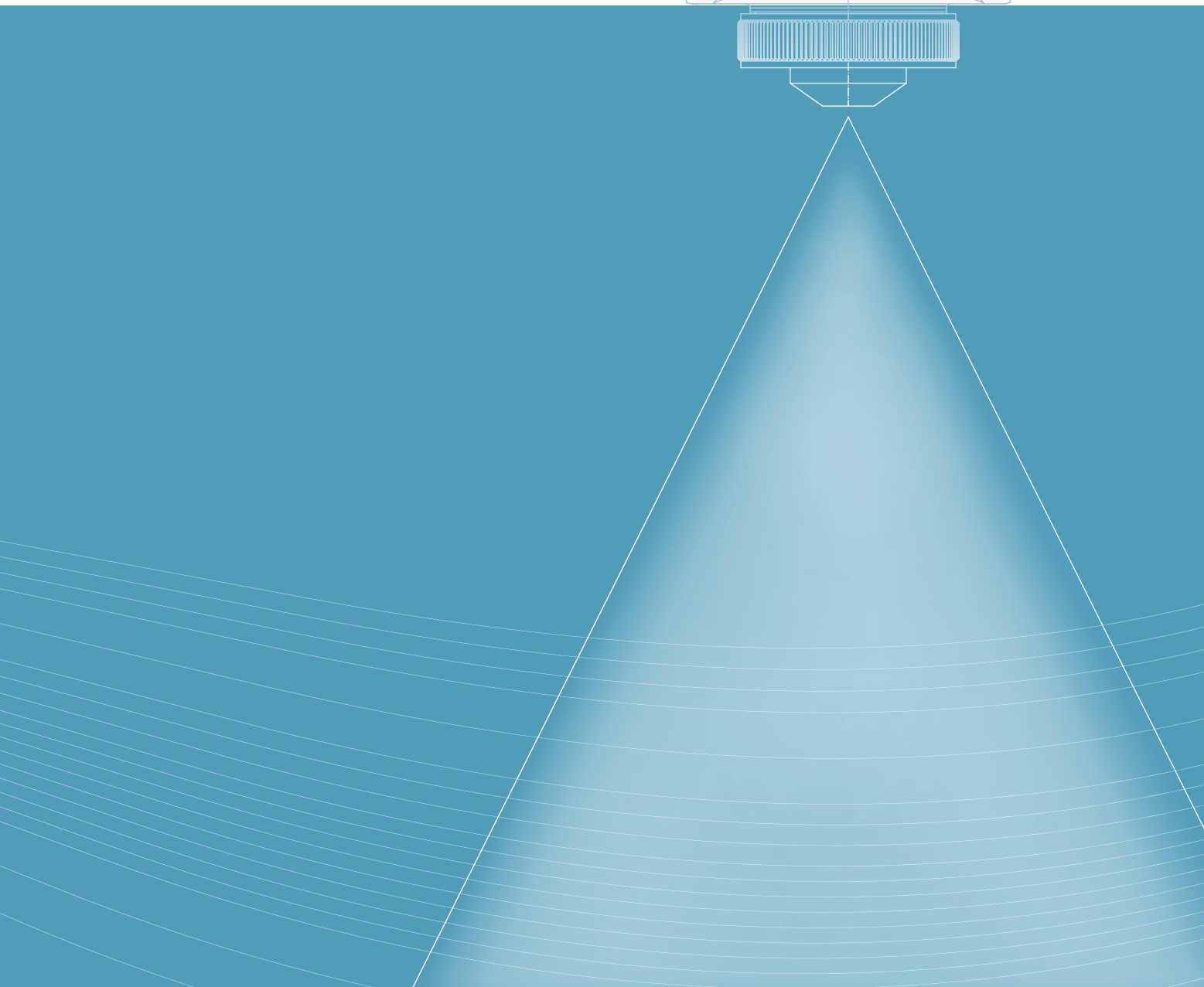
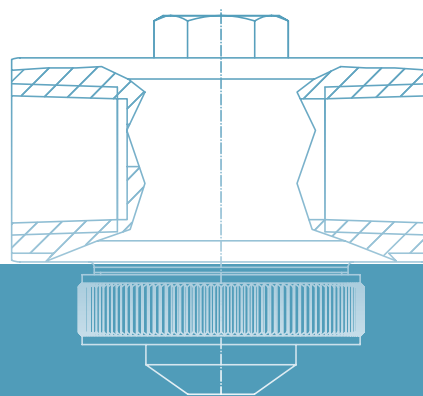




# ➤ PNEUMATIC ATOMIZING NOZZLES





# ➤ PNEUMATIC ATOMIZING NOZZLES GENERAL INFORMATION

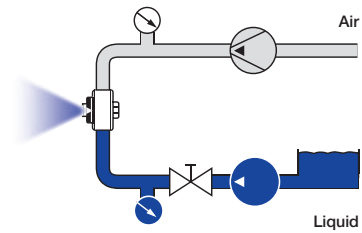
Pneumatic atomizing nozzles produce extremely fine droplets with a small droplet size. There are two options available: Internal Mixing (for lower viscosity fluids) where the mixing of gas and liquid happens inside the nozzle and External Mixing (for higher viscosity fluids) where the mixing of gas and liquid happens outside the nozzle. Depending on the option chosen, the liquid can be gravity/siphon fed or pressurized. Flat fan, full cone and solid stream spray patterns are available.

## Pneumatic atomizing nozzles

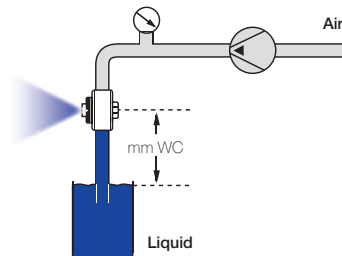


- Produces extremely fine droplets.
- Wide range of liquid-supply.
- Internal or external mixing.
- Suitable for humidification, cooling and the atomization of viscous fluids.

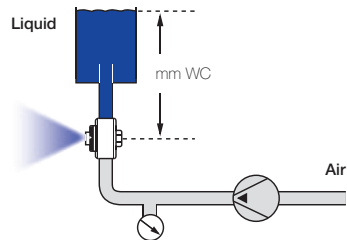
## Liquid pressure principle








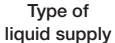
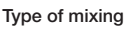


## Siphon principle









## Supply principle











		Pneumatic atomizing nozzles			
					
<b>Series</b>		136.1	136.2	136.3	136.4
<b>Information on page</b>		115	117	118	121
 Spray pattern	Full cone	•	•	•	
	Flat fan				•
	Solid stream				
 Type of liquid supply	Pressure principle	•	•		•
	Siphon and/or supply principle			•	
 Type of mixing	Internal mixing	•	•		•
	External mixing			•	
 Flow rate	gal/h	0.11–24.62	0.11–35.11	0.08–17.63	0.03–20.10
 Spray angle	Small (15°–30°)	•		•	
	Medium (45°)				•
	Large (60°–80°)		•		•

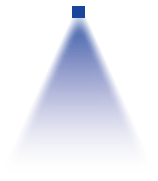
					
136.5	136.6	166.1	166.2	166.4	166.6
123	125	131	133	134	136
		•	•		
•	•			•	•
	•	•	•	•	•
•					
•		•	•	•	
	•				•
0.21–0.85	0.44–26.97	0.11–24.62	0.11–35.11	0.03–20.10	0.44–26.97
		•			
	•			•	•
•	•		•	•	•



# PNEUMATIC ATOMIZING NOZZLES OVERVIEW OF SERIES



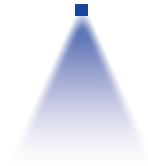
Pneumatic atomizing nozzles					
					
Series		176 ViscoMist	140	170	150
Information on page		139	138	on request	on request
Spray pattern	Full cone	•	•	•	•
	Flat fan	•			
	Solid stream	•			
Type of liquid supply	Pressure principle	•		•	•
	Siphon and/or supply principle		•		
Type of mixing	Internal mixing		•	•	
	External mixing	•			•
Flow rate 	gal/h	2.06–81.10	1.19–3.17	2.25–76.61 [gal/min]	0.04–16.64 [gal/min]
Spray angle 	Small (15°–30°)	•	•	•	•
	Medium (45°)				
	Large (60°–80°)				





# ➤ Pneumatic atomizing nozzles, full cone, pressure principle, internal mixing

## Series 136.1

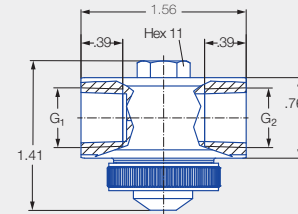


### Features:

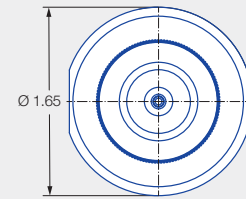
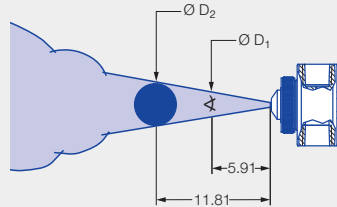
- Fine full cone atomization
- Liquid pressure principle
- Internal mixing

### Applications:

- Humidification of air
- Cooling



Series 136.1



Liquid connection G <sub>1</sub>	Air connection G <sub>2</sub>	Screw plug thread (size 11)	Weight [lb] (Stainless steel 303)
1/4 NPT	1/4 NPT	5/16-24 UNF-2A	0.5

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions								
	Type	Material number		10				20				40				60				p air [psi]	p water [psi]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]	
		1Y		16	p air [psi]	V̇ water [gal/h]	V̇ <sub>a</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>a</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>a</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>a</sub> air [SCFM]								
20°	136.115.xx.B2	●	●	0.2	6	1.6	0.18	20	1.5	.47	35	2.4	0.6	44	2.9	0.7	12	10	2	4				
					12	1.0	0.35	26	1.1	.59	41	2.0	0.7	49	2.5	0.8	26	22	2	4				
		17	.45		0.53	32	.58	.82	46	1.6	0.9	55	2.2	0.9	38	29	2	4						
		-	-		-	38	.32	1.0	52	1.2	1.1	61	1.8	1.1	46	44	2	4						
		-	-		-	-	-	-	58	0.8	1.2	67	1.5	1.3	64	58	2	4						
		-	-		-	-	-	-	64	0.5	1.5	73	1.1	1.5	-	-	-	-						
		-	-		-	-	-	-	70	0.3	1.6	78	0.8	1.6	-	-	-	-						
		-	-		-	-	-	-	76	0.1	1.8	84	0.6	1.8	-	-	-	-						
		-	-		-	-	-	-	82	0.1	2.0	90	0.5	2.0	-	-	-	-						
		-	-		-	-	-	-	88	0.1	2.2	96	0.4	2.2	-	-	-	-						
	136.125.xx.B2	●	●	0.5	12	1.3	0.9	17	1.8	1.1	41	2.4	1.9	49	2.8	2.3	20	10	2	4				
					17	1.2	1.1	23	1.7	1.3	46	2.3	2.2	55	2.7	2.5	32	22	2	4				
		23	1.1		1.4	29	1.6	1.5	52	2.2	2.4	61	2.6	2.7	41	29	2	4						
		29	0.9		1.5	35	1.5	1.8	58	2.1	2.6	67	2.5	2.9	49	44	2	4						
		35	0.8		1.8	41	1.4	2.0	64	2.0	2.8	73	2.4	3.2	61	58	2	4						
		41	0.7		1.9	46	1.3	2.2	70	1.9	3.1	78	2.3	3.4	-	-	-	-						
		46	0.5		2.2	52	1.2	2.4	75	1.8	3.3	84	2.2	3.6	-	-	-	-						
		52	0.4		2.4	58	1.0	2.6	81	1.7	3.5	-	-	-	-	-	-	-						
		58.0	0.3		3	63.8	0.9	3	87	1.6	4	-	-	-	-	-	-	-						
		63.8	0.3		3	69.6	0.8	3	-	-	-	-	-	-	-	-	-	-						
69.6	0.2	3	75.4	0.7	3	-	-	-	-	-	-	-	-	-	-									
-	-	-	81.2	0.6	3	-	-	-	-	-	-	-	-	-	-									
-	-	-	87.0	0.5	4	-	-	-	-	-	-	-	-	-	-									





Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]	
		1Y		16	p air [psi]	V̇ water [gal/h]	V̇ <sub>air</sub> [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>air</sub> [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>air</sub> [SCFM]	p air [psi]	V̇ water [gal/h]					V̇ <sub>air</sub> [SCFM]
		Stainless steel 316L		Stainless steel 303																
20°	136.134.xx.B2	●	●	0.03	17	3.5	1.6	29	5.1	2.3	44	7.5	3.1	55	9.6	3.6	26	10	2	4
					23	3.3	1.9	35	4.8	2.6	49	7.2	3.4	61	8.4	4.0	41	22	2	4
					29	3.1	2.3	41	4.6	2.9	55	7.0	3.7	67	8.2	4.3	55	29	2	4
					35	3.0	2.6	46	4.4	3.2	61	6.8	4.0	73	8.1	4.6	75	44	3	4
					41	2.9	2.9	52	4.2	3.5	67	6.6	4.3	78	7.9	4.9	87	58	3	4
					46	2.8	3.2	58	4.1	3.8	73	6.4	4.6	84	7.7	5.2	-	-	-	-
					52	2.8	3.5	64	4.0	4.1	78	6.2	4.9	-	-	-	-	-	-	-
					58	2.7	3.8	70	3.9	4.5	84	6.1	5.2	-	-	-	-	-	-	-
					64	2.6	4.1	75	3.8	4.8	-	-	-	-	-	-	-	-	-	-
	70	2.6	4.5	81	3.7	5.1	-	-	-	-	-	-	-	-	-	-				
	75	2.5	4.8	87	3.6	5.4	-	-	-	-	-	-	-	-	-	-				
	81	2.4	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-				
	87	2.2	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-				
	136.142.xx.B2	●	●	0.10	20	6.4	3.0	23	14.1	2.8	46	18.7	4.7	55	24.6	5.4	12	10	2	4
					26	5.4	3.7	29	11.2	3.5	52	16.5	5.4	61	22.0	5.9	23	22	3	4
					32	5.3	4.2	35	9.3	4.2	58	14.7	6.2	67	19.9	6.7	44	29	2	4
					38	5.1	4.8	41	8.0	4.9	64	13.0	6.9	73	18.2	7.4	58	44	3	4
					44	4.6	5.5	46	7.5	5.6	70	11.8	7.6	78	16.8	8.1	87	58	3	4
49					4.3	6.1	52	7.4	6.2	75	11.1	8.3	84	15.2	8.8	-	-	-	-	
55					4.5	6.7	58	7.2	6.8	81	10.7	8.9	-	-	-	-	-	-	-	
61					4.3	7.3	64	6.8	7.4	87	10.5	9.5	-	-	-	-	-	-	-	
67					3.9	7.8	70	6.4	7.9	-	-	-	-	-	-	-	-	-	-	
73					3.7	8.4	75	5.9	8.6	-	-	-	-	-	-	-	-	-	-	
78	3.4	9.0	81	5.7	9.2	-	-	-	-	-	-	-	-	-	-					
84	3.3	9.5	87	5.6	9.8	-	-	-	-	-	-	-	-	-	-					

Ordering Type + Material no. = Ordering no.  
 example: 136.134.xx.B2 + 1Y = 136.134.1Y.B2



# ➤ Pneumatic atomizing nozzles, wide full cone, pressure principle, internal mixing

## Series 136.2

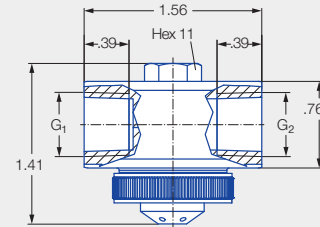


### Features:

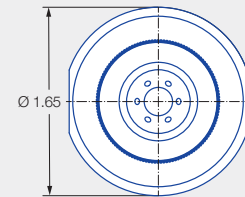
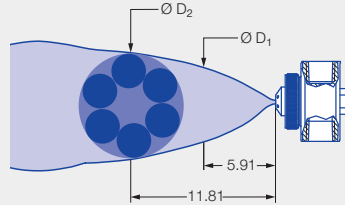
- Fine full cone atomization
- Liquid pressure principle
- Internal mixing
- Extra wide spray angle of 60°

### Applications:

- Humidification
- Cooling



Series 136.2



Liquid connection G <sub>1</sub>	Air connection G <sub>2</sub>	Screw plug thread (size 11)	Weight [lb] (Stainless steel 303)
1/4 NPT	1/4 NPT	5/16-24 UNF-2A	0.5

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]	
		1Y		16	p air [psi]	V̇ water [gal/h]	V̇ air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ air [SCFM]	p air [psi]	V̇ water [gal/h]					V̇ air [SCFM]
60°	136.215.xx.B2	●	●	0.02	15	0.8	0.8	23	1.5	1.0	41	2.2	1.4	55	2.5	1.8	15	10	8	13
					17	0.5	0.9	26	1.3	1.1	46	1.9	1.6	61	2.2	2.1	23	22	9	15
		20	0.2		1.1	29	1.0	1.2	52	1.5	1.9	67	1.8	2.3	35	29	9	15		
		-	-		-	32	0.7	1.4	58	1.1	2.1	73	1.4	2.5	46	44	10	15		
		-	-		-	35	0.4	1.5	64	0.6	2.4	78	1.0	2.8	61	58	10	16		
		-	-		-	38	0.2	1.6	70	0.2	2.6	84	0.6	3.1	-	-	-	-		
		-	-		-	-	-	-	73	0.1	2.7	87	0.4	3.3	-	-	-	-		
		-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	136.222.xx.B2	●	●	0.04	12	4.6	1.6	23	6.8	2.4	44	10.7	3.4	55	14.5	3.8	12	10	10	18
					15	1.6	2.5	26	3.9	3.1	46	8.3	4.1	58	12.0	4.3	23	22	10	18
		-	-		-	29	1.8	3.9	49	5.9	4.8	61	9.9	5.0	33	29	10	18		
		-	-		-	32	0.5	4.8	52	3.9	5.6	64	7.8	5.7	46	44	10	18		
		-	-		-	-	-	-	55	2.2	6.5	67	5.7	6.6	61	58	10	18		
		-	-		-	-	-	-	58	1.2	7.2	70	4.0	7.3	-	-	-	-		
		-	-		-	-	-	-	-	-	-	73	2.6	8.1	-	-	-	-		
		-	-		-	-	-	-	-	-	-	75	1.6	8.9	-	-	-	-		
	136.231.xx.B2	●	●	0.06	23	6.8	3.0	38	11.7	4.1	52	24.8	4.6	61	35.1	4.3	29	10	9	15
					29	4.7	3.6	44	8.7	4.8	58	20.7	5.5	67	31.0	5.3	38	22	10	16
		35	3.0		4.2	49	6.5	5.4	64	17.4	6.2	73	26.7	6.1	35	29	10	17		
		41	1.8		4.8	55	4.8	6.0	70	14.5	7.0	78	23.2	6.9	52	44	10	17		
		-	-		-	61	3.5	6.6	75	12.0	7.7	84	20.2	7.8	61	58	10	17		
		-	-		-	67	2.5	7.1	81	10.0	8.3	87	18.8	8.1	-	-	-	-		
		-	-		-	-	-	-	87	9.5	8.5	-	-	-	-	-	-	-		
		-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Ordering example: Type 136.215.xx.B2 + Material no. 1Y = Ordering no. 136.215.1Y.B2

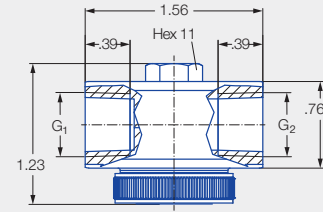
# ➤ Pneumatic atomizing nozzles, full cone, siphon principle, external mixing Series 136.3

### Features:

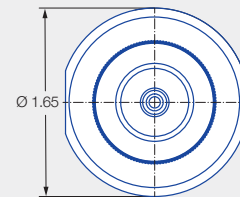
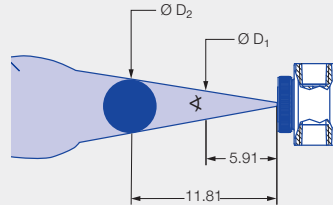
- Particularly fine full cone atomization
- Gravity/Siphon principle
- External mixing

### Applications:

- Cooling
- Atomization of viscous liquids
- Chemical industry



Series 136.3



Liquid connection G <sub>1</sub>	Air connection G <sub>2</sub>	Screw plug thread (size 11)	Weight [lb] (Stainless steel 303)
1/4 NPT	1/4 NPT	5/16-24 UNF-2A	0.5

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Air		V̇ water [gal/h]					Spray dimensions							
	Type	Material number		p [psig]	V̇ <sub>n</sub> [SCFM]	Water column [in WC]			Aspiration height [in WC]		p <sub>air</sub> [psig]	Aspiration height [in WS]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]				
		1Y				16	6	12	18	4					8	12	24	35
20°	136.316.xx.B2	●	●	0.02	9	0.4	–	0.4	0.3	–	–	–	–	–	20	12	2	4
					12	0.5	0.3	0.4	0.4	–	–	–	–	–	46	12	2	5
					17	0.6	0.4	0.4	0.4	0.3	0.2	–	–	–	70	12	3	5
					20	0.7	0.4	0.4	0.4	0.3	0.3	0.2	–	–	87	12	3	5
					26	0.8	0.4	0.5	0.5	0.3	0.3	0.2	–	–	–	–	–	–
					29	0.9	0.4	0.5	0.5	0.3	0.3	0.3	–	–	–	–	–	–
					35	1.1	0.5	0.5	0.5	0.4	0.3	0.3	0.1	–	–	–	–	–
					38	1.1	0.5	0.5	0.5	0.4	0.3	0.3	0.2	–	–	–	–	–
					44	1.2	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.1	–	–	–	–
					46	1.3	0.5	0.6	0.5	0.4	0.4	0.4	0.3	0.1	–	–	–	–
					52	1.4	0.5	0.6	0.6	0.5	0.4	0.4	0.3	0.2	–	–	–	–
					55	1.5	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.2	–	–	–	–
					61	1.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	–	–	–	–
					64	1.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.3	–	–	–	–
					70	1.8	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.3	–	–	–	–
					73	1.9	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.2	–	–	–	–
					78	2.0	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.1	–	–	–	–
81	2.1	0.5	0.6	0.6	0.5	0.4	0.4	0.2	–	–	–	–	–					
87	2.2	0.5	0.6	0.5	0.4	0.4	0.3	–	–	–	–	–	–					





Spray angle	Ordering number		Narrowest free cross section Ø [in]	Air		V̇ water [gal/h]					Spray dimensions								
	Type	Material number		p [psi]	V̇ <sub>a</sub> [SCFM]	Water column [in WC]			Aspiration height [in WC]		p <sub>air</sub> [psi]	Aspiration height [in WS]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]					
		1Y				16	6	12	18	4					8	12	24	35	
		Stainless steel 316L				Stainless steel 303													
20°	136.324.xx.B2	●	●	0.03	12	0.5	-	-	-	0.7	0.5	-	-	-	17	12	2	5	
					17	0.6	-	-	-	0.8	0.7	0.5	-	-	46	12	3	5	
					20	0.7	-	-	-	0.9	0.7	0.6	-	-	70	12	3	5	
					26	0.9	-	-	-	1.0	0.9	0.7	-	-	87	12	3	5	
					29	0.9	-	-	-	1.0	0.9	0.8	0.2	-	-	-	-	-	-
					35	1.1	-	-	-	1.1	1.0	0.8	0.4	-	-	-	-	-	-
					38	1.1	-	-	-	1.2	1.0	0.9	0.4	-	-	-	-	-	-
					44	1.2	1.4	-	-	1.2	1.1	1.0	0.5	-	-	-	-	-	-
					46	1.3	1.5	-	-	1.3	1.1	1.0	0.6	-	-	-	-	-	-
					52	1.4	1.5	-	-	1.3	1.2	1.1	0.7	-	-	-	-	-	-
					55	1.5	1.6	-	-	1.4	1.2	1.2	0.8	0.6	-	-	-	-	-
					61	1.6	1.7	1.8	-	1.5	1.4	1.2	0.8	0.8	-	-	-	-	-
					64	1.7	1.7	1.8	1.9	1.6	1.4	1.3	1.0	0.8	-	-	-	-	-
					70	1.8	1.7	1.7	1.8	1.6	1.4	1.4	1.0	0.5	-	-	-	-	-
					73	1.9	1.6	1.7	1.8	1.6	1.4	1.3	1.1	-	-	-	-	-	-
					78	2.0	1.5	1.6	1.7	1.5	1.3	1.2	1.0	-	-	-	-	-	-
	81	2.1	1.5	1.6	1.7	1.4	1.3	1.2	1.0	-	-	-	-	-	-				
	87	2.2	1.4	1.5	1.6	1.3	1.2	1.1	0.5	-	-	-	-	-	-				
		136.334.xx.B2	●	●	0.03	9	0.7	-	-	-	0.6	-	-	-	-	12	12	65	5
						12	0.8	-	-	-	0.7	0.6	0.4	-	-	46	12	65	5
17						1.1	-	-	-	0.9	0.8	0.7	0.2	-	70	12	70	5	
20						1.2	-	-	-	1.0	0.9	0.8	0.3	-	87	12	75	5	
26						1.4	1.4	-	-	1.1	1.0	0.9	0.6	-	-	-	-	-	-
29						1.5	1.4	1.6	1.7	1.2	1.1	1.0	0.7	0.2	-	-	-	-	-
35						1.6	1.5	1.7	1.8	1.3	1.2	1.1	0.9	0.4	-	-	-	-	-
38						1.8	1.6	1.7	1.8	1.3	1.2	1.2	0.9	0.5	-	-	-	-	-
44						2.0	1.7	1.8	1.9	1.4	1.3	1.2	1.0	0.6	-	-	-	-	-
46						2.1	1.7	1.8	1.9	1.5	1.4	1.3	1.1	0.7	-	-	-	-	-
52						2.3	1.8	1.9	2.0	1.5	1.5	1.4	1.1	0.9	-	-	-	-	-
55						2.4	1.8	1.9	2.1	1.6	1.5	1.4	1.2	1.0	-	-	-	-	-
61						2.6	1.9	2.1	2.2	1.7	1.6	1.5	1.3	1.1	-	-	-	-	-
64						2.7	2.0	2.2	2.3	1.8	1.7	1.6	1.4	1.2	-	-	-	-	-
70	2.9	2.2	2.3	2.4	1.9	1.8	1.8	1.5	1.3	-	-	-	-	-					
73	3.0	2.3	2.3	2.4	2.0	1.9	1.9	1.6	1.4	-	-	-	-	-					
78	3.2	2.2	2.3	2.3	2.0	2.0	1.9	1.7	1.5	-	-	-	-	-					
81	3.3	2.2	2.2	2.3	2.0	2.0	1.9	1.7	1.5	-	-	-	-	-					
87	3.5	2.1	2.2	2.2	1.9	1.9	1.8	1.6	1.5	-	-	-	-	-					





Spray angle	Ordering number		Narrowest free cross section Ø [in]	Air		V̇ water [gal/h]					Spray dimensions							
	Type	Material number		p [psi]	V̇ <sub>a</sub> [SCFM]	Water column [in WC]			Aspiration height [in WC]		p <sub>air</sub> [psi]	Aspiration height [in WS]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]				
		1Y				16	6	12	18	4					8	12	24	35
		Stainless steel 316L				Stainless steel 303												
20°	136.342.xx.B2	●	●	0.06	20	2.1	-	-	-	2.3	-	-	1.0	-	26	300	3	5
					26	2.5	-	-	-	2.5	2.2	2.0	1.4	0.9	44	300	3	5
					29	2.6	3.2	-	-	2.6	2.4	2.1	1.5	1.1	61	300	3	5
					35	3.1	3.2	-	-	2.7	2.5	2.3	1.8	1.4	87	300	3	5
					38	3.2	3.2	3.5	-	2.8	2.6	2.4	1.9	1.5	-	-	-	-
					44	3.6	3.2	3.5	3.7	2.8	2.7	2.5	2.0	1.7	-	-	-	-
					46	3.8	3.2	3.5	3.7	2.8	2.7	2.5	2.1	1.8	-	-	-	-
					52	4.1	3.3	3.5	3.7	2.9	2.8	2.7	2.3	2.1	-	-	-	-
					55	4.3	3.3	3.5	3.7	3.0	2.9	2.8	2.5	2.2	-	-	-	-
					61	4.7	3.5	3.7	3.8	3.2	3.1	3.0	2.8	2.6	-	-	-	-
					64	4.9	3.6	3.7	3.9	3.3	3.2	3.1	2.9	2.7	-	-	-	-
					70	5.2	3.7	3.8	4.0	3.4	3.3	3.2	3.0	2.7	-	-	-	-
					73	5.4	3.7	3.8	4.0	3.4	3.3	3.2	2.9	2.7	-	-	-	-
	78	5.8	3.6	3.8	3.9	3.3	3.2	3.1	2.8	2.4	-	-	-	-				
	81	5.9	3.5	3.7	3.9	3.2	3.1	3.0	2.7	2.3	-	-	-	-				
	87	6.4	3.2	3.4	-	2.9	2.8	2.7	2.3	1.9	-	-	-	-				
	136.351.xx.B2	●	●	0.10	46	6.8	-	-	-	-	10.3	-	-	-	55	12	4	5
					52	7.4	-	-	-	12.1	11.1	-	8.8	-	67	12	4	6
					55	7.7	-	-	-	12.6	11.9	11.2	9.3	-	78	12	4	6
					61	8.4	-	-	-	13.6	13.0	12.3	10.5	7.9	87	12	4	6
64					8.7	-	-	-	14.0	13.4	12.8	11.0	8.3	-	-	-	-	
70					9.4	-	16.7	-	14.6	14.1	13.5	11.9	9.2	-	-	-	-	
73					9.7	-	16.8	17.6	14.8	14.3	13.8	12.2	9.5	-	-	-	-	
78					10.4	16.1	17.0	17.6	15.0	14.5	14.0	12.6	10.0	-	-	-	-	
81					10.7	16.1	16.9	17.6	15.0	14.5	14.1	12.6	10.2	-	-	-	-	
87					11.3	15.8	16.6	17.3	14.7	14.3	13.8	12.1	9.8	-	-	-	-	

Ordering    Type            +    Material no.    =    Ordering no.  
 example: 136.342.xx.B2    +    1Y                =    136.342.1Y.B2

# ➤ Pneumatic atomizing nozzles, wide flat fan, pressure principle, internal mixing

## Series 136.4



### Features:

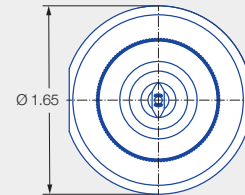
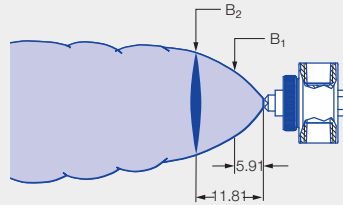
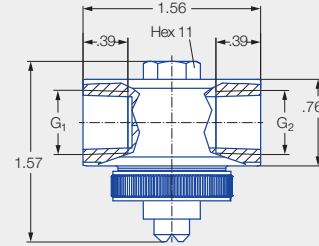
- Fine flat fan atomization
- Pressure principle
- Internal mixing

### Applications:

- Humidification of goods
- Cooling
- Belt humidification



Series 136.4



Liquid connection G <sub>1</sub>	Air connection G <sub>2</sub>	Screw plug thread (size 11)	Weight [lb] (Stainless steel 303)
1/4 NPT	1/4 NPT	5/16-24 UNF-2A	0.5

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]	
		1Y		16	p air [psi]	v̇ water [gal/h]	v̇ air [SCFM]	p air [psi]	v̇ water [gal/h]	v̇ air [SCFM]	p air [psi]	v̇ water [gal/h]	v̇ air [SCFM]	p air [psi]	v̇ water [gal/h]					v̇ air [SCFM]
45°	136.414.xx.B2	●	●	0.03	15	2.0	0.8	20	3.8	0.9	32	5.9	1.2	44	6.6	1.5	20	10	3	5
					17	1.6	0.9	23	3.4	0.9	38	5.3	1.4	49	6.1	1.6	35	22	4	6
					20	1.1	1.0	26	3.1	1.1	44	4.7	1.5	55	5.5	1.8	46	29	4	6
					23	0.7	1.1	29	2.7	1.2	49	4.1	1.8	61	5.0	2.1	55	44	5	7
					26	0.3	1.2	32	2.4	1.3	55	3.5	2.0	67	4.5	2.2	67	58	5	8
					-	-	-	35	2.0	1.4	61	2.9	2.2	73	3.9	2.5	-	-	-	-
					-	-	-	38	1.6	1.5	67	2.3	2.4	78	3.4	2.7	-	-	-	-
					-	-	-	41	1.2	1.6	73	1.7	2.6	84	2.9	2.9	-	-	-	-
	-	-	-	44	0.8	1.8	78	1.1	2.9	87	2.6	3.1	-	-	-	-				
	-	-	-	46	0.6	1.9	84	0.7	3.1	-	-	-	-	-	-	-				
	-	-	-	49	0.3	2.0	87	0.4	3.2	-	-	-	-	-	-	-				
	136.443.xx.B2	●	●	0.04	17	3.7	0.9	23	7.0	0.9	44	9.8	1.5	52	12.0	1.7	17	10	4	6
					20	3.1	1.0	26	6.4	1.1	49	8.7	1.8	58	11.1	1.9	29	22	5	7
					23	2.5	1.1	29	5.8	1.2	55	7.8	2.0	64	10.1	2.2	41	29	6	7
					26	2.1	1.2	32	5.3	1.3	61	6.9	2.2	70	9.2	2.4	55	44	6	8
					-	-	-	35	4.8	1.4	67	6.1	2.5	75	8.4	2.6	70	58	6	9
-					-	-	38	4.3	1.5	73	5.3	2.7	81	7.7	2.9	-	-	-	-	
-					-	-	41	3.8	1.6	78	4.6	2.9	87	6.9	3.1	-	-	-	-	
-					-	-	44	3.4	1.8	84	3.9	3.1	-	-	-	-	-	-	-	
-					-	-	46	3.0	1.9	87	3.7	3.2	-	-	-	-	-	-	-	
-					-	-	49	2.6	2.0	-	-	-	-	-	-	-	-	-	-	
-	-	-	52	2.3	3.6	-	-	-	-	-	-	-	-	-	-					





Spray angle	Ordering number		Narrowest free cross section $\varnothing$ [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]	
		1Y		16	p air [psi]	V̇ water [gal/h]	V̇ <sub>i</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>i</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>i</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]					V̇ <sub>i</sub> air [SCFM]
		Stainless steel 316L		Stainless steel 303																
45°	136.462.xx.B2	●	●	0.06	17	5.0	1.5	29	5.8	1.2	44	16.3	2.4	55	20.1	2.7	17	10	5	6
					23	3.2	2.0	35	4.8	1.4	49	13.7	2.8	58	18.6	3.0	35	22	5	7
					29	2.5	2.4	41	3.8	1.6	55	11.8	3.4	61	17.3	3.2	46	29	5	7
					35	1.9	2.8	46	3.0	1.9	61	10.3	3.9	64	16.2	3.5	55	44	6	8
					41	1.5	3.2	52	2.3	2.1	67	8.8	4.4	67	15.1	3.8	87	58	6	8
					46	1.3	3.5	58	2.1	2.3	73	7.8	4.8	70	14.3	3.9	-	-	-	-
					52	1.0	3.9	64	1.64	2.5	78	6.74	5.2	73	13.6	4.2	-	-	-	-
					58	0.8	4.2	70	1.2	2.7	84	5.8	5.7	75	13.0	4.5	-	-	-	-
					64	0.6	4.6	75	0.8	2.9	87	5.4	5.8	78	12.3	4.8	-	-	-	-
					-	-	-	81	0.4	3.1	-	-	-	81	11.5	5.1	-	-	-	-
					-	-	-	84	0.2	3.2	-	-	-	84	10.9	5.2	-	-	-	-
					-	-	-	-	-	-	-	-	-	87	10.3	5.5	-	-	-	-
60°	136.425.xx.B2	●	●	0.02	12	1.7	0.7	20	2.5	1.0	35	3.5	1.5	35	4.3	1.5	17	10	6	8
					17	1.5	0.9	26	2.3	1.2	38	3.4	1.6	41	4.1	1.7	32	22	6	10
					23	1.2	1.1	32	2.1	1.4	44	3.2	1.8	46	4.0	1.9	44	29	7	10
					29	1.1	1.4	38	1.9	1.6	49	3.1	2.0	52	3.8	2.1	49	44	8	13
					35	0.8	1.5	44	1.7	1.8	55	2.9	2.2	58	3.7	2.2	81	58	8	13
					41	0.7	1.7	49	1.5	2.0	61	2.7	2.4	64	3.5	2.4	-	-	-	-
					44	0.6	1.8	55	1.3	2.2	67	2.6	2.5	70	3.4	2.6	-	-	-	-
					-	-	-	58	1.3	2.3	73	2.4	2.7	75	3.2	2.8	-	-	-	-
					-	-	-	64	1.1	2.5	78	2.3	2.9	81	3.1	3.0	-	-	-	-
					-	-	-	70	1.0	2.6	84	2.1	3.1	87	3.0	3.2	-	-	-	-
					-	-	-	75	0.7	2.8	87	2.1	3.2	-	-	-	-	-	-	-
					-	-	-	81	0.6	3.0	-	-	-	-	-	-	-	-	-	-
	-	-	-	87	0.4	3.2	-	-	-	-	-	-	-	-	-	-				
	136.452.xx.B2	●	●	0.06	15	5.0	2.3	26	8.2	3.1	46	13.2	4.5	55	18.7	4.8	15	10	5	7
					20	2.3	3.4	29	6.7	3.7	52	10.4	5.5	61	15.5	5.7	26	22	6	9
					26	2.0	4.1	32	5.3	4.2	58	8.3	6.6	67	12.8	6.6	38	29	6	10
					32	1.1	4.9	35	4.1	4.7	64	6.3	7.6	73	10.9	7.7	52	44	7	11
					38	0.3	5.8	38	3.3	5.2	70	4.7	8.5	78	8.9	8.7	73	58	7	11
					41	0.03	6.1	41	2.7	5.7	75	3.5	9.4	84	7.3	9.7	-	-	-	-
					-	-	-	-	-	-	81	2.8	10.3	87	6.4	10.1	-	-	-	-
-					-	-	-	-	-	87	2.3	11.1	-	-	-	-	-	-	-	
136.433.xx.B2	●	●	0.02	15	3.1	1.2	26	4.8	1.6	44	8.2	2.2	55	9.9	2.6	20	10	6	8	
				17	2.1	1.4	29	4.0	1.9	49	6.7	2.6	61	8.6	2.9	32	22	7	10	
				20	1.4	1.6	32	3.2	2.1	55	5.4	3.0	67	7.3	3.4	44	29	8	12	
				23	1.0	1.9	35	2.6	2.4	61	4.3	3.5	73	6.2	3.8	55	58	12	19	
				-	-	-	38	2.0	2.5	67	3.3	3.9	78	5.1	4.2	75	58	10	16	
				-	-	-	41	1.6	2.8	73	2.5	4.3	84	4.2	4.6	-	-	-	-	
				-	-	-	44	1.2	2.9	78	1.7	4.7	87	3.8	4.9	-	-	-	-	

Ordering    Type            +    Material no.        =    Ordering no.  
 example: 136.462.xx.B2    +    1Y                    =    136.462.1Y.B2





# ➤ Pneumatic atomizing nozzles, wide flat fan, siphon principle, internal mixing

## Series 136.5



### Features:

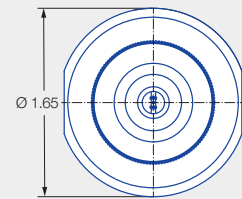
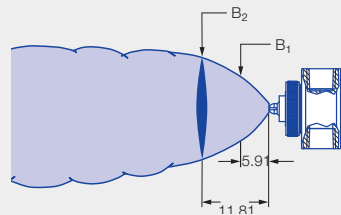
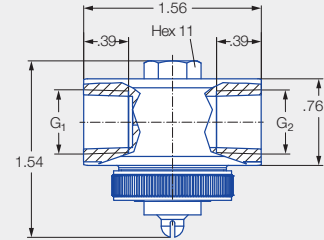
- Particularly fine flat fan atomization
- Siphon principle
- Internal mixing

### Applications:

- Humidification of goods
- Cooling
- Belt humidification



Series 136.5



Liquid connection G <sub>1</sub>	Air connection G <sub>2</sub>	Screw plug thread (size 11)	Weight [lb] (Stainless steel 303 SS)
1/4 NPT	1/4 NPT	5/16-24 UNF-2A	0.5

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Air		V̇ water [gal/h]					Spray dimensions							
	Material number			p [psi]	V̇ <sub>a</sub> [SCFM]	Water column [in WC]			Aspiration height [in WC]		p air [psi]	Aspiration height [in WS]	B <sub>1</sub> [in]	B <sub>2</sub> [in]				
	1Y	16				6	12	18	4	8					12	24	35	
60°	136.516.xx.B2	●	●	0.02	12	1.1	-	-	-	0.4	0.4	-	1.17	0.3	15	12	5	6
					17	1.3	0.5	0.6	0.6	0.5	0.5	0.4	1.41	0.4	44	12	6	8
					20	1.5	0.5	0.6	0.6	0.5	0.5	0.4	1.47	0.4	67	12	7	9
					26	1.7	0.5	0.6	0.6	0.5	0.5	0.5	1.53	0.4	87	12	7	9
					29	1.8	0.5	0.6	0.6	0.5	0.5	0.4	1.50	0.4	-	-	-	-
					35	2.1	0.5	0.6	0.6	0.5	0.5	0.4	1.47	0.4	-	-	-	-
					38	2.2	0.5	0.6	0.6	0.5	0.5	0.4	1.44	0.4	-	-	-	-
					44	2.5	0.5	0.5	0.6	0.5	0.4	0.4	1.44	0.4	-	-	-	-
					46	2.6	0.5	0.5	0.6	0.4	0.4	0.4	1.59	0.4	-	-	-	-
					52	2.8	0.5	0.5	0.6	0.5	0.5	0.5	1.68	0.4	-	-	-	-
					55	2.9	0.5	0.5	0.6	0.5	0.5	0.5	1.71	0.5	-	-	-	-
					61	3.2	0.5	0.5	0.6	0.5	0.5	0.5	1.68	0.4	-	-	-	-
					64	3.4	0.5	0.5	0.6	0.5	0.5	0.5	1.74	0.5	-	-	-	-
					70	3.6	0.5	0.5	0.6	0.5	0.5	0.5	2.04	0.5	-	-	-	-
					73	3.7	0.6	0.6	0.6	0.6	0.6	0.6	2.10	0.6	-	-	-	-
					78	4.0	0.6	0.6	0.6	0.6	0.6	0.6	2.04	0.5	-	-	-	-
81	4.1	0.6	0.6	0.6	0.6	0.6	0.6	2.01	0.5	-	-	-	-					
87	4.4	0.6	0.6	0.6	0.6	0.6	0.5	1.92	0.5	-	-	-	-					





Spray angle	Ordering number		Narrowest free cross section $\varnothing$ [in]	Air		$\dot{V}$ water [gal/h]					Spray dimensions							
	Type	Material number				Water column [in WC]			Aspiration height [in WC]		$p$ air [psi]	Aspiration height [in WS]	$B_1$ [in]	$B_2$ [in]				
		1Y				16	6	12	18	4					8	12	24	35
		Stainless steel 316L				Stainless steel 303												
$p$ [psi]	$\dot{V}_i$ [SCFM]	6	12	18	4	8	12	24	35	$p$ air [psi]	Aspiration height [in WS]	$B_1$ [in]	$B_2$ [in]					
60°	136.525.xx.B2	●	●	0.02	9	0.9	–	–	–	0.5	–	–	–	–	15	12	6	9
					12	1.1	–	–	–	0.6	0.6	0.5	–	–	44	12	8	12
					17	1.4	0.7	0.8	–	0.7	0.6	0.6	0.5	0.4	67	12	8	13
					20	1.5	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5	87	12	10	16
					26	1.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	–	–	–	–
					29	1.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	–	–	–	–
					35	2.2	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.4	–	–	–	–
					38	2.3	0.7	0.8	0.8	0.7	0.6	0.6	0.5	0.4	–	–	–	–
					44	2.6	0.7	0.7	0.8	0.6	0.6	0.5	0.5	0.5	–	–	–	–
					46	2.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	–	–	–	–
					52	3.0	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	–	–	–	–
					55	3.1	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	–	–	–	–
					61	3.4	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	–	–	–	–
					64	3.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	–	–	–	–
					70	3.8	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	–	–	–	–
					73	3.9	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	–	–	–	–
78	4.2	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.5	–	–	–	–					
81	4.3	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.5	–	–	–	–					
87	4.6	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	–	–	–	–					

Ordering    Type            +    Material no.       =    Ordering no.  
 example: 136.525.xx.B2    +    1Y                 =    136.525.1Y.B2

# ➤ Pneumatic atomizing nozzles, flat fan, pressure principle, external mixing Series 136.6

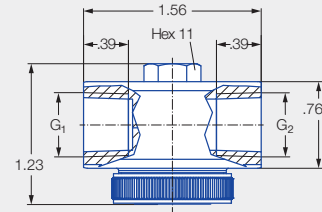


### Features:

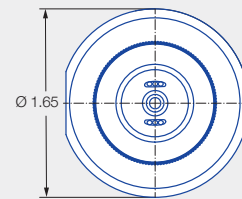
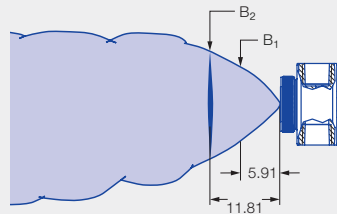
- Fine flat fan atomization
- Liquid pressure principle
- External mixing

### Applications:

- Humidification of goods
- Cooling
- Belt humidification
- Atomization of viscous liquids



Series 136.6



Liquid connection G <sub>1</sub>	Air connection G <sub>2</sub>	Screw plug thread (size 11)	Weight [lb] (Stainless steel 303)
1/4 NPT	1/4 NPT	5/16-24 UNF-2A	0.5

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]	
		1Y		16	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]					V̇ <sub>n</sub> air [SCFM]
45°	136.616.xx.B2	●	●	0.02	12	0.4	1.5	12	0.6	1.4	12	0.9	1.5	15	1.0	1.6	20	1	3	5
					17	0.5	1.8	15	0.7	1.7	17	0.9	1.8	20	1.0	2.0	32	2	4	5
					23	0.5	2.2	20	0.7	2.1	23	0.9	2.2	26	1.0	2.4	46	3	4	5
					29	0.6	2.5	26	0.7	2.5	29	1.0	2.5	32	1.0	2.7	58	4	4	6
					35	0.5	2.9	32	0.7	2.8	35	1.0	2.9	38	1.0	3.1	73	5	4	6
					41	0.6	3.2	38	0.7	3.2	41	1.0	3.2	44	1.0	3.4	-	-	-	-
					46	0.6	3.6	44	0.7	3.5	46	1.0	3.6	49	1.0	3.8	-	-	-	-
					52	0.6	3.9	52	0.7	3.9	52	1.0	3.9	55	1.0	4.1	-	-	-	-
					58	0.6	4.3	58	0.7	4.3	58	1.0	4.3	61	1.0	4.5	-	-	-	-
					64	0.6	4.6	64	0.7	4.6	64	1.0	4.6	67	1.0	4.8	-	-	-	-
					70	0.6	5.0	70	0.7	5.0	70	1.0	4.9	73	1.0	5.2	-	-	-	-
					75	0.6	5.4	75	0.7	5.4	75	1.0	5.4	78	1.0	5.5	-	-	-	-
					81	0.6	5.7	81	0.7	5.7	81	1.0	5.7	84	1.0	5.9	-	-	-	-
					87	0.6	6.0	87	0.7	6.0	87	1.0	6.0	87	1.0	6.0	-	-	-	-





Spray angle	Ordering number				Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		Stainless steel 316L		Stainless steel 303	10			20			40			60			p air [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]
		1Y	16				p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]				
45°	136.635.xx.B2	●	●	0.02	12	0.63	1.5	12	0.91	1.4	12	1.3	1.4	15	1.4	1.6	20	1	3	5		
					17	0.69	1.8	17	0.94	1.8	17	1.3	1.8	20	1.4	2.0	32	2	4	5		
					23	0.8	2.2	23	1.0	2.2	23	1.3	2.2	26	1.4	2.4	46	3	4	5		
					29	0.8	2.5	29	1.0	2.5	30	1.3	2.5	32	1.4	2.7	58	4	4	6		
					35	0.8	2.9	35	1.0	2.9	35	1.4	2.9	38	1.5	3.1	73	5	4	6		
					41	0.8	3.2	41	1.0	3.2	41	1.4	3.2	44	1.5	3.4	-	-	-	-		
					46	0.8	3.6	46	1.0	3.6	46	1.4	3.6	49	1.5	3.8	-	-	-	-		
					52	0.8	3.9	52	1.0	3.9	52	1.4	3.9	55	1.5	4.1	-	-	-	-		
					58	0.8	4.3	58	1.0	4.2	58	1.4	4.3	61	1.5	4.5	-	-	-	-		
					64	0.8	4.6	64	1.0	4.6	64	1.4	4.6	67	1.5	4.8	-	-	-	-		
	70	0.8	4.9	70	1.0	4.9	70	1.4	4.9	73	1.5	5.1	-	-	-	-						
	75	0.8	5.3	75	1.0	5.3	75	1.4	5.3	78	1.5	5.5	-	-	-	-						
	81	0.8	5.7	81	1.0	5.7	81	1.4	5.7	84	1.5	5.8	-	-	-	-						
	87	0.8	6.0	87	1.0	6.0	87	1.4	6.0	87	1.5	6.0	-	-	-	-						
	136.654.xx.B2	●	●	0.03	12	1.4	1.4	12	1.9	1.4	17	2.7	1.8	23	2.9	2.2	20	1	4	5		
					17	1.5	1.8	17	2.0	1.8	23	2.7	2.2	29	3.0	2.5	32	2	4	6		
					23	1.5	2.2	23	2.0	2.2	29	2.7	2.5	35	3.0	2.9	46	3	4	6		
					29	1.6	2.5	29	2.1	2.5	35	2.8	2.9	41	3.0	3.2	58	4	4	6		
					35	1.6	2.9	35	2.1	2.9	41	2.8	3.2	46	3.0	3.6	73	5	4	6		
					41	1.7	3.2	41	2.1	3.2	46	2.8	3.6	52	3.0	3.9	-	-	-	-		
46					1.7	3.6	46	2.1	3.6	52	2.8	3.9	58	3.0	4.2	-	-	-	-			
52					1.7	3.9	52	2.1	3.9	58	2.8	4.2	64	3.0	4.6	-	-	-	-			
58					1.7	4.2	58	2.1	4.2	64	2.8	4.6	70	3.0	4.9	-	-	-	-			
64					1.7	4.6	64	2.1	4.6	70	2.8	4.9	75	3.0	5.3	-	-	-	-			
70	1.7	4.9	70	2.1	4.9	75	2.8	5.3	81	3.0	5.7	-	-	-	-							
75	1.6	5.3	75	2.1	5.3	81	2.8	5.7	87	2.9	5.9	-	-	-	-							
81	1.6	5.7	81	2.1	5.7	87	2.7	6.0	-	-	-	-	-	-	-							
87	1.5	6.0	87	2.0	6.0	-	-	-	-	-	-	-	-	-	-							
60°	136.626.xx.B2	●	●	0.02	12	0.5	1.6	12	0.7	1.6	12	0.9	1.6	12	1.0	1.6	23	1	3	5		
					17	0.5	2.1	17	0.7	2.1	17	1.0	2.1	17	1.0	2.1	35	2	4	6		
					23	0.6	2.5	23	0.7	2.5	23	1.0	2.5	23	1.0	2.5	46	3	4	6		
					29	0.6	2.9	29	0.7	2.9	29	1.0	2.9	29	1.0	2.9	58	4	4	6		
					35	0.6	3.3	35	0.8	3.3	35	1.0	3.3	35	1.0	3.3	75	5	4	6		
					41	0.6	3.7	41	0.8	3.7	41	1.0	3.7	41	1.1	3.7	-	-	-	-		
					46	0.6	4.1	46	0.8	4.1	46	1.0	4.1	46	1.1	4.1	-	-	-	-		
					52	0.6	4.5	52	0.8	4.5	52	1.0	4.5	52	1.1	4.5	-	-	-	-		
					58	0.6	4.9	58	0.8	4.9	58	1.0	4.9	58	1.1	4.9	-	-	-	-		
					64	0.6	5.3	64	0.8	5.3	64	1.0	5.3	64	1.1	5.3	-	-	-	-		
					70	0.6	5.7	70	0.8	5.7	70	1.0	5.7	70	1.1	5.7	-	-	-	-		
					75	0.6	6.1	75	0.8	6.1	75	1.0	6.1	75	1.1	6.1	-	-	-	-		
					81	0.6	6.6	81	0.8	6.5	81	1.0	6.5	81	1.1	6.5	-	-	-	-		
					87	0.6	6.9	87	0.8	6.9	87	1.0	6.9	87	1.1	6.9	-	-	-	-		





Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]	
		1Y		16	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]					V̇ <sub>n</sub> air [SCFM]
		Stainless steel 316L		Stainless steel 303																
60°	136.645.xx.B2	●	●	0.02	12	40	1.6	12	0.97	1.6	15	1.4	1.9	1.00	1.5	1.8	23	1	4	6
					17	41	2.1	17	1.02	2.1	20	1.4	2.3	1.40	1.5	2.3	35	2	4	6
					23	45	2.5	23	1.1	2.5	26	1.4	2.7	1.80	1.5	2.7	46	3	5	6
					29	47	2.9	29	1.1	2.9	32	1.4	3.1	2.20	1.5	3.1	58	4	5	6
					35	49	3.3	35	1.1	3.3	38	1.4	3.5	2.60	1.5	3.5	75	5	5	6
					41	49	3.6	41	1.1	3.7	44	1.5	3.9	3.00	1.5	3.9	-	-	-	-
					46	50	4.1	46	1.1	4.1	49	1.5	4.2	3.40	1.6	4.3	-	-	-	-
					52	50	4.5	52	1.1	4.5	55	1.5	4.7	3.80	1.6	4.7	-	-	-	-
					58	51	4.9	58	1.1	4.9	61	1.5	5.1	4.20	1.6	5.1	-	-	-	-
					64	51	5.3	64	1.1	5.3	67	1.5	5.5	4.60	1.6	5.5	-	-	-	-
					70	52	5.7	70	1.2	5.7	73	1.5	5.9	5.00	1.6	5.9	-	-	-	-
					75	52	6.1	75	1.1	6.1	78	1.5	6.3	5.40	1.6	6.3	-	-	-	-
	81	52	6.5	81	1.1	6.5	84	1.5	6.7	5.80	1.6	6.7	-	-	-	-				
	87	52	6.9	87	1.2	6.9	87	1.5	6.9	6.00	1.6	6.9	-	-	-	-				
	12	79	1.6	15	2.0	1.9	15	2.8	1.9	1.00	3.0	1.9	23	1	4	6				
	17	86	2.1	20	2.1	2.3	20	2.8	2.3	1.40	3.0	2.3	35	2	5	6				
	23	89	2.5	26	2.1	2.7	26	2.9	2.7	1.80	3.1	2.6	46	3	6	7				
	29	93	2.9	32	2.2	3.1	32	2.9	3.1	2.20	3.1	3.1	58	4	6	7				
	35	96	3.3	38	2.2	3.5	38	2.9	3.5	2.60	3.1	3.5	75	5	6	8				
	41	98	3.7	44	2.3	3.9	44	2.9	3.9	3.00	3.1	3.9	-	-	-	-				
	46	101	4.1	49	2.3	4.3	49	3.0	4.3	3.40	3.2	4.3	-	-	-	-				
	52	101	4.5	55	2.3	4.7	55	3.0	4.7	3.80	3.2	4.7	-	-	-	-				
	58	102	4.9	61	2.3	5.1	61	3.0	5.1	4.20	3.2	5.1	-	-	-	-				
	64	103	5.3	67	2.3	5.5	67	3.0	5.5	4.60	3.2	5.5	-	-	-	-				
	70	103	5.7	73	2.3	5.9	73	3.0	5.9	5.00	3.2	5.9	-	-	-	-				
	75	104	6.1	78	2.3	6.3	78	3.0	6.3	5.40	3.2	6.3	-	-	-	-				
	81	103	6.5	84	2.3	6.7	84	3.0	6.7	5.80	3.2	6.7	-	-	-	-				
	87	104	6.9	87	2.3	6.9	87	3.0	6.9	6.00	3.2	6.9	-	-	-	-				
	9	201	3.3	15	4.89	4.5	23	6.6	10.20	2.00	7.0	6.9	23	1	5	6				
	15	207	4.5	20	4.89	5.5	29	6.5	11.70	6.9	7.0	7.9	35	2	5	6				
	20	207	5.5	26	4.8	6.5	35	6.5	13.30	7.8	6.8	8.9	46	3	5	6				
	26	205	6.5	32	4.7	7.5	41	6.2	15.10	8.9	6.5	9.8	58	4	5	6				
	32	198	7.4	38	4.6	8.4	46	5.9	16.60	9.8	6.2	10.8	75	5	5	7				
	38	198	8.4	44	4.4	9.4	52	5.6	18.40	10.8	5.8	11.7	-	-	-	-				
	44	193	11.1	49	4.2	10.2	58	5.3	19.80	11.7	5.4	12.7	-	-	-	-				
	49	187	10.2	55	4.0	11.2	64	5.0	21.50	12.7	5.1	13.6	-	-	-	-				
55	182	11.2	61	3.9	12.2	70	4.6	23.20	13.7	4.8	14.5	-	-	-	-					
61	177	12.2	67	3.7	13.1	75	4.4	24.80	14.6	4.5	15.5	-	-	-	-					
67	171	13.2	73	3.5	14.1	81	4.1	26.40	15.5	4.2	16.5	-	-	-	-					
73	159	14.1	78	3.2	15.1	84	4.0	27.30	16.1	-	-	-	-	-	-					
78	151	15.1	84	3.0	16.0	87	3.9	28.00	16.5	-	-	-	-	-	-					
84	139	16.0	87	2.9	16.5	-	-	-	-	-	-	-	-	-	-					
87	130	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-					





Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]	
		1Y		16	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ <sub>n</sub> air [SCFM]	p air [psi]	V̇ water [gal/h]					V̇ <sub>n</sub> air [SCFM]
		Stainless steel 316L		Stainless steel 303																
60°	136.682.xx.B2	●	●	0,06	15	5.9	4.4	20	7.6	5.5	26	10.9	6.5	29	11.6	6.9	23	1	4	6
					20	5.3	5.5	26	6.9	6.4	32	9.2	7.4	35	10.3	7.9	35	2	5	6
					26	5.0	6.5	32	6.3	7.4	38	8.8	8.4	41	9.3	8.9	46	3	5	6
					32	4.7	7.4	38	5.9	8.4	44	8.0	9.4	46	8.5	9.8	58	4	5	6
					38	4.5	8.4	44	5.6	9.4	49	7.5	10.3	52	8.0	10.8	75	5	5	7
					44	4.4	9.4	49	5.3	10.3	55	7.0	11.2	58	7.5	11.7	-	-	-	-
					49	4.2	10.3	55	5.1	11.2	61	6.7	12.2	64	7.1	12.7	-	-	-	-
					55	4.2	11.2	61	5.0	12.2	67	6.4	13.1	70	6.8	13.6	-	-	-	-
					61	4.2	12.2	67	4.9	13.1	73	6.1	14.1	75	6.4	14.6	-	-	-	-
					67	4.2	13.1	73	4.8	14.1	78	5.8	15.0	81	6.2	15.5	-	-	-	-
					73	4.0	14.1	78	4.6	14.9	84	5.6	16.0	87	5.9	16.5	-	-	-	-
					78	3.7	15.0	84	4.2	16.0	87	5.5	16.5	-	-	-	-	-	-	-
	84	3.2	16.0	87	3.9	16.5	-	-	-	-	-	-	-	-	-	-				
	87	2.9	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-				
	136.691.xx.B2	●	●	0,10	20	13.7	8.1	29	17.8	10.3	38	24.4	12.5	38	27.0	12.5	23	1	6	8
					26	13.2	9.6	35	17.1	11.8	44	23.2	13.9	44	25.7	13.9	35	2	6	8
					32	12.8	11.1	41	16.4	13.2	49	22.3	15.3	49	24.4	15.4	46	3	6	8
					38	12.5	12.5	46	16.0	14.7	55	21.3	16.8	55	23.4	16.8	58	4	6	8
					44	12.3	13.9	52	15.3	16.1	61	20.3	18.2	61	22.5	18.2	75	5	6	8
					49	12.0	15.4	58	14.8	17.5	67	19.7	19.7	67	21.5	19.7	-	-	-	-
55					11.7	16.8	64	14.3	18.9	73	18.8	21.1	73	20.7	21.1	-	-	-	-	
61					11.3	18.2	70	13.8	20.4	78	18.0	22.5	78	19.6	22.5	-	-	-	-	
67					11.0	19.7	75	13.2	21.8	84	17.0	24.0	84	18.8	24.0	-	-	-	-	
73					10.5	21.1	81	12.7	23.2	87	16.7	24.7	87	18.2	24.7	-	-	-	-	
78					10.3	22.5	87	12.3	24.7	-	-	-	-	-	-	-	-	-	-	
81					10.2	23.2	-	-	-	-	-	-	-	-	-	-	-	-	-	

Ordering    Type    +    Material no.    =    Ordering no.  
 example: 136.682.xx.B2    +    1Y    =    136.682.1Y.B2

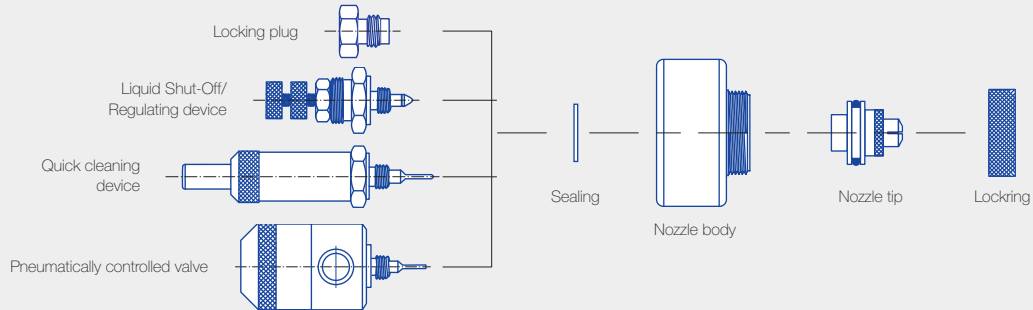


# Accessories for pneumatic atomizing nozzles

## Series 136.1 to 136.6



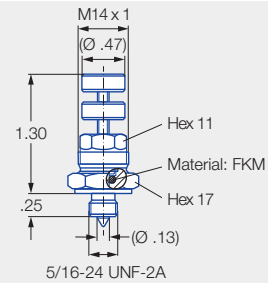
### Overview of accessories



#### Regulating device and shut-off needle

Enables manual regulation of the flow rate and closing of the nozzle.

Material: Stainless steel 303  
Weight: .07 lb



#### Ordering no.

Type

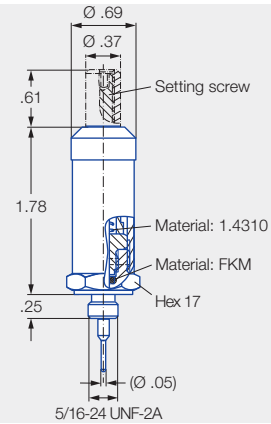
**015.600.16**

Suitable for all nozzles of series 136

#### Regulating device with quick-cleaning needle

Enables manual regulation of the flow rate and cleaning of the nozzle orifice.

Material: Stainless steel 303  
Weight: .17 lb



#### Ordering number

Type

**013.601.16.30**

**013.602.16.30**

**013.603.16.30**

**013.604.16.30**

**013.605.16.30**

**013.606.16.30**

For nozzles

136.xx1

136.xx2

136.xx3

136.xx4

136.xx5

136.xx6

Needle diameter  
D  
[in]

0.08

0.05

0.03

0.02

0.02

0.01

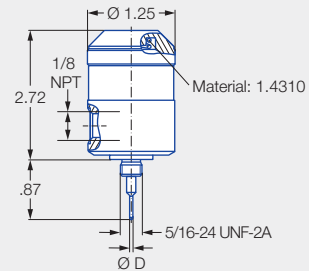




**Pneumatically controlled valve. Opening pressure 30 psi, max. 180 cycles/min.**

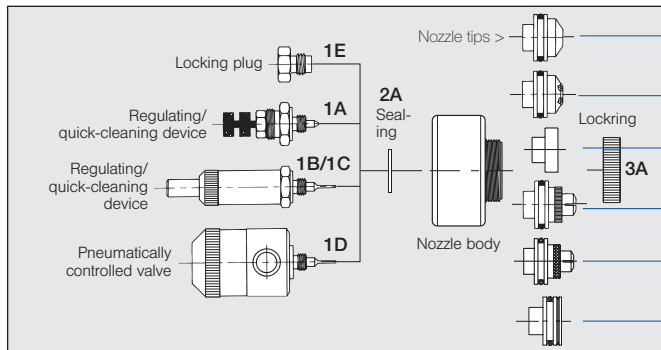
External control system via separate compressed air connection for switching the nozzle on and off.

Material: Stainless steel 303  
Weight: .51 lb



Ordering number	For nozzles	Needle diameter D [in]
013.601.16.10	136.xx1	0.08
013.602.16.10	136.xx2	0.05
013.603.16.10	136.xx3	0.03
013.604.16.10	136.xx4	0.02
013.605.16.10	136.xx5	0.02
013.606.16.10	136.xx6	0.01

- 1E for Series 136/166  
Locking plug  
136. 000. 1Y. 00. 04
- 2A for Series 136  
Seal  
095. 015. 7A. 03. 04
- 3A for Series 136/166  
Lockring  
136. 000. 1Y. 00. 07



- Nozzle tips\*
- Series 136.1/166.1  
136. xxx. 1Y. 00. 03
  - Series 136.2/166.2  
136. xxx. 1Y. 00. 03
  - Series 136.3/166.3  
136. xxx. 1Y. 00. 03
  - Series 136.4/166.4  
136. xxx. 1Y. 00. 03
  - Series 136.5/166.5  
136. xxx. 1Y. 00. 03
  - Series 136.6/166.6  
136. xxx. 1Y. 00. 03

\* Use the 3 digits from the full nozzle assembly for the spare tip part number  
Example:  
136.414.17.B2



# ➤ Pneumatic atomizing nozzles, full cone, pressure principle, internal mixing

## Series 166.1



### Features:

- Version with magnetic valve
- Fine full cone atomization
- Liquid pressure principle
- Internal mixing

### Applications:

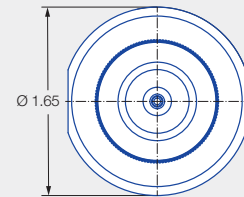
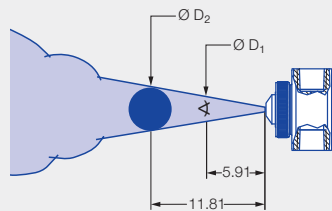
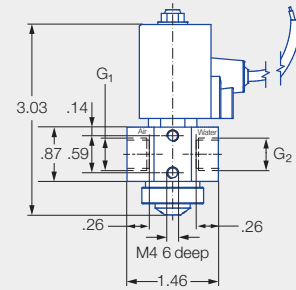
- Humidification
- Cooling

### Technical data:

- Operating pressure: 0–87 psi
- Voltage: 24 V DC
- Power: 8 W
- Switching frequency: Approx. 500/min
- Protective system: IP 67
- Ambient temperature: +50 °C/+122 °F
- Cable length: 39.37 in
- Material of gasket: EPDM



Series 166.1



Air connection G <sub>1</sub>	Water connection G <sub>2</sub>	Weight [lb]
1/4 NPT	1/4 NPT	0.91

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions							
	Type	Material number		10				20				40				60				p air [psi]	p water [psi]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]
		16		p air [psi]	V̇ water [gal/h]	V̇ air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ air [SCFM]	p air [psi]	V̇ water [gal/h]	V̇ air [SCFM]								
20°	166.115.xx.B2	●	0.02	6	1.56	0.3	0.2	1.5	0.5	35	2.4	0.6	44	2.9	0.7	12	10	2	4				
				12	1.00	0.6	0.4	1.1	0.6	41	2.0	0.7	49	2.5	0.8	26	22	2	4				
17				0.45	0.9	0.5	0.6	0.8	46	1.6	0.9	55	2.2	0.9	38	29	2	4					
-				-	-	-	2.6	0.3	1.0	52	1.2	1.1	61	1.8	1.1	46	44	2	4				
-				-	-	-	-	-	-	58	0.8	1.2	67	1.5	1.3	64	58	2	4				
-				-	-	-	-	-	-	64	0.5	1.5	73	1.1	1.5	-	-	-	-				
-				-	-	-	-	-	-	70	0.3	1.6	78	0.8	1.6	-	-	-	-				
166.125.xx.B2	●	0.02	12	1.24	1.5	0.9	1.8	1.1	41	2.4	1.9	49	2.8	2.3	20	10	2	4					
			17	1.16	1.9	1.1	1.7	1.3	46	2.3	2.2	55	2.7	2.5	32	22	2	4					
			23	1.06	2.3	1.4	1.6	1.5	52	2.2	2.4	61	2.6	2.7	41	29	2	4					
			29	0.92	2.6	1.5	1.5	1.8	58	2.1	2.6	67	2.5	2.9	49	44	2	4					
			35	0.79	3.0	1.8	1.4	2.0	64	2.0	2.8	73	2.5	3.2	61	58	2	4					
			41	0.71	3.2	1.9	1.3	2.2	70	1.9	3.1	78	2.4	3.4	-	-	-	-					
			46	0.53	3.7	2.2	1.2	2.4	75	1.8	3.3	84	2.3	3.6	-	-	-	-					
			52	0.42	4.1	2.4	1.0	2.6	81	1.7	3.5	-	-	-	-	-	-	-					
			58	0.34	4.5	2.6	0.9	2.8	87	1.6	3.7	-	-	-	-	-	-	-					
			64	0.26	4.9	2.9	0.8	3.1	-	-	-	-	-	-	-	-	-	-					
			70	0.16	5.2	3.1	0.7	3.3	-	-	-	-	-	-	-	-	-	-					
			-	-	-	3.3	0.6	3.5	-	-	-	-	-	-	-	-	-	-					
			-	-	-	3.5	0.5	3.7	-	-	-	-	-	-	-	-	-	-					



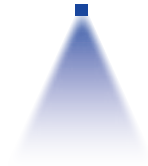


Spray angle	Ordering number		Narrowest free cross section $\varnothing$ [in]	Liquid pressure p [psi]												Spray dimensions						
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	$\varnothing D_1$ [in]	$\varnothing D_2$ [in]			
		16		p air [psi]	$\dot{V}$ water [gal/h]	$\dot{V}_i$ air [SCFM]	p air [psi]	$\dot{V}$ water [gal/h]	$\dot{V}_i$ air [SCFM]	p air [psi]	$\dot{V}$ water [gal/h]	$\dot{V}_i$ air [SCFM]	p air [psi]	$\dot{V}$ water [gal/h]	$\dot{V}_i$ air [SCFM]							
20°	166.134.xx.B2	●	0.03	17	3.5	1.6	29	5.1	2.3	44	7.5	3.1	55	8.6	1.6	26	10	2	4			
				23	3.3	1.9	35	4.8	2.6	49	7.3	3.4	61	8.5	1.8	41	22	2	4			
				29	3.1	2.3	41	4.6	2.9	55	7.1	3.7	67	8.3	1.9	55	29	2	4			
				35	3.0	2.6	46	4.4	3.2	61	6.8	4.0	73	8.1	2.1	75	44	3	4			
				41	2.9	2.9	52	4.3	3.5	67	6.6	4.3	78	7.9	2.2	87	58	3	4			
				46	2.9	3.2	58	4.1	3.8	73	6.4	4.6	84	7.7	2.4	-	-	-	-			
				52	2.8	3.5	64	4.0	4.1	78	6.2	4.9	-	-	-	-	-	-	-			
				58	2.7	3.8	70	4.0	4.5	84	6.1	5.2	-	-	-	-	-	-	-			
				64	2.7	4.1	75	3.9	4.8	-	-	-	-	-	-	-	-	-	-			
				70	2.6	4.5	81	3.7	5.1	-	-	-	-	-	-	-	-	-	-			
				75	2.5	4.8	87	3.6	5.4	-	-	-	-	-	-	-	-	-	-			
				81	2.4	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-			
				87	2.2	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-			
				166.142.xx.B2	●	0.10	20	6.4	3.0	23	14.1	2.8	46	18.7	4.7	55	24.6	2.4	12	10	2	4
							26	5.4	3.7	29	11.3	3.5	52	16.5	5.4	61	22.0	2.7	23	22	3	4
							32	5.3	4.2	35	9.3	4.2	58	14.7	6.2	67	19.9	3.0	44	29	2	4
							38	5.1	4.8	41	8.0	4.9	64	13.0	6.9	73	18.2	3.3	58	44	3	4
							44	4.6	5.5	46	7.6	5.6	70	11.8	7.6	78	16.8	3.6	87	58	3	4
49	4.4	6.1	52				7.5	6.2	75	11.1	8.3	84	15.2	3.9	-	-	-	-				
55	4.5	6.7	58				7.2	6.8	81	10.7	8.9	-	-	-	-	-	-	-				
61	4.3	7.3	64				6.8	7.4	87	10.5	9.5	-	-	-	-	-	-	-				
67	4.0	7.8	70				6.4	7.9	-	-	-	-	-	-	-	-	-	-				
73	3.7	8.4	75				5.9	8.6	-	-	-	-	-	-	-	-	-	-				
78	3.5	9.0	81				5.8	9.2	-	-	-	-	-	-	-	-	-	-				
84	3.3	9.5	87				5.7	9.8	-	-	-	-	-	-	-	-	-	-				

Ordering Type + Material no. = Ordering no.  
 example: 166.134.xx.B2 + 16 = 166.134.16.B2

# ➤ Pneumatic atomizing nozzles, wide full cone, pressure principle, internal mixing

## Series 166.2



### Features:

- Version with magnetic valve
- Fine full cone atomization
- Pressure principle
- Internal mixing
- Extra wide spray angle of 60°

### Applications:

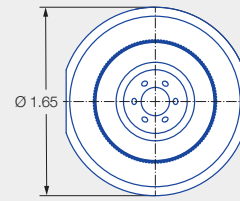
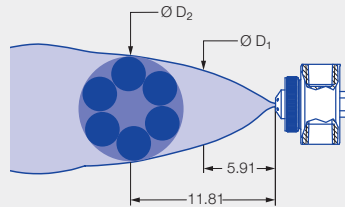
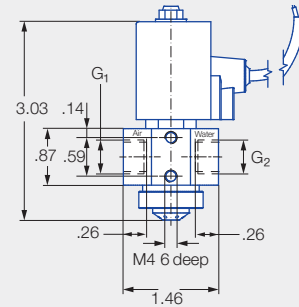
- Humidification of air
- Cooling

### Technical data:

- Operating pressure: 0–87 psi
- Voltage: 24 V DC
- Power: 8 W
- Switching frequency: Approx. 500/min
- Protective system: IP 67
- Ambient temperature: +50 °C / +122 °F
- Cable length: 39.37 in
- Material of gasket: EPDM



Series 166.2



Air connection G <sub>1</sub>	Water connection G <sub>2</sub>	Weight [lb]
1/4 NPT	1/4 NPT	0.90

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions						
	Type	Material number		10				20				40				60				p water [psi]	Ø D <sub>1</sub> [in]	Ø D <sub>2</sub> [in]
		16		p air [psi]	v̇ water [gal/h]	v̇ air [SCFM]	p air [psi]	v̇ water [gal/h]	v̇ air [SCFM]	p air [psi]	v̇ water [gal/h]	v̇ air [SCFM]	p air [psi]	v̇ water [gal/h]	v̇ air [SCFM]							
60°	166.215.xx.B2	●	0.02	15	0.8	0.8	23	1.5	1.0	41	2.2	1.4	55	2.5	1.8	15	10	8	330			
				17	0.5	0.9	26	1.3	1.1	46	1.9	1.6	61	2.2	2.1	23	22	9	380			
				20	0.2	1.1	29	1.0	1.2	52	1.5	1.9	67	1.8	2.3	35	29	9	385			
				-	-	-	32	0.7	1.4	58	1.1	2.1	73	1.4	2.5	46	44	10	390			
				-	-	-	35	0.4	1.5	64	0.6	2.4	78	1.0	2.8	61	58	10	410			
				-	-	-	38	0.2	1.6	70	0.2	2.6	84	0.6	3.1	-	-	-	-			
				-	-	-	-	-	-	73	0.1	2.7	87	0.4	3.3	-	-	-	-			
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	166.222.xx.B2	●	0.04	12	4.6	1.6	23	6.8	2.4	44	10.7	3.4	55	14.5	3.8	12	10	10	450			
				15	1.6	2.5	26	3.9	3.1	46	8.3	4.1	58	12.0	4.3	23	22	10	465			
				-	-	-	29	1.8	3.9	49	5.9	4.8	61	9.9	5.0	33	29	10	465			
				-	-	-	32	0.5	4.8	52	3.9	5.6	64	7.8	5.7	46	44	10	465			
				-	-	-	-	-	-	55	2.2	6.5	67	5.7	6.6	61	58	10	465			
				-	-	-	-	-	-	58	1.2	7.2	70	4.0	7.3	-	-	-	-			
				-	-	-	-	-	-	-	-	-	73	2.6	8.1	-	-	-	-			
				-	-	-	-	-	-	-	-	-	75	1.6	8.9	-	-	-	-			
	166.231.xx.B2	●	0.06	23	6.8	3.0	38	11.7	4.1	52	24.8	4.6	61	35.1	4.3	29	10	9	15			
				29	4.7	3.6	44	8.7	4.8	58	20.7	5.5	67	31.0	5.3	38	22	10	16			
				35	3.0	4.2	49	6.5	5.4	64	17.4	6.2	73	26.7	6.1	35	29	10	17			
				41	1.8	4.8	55	4.8	6.0	70	14.5	7.0	78	23.2	6.9	52	44	10	17			
				-	-	-	61	3.5	6.6	75	12.0	7.7	84	20.2	7.8	61	58	10	17			
				-	-	-	67	2.5	7.1	81	10.0	8.3	87	18.8	8.1	-	-	-	-			
				-	-	-	-	-	-	87	9.5	8.5	-	-	-	-	-	-	-			
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Ordering Type + Material no. = Ordering no.  
 example: 166.215.xx.B2 + 16 = 166.215.16.B2

# ➤ Pneumatic atomizing nozzles, flat fan, pressure principle, internal mixing Series 166.4

### Features:

- Version with magnetic valve
- Fine flat fan atomization
- Liquid pressure principle
- Internal mixing

### Applications:

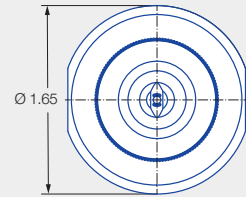
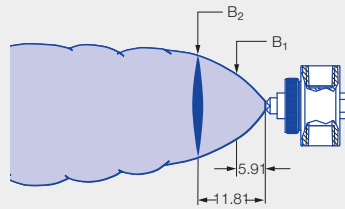
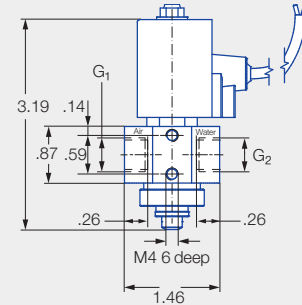
- Belt humidification
- Cooling
- Humidification of goods

### Technical data:

- Operating pressure: 0–87 psi
- Voltage: 24 V DC
- Power: 8 W
- Switching frequency: Approx. 500/min
- Protective system: IP 67
- Ambient temperature: +50 °C / +122 °F
- Cable length: 39.37 in
- Material of gasket: EPDM



Series 166.4



Air connection G <sub>1</sub>	Water connection G <sub>2</sub>	Weight [lb]
1/4 NPT	1/4 NPT	0.90

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions							
	Type	Material number		10				20				40				60				p air [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]
		16		p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]								
45°	166.414.xx.B2	●	0.03	15	2.0	0.8	20	3.8	0.9	32	5.9	1.2	44	6.6	1.5	20	10	3	5				
				17	1.6	0.9	23	3.4	0.9	38	5.3	1.4	49	6.1	1.6	35	22	4	6				
				20	1.1	1.0	26	3.1	1.1	44	4.7	1.5	55	5.5	1.8	46	29	4	6				
				23	0.7	1.1	29	2.7	1.2	49	4.1	1.8	61	5.0	2.1	55	44	5	7				
				26	0.3	1.2	32	2.4	1.3	55	3.5	2.0	67	4.5	2.2	67	58	5	8				
				–	–	–	35	2.0	1.4	61	2.9	2.2	73	3.9	2.5	–	–	–	–				
				–	–	–	38	1.6	1.5	67	2.3	2.4	78	3.4	2.7	–	–	–	–				
				–	–	–	41	1.2	1.6	73	1.7	2.6	84	2.9	2.9	–	–	–	–				
				–	–	–	44	0.8	1.8	78	1.1	2.9	87	2.6	3.1	–	–	–	–				
				–	–	–	46	0.6	1.9	84	0.7	3.1	–	–	–	–	–	–	–				
				–	–	–	49	0.3	2.0	87	0.4	3.2	–	–	–	–	–	–	–				
				166.462.xx.B2	●	0.06	17	5.0	1.5	29	5.8	1.2	44	16.3	2.4	55	20.1	2.7	17	10	5	6	
							23	3.2	2.0	35	4.8	1.4	49	13.7	2.8	58	18.6	3.0	35	22	5	7	
							29	2.5	2.4	41	3.8	1.6	55	11.8	3.4	61	17.3	3.2	46	29	5	7	
35	1.9	2.8	46				3.0	1.9	61	10.3	3.9	64	16.2	3.5	55	44	6	8					
41	1.5	3.2	52				2.3	2.1	67	8.8	4.4	67	15.1	3.8	87	58	6	8					
46	1.3	3.5	58				2.1	2.3	73	7.8	4.8	70	14.3	3.9	–	–	–	–					
52	1.0	3.9	64				1.6	2.5	78	6.7	5.2	73	13.6	4.2	–	–	–	–					
58	0.8	4.2	70				1.2	2.7	84	5.8	5.7	75	13.0	4.5	–	–	–	–					
64	0.6	4.6	75				0.8	2.9	87	5.4	5.8	78	12.3	4.8	–	–	–	–					
–	–	–	81				0.4	3.1	–	–	–	81	11.5	5.1	–	–	–	–					
–	–	–	84				0.2	3.2	–	–	–	84	10.9	5.2	–	–	–	–					
–	–	–	–				–	–	–	–	–	87	10.3	5.5	–	–	–	–					





Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			40			60			p air [psi]	p water [psi]	B <sub>1</sub> [in]	B <sub>2</sub> [in]	
		16		p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]					
60°	166.425.xx.B2	●	0.02	12	1.7	0.7	20	2.5	1.0	35	3.5	1.5	35	16.1	4.3	17	10	6	8	
				17	1.5	0.9	26	2.3	1.2	38	3.4	1.6	41	15.5	4.1	32	22	6	10	
				23	1.2	1.1	32	2.1	1.4	44	3.2	1.8	46	15.0	4.0	44	29	7	10	
				29	1.1	1.4	38	1.9	1.6	49	3.1	2.0	52	14.5	3.8	49	44	8	13	
				35	0.8	1.5	44	1.7	1.8	55	2.9	2.2	58	13.9	3.7	81	58	8	13	
				41	0.7	1.7	49	1.5	2.0	61	2.7	2.4	64	13.4	3.5	-	-	-	-	
				44	0.6	1.8	55	1.3	2.2	67	2.6	2.5	70	12.8	3.4	-	-	-	-	
				-	-	-	58	1.3	2.3	73	2.4	2.7	75	12.2	3.2	-	-	-	-	
				-	-	-	64	1.1	2.5	78	2.3	2.9	81	11.7	3.1	-	-	-	-	
				-	-	-	70	1.0	2.6	84	2.1	3.1	87	11.2	3.0	-	-	-	-	
	-	-	-	75	0.7	2.8	87	2.1	3.2	-	-	-	-	-	-	-				
	-	-	-	81	0.6	3.0	-	-	-	-	-	-	-	-	-	-				
	-	-	-	87	0.4	3.2	-	-	-	-	-	-	-	-	-	-				
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	60°	166.452.xx.B2	●	0.06	15	5.0	2.3	26	8.2	3.1	46	13.2	4.5	55	18.7	4.8	15	10	5	7
					20	2.3	3.4	29	6.7	3.7	52	10.4	5.5	61	15.5	5.7	26	22	6	9
					26	2.0	4.1	32	5.3	4.2	58	8.3	6.6	67	12.8	6.6	38	29	6	10
32					1.1	4.9	35	4.1	4.7	64	6.3	7.6	73	10.9	7.7	52	44	7	11	
38					0.3	5.8	38	3.3	5.2	70	4.7	8.5	78	8.9	8.7	73	58	7	11	
41					0.03	6.1	41	2.7	5.7	75	3.5	9.4	84	7.3	9.7	-	-	-	-	
-					-	-	-	-	-	81	2.8	10.3	87	6.4	10.1	-	-	-	-	
-					-	-	-	-	-	87	2.3	11.1	-	-	-	-	-	-	-	
-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
80°	166.433.xx.B2	●	0.02	15	3.1	1.2	26	4.8	1.6	44	8.2	2.2	55	9.9	2.6	20	10	6	8	
				17	2.1	1.4	29	4.0	1.9	49	6.7	2.6	61	8.6	2.9	32	22	7	10	
				20	1.4	1.6	32	3.2	2.1	55	5.4	3.0	67	7.3	3.4	44	29	8	12	
				23	1.0	1.9	35	2.6	2.4	61	4.3	3.5	73	6.2	3.8	55	58	12	19	
				-	-	-	38	2.0	2.5	67	3.3	3.9	78	5.1	4.2	75	58	10	16	
				-	-	-	41	1.6	2.8	73	2.5	4.3	84	4.2	4.6	-	-	-	-	
				-	-	-	44	1.2	2.9	78	1.7	4.7	87	3.8	4.9	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Ordering Type + Material no. = Ordering no.  
 example: 166.425.xx.B2 + 16 = 166.425.16.B2



# ➤ Pneumatic atomizing nozzles, flat fan, pressure principle, external mixing Series 166.6

### Features:

- Version with magnetic valve
- Fine flat fan atomization
- Liquid pressure principle
- External mixing

### Applications:

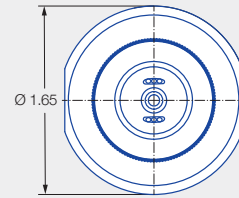
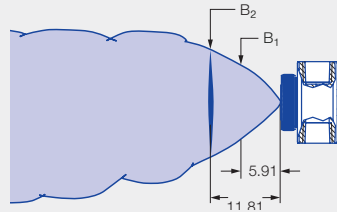
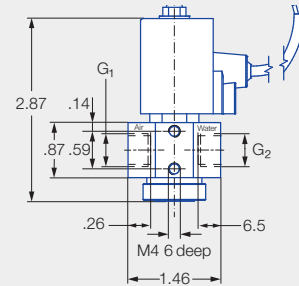
- Belt humidification
- Cooling
- Humidification of goods
- Atomization of viscous liquids

### Technical data:

- Operating pressure: 0–8 psi
- Voltage: 24 V DC
- Power: 8 W
- Switching frequency: Approx. 500/min
- Protective system: IP 67
- Ambient temperature: +50 °C / +122 °F
- Cable length: 39.37 in
- Material of gasket: EPDM



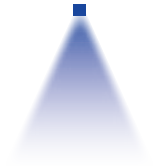
Series 166.6



Air connection G <sub>1</sub>	Water connection G <sub>2</sub>	Weight [lb]
1/4 NPT	1/4 NPT	0.90

Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions							
	Type	Material number		10				20				0.30				0.35				p <sub>air</sub> [psi]	p <sub>water</sub> [bar]	B <sub>1</sub> [in]	B <sub>2</sub> [mm]
		16		p <sub>air</sub> [psi]	V <sub>water</sub> [gal/h]	V <sub>air</sub> [SCFM]	p <sub>air</sub> [psi]	V <sub>water</sub> [gal/h]	V <sub>air</sub> [SCFM]	p <sub>air</sub> [psi]	V <sub>water</sub> [gal/h]	V <sub>air</sub> [SCFM]	p <sub>air</sub> [psi]	V <sub>water</sub> [gal/h]	V <sub>air</sub> [SCFM]								
45°	166.616.xx.B2	●	0.02	12	0.4	1.5	12	0.6	1.4	12	0.9	1.5	15	1.0	1.6	20	1	3	5				
				17	0.5	1.8	15	0.6	1.7	17	0.9	1.8	20	1.0	2.0	32	2	4	5				
				23	0.5	2.2	20	0.7	2.1	23	0.9	2.2	26	1.0	2.4	46	3	4	5				
				29	0.6	2.5	26	0.7	2.5	29	1.0	2.5	32	1.0	2.7	58	4	4	6				
				35	0.5	2.9	32	0.7	2.8	35	1.0	2.9	38	1.0	3.1	73	5	4	6				
				41	0.6	3.2	38	0.7	3.2	41	1.0	3.2	44	1.0	3.4	-	-	-	-				
				46	0.6	3.6	44	0.7	3.5	46	1.0	3.6	49	1.0	3.8	-	-	-	-				
				52	0.6	3.9	52	0.7	3.9	52	1.0	3.9	55	1.0	4.1	-	-	-	-				
				58	0.6	4.3	58	0.7	4.3	58	1.0	4.3	61	1.0	4.5	-	-	-	-				
				64	0.6	4.6	64	0.7	4.6	64	1.0	4.6	67	1.0	4.8	-	-	-	-				
				70	0.6	5.0	70	0.7	5.0	70	1.0	4.9	73	1.0	5.2	-	-	-	-				
				75	0.6	5.4	75	0.7	5.4	75	1.0	5.4	78	1.0	5.5	-	-	-	-				
				81	0.6	5.7	81	0.7	5.7	81	1.0	5.7	84	1.0	5.9	-	-	-	-				
				87	0.6	6.0	87	0.7	6.0	87	1.0	6.0	87	1.0	6.0	-	-	-	-				
				45°	166.654.xx.B2	●	0.03	12	1.4	1.4	12	1.9	1.4	17	2.7	1.8	23	2.9	2.2	20	1	3	5
								17	1.5	1.8	17	2.0	1.8	23	2.7	2.2	29	3.0	2.5	32	2	4	5
23	1.5	2.2	23					2.0	2.2	29	2.7	2.5	35	3.0	2.9	46	3	4	5				
29	1.6	2.5	29					2.1	2.5	35	2.8	2.9	41	3.0	3.2	58	4	4	6				
35	1.6	2.9	35					2.1	2.9	41	2.8	3.2	46	3.0	3.6	73	5	4	6				
41	1.7	3.2	41					2.1	3.2	46	2.8	3.6	52	3.0	3.9	-	-	-	-				
46	1.7	3.6	46					2.1	3.6	52	2.8	3.9	58	3.0	4.2	-	-	-	-				
52	1.7	3.9	52					2.1	3.9	58	2.8	4.2	64	3.0	4.6	-	-	-	-				
58	1.7	4.2	58					2.1	4.2	64	2.8	4.6	70	3.0	4.9	-	-	-	-				
64	1.7	4.6	64					2.1	4.6	70	2.8	4.9	75	3.0	5.3	-	-	-	-				
70	1.7	4.9	70					2.1	4.9	75	2.8	5.3	81	3.0	5.7	-	-	-	-				
75	1.6	5.3	75					2.1	5.3	81	2.8	5.7	87	2.9	5.9	-	-	-	-				
81	1.6	5.7	81	2.1	5.7	87	2.7	6.0	-	-	-	-	-	-	-								
87	1.5	6.0	87	2.0	6.0	-	-	-	-	-	-	-	-	-	-								





Spray angle	Ordering number		Narrowest free cross section Ø [in]	Liquid pressure p [psi]												Spray dimensions				
	Type	Material number		10			20			0.30			0.35			p air [psi]	p water [bar]	B <sub>1</sub> [in]	B <sub>2</sub> [mm]	
		16		p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]	p air [psi]	V water [gal/h]	V air [SCFM]					
60°	166.626.xx.B2	●	0.02	12	0.5	1.6	12	0.7	1.6	12	0.9	1.6	0.80	12	1.6	23	1	3	5	
				17	0.5	2.1	17	0.7	2.1	17	1.0	2.1	1.20	17	2.1	35	2	4	6	
				23	0.6	2.5	23	0.7	2.5	23	1.0	2.5	1.60	23	2.5	46	3	4	6	
				29	0.6	2.9	29	0.7	2.9	29	1.0	2.9	2.00	29	2.9	58	4	4	6	
				35	0.6	3.3	35	0.8	3.3	35	1.0	3.3	2.40	35	3.3	75	5	4	6	
				41	0.6	3.7	41	0.8	3.7	41	1.0	3.7	2.80	41	3.7	-	-	-	-	
				46	0.6	4.1	46	0.8	4.1	46	1.0	4.1	3.20	46	4.1	-	-	-	-	
				52	0.6	4.5	52	0.8	4.5	52	1.0	4.5	3.60	52	4.5	-	-	-	-	
				58	0.6	4.9	58	0.8	4.9	58	1.0	4.9	4.00	58	4.9	-	-	-	-	
				64	0.6	5.3	64	0.8	5.3	64	1.0	5.3	4.40	64	5.3	-	-	-	-	
				70	0.6	5.7	70	0.8	5.7	70	1.0	5.7	4.80	70	5.7	-	-	-	-	
				75	0.6	6.1	75	0.8	6.1	75	1.0	6.1	5.20	75	6.1	-	-	-	-	
	81	0.6	6.6	81	0.8	6.5	81	1.0	6.5	5.60	81	6.5	-	-	-	-				
	87	0.6	6.9	87	0.8	6.9	87	1.0	6.9	6.00	87	6.9	-	-	-	-				
		166.682.xx.B2	●	0.06	15	5.9	4.4	20	7.6	5.5	26	10.9	6.5	2.00	29	6.9	23	1	4	6
	20				5.3	5.5	26	6.9	6.4	32	9.2	7.4	2.40	35	7.9	35	2	5	6	
	26				5.0	6.5	32	6.3	7.4	38	8.8	8.4	2.80	41	8.9	46	3	5	6	
	32				4.7	7.4	38	5.9	8.4	44	8.0	9.4	3.20	46	9.8	58	4	5	6	
	38				4.5	8.4	44	5.6	9.4	49	7.5	10.3	3.60	52	10.8	75	5	5	7	
	44				4.4	9.4	49	5.3	10.3	55	7.0	11.2	4.00	58	11.7	-	-	-	-	
	49				4.2	10.3	55	5.1	11.2	61	6.7	12.2	4.40	64	12.7	-	-	-	-	
	55				4.2	11.2	61	5.0	12.2	67	6.4	13.1	4.80	70	13.6	-	-	-	-	
	61				4.2	12.2	67	4.9	13.1	73	6.1	14.1	5.20	75	14.6	-	-	-	-	
	67				4.2	13.1	73	4.8	14.1	78	5.8	15.0	5.60	81	15.5	-	-	-	-	
	73				4.0	14.1	78	4.6	14.9	84	5.6	16.0	6.00	87	16.5	-	-	-	-	
	78				3.7	15.0	84	4.2	16.0	87	5.5	16.5	-	-	-	-	-	-	-	
	84	3.2	16.0	87	3.9	16.5	-	-	-	-	-	-	-	-	-	-				
	87	2.9	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-				
		166.691.xx.B2	●	0.10	20	13.7	8.1	29	17.8	10.3	38	24.4	12.5	2.60	38	12.5	23	1	6	8
	26				13.2	9.6	35	17.1	11.8	44	23.2	13.9	3.00	44	13.9	35	2	6	8	
	32				12.8	11.1	41	16.4	13.2	49	22.3	15.3	3.40	49	15.4	46	3	6	8	
	38				12.5	12.5	46	16.0	14.7	55	21.3	16.8	3.80	55	16.8	58	4	6	8	
	44				12.3	13.9	52	15.3	16.1	61	20.3	18.2	4.20	61	18.2	75	5	6	8	
	49				12.0	15.4	58	14.8	17.5	67	19.7	19.7	4.60	67	19.7	-	-	-	-	
	55				11.7	16.8	64	14.3	18.9	73	18.8	21.1	5.00	73	21.1	-	-	-	-	
	61				11.3	18.2	70	13.8	20.4	78	18.0	22.5	5.40	78	22.5	-	-	-	-	
67	11.0				19.7	75	13.2	21.8	84	17.0	24.0	5.80	84	24.0	-	-	-	-		
73	10.5				21.1	81	12.7	23.2	87	16.7	24.7	6.00	87	24.7	-	-	-	-		
78	10.3				22.5	87	12.3	24.7	-	-	-	-	-	-	-	-	-	-		
81	10.2				23.2	-	-	-	-	-	-	-	-	-	-	-	-	-		

Ordering Type + Material no. = Ordering no.  
 example: 166.626.xx.B2 + 16 = 166.626.16.B2



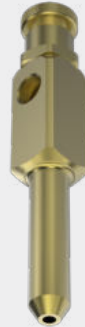
# ➤ Pneumatic atomizing nozzles, full cone, siphon principle, internal mixing Series 140

### Features:

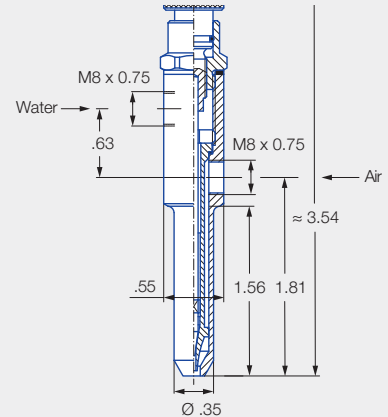
- Particularly fine full cone atomization
- Siphon principle
- Internal mixing
- Integrated regulating device
- Material: Brass

### Applications:

- Lubrication
- Cooling
- Humidification



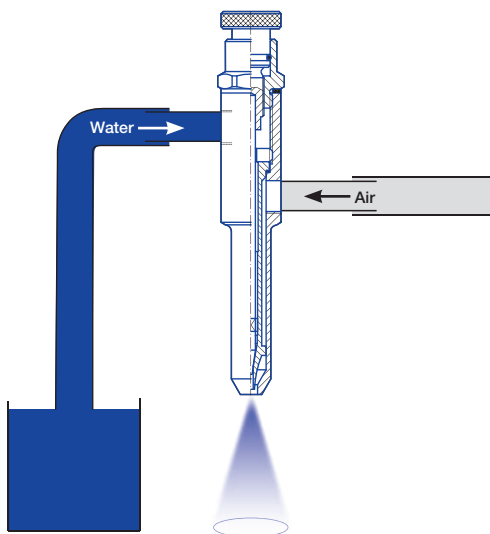
Series 140



Material	Weight [lb]
Brass	0.07

Spray angle	Ordering number	Narrowest free cross section Ø [in]		Hs Aspiration height [in WS]	Flow rate							
		Water	Air		7		15		30		45	
					$\dot{V}_W$ [gal/h]	$\dot{V}_A$ L [SCFM]	$\dot{V}_W$ [gal/h]	$\dot{V}_A$ L [SCFM]	$\dot{V}_W$ [gal/h]	$\dot{V}_A$ L [SCFM]	$\dot{V}_W$ [gal/h]	$\dot{V}_A$ L [SCFM]
20°-30°	140.252.30.01	0.02	0.03	20	-	-	1.2	2.4	2.1	3.5	2.8	4.7
		0.02	0.03	8	1.2	1.50	1.8	2.4	2.6	3.5	3.2	4.7

### Assembly scheme/Accessories

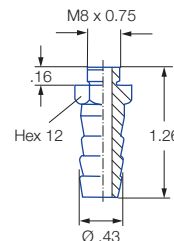


### Accessories:

- Gasket  
**014.040.72**  
7.8 x 12 x 1 (EWP 210)



- Nipple  
**014.010.30.04**  
(Material: Brass)  
Weight: .04 lb





# ➤ Pneumatic atomizing nozzles for atomizing viscous media

## Series 176 ViscoMist



The ViscoMist™ series offers independent regulation of both atomizing air and fan air, which provides the user with infinite control over the viscous fluid's spray pattern and roplet size.

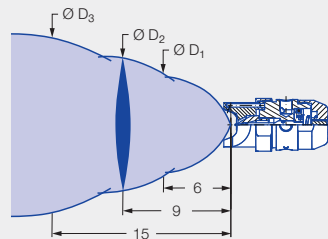
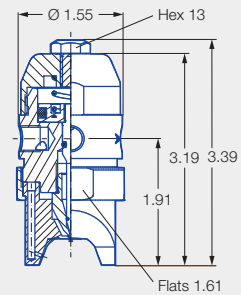
The ViscoMist™ nozzle features a standard 'Liquid Shut-Off/Clean-Out Needle' function. This design element activates and deactivates the liquid supply, while simultaneously removing excess fluid from the fluid nozzle preventing clogging. This feature is especially vital when the viscous liquids are being applied in continuous process environments.

The modular design of the ViscoMist™ allows maximum flexibility to meet the exact spray requirements.

Interchangeable air caps and various flow capacities are available to suit any spraying application needs.



Series 176 ViscoMist



### External mixing nozzle for viscous liquids, e.g. for:

- Coating processes
- Moisturising
- Lubrication
- Glazing
- Disinfection

### One nozzle – several spray characters:

- Spray characters
  - Solid stream
  - Full cone
  - Flat fan
- Independent regulation of liquid, atomizing air and fan air
- Fluid circulation possible (nozzle body with five connections)

### Nozzle sizes:

- Ø 0.01 in to 0.10 in

### Valve position:

- Normally closed, fail-safe with loss of air

### Signal air pressure:

- Min. 30 psi, max. 45 psi

### Cycles per minute:

- 180 cycles/min (short term)

### Connection thread:

- 1/8 NPT
- BSPP thread available on request

### Weight:

- 1.21 lb

### Material:

- 1Y (stainless steel 316L)

### Flow rate range:

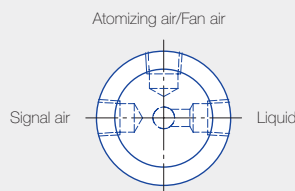
- Water: .55 to 21.4 gal/hr, at 30 psi
- Air 27.5 to 104.12 gal/min in normal condition, at 30 psi

### Atomizing air/Signal air/Fan air:

The atomizing air causes the liquid to atomize at the nozzle orifice. The spray character can be adjusted with the fan air to suit the application. The signal air activates the nozzle.

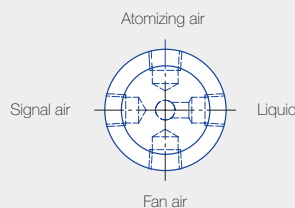
## Nozzle body configurations

### Nozzle body configuration 2



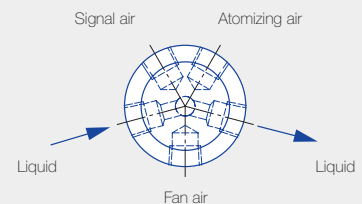
Version with three connections

### Nozzle body configuration 4



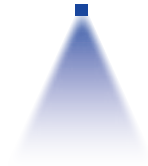
Version with four connections

### Nozzle body configuration 5



Version with five connections





Ordering number	Narrowest free cross section Ø [in]	Liquid		Air			Spray dimensions [in] at distance D <sub>1</sub> , D <sub>2</sub> and D <sub>3</sub>																
		Liquid pressure p [psi]	V̇ water [gal/h]	Air pressure p air [psi]	Atomizing air [SCFM]	Fan air [SCFM]	Atomizing air [psi]	Liquid pressure p [psi]	Fan air [psi]														
									0.00*			5			10			15			22		
									Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in
176.201.1Y.01.00 176.401.1Y.01.00 176.501.1Y.01.00	0.01	2	0.5	2	0.2	0.6	4	5	2	2	4	6	7	8	7	9	11	7	9	10	7	9	11
		4	0.7	4	0.4	0.8		10	2	2	3	6	8	11	8	11	13	9	12	13	9	11	13
		10	1.2	10	0.6	1.3		15	-	-	-	7	8	11	8	12	15	9	12	14	10	12	15
		15	1.5	15	0.7	1.7		22	-	-	-	7	8	14	8	10	13	10	12	14	11	13	15
		20	1.7	20	0.8	2.0	15	5	2	2	4	4	5	7	5	7	9	6	9	11	7	9	12
		25	1.9	25	0.9	2.3		10	2	2	4	3	4	7	5	7	9	6	8	9	7	9	11
		29	2.1	29	1.1	2.7		15	1	2	3	3	5	7	5	7	10	6	9	11	7	9	13
		35	2.3	35	1.2	3.0		22	-	-	-	4	6	8	6	7	10	7	10	14	7	11	14
		40	2.4	40	1.4	3.3	30	5	2	2	4	2	3	4	4	5	6	4	6	7	6	8	9
		46	2.6	46	1.5	3.7		10	2	2	4	2	4	6	3	4	6	4	7	9	6	8	10
		51	2.7	51	1.6	4.0		15	2	2	4	3	4	6	4	5	7	5	8	10	6	8	10
		58	3.0	58	1.8	4.5		22	-	-	-	2	3	5	4	6	7	6	7	9	7	9	12
		176.202.1Y.01.00 176.402.1Y.01.00 176.502.1Y.01.00	0.02	2	1.1	2	0.3	0.6	4	5	2	2	4	6	7	11	2	10	12	7	9	11	8
4	1.6			4	0.4	0.8	10	-		-	-	7	9	10	3	12	14	11	13	16	12	13	16
10	2.4			10	0.6	1.3	15	-		-	-	6	8	9	3	11	17	12	13	18	12	15	22
15	3.0			15	0.7	1.7	22	-		-	-	-	-	-	3	11	14	11	13	17	14	16	19
20	3.5			20	0.8	2.0	15	5	2	2	4	4	6	6	5	7	9	6	7	9	7	9	10
25	4.0			25	0.9	2.3		10	2	2	4	4	5	7	6	7	9	7	9	10	8	9	11
29	4.3			29	1.1	2.7		15	-	-	-	4	6	8	7	8	11	7	9	13	8	10	13
35	4.7			35	1.2	3.0		22	-	-	-	-	-	-	7	8	12	8	10	14	10	12	15
40	5.1			40	1.4	3.3	30	5	2	2	3	2	3	4	4	5	7	4	6	7	5	8	9
46	5.4			46	1.5	3.7		10	2	2	3	3	4	5	4	6	7	6	7	7	6	8	10
51	5.7			51	1.6	4.0		15	1	2	4	3	4	5	4	6	7	5	7	9	6	8	10
58	6.2			58	1.8	4.5		22	-	-	-	3	4	6	4	6	9	5	7	9	7	9	12
176.203.1Y.01.00 176.403.1Y.01.00 176.503.1Y.01.00	0.03			2	2.2	2	0.2	0.6	4	5	-	-	-	9	12	16	13	16	19	13	16	20	12
		4	3.3	4	0.2	0.8	6	-		-	-	9	11	13	12	14	20	16	19	24	17	23	29
		10	5.1	10	0.4	1.3	10	-		-	-	-	-	-	13	16	21	16	18	25	18	21	28
		15	6.3	15	0.5	1.7	13	-		-	-	-	-	-	11	14	18	15	18	24	16	20	23
		20	7.3	20	0.6	2.3	16	5	2	2	4	6	8	11	7	9	11	9	12	15	11	14	16
		25	8.2	25	0.6	3.0		10	-	-	-	6	8	10	9	12	15	12	14	18	13	15	17
								15	-	-	-	-	-	-	9	11	16	12	15	20	12	16	19
								22	-	-	-	-	-	-	9	11	15	11	15	20	13	17	21

**Notice:**

The fourth digit in the order number (2, 4 or 5) stands for the housing variant (for details see Page 139).

\* A cone-shaped spray pattern is produced without fan air.





Ordering number	Narrowest free cross section Ø [in]	Liquid		Air			Spray dimensions [in] at distance D <sub>1</sub> , D <sub>2</sub> and D <sub>3</sub>																		
		Liquid pressure p [psi]	V̇ water [gal/h]	Air pressure p air [psi]	Atomizing air [SCFM]	Fan air [SCFM]	Atomizing air [psi]	Liquid pressure p [psi]	Fan air [psi]																
									0.00*			5			10			15			22				
									Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in		
176.203.1Y.01.00 176.403.1Y.01.00 176.503.1Y.01.00	0.03	29	9.0	29	1.3	2.7	30	5	1	2	3	4	6	7	6	8	9	7	9	12	8	9	11		
		35	9.7	35	1.4	3.0		10	-	-	-	5	6	8	7	9	13	9	12	15	10	12	14		
		40	10.4	40	1.6	3.3		15	-	-	-	5	7	8	7	9	13	9	12	16	10	13	16		
		46	11.1	40	1.7	3.7		22	-	-	-	-	-	-	7	9	13	9	12	17	10	13	17		
		51	11.7	46	1.9	4.0	40	5	2	2	4	4	5	7	6	7	9	7	8	11	7	9	12		
		58	12.7	51	2.1	4.5		10	-	-	-	4	6	8	6	8	10	7	9	12	9	11	15		
					15	-		-	-	-	-	-	7	9	12	8	10	14	9	11	15				
							22	-	-	-	-	-	-	7	9	13	9	11	15	9	11	16			
176.204.1Y.01.00 176.404.1Y.01.00 176.504.1Y.01.00	0.04	2	4.5	2	1.4	1.2	4	5	-	-	-	6	8	12	12	16	18	13	16	22	12	16	20		
		4	6.4	4	2.0	1.7		10	-	-	-	-	-	-	12	15	41	14	17	21	16	19	25		
		10	9.8	10	3.3	2.7		15	-	-	-	-	-	-	10	15	20	14	18	23	16	20	27		
		15	12.1	15	4.3	3.4		22	-	-	-	-	-	-	10	15	19	13	15	21	16	20	26		
		20	14.0	20	5.2	4.1	15	5	2	2	3	4	6	7	6	8	10	8	10	13	10	12	17		
		25	15.6	25	6.0	4.7		10	-	-	-	4	6	9	7	8	11	9	11	15	10	13	17		
		29	17.2	29	6.8	5.3		15	-	-	-	4	5	7	6	7	12	9	10	15	10	12	19		
		35	18.6	35	7.6	6.0		22	-	-	-	-	-	-	6	8	11	8	10	16	9	12	18		
		40	19.9	40	8.4	6.6	30	5	2	2	4	3	4	6	4	5	7	4	7	9	6	7	11		
		46	21.2	46	9.2	7.2		10	-	-	-	3	4	6	4	5	8	5	7	9	6	8	11		
		51	22.4	51	10.1	7.8		15	-	-	-	3	4	6	4	6	8	5	7	10	6	8	11		
		58	24.2	58	11.5	8.9		22	-	-	-	3	4	6	4	6	9	5	7	10	6	8	12		
		176.205.1Y.01.00 176.405.1Y.01.00 176.505.1Y.01.00	0.05	2	6.5	2	1.3	1.2	4	5	-	-	-	9	13	18	14	18	21	16	21	25	18	21	26
				4	9.3	4	1.9	1.7		10	-	-	-	-	-	-	13	18	23	16	20	26	16	19	24
10	14.3			10	3.0	2.7	15	-		-	-	-	-	-	13	16	19	14	18	22	17	22	29		
15	17.6			15	4.0	3.4	22	-		-	-	-	-	-	-	-	-	15	20	26	18	23	32		
20	20.2			20	4.7	4.1	15	5	-	-	-	5	7	9	7	9	15	9	11	17	7	14	20		
25	22.8			25	5.4	4.7		10	-	-	-	4	7	9	7	9	13	9	11	16	7	14	20		
29	25.0			29	6.1	5.3		15	-	-	-	-	-	-	7	9	14	9	12	17	11	13	19		
35	27.2			35	6.8	6.0		22	-	-	-	-	-	-	7	9	12	9	12	16	10	13	19		
40	29.2			40	7.5	6.6	30	5	2	2	4	3	4	6	4	6	8	6	7	10	7	9	13		
46	31.0			46	8.2	7.2		10	-	-	-	3	4	6	4	6	9	5	7	11	7	9	14		
51	32.8			51	8.9	7.8		15	-	-	-	3	4	6	4	6	9	6	7	11	7	9	14		
58	35.4			58	10.1	8.9		22	-	-	-	3	4	6	4	6	8	6	7	12	7	9	14		
							40	5	2	2	4	3	4	6	4	5	8	4	6	9	6	7	11		
								10	-	-	-	2	4	6	4	5	8	4	7	10	6	8	12		
					15	-		-	-	2	4	5	4	5	8	5	7	9	6	8	12				
					22	-		-	-	2	4	6	4	5	8	4	7	10	6	8	12				

**Notice:**

The fourth digit in the order number (2, 4 or 5) stands for the housing variant (for details see Page 139).

\* A cone-shaped spray pattern is produced without fan air.





Ordering number	Narrowest free cross section Ø [in]	Liquid		Air			Spray dimensions [in] at distance D <sub>1</sub> , D <sub>2</sub> and D <sub>3</sub>																						
		Liquid pressure p [psi]	V water [gal/h]	Air pressure p air [psi]	Atomizing air [SCFM]	Fan air [SCFM]	Atomizing air [psi]	Liquid pressure p [psi]	Fan air [psi]																				
									10			15			20			25			30								
									Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in						
176.206.1Y.01.00 176.406.1Y.01.00 176.506.1Y.01.00	0.04	2	11.0	2	0.9	1.2	15	5	9	13	20	11	16	24	14	18	26	-	-	-	-	-	-						
		4	15.7	4	1.3	1.7		10	9	14	21	13	17	26	14	20	30	-	-	-	-	-	-						
		10	24.0	10	2.0	2.7		15	10	14	20	12	17	24	14	20	27	-	-	-	-	-	-						
		15	29.5	15	2.6	3.4		22	-	-	-	12	15	22	13	18	24	-	-	-	-	-	-						
		20	34.1	20	3.0	4.1	30	5	6	9	13	8	11	16	9	12	18	9	13	18	10	13	17						
								10	7	9	12	8	10	15	9	12	18	10	14	19	11	14	20						
								15	6	9	13	7	10	15	9	12	17	10	13	19	11	14	21						
								22	-	-	-	7	10	14	9	11	17	10	13	20	11	14	20						
								25	38.1	25	3.5	4.7	40	5	6	7	11	7	9	12	7	10	14	8	11	16	8	11	17
														10	6	8	12	7	9	13	7	10	15	8	11	16	9	12	16
														15	6	7	11	7	9	13	7	9	15	8	11	16	9	12	17
														22	5	7	10	6	8	13	7	10	15	8	11	17	9	13	19
		40	48.2	40	4.9	6.6	60	5	5	7	10	6	8	12	7	9	13	7	9	14	7	9	14						
								10	5	7	10	6	8	12	7	9	13	7	9	14	7	10	15						
15	5							7	11	6	8	12	6	9	13	7	10	14	8	10	16								
22	-							-	-	6	8	12	6	9	14	7	10	15	8	11	17								
176.207.1Y.01.00 176.407.1Y.01.00 176.507.1Y.01.00	0.08	2	15.6	2	2.1	2.0	15	5	8	11	16	11	14	19	13	17	21	13	19	27	16	19	26						
		4	22.4	4	3.2	2.9		10	8	11	16	11	14	19	12	16	23	14	18	28	16	21	30						
		10	34.3	10	5.0	4.6		15	6	9	14	9	12	18	11	14	21	12	17	24	14	20	29						
		15	42.1	15	6.4	5.9		22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
		20	48.8	20	7.6	7.2	30	5	4	6	9	6	7	11	7	9	14	9	11	15	10	13	19						
								10	4	6	9	6	7	11	7	10	15	8	11	16	10	13	19						
								15	4	6	10	5	7	11	7	9	13	8	11	16	9	12	19						
								22	-	-	-	-	-	-	6	9	13	7	10	15	9	12	17						
		25	54.6	25	8.8	8.3	45	5	4	5	7	4	7	10	6	8	12	7	9	13	8	11	15						
								10	4	5	8	5	7	10	6	8	12	7	9	14	8	11	16						
								15	4	4	7	5	6	10	6	7	12	7	9	13	8	11	15						
								22	4	5	8	4	6	10	6	8	12	6	9	14	8	11	15						
		40	69.4	40	12.3	11.6	60	5	4	4	6	4	6	9	6	7	10	6	9	14	7	10	16						
								10	4	4	7	4	6	9	5	7	11	6	8	13	7	10	14						
15	3							4	7	4	6	9	5	7	11	6	9	13	7	10	15								
22	-							-	-	4	6	9	5	7	10	6	8	13	7	9	14								

**Notice:**  
The fourth digit in the order number (2, 4 or 5) stands for the housing variant (for details see Page 139).  
\* A cone-shaped spray pattern is produced without fan air.



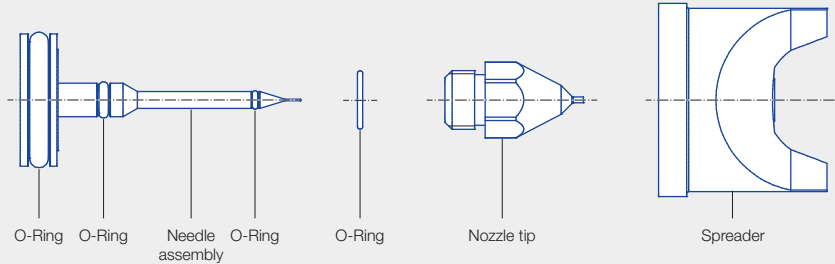


Ordering number	Narrowest free cross section Ø [in]	Liquid		Air			Spray dimensions [in] at distance D <sub>1</sub> , D <sub>2</sub> and D <sub>3</sub>																		
		Liquid pressure p [psi]	V water [gal/h]	Air pressure p air [psi]	Atomizing air [SCFM]	Fan air [SCFM]	Atomizing air [psi]	Liquid pressure p [psi]	Fan air [psi]																
									10			15			20			25			30				
									Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in	Ø D <sub>1</sub> = 6 in	Ø D <sub>2</sub> = 9 in	Ø D <sub>3</sub> = 15 in		
176.208.1Y.01.00 176.408.1Y.01.00 176.508.1Y.01.00	0.09	2	25.7	2	2.3	2.6	15	5	7	11	17	11	14	24	12	18	28	-	-	-	-	-	-		
		4	30.3	4	2.7	3.1		10	7	11	17	10	14	24	13	19	30	-	-	-	-	-	-		
		10	43.1	10	4.0	4.6		15	-	-	-	9	13	22	12	17	27	-	-	-	-	-	-		
		15	52.6	15	5.1	5.9		22	-	-	-	10	14	21	12	15	23	-	-	-	-	-	-		
		20	60.7	20	6.0	7.2	30	5	4	7	12	7	10	14	8	11	16	9	13	18	11	18	22		
		25	67.7	25	7.0	8.3		10	4	7	10	7	9	14	9	11	16	9	14	20	11	15	21		
		29	74.2	29	7.9	9.4		15	4	7	9	6	8	13	7	10	16	9	12	19	11	15	24		
		35	80.1	35	8.8	10.4		22	-	-	-	6	8	13	8	11	15	9	12	18	11	15	22		
		40	85.6	40	9.6	11.6	40	5	4	7	9	6	7	11	7	10	14	8	11	15	10	14	18		
		46	90.7	46	10.6	12.7		10	4	6	9	6	8	12	7	9	14	8	11	17	9	13	19		
		51	95.5	51	11.3	13.7		15	4	6	8	5	7	11	7	9	15	8	11	16	9	13	19		
		58	102.7	58	12.8	15.5		22	4	5	8	5	7	11	6	9	14	7	11	18	9	13	18		
		176.209.1Y.01.00 176.409.1Y.01.00 176.509.1Y.01.00	0.10	2	21.7	2	1.1	2.0	15	5	8	12	18	11	15	24	13	18	28	16	21	30	18	26	32
				4	31.6	4	2.2	2.9		10	8	11	17	11	16	24	13	19	27	16	22	29	18	25	32
10	47.6			10	3.9	4.6	15	-		-	-	-	-	-	12	18	27	16	20	27	17	23	32		
15	58.4			15	5.0	5.9	22	-		-	-	-	-	-	12	18	27	15	21	30	17	23	32		
20	67.5			20	6.0	7.2	30	5	5	8	12	7	10	15	8	11	18	10	13	20	11	14	22		
25	75.4			25	6.8	8.3		10	5	7	11	7	9	14	8	11	18	9	13	22	11	15	24		
29	82.7			29	7.7	9.4		15	4	7	11	7	9	14	8	11	17	9	13	20	11	15	22		
35	89.5			35	8.7	10.4		22	-	-	-	-	-	-	8	10	17	9	12	18	10	15	22		
40	95.8			40	9.6	11.6	40	5	4	6	9	6	8	13	7	9	16	8	11	18	9	14	20		
46	101.7			46	10.4	12.7		10	4	6	9	6	7	12	7	9	16	8	11	18	9	14	22		
51	107.2			51	11.4	13.7		15	4	6	9	6	7	12	7	10	16	8	11	18	10	14	22		
58	115.4			58	12.8	15.5		22	4	6	8	6	7	12	7	10	16	8	11	18	9	13	20		
60	5			4	6	8	5	7	10	6	7	11	7	10	14	7	10	14	7	10	16				
	10			4	5	8	5	7	11	6	8	12	7	9	14	8	11	16	8	11	16				
	15	4	5	7	4	6	10	6	8	12	7	9	16	8	11	18	8	11	18						
	22	-	-	-	4	6	10	6	7	12	6	7	12	7	9	16	7	9	16						

**Notice:**  
 The fourth digit in the order number (2, 4 or 5) stands for the housing variant (for details see Page139).  
 \* A cone-shaped spray pattern is produced without fan air.

# ➤ Spare parts set for pneumatic atomizing nozzles Series 176 ViscoMist

## Overview of the spare parts set and the power set



### Spare parts set

Spare parts set for replacing the main wear parts of the nozzle, consisting of:

- Needle (stainless steel 316L)
- O-rings (Viton)
- Nozzle tip (stainless steel 316L)

### Power set

Power set for replacing the main wear parts of the nozzle and the air hood, consisting of:

- Needle (stainless steel 316L)
- O-rings (Viton)
- Nozzle tip (stainless steel 316L)
- Spreader (stainless steel 316L)

Ordering number	Narrowest free cross section Ø [in]	For nozzles
Type		
<b>017.601.1Y.01</b>	0.015	176.xx1.1Y.11.00
<b>017.602.1Y.01</b>	0.023	176.xx2.1Y.11.00
<b>017.603.1Y.01</b>	0.03	176.xx3.1Y.11.00
<b>017.604.1Y.01</b>	0.042	176.xx4.1Y.11.00
<b>017.605.1Y.01</b>	0.052	176.xx5.1Y.11.00
<b>017.606.1Y.01</b>	0.067	176.xx6.1Y.11.00
<b>017.607.1Y.01</b>	0.081	176.xx7.1Y.11.00
<b>017.608.1Y.01</b>	0.093	176.xx8.1Y.11.00
<b>017.609.1Y.01</b>	0.100	176.xx9.1Y.11.00

Ordering number	Narrowest free cross section Ø [in]	For nozzles
Type		
<b>017.601.1Y.00</b>	0.015	176.xx1.1Y.11.00
<b>017.602.1Y.00</b>	0.023	176.xx2.1Y.11.00
<b>017.603.1Y.00</b>	0.031	176.xx3.1Y.11.00
<b>017.604.1Y.00</b>	0.042	176.xx4.1Y.11.00
<b>017.605.1Y.00</b>	0.052	176.xx5.1Y.11.00
<b>017.606.1Y.00</b>	0.067	176.xx6.1Y.11.00
<b>017.607.1Y.00</b>	0.081	176.xx7.1Y.11.00
<b>017.608.1Y.00</b>	0.093	176.xx8.1Y.11.00
<b>017.609.1Y.00</b>	0.100	176.xx9.1Y.11.00

#### Notice:

Instructions for replacing individual or all components of the nozzles are included in the scope of delivery of the spare parts sets and the power sets.

### O-ring set

Type	Ordering number		Consisting of 4 O-rings, suitable for all nozzles of series 176
	Material number		
	7A	6C	
	Viton	EPDM	
<b>017.600.xx.01.03</b>	●	●	

Viton (7A) is the standard O-ring material. EPDM (6C) is optionally available.

Ordering Type + Material no. = Ordering no.  
example: 017.600.xx.01.03 + 7A = 017.600.7A.01.03