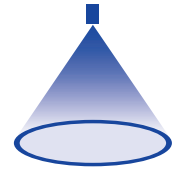


# ➤ Axial-flow hollow cone nozzles Series 220

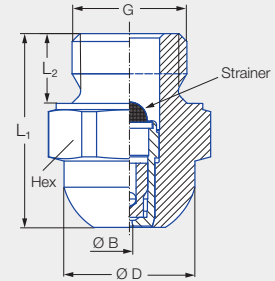
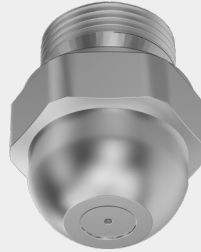


### Features:

- Extremely fine, fog-like atomization

### Applications:

- Humidification
- Cooling
- Disinfection
- Chemical engineering
- Adiabatic cooling



Series 220

Code	G	Dimensions [mm]				Weight [g]
		L <sub>1</sub>	L <sub>2</sub>	Ø D	Hex	
AC	1/4 BSPP	22.0	8.0	15.0	17	27.0


Spray angle	Ordering no.			Bore diameter B [mm]	Narrowest free cross section Ø [mm]	Strainer insert mesh size [mm]	V̇ water [l/min]								Spray diameter D [mm] (at p = 5 bar)																	
	Type	Mat. no.					Code	p [bar]																								
		1Y	11					2.0	3.0	5.0	7.0	10.0	20.0	50.0		100.0																
60°	Type	Stainless steel 316L	Stainless steel 430F	1/4 BSPP	0.10	0.10	0.04	-	-	0.013	0.015	0.018	0.026	0.041	0.058	120																
																	220.004	●	●	AC	0.15	0.15	0.04	-	0.015	0.019	0.022	0.027	0.038	0.060	0.085	140
																	220.014	●	●	AC	0.20	0.15	0.04	0.017	0.021	0.027	0.032	0.038	0.054	0.085	0.121	160
80°	Type	Stainless steel 316L	Stainless steel 430F	1/4 BSPP	0.25	0.25	0.10	0.025	0.031	0.040	0.047	0.057	0.080	0.126	0.179	190																
																	220.085	●	●	AC	0.35	0.35	0.10	0.039	0.048	0.062	0.073	0.088	0.124	0.196	0.277	230
																	220.125	●	●	AC	0.40	0.40	0.10	0.052	0.064	0.082	0.097	0.116	0.164	0.259	0.367	250
																	220.145	●	●	AC	0.45	0.45	0.10	0.065	0.080	0.103	0.122	0.146	0.206	0.326	0.461	260
																	220.165	●	●	AC	0.55	0.35	0.20	0.082	0.101	0.130	0.154	0.184	0.260	0.411	0.581	270
																	220.185	●	●	AC	0.60	0.35	0.20	0.106	0.130	0.168	0.199	0.238	0.336	0.531	0.751	280
																	220.205	●	●	AC	0.70	0.50	0.20	0.165	0.202	0.261	0.309	0.369	0.522	0.825	1.167	290
																	220.245	●	●	AC	0.90	0.55	0.20	0.247	0.302	0.390	0.461	0.552	0.780	1.233	1.744	300

Mat. no.	Housing	Nozzle insert	Strainer
1Y	Stainless steel 316L	Stainless steel 316L	Stainless steel 316L
11	Stainless steel 430F	Stainless steel 430F	Stainless steel 316L

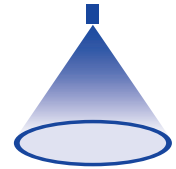
The supplied and integrated strainer insert prevents clogging of the nozzle, thereby ensuring a long service life.

Conversion formula for this series:  $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$

Ordering Type + Material no. + Code = Ordering no.  
example: 220.004 + 1Y + AC = 220.004.1Y.AC

 Assembly accessories can be found in Chapter 9 "Accessories".

# ➤ Axial-flow hollow cone nozzles Series 226

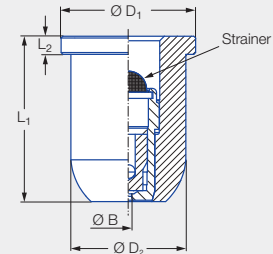


### Features:

- Extremely fine, fog-like atomization
- Assembly with retaining nut

### Applications:

- Humidification
- Cooling
- Disinfection
- Chemical engineering
- Adiabatic cooling



Series 226

Code	Dimensions [mm]				Weight [g]
	L <sub>1</sub>	L <sub>2</sub>	Ø D <sub>1</sub>	Ø D <sub>2</sub>	
Assembly with retaining nut 3/8 BSPP	18.00	2.00	14.80	12.65	20.00

Spray angle	Ordering no.		Bore diameter B [mm]	Narrowest free cross section Ø [mm]	Strainer insert mesh size [mm]	V̇ water [l/min]								Spray diameter D [mm] (at p = 5 bar)	
	Type	Mat. no.				p [bar]									
		16				2.0	3.0	5.0	7.0	10.0	20.0	50.0	100.0		H = 250 [mm]
60°	Stainless steel 303	226.004	●	0.10	0.10	0.04	–	–	<b>0.013</b>	0.015	0.018	0.026	0.041	0.058	120
		226.014	●	0.15	0.15	0.04	–	0.015	<b>0.019</b>	0.022	0.027	0.038	0.060	0.085	140
		226.054	●	0.20	0.15	0.04	0.017	0.021	<b>0.027</b>	0.032	0.038	0.054	0.085	0.121	160
80°	Stainless steel 303	226.085	●	0.25	0.25	0.10	0.025	0.031	<b>0.040</b>	0.047	0.057	0.080	0.126	0.179	190
		226.125	●	0.35	0.35	0.10	0.039	0.048	<b>0.062</b>	0.073	0.088	0.124	0.196	0.277	230
		226.145	●	0.40	0.40	0.10	0.052	0.064	<b>0.082</b>	0.097	0.116	0.164	0.259	0.367	250
		226.165	●	0.45	0.45	0.10	0.065	0.080	<b>0.103</b>	0.122	0.146	0.206	0.326	0.461	260
		226.185	●	0.55	0.35	0.20	0.082	0.101	<b>0.130</b>	0.154	0.184	0.260	0.411	0.581	270
		226.205	●	0.60	0.35	0.20	0.106	0.130	<b>0.168</b>	0.199	0.238	0.336	0.531	0.751	280
		226.245	●	0.70	0.50	0.20	0.165	0.202	<b>0.261</b>	0.309	0.369	0.522	0.825	1.167	290
226.285	●	0.90	0.55	0.20	0.247	0.302	<b>0.390</b>	0.461	0.552	0.780	1.233	1.744	300		

Mat. no.	Housing	Nozzle insert	Strainer
16	Stainless steel 303	Stainless steel 430F	Stainless steel 316L

The supplied and integrated strainer insert prevents clogging of the nozzle, thereby ensuring a long service life.

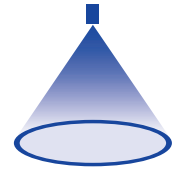
Conversion formula for this series:  $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$

Ordering Type + Material no. = Ordering no.  
example: 226.004 + 16 = 226.004.16

Assembly accessories can be found in Chapter 9 "Accessories".

# ➤ Axial-flow hollow cone nozzles

## Series 214/216

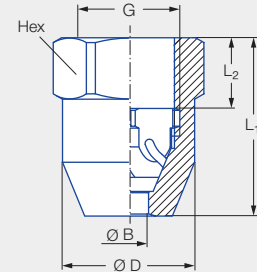


### Features:

- Fine, uniform atomization

### Applications:

- Cooling
- Gas washing
- Dust control
- Sprinkling
- Adiabatic cooling




Series 214/216

Series	G	Dimensions [mm]				Weight [g] (Brass)
		L <sub>1</sub>	L <sub>2</sub>	Ø D	Hex	
<b>214</b>	1/8 BSPP	18.0	6.0	16.0	17	27.0
<b>216</b>	3/8 BSPP	29.0	12.0	21.3	22	60.0

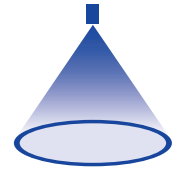
Spray angle	Ordering no.			Bore diameter B [mm]	Narrowest free cross section Ø [mm]	V̇ water [l/min]							Spray diameter D [mm] (at p = 5 bar)
	Type	Mat. no.				p [bar]							
		17	30			0.5	1.0	2.0	3.0	5.0	10.0	20.0	
60°	<b>214.184</b>	●	●	0.50	0.50	–	–	0.08	0.10	<b>0.13</b>	0.18	0.25	120
	<b>216.324</b>	●	●	1.00	1.00	–	0.28	0.40	0.49	<b>0.63</b>	0.89	1.26	190
	<b>216.364</b>	●	●	1.40	1.40	–	0.45	0.63	0.77	<b>1.00</b>	1.41	1.99	220
	<b>216.404</b>	●	●	2.00	2.00	–	0.71	1.00	1.22	<b>1.58</b>	2.24	3.16	240
80°	<b>214.245</b>	●	●	1.00	0.50	–	–	0.16	0.20	<b>0.25</b>	0.36	0.51	240
	<b>214.305</b>	●	●	1.80	0.50	–	0.23	0.32	0.39	<b>0.51</b>	0.72	1.01	320
90°	<b>216.496</b>	●	●	3.00	2.00	–	1.20	1.70	2.08	<b>2.69</b>	3.80	5.38	430
	<b>216.566</b>	●	●	4.00	2.00	–	1.77	2.50	3.06	<b>3.95</b>	5.59	7.91	430
	<b>216.646</b>	●	●	3.50	2.00	2.00	2.83	4.00	4.90	<b>6.32</b>	8.94	12.65	440
	<b>216.686</b>	●	●	4.00	2.00	2.50	3.54	5.00	6.12	<b>7.91</b>	11.18	15.81	450
	<b>216.726</b>	●	●	5.00	2.00	3.15	4.45	6.30	7.72	<b>9.96</b>	14.09	19.92	460
	<b>216.776</b>	●	●	6.00	2.00	4.30	6.00	8.50	10.40	<b>13.40</b>	19.00	26.90	470

Conversion formula for this series:  $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$

Ordering Type + Material no. = Ordering no.  
example: 214.184 + 17 = 214.184.17

 Assembly accessories can be found in Chapter 9 "Accessories".

# ➤ Axial-flow hollow cone nozzles Series 2TR

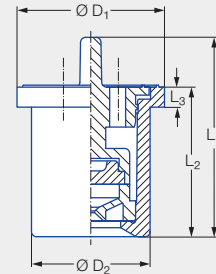


### Features:

- Fine, uniform atomization
- Assembly with retaining nut

### Applications:

- Sprinkling
- Adiabatic cooling
- Cooling
- Humidification of air

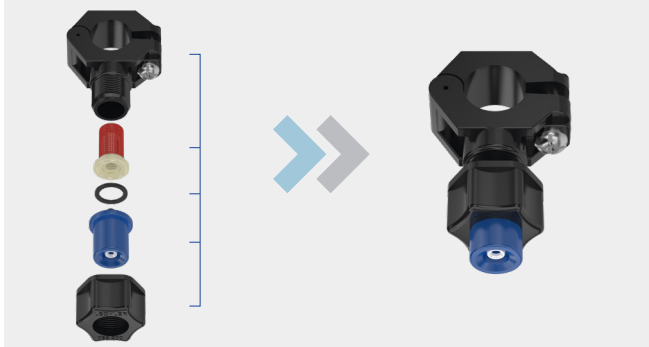


Series 2TR

Code	Dimensions [mm]					Weight [g]
	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Ø D <sub>1</sub>	Ø D <sub>2</sub>	
Assembly with retaining nut 3/8 BSPP	20.0	15.0	2.0	14.8	11.9	3.0

Spray angle	Ordering no.		Color	Bore diameter B [mm]	Narrowest free cross section Ø [mm]	V̇ water [l/min]						Spray diameter D [mm] (at p = 5 bar)
	Type	Mat. no.				p [bar]						
		C8				1.0	2.0	3.0	5.0	7.0	10.0	
		Housing: POM Insert: Ceramic										H = 250 [mm]
80°	2TR.245	●	Purple	0.65	0.55	–	0.16	0.20	<b>0.25</b>	0.30	0.36	220
	2TR.275	●	Black	0.80	0.70	0.16	0.22	0.27	<b>0.35</b>	0.41	0.49	260
	2TR.305	●	Orange	0.90	0.80	0.23	0.32	0.39	<b>0.51</b>	0.60	0.72	320
	2TR.345	●	Green	1.10	0.90	0.34	0.48	0.59	<b>0.76</b>	0.90	1.07	420
	2TR.365	●	Yellow	1.40	0.95	0.46	0.65	0.80	<b>1.03</b>	1.22	1.45	490
	2TR.405	●	Blue	1.70	1.10	0.69	0.97	1.19	<b>1.53</b>	1.81	2.17	530
	2TR.445	●	Red	2.00	1.20	0.89	1.26	1.55	<b>2.02</b>	2.37	2.83	550
	2TR.485	●	Brown	2.20	1.30	1.11	1.57	1.94	<b>2.50</b>	2.96	3.54	560

### Assembly example



Conversion formula for this series:  $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$

Ordering Type + Material no. = Ordering no.  
example: 2TR.245 + C8 = 2TR.245.C8

Assembly accessories can be found in Chapter 9 "Accessories".