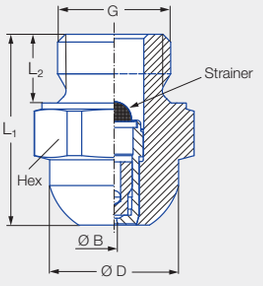
Axial-flow hollow cone nozzles
Series 220

Features:
- Extremely fine, fog-like atomization

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

Series 220



Code	G	Dimensions [mm]				Weight [g]
		L_1	L_2	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] p [bar]							Spray diameter D [mm] (at p = 5 bar)
	Type	Mat. no. 1Y Stainless steel 316L	Mat. no. 11 Stainless steel 430F	Code 1/4 BSPP				2.0	3.0	**5.0**	7.0	10.0	20.0	50.0	100.0	H = 250 [mm]
60°	**220.004**	●	●	**AC**	0.10	0.10	0.04	–	–	**0.013**	0.015	0.018	0.026	0.041	0.058	120
	220.014	●	●	**AC**	0.15	0.15	0.04	–	0.015	**0.019**	0.022	0.027	0.038	0.060	0.085	140
	220.054	●	●	**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°	**220.085**	●	●	**AC**	0.25	0.25	0.10	0.025	0.031	**0.040**	0.047	0.057	0.080	0.126	0.179	190
	220.125	●	●	**AC**	0.35	0.35	0.10	0.039	0.048	**0.062**	0.073	0.088	0.124	0.196	0.277	230
	220.145	●	●	**AC**	0.40	0.40	0.10	0.052	0.064	**0.082**	0.097	0.116	0.164	0.259	0.367	250
	220.165	●	●	**AC**	0.45	0.45	0.10	0.065	0.080	**0.103**	0.122	0.146	0.206	0.326	0.461	260
	220.185	●	●	**AC**	0.55	0.35	0.20	0.082	0.101	**0.130**	0.154	0.184	0.260	0.411	0.581	270
	220.205	●	●	**AC**	0.60	0.35	0.20	0.106	0.130	**0.168**	0.199	0.238	0.336	0.531	0.751	280
	220.245	●	●	**AC**	0.70	0.50	0.20	0.165	0.202	**0.261**	0.309	0.369	0.522	0.825	1.167	290
	220.285	●	●	**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 example:	Type	+	Material no.	+	Code	=	Ordering no.
	220.004	+	1Y	+	AC	=	220.004.1Y.AC

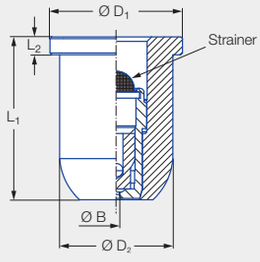
Assembly accessories can be found in Chapter 9 “Accessories”.

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_1	L_2	Ø D_1	Ø D_2	
Assembly with retaining nut 3/8 BSPP	18.00	2.00	14.80	12.65	20.00

Spray angle	Ordering no. Type	Mat. no. 16 Stainless steel 303	Bore diameter B [mm]	Narrowest free cross section Ø [mm]	Strainer insert mesh size [mm]	V̇ water [l/min] p [bar] 2.0	3.0	**5.0**	7.0	10.0	20.0	50.0	100.0	Spray diameter D [mm] (at p = 5 bar) H = 250 [mm]
60°	**226.004**	●	0.10	0.10	0.04	–	–	**0.013**	0.015	0.018	0.026	0.041	0.058	120
	226.014	●	0.15	0.15	0.04	–	0.015	**0.019**	0.022	0.027	0.038	0.060	0.085	140
	226.054	●	0.20	0.15	0.04	0.017	0.021	**0.027**	0.032	0.038	0.054	0.085	0.121	160
80°	**226.085**	●	0.25	0.25	0.10	0.025	0.031	**0.040**	0.047	0.057	0.080	0.126	0.179	190
	226.125	●	0.35	0.35	0.10	0.039	0.048	**0.062**	0.073	0.088	0.124	0.196	0.277	230
	226.145	●	0.40	0.40	0.10	0.052	0.064	**0.082**	0.097	0.116	0.164	0.259	0.367	250
	226.165	●	0.45	0.45	0.10	0.065	0.080	**0.103**	0.122	0.146	0.206	0.326	0.461	260
	226.185	●	0.55	0.35	0.20	0.082	0.101	**0.130**	0.154	0.184	0.260	0.411	0.581	270
	226.205	●	0.60	0.35	0.20	0.106	0.130	**0.168**	0.199	0.238	0.336	0.531	0.751	280
	226.245	●	0.70	0.50	0.20	0.165	0.202	**0.261**	0.309	0.369	0.522	0.825	1.167	290
	226.285	●	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
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 example:	Type 226.004	+	Material no. 16	=	Ordering no. 226.004.16

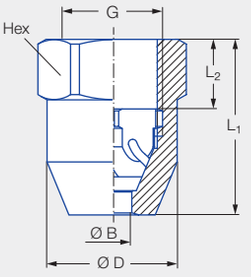
Assembly accessories can be found in Chapter 9 “Accessories”.

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_1	L_2	Ø D	Hex	
214	1/8 BSPP	18.0	6.0	16.0	17	27.0
216	3/8 BSPP	29.0	12.0	21.3	22	60.0

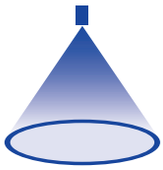
Spray angle	Ordering no. Type	Mat. no. 17 Stainless steel 316Ti	Mat. no. 30 Brass	Bore diameter B [mm]	Narrowest free cross section Ø [mm]	V̇ water [l/min] p [bar] 0.5	1.0	2.0	3.0	**5.0**	10.0	20.0	Spray diameter D [mm] (at p = 5 bar) H =250 [mm]
60°	**214.184**	●	●	0.50	0.50	–	–	0.08	0.10	**0.13**	0.18	0.25	120
	216.324	●	●	1.00	1.00	–	0.28	0.40	0.49	**0.63**	0.89	1.26	190
	216.364	●	●	1.40	1.40	–	0.45	0.63	0.77	**1.00**	1.41	1.99	220
	216.404	●	●	2.00	2.00	–	0.71	1.00	1.22	**1.58**	2.24	3.16	240
80°	**214.245**	●	●	1.00	0.50	–	–	0.16	0.20	**0.25**	0.36	0.51	240
	214.305	●	●	1.80	0.50	–	0.23	0.32	0.39	**0.51**	0.72	1.01	320
90°	**216.496**	●	●	3.00	2.00	–	1.20	1.70	2.08	**2.69**	3.80	5.38	430
	216.566	●	●	4.00	2.00	–	1.77	2.50	3.06	**3.95**	5.59	7.91	430
	216.646	●	●	3.50	2.00	2.00	2.83	4.00	4.90	**6.32**	8.94	12.65	440
	216.686	●	●	4.00	2.00	2.50	3.54	5.00	6.12	**7.91**	11.18	15.81	450
	216.726	●	●	5.00	2.00	3.15	4.45	6.30	7.72	**9.96**	14.09	19.92	460
	216.776	●	●	6.00	2.00	4.30	6.00	8.50	10.40	**13.40**	19.00	26.90	470

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

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

Assembly accessories can be found in Chapter 9 “Accessories”.

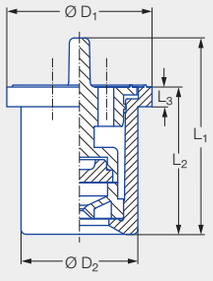
Axial-flow hollow cone nozzles
Series 2TR



Features:
- Fine, uniform atomization
- Assembly with retaining nut

Applications:
- Sprinkling
- Adiabatic cooling
- Cooling
- Humidification of air

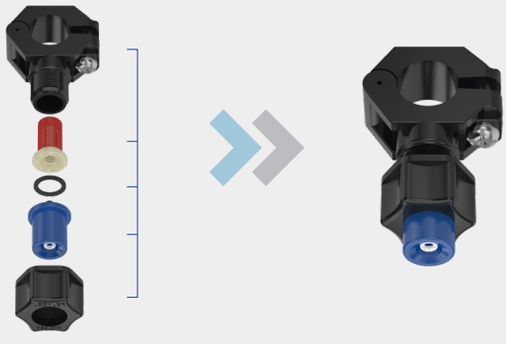
Series 2TR



Code	Dimensions [mm]					Weight [g]
	L_1	L_2	L_3	Ø D_1	Ø D_2	
Assembly with retaining nut 3/8 BSPP	20.0	15.0	2.0	14.8	11.9	3.0

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

Assembly accessories can be found in Chapter 9 “Accessories”.