



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

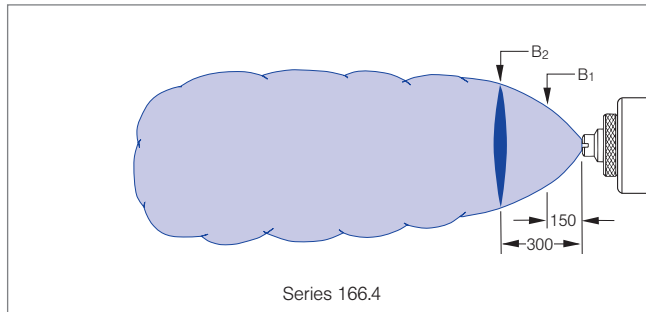
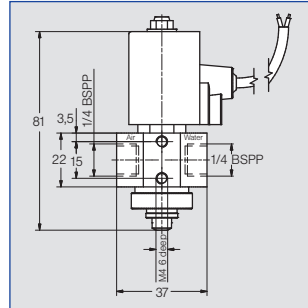


**Version with magnetic valve.**  
**Particularly fine flat fan atomization with air or gas.**  
**Siphon principle. Internal mixing of fluids.**

Applications:  
Web dampening, cooling,  
humidification of goods.

**Technical Data:**

- Service pressure: 0-6 bar
- Voltage: 24 V DC
- Power: 8 W
- Switching frequency: ca. 500/min
- Protective system: IP 67
- Ambient temperature: 10°C / +50°C
- Cable length: 1.000 mm
- Material of gasket: EPDM



**Accessories for series 166 please refer to page 1.29**

Spray angle	Ordering no.		E Ø [mm]	Liquid pressure p [bar]												Spray dimensions							
	Type	Mat. no.		0.7			1.5			3.0			4.0			p Air [bar]	p Water [bar]	B <sub>1</sub> [mm]	B <sub>2</sub> [mm]				
				p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]	p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]	p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]	p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]								
45°	166. 414. xx. A2	○	16	AISI 303	0.7	1.00	7.70	1.30	1.40	14.30	1.50	2.20	22.40	2.00	3.00	25.10	2.50	1.40	0.70	85	125		
						1.20	6.00	1.50	1.60	13.00	1.60	2.60	20.00	2.30	3.40	23.00	2.80	2.40	1.50	100	145		
						1.40	4.20	1.70	1.80	11.60	1.80	3.00	17.70	2.60	3.80	20.90	3.10	3.20	2.00	105	155		
						1.60	2.70	1.90	2.00	10.20	2.00	3.40	15.50	3.00	4.20	18.90	3.50	3.80	3.00	120	170		
						1.80	1.30	2.10	2.20	8.90	2.20	3.80	13.30	3.40	4.60	16.90	3.80	4.60	4.00	130	210		
						-	-	-	2.40	7.40	2.40	4.20	11.00	3.70	5.00	14.90	4.20	-	-	-	-	-	-
						-	-	-	2.60	5.90	2.60	4.60	8.80	4.10	5.40	12.80	4.60	-	-	-	-	-	-
						-	-	-	2.80	4.60	2.80	5.00	6.60	4.50	5.80	10.80	5.00	-	-	-	-	-	-
						-	-	-	3.00	3.20	3.00	5.40	4.30	4.90	6.00	9.80	5.20	-	-	-	-	-	-
						-	-	-	3.20	2.10	3.20	5.80	2.50	5.30	-	-	-	-	-	-	-	-	-
						-	-	-	3.40	1.10	3.40	6.00	1.60	5.50	-	-	-	-	-	-	-	-	-
						166. 462. xx. A2	○	15	AISI 303	1.5	1.20	19.00	2.60	2.00	22.00	2.00	3.00	61.80	4.00	3.80	76.10	4.60	1.20
	1.60	12.20	3.40	2.40	18.00						2.40	3.40	51.90	4.80	4.00	70.40	5.10	2.40	1.50	120	170		
	2.00	9.40	4.10	2.80	14.40						2.80	3.80	44.60	5.80	4.20	65.60	5.50	3.20	2.00	120	175		
	2.40	7.10	4.80	3.20	11.30						3.20	4.20	39.00	6.60	4.40	61.30	5.90	3.80	3.00	140	205		
	2.80	5.70	5.40	3.60	8.80						3.60	4.60	33.40	7.40	4.60	57.30	6.40	6.00	4.00	145	205		
	3.20	5.00	6.00	4.00	8.10						3.90	5.00	29.40	8.10	4.80	54.10	6.70	-	-	-	-	-	
	3.60	3.60	6.60	4.40	6.20						4.30	5.40	25.50	8.90	5.00	51.30	7.20	-	-	-	-	-	
	4.00	3.20	7.20	4.80	4.60						4.60	5.80	22.00	9.60	5.20	49.30	7.70	-	-	-	-	-	
	4.40	2.20	7.80	5.20	3.20						4.90	6.00	20.60	9.90	5.40	46.50	8.20	-	-	-	-	-	
	-	-	-	5.60	1.60						5.30	-	-	-	5.60	43.70	8.60	-	-	-	-	-	-
	-	-	-	5.80	0.80						5.40	-	-	-	5.80	41.30	8.90	-	-	-	-	-	-
	-	-	-	-	-						-	-	-	-	6.00	39.00	9.30	-	-	-	-	-	-

E = narrowest free cross section (water)

Continued on next page.

**Example**    **Type**                    + **Material no. (xx)**    = **Ordering no.**  
**for ordering:**    166. 414. xx. A2 + 16                                        = 166. 414. 16. A2





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Spray angle	Ordering no.		E ∅ [mm]	Liquid pressure p [bar]												Spray dimensions					
	Type	Mat. no.		0.7			1.5			3.0			4.0			p Air [bar]	p Water [bar]	B <sub>1</sub> [mm]	B <sub>2</sub> [mm]		
				p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]	p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]	p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]	p Air [bar]	V̇ Water [l/h]	V̇ <sub>n</sub> Air [m <sup>3</sup> /h]						
				16	AISI 303																
60°	166.425.xx.A2	○	0.5	0.80	6.50	1.20	1.40	9.40	1.70	2.40	13.20	2.50	2.40	16.10	2.50	1.20	0.70	155	195		
				1.20	5.50	1.60	1.80	8.70	2.10	2.60	12.90	2.70	2.80	15.50	2.90	2.20	1.50	165	255		
				1.60	4.70	1.90	2.20	7.90	2.40	3.00	12.30	3.00	3.20	15.00	3.20	3.00	2.00	170	265		
				2.00	4.00	2.30	2.60	7.20	2.70	3.40	11.80	3.40	3.60	14.50	3.50	3.40	3.00	200	330		
				2.40	3.20	2.60	3.00	6.40	3.10	3.80	11.10	3.70	4.00	13.90	3.80	5.60	4.00	200	330		
				2.80	2.60	2.90	3.40	5.70	3.40	4.20	10.40	4.00	4.40	13.40	4.10						
				3.00	2.20	3.10	3.80	5.10	3.70	4.60	9.80	4.30	4.80	12.80	4.50						
				-	-	-	4.00	4.80	3.90	5.00	9.20	4.60	5.20	12.20	4.80						
				-	-	-	4.40	4.20	4.20	5.40	8.60	5.00	5.60	11.70	5.10						
				-	-	-	4.80	3.60	4.50	5.80	8.10	5.30	6.00	11.20	5.40						
	-	-	-	5.20	2.80	4.80	6.00	7.80	5.40	-	-	-									
	-	-	-	5.60	2.20	5.10	-	-	-	-	-	-									
	-	-	-	6.00	1.60	5.50	-	-	-	-	-	-									
	166.452.xx.A2	○	1.5	1.00	18.80	3.90	1.80	31.00	5.30	3.20	50.10	7.70	3.80	70.70	8.20	1.00	0.70	130	185		
				1.40	8.60	5.70	2.00	25.40	6.30	3.60	39.50	9.40	4.20	58.60	9.60	1.80	1.50	150	240		
				1.80	7.40	7.00	2.20	20.10	7.20	4.00	31.30	11.20	4.60	48.60	11.20	2.60	2.00	155	245		
				2.20	4.10	8.40	2.40	15.50	8.00	4.40	24.00	12.90	5.00	41.20	13.10	3.60	3.00	175	280		
				2.60	1.00	9.80	2.60	12.40	8.90	4.80	17.70	14.50	5.40	33.60	14.80	5.00	4.00	180	285		
				2.80	0.10	10.30	2.80	10.40	9.60	5.20	13.40	16.00	5.80	27.50	16.40						
				-	-	-	-	-	-	-	5.60	10.60	17.50	6.00	24.40	17.20					
-				-	-	-	-	-	-	6.00	8.60	18.80	-	-	-						
80°				○	0.4	1.00	11.60	2.00	1.80	18.30	2.80	3.00	31.00	3.70	3.80	37.50	4.40	1.40	0.70	150	210
						1.20	8.10	2.40	2.00	15.30	3.20	3.40	25.40	4.40	4.20	32.40	5.00	2.20	1.50	185	255
	1.40	5.30	2.80			2.20	12.20	3.60	3.80	20.60	5.10	4.60	27.70	5.70	3.00	2.00	205	300			
	1.60	3.70	3.20			2.40	9.80	4.00	4.20	16.30	5.90	5.00	23.40	6.50	3.80	4.00	300	485			
	-	-	-			2.60	7.60	4.30	4.60	12.50	6.60	5.40	19.40	7.20	5.20	4.00	260	395			
	-	-	-			2.80	5.90	4.70	5.00	9.30	7.30	5.80	15.90	7.90							
	-	-	-			3.00	4.40	5.00	5.40	6.50	8.00	6.00	14.20	8.30							

E = narrowest free cross section (water)

<b>Example</b>	<b>Type</b>	<b>+ Material no. (xx)</b>	<b>= Ordering no.</b>
<b>for ordering:</b>	<b>166.425.xx.A2</b>	<b>+ 16</b>	<b>= 166.425.16.A2</b>

