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

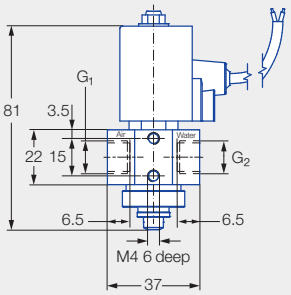
Features:
- Version with magnetic valve
- Fine flat fan atomization
- Liquid pressure principle
- Internal mixing

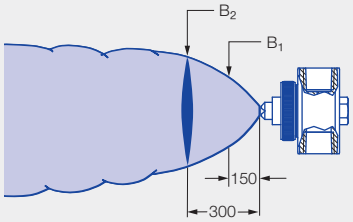
Applications:
- Belt humidification
- Cooling
- Humidification of goods

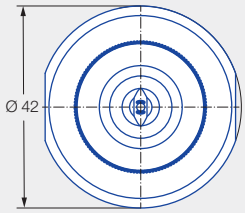
Technical data:
- Operating pressure: 0–6 bar
- Voltage: 24 V DC
- Power: 8 W
- Switching frequency: Approx. 500/min
- Protective system: IP 67
- Ambient temperature: +10 °C /+50 °C
- Cable length: 1,000 mm
- Material of gasket: EPDM



Series 166.4







Air connection G_1	Water connection G_2	Weight [g]
1/4 BSPP	1/4 BSPP	410

Spray angle	Ordering no. Type	Mat. no. 16 Stainless steel 303	Narrowest free cross section Ø [mm]	Liquid pressure p [bar] 0.7 p air [bar]	0.7 V̇ water [l/h]	0.7 V̇n air [m³/h]	1.5 p air [bar]	1.5 V̇ water [l/h]	1.5 V̇n air [m³/h]	3.0 p air [bar]	3.0 V̇ water [l/h]	3.0 V̇n air [m³/h]	4.0 p air [bar]	4.0 V̇ water [l/h]	4.0 V̇n air [m³/h]	Spray dimensions p air [bar]	p water [bar]	B1 [mm]	B2 [mm]
45°	166.414.xx.A2	●	0.7	1.0	**7.7**	1.3	1.4	**14.3**	1.5	2.2	**22.4**	2.0	3.0	**25.1**	2.5	1.4	0.7	85	125
				1.2	**6.0**	1.5	1.6	**13.0**	1.6	2.6	**20.0**	2.3	3.4	**23.0**	2.8	2.4	1.5	100	145
				1.4	**4.2**	1.7	1.8	**11.6**	1.8	3.0	**17.7**	2.6	3.8	**20.9**	3.1	3.2	2.0	105	155
				1.6	**2.7**	1.9	2.0	**10.2**	2.0	3.4	**15.5**	3.0	4.2	**18.9**	3.5	3.8	3.0	120	170
				1.8	**1.3**	2.1	2.2	**8.9**	2.2	3.8	**13.3**	3.4	4.6	**16.9**	3.8	4.6	4.0	130	210
				–	**–**	–	2.4	**7.4**	2.4	4.2	**11.0**	3.7	5.0	**14.9**	4.2	–	–	–	–
				–	**–**	–	2.6	**5.9**	2.6	4.6	**8.8**	4.1	5.4	**12.8**	4.6	–	–	–	–
				–	**–**	–	2.8	**4.6**	2.8	5.0	**6.6**	4.5	5.8	**10.8**	5.0	–	–	–	–
				–	**–**	–	3.0	**3.2**	3.0	5.4	**4.3**	4.9	6.0	**9.8**	5.2	–	–	–	–
				–	**–**	–	3.2	**2.1**	3.2	5.8	**2.5**	5.3	–	**–**	–	–	–	–	–
				–	**–**	–	3.4	**1.1**	3.4	6.0	**1.6**	5.5	–	**–**	–	–	–	–	–
	166.462.xx.A2	●	1.5	1.2	**19.0**	2.6	2.0	**22.0**	2.0	3.0	**61.8**	4.0	3.8	**76.1**	4.6	1.2	0.7	120	140
				1.6	**12.2**	3.4	2.4	**18.0**	2.4	3.4	**51.9**	4.8	4.0	**70.4**	5.1	2.4	1.5	120	170
				2.0	**9.4**	4.1	2.8	**14.4**	2.8	3.8	**44.6**	5.8	4.2	**65.6**	5.5	3.2	2.0	120	175
				2.4	**7.1**	4.8	3.2	**11.3**	3.2	4.2	**39.0**	6.6	4.4	**61.3**	5.9	3.8	3.0	140	205
				2.8	**5.7**	5.4	3.6	**8.8**	3.6	4.6	**33.4**	7.4	4.6	**57.3**	6.4	6.0	4.0	145	205
				3.2	**5.0**	6.0	4.0	**8.1**	3.9	5.0	**29.4**	8.1	4.8	**54.1**	6.7	–	–	–	–
				3.6	**3.6**	6.6	4.4	**6.2**	4.3	5.4	**25.5**	8.9	5.0	**51.3**	7.2	–	–	–	–
				4.0	**3.2**	7.2	4.8	**4.6**	4.6	5.8	**22.0**	9.6	5.2	**49.3**	7.7	–	–	–	–
				4.4	**2.2**	7.8	5.2	**3.2**	4.9	6.0	**20.6**	9.9	5.4	**46.5**	8.2	–	–	–	–
				–	**–**	–	5.6	**1.6**	5.3	–	**–**	–	5.6	**43.7**	8.6	–	–	–	–
				–	**–**	–	5.8	**0.8**	5.4	–	**–**	–	5.8	**41.3**	8.9	–	–	–	–
				–	**–**	–	–	**–**	–	–	**–**	–	6.0	**39.0**	9.3	–	–	–	–

Spray angle	Ordering no.		Narrowest free cross section Ø [mm]	Liquid pressure p [bar]												Spray dimensions			
	Type	Mat. no. 16		0.7			1.5			3.0			4.0						
		Stainless steel 303		**p** air [bar]	**V̇** water [l/h]	$\dot{V}_n$ air [m³/h]	**p** air [bar]	**V̇** water [l/h]	$\dot{V}_n$ air [m³/h]	**p** air [bar]	**V̇** water [l/h]	$\dot{V}_n$ air [m³/h]	**p** air [bar]	**V̇** water [l/h]	$\dot{V}_n$ air [m³/h]	**p** air [bar]	**p** water [bar]	B_1 [mm]	B_2 [mm]
60°	**166.425.xx.A2**	●	0.5	0.8	**6.5**	1.2	1.4	**9.4**	1.7	2.4	**13.2**	2.5	2.4	**16.1**	2.5	1.2	0.7	155	195
				1.2	**5.5**	1.6	1.8	**8.7**	2.1	2.6	**12.9**	2.7	2.8	**15.5**	2.9	2.2	1.5	165	255
				1.6	**4.7**	1.9	2.2	**7.9**	2.4	3.0	**12.3**	3.0	3.2	**15.0**	3.2	3.0	2.0	170	265
				2.0	**4.0**	2.3	2.6	**7.2**	2.7	3.4	**11.8**	3.4	3.6	**14.5**	3.5	3.4	3.0	200	330
				2.4	**3.2**	2.6	3.0	**6.4**	3.1	3.8	**11.1**	3.7	4.0	**13.9**	3.8	5.6	4.0	200	330
				2.8	**2.6**	2.9	3.4	**5.7**	3.4	4.2	**10.4**	4.0	4.4	**13.4**	4.1	–	–	–	–
				3.0	**2.2**	3.1	3.8	**5.1**	3.7	4.6	**9.8**	4.3	4.8	**12.8**	4.5	–	–	–	–
				–	**–**	–	4.0	**4.8**	3.9	5.0	**9.2**	4.6	5.2	**12.2**	4.8	–	–	–	–
				–	**–**	–	4.4	**4.2**	4.2	5.4	**8.6**	5.0	5.6	**11.7**	5.1	–	–	–	–
				–	**–**	–	4.8	**3.6**	4.5	5.8	**8.1**	5.3	6.0	**11.2**	5.4	–	–	–	–
				–	**–**	–	5.2	**2.8**	4.8	6.0	**7.8**	5.4	–	**–**	–	–	–	–	–
				–	**–**	–	5.6	**2.2**	5.1	–	**–**	–	–	**–**	–	–	–	–	–
				–	**–**	–	6.0	**1.6**	5.5	–	**–**	–	–	**–**	–	–	–	–	–
	166.452.xx.A2	●	1.5	1.0	**18.8**	3.9	1.8	**31.0**	5.3	3.2	**50.1**	7.7	3.8	**70.7**	8.2	1.0	0.7	130	185
				1.4	**8.6**	5.7	2.0	**25.4**	6.3	3.6	**39.5**	9.4	4.2	**58.6**	9.6	1.8	1.5	150	240
				1.8	**7.4**	7.0	2.2	**20.1**	7.2	4.0	**31.3**	11.2	4.6	**48.6**	11.2	2.6	2.0	155	245
				2.2	**4.1**	8.4	2.4	**15.5**	8.0	4.4	**24.0**	12.9	5.0	**41.2**	13.1	3.6	3.0	175	280
				2.6	**1.0**	9.8	2.6	**12.4**	8.9	4.8	**17.7**	14.5	5.4	**33.6**	14.8	5.0	4.0	180	285
				2.8	**0.1**	10.3	2.8	**10.4**	9.6	5.2	**13.4**	16.0	5.8	**27.5**	16.4	–	–	–	–
				–	**–**	–	–	**–**	–	5.6	**10.6**	17.5	6.0	**24.4**	17.2	–	–	–	–
				–	**–**	–	–	**–**	–	6.0	**8.6**	18.8	–	**–**	–	–	–	–	–
80°	**166.433.xx.A2**	●	0.4	1.0	**11.6**	2.0	1.8	**18.3**	2.8	3.0	**31.0**	3.7	3.8	**37.5**	4.4	1.4	0.7	150	210
				1.2	**8.1**	2.4	2.0	**15.3**	3.2	3.4	**25.4**	4.4	4.2	**32.4**	5.0	2.2	1.5	185	255
				1.4	**5.3**	2.8	2.2	**12.2**	3.6	3.8	**20.6**	5.1	4.6	**27.7**	5.7	3.0	2.0	205	300
				1.6	**3.7**	3.2	2.4	**9.8**	4.0	4.2	**16.3**	5.9	5.0	**23.4**	6.5	3.8	4.0	300	485
				–	**–**	–	2.6	**7.6**	4.3	4.6	**12.5**	6.6	5.4	**19.4**	7.2	5.2	4.0	260	395
				–	**–**	–	2.8	**5.9**	4.7	5.0	**9.3**	7.3	5.8	**15.9**	7.9	–	–	–	–
				–	**–**	–	3.0	**4.4**	5.0	5.4	**6.5**	8.0	6.0	**14.2**	8.3	–	–	–	–

Ordering example:	Type	+	Material no.	=	Ordering no.
	166.425.xx.A2	+	16	=	166.425.16.A2