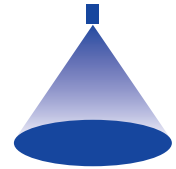


# ➤ Axial-flow full cone nozzles Series 460/461



### Features:

- Extremely uniform liquid distribution

### Applications:

- Cleaning and washing processes
- Cooling
- Surface spraying
- Chemical process engineering



Series 460/461

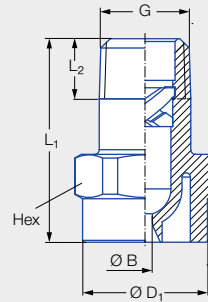


Figure 1

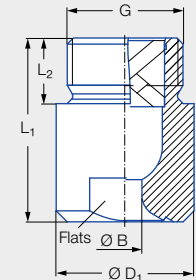


Figure 2

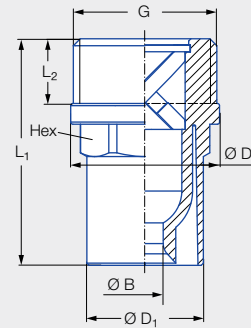




Figure 3

Code	Figure	G	Dimensions [mm]					Weight [g]
			L <sub>1</sub>	L <sub>2</sub>	Ø D <sub>1</sub>	Ø D <sub>2</sub>	Hex/Flats	
CA	1	1/8 BSPT	22.0	6.5	13.0	–	14	2.7
CC	1	1/4 BSPT	22.0	9.7	13.0	–	14	3.3
CE	1	3/8 BSPT	30.0	10.0	17.0	–	17	6.4
CG	1	1/2 BSPT	43.5	13.2	22.0	–	22	14.5
CK	2	3/4 BSPT	42.0	15.0	31.5	–	27	19.9
AK	2	3/4 BSPP	42.0	15.0	31.5	–	27	24.3
AM	3	1 BSPP	52.5	15.0	27.0	34.5	27	34.4

Spray angle	Ordering no.								Bore diameter B [mm]	Narrowest free cross sections Ø [mm]	V̇ water [l/min]							Spray diameter D [mm] (at p = 2 bar)			
	Type	Mat. no.	Code								p [bar]										
			5E	1/8 BSPT	1/4 BSPT	3/8 BSPT	1/2 BSPT	3/4 BSPT			3/4 BSPP	1 BSPP	0.5	1.0	2.0	3.0	5.0			7.0	10.0
																		PVDF			
60°	460.524	●	CA							1.60	1.60	1.15	1.52	2.00	2.35	2.89	3.30	3.81	210	380	
	460.644	●	CC							2.40	1.90	2.30	3.03	4.00	4.70	5.77	6.60	7.61	240	420	
	460.724	●	CC							2.80	2.10	3.15	4.45	6.30	7.72	8.91	9.96	14.09	260	450	
	460.964	●						AK		5.80	4.90	14.36	18.95	25.00	29.40	36.07	41.26	47.59	310	560	





Spray angle	Ordering no.								Bore diameter B [mm]	Narrowest free cross sections Ø [mm]	V̇ water [l/min]							Spray diameter D [mm] (at p = 2 bar)			
	Type	Mat. no.	Code								p [bar]										
		5E	1/8 BSPT	1/4 BSPT	3/8 BSPT	1/2 BSPT	3/4 BSPT	3/4 BSPP			1 BSPP	0.5	1.0	2.0	3.0	5.0	7.0		10.0	H = 250 [mm]	H = 500 [mm]
		PVDF																			
90°	460.326	●	CA							0.80	0.55	0.23	0.30	<b>0.40</b>	0.47	0.58	0.66	0.76	430	750	
	460.406	●	CA							1.20	0.85	0.57	0.76	<b>1.00</b>	1.18	1.44	1.65	1.90	440	780	
	460.486	●	CA							1.45	1.20	0.92	1.21	<b>1.60</b>	1.88	2.31	2.64	3.05	450	800	
	460.526	●	CA							1.65	1.30	1.15	1.52	<b>2.00</b>	2.35	2.89	3.30	3.81	450	820	
	460.606	●	CA		CE					2.05	1.45	1.81	2.39	<b>3.15</b>	3.70	4.54	5.20	6.00	470	850	
	460.646	●		CC						2.30	1.80	2.30	3.03	<b>4.00</b>	4.70	5.77	6.60	7.61	480	870	
	460.726	●			CE					2.95	2.00	3.62	4.77	<b>6.30</b>	7.41	9.09	10.40	11.99	500	900	
	460.746	●			CE					3.30	1.90	4.08	5.38	<b>7.10</b>	8.35	10.24	11.72	13.52	510	910	
	460.766	●			CE					3.30	2.40	4.59	6.06	<b>8.00</b>	9.41	11.54	13.20	15.23	510	910	
	460.806	●			CE					3.70	2.70	5.74	7.58	<b>10.00</b>	11.76	14.43	16.51	19.04	520	920	
	460.846	●			CE					4.05	3.20	7.18	9.47	<b>12.50</b>	14.70	18.03	20.63	23.80	520	930	
	460.886	●			CE	CG				4.70	3.10	9.19	12.13	<b>16.00</b>	18.82	23.08	26.41	30.46	520	930	
	460.926	●				CG				5.10	2.80	11.49	15.16	<b>20.00</b>	23.52	28.85	33.01	38.07	520	940	
	460.966	●				CG				5.80	3.80	14.36	18.95	<b>25.00</b>	29.40	36.07	41.26	47.59	520	940	
	461.006	●				CG				6.40	3.80	18.09	23.87	<b>31.50</b>	37.05	45.45	51.99	59.97	520	940	
461.046	●					CK			7.20	5.30	22.97	30.31	<b>40.00</b>	47.04	57.71	66.02	76.15	520	950		
461.086	●						AM		8.40	5.00	25.00	35.36	<b>50.00</b>	61.24	70.71	79.06	111.80	530	950		
120°	460.368	●	CA							0.95	0.65	0.32	0.45	<b>0.63</b>	0.77	0.89	1.00	1.41	650	1,030	
	460.408	●	CA							1.20	0.85	0.57	0.76	<b>1.00</b>	1.18	1.44	1.65	1.90	680	1,100	
	460.488	●	CA							1.50	1.00	0.92	1.21	<b>1.60</b>	1.88	2.31	2.64	3.05	700	1,160	
	460.528	●	CA							1.65	1.20	1.15	1.52	<b>2.00</b>	2.35	2.89	3.30	3.81	710	1,200	
	460.608	●	CA							2.10	1.40	1.81	2.39	<b>3.15</b>	3.70	4.54	5.20	6.00	730	1,270	
	460.648	●		CC						2.45	1.60	2.30	3.03	<b>4.00</b>	4.70	5.77	6.60	7.61	750	1,310	
	460.728	●			CE					3.10	1.90	3.62	4.77	<b>6.30</b>	7.41	9.09	10.40	11.99	780	1,380	
	460.748	●			CE					3.30	1.90	4.08	5.38	<b>7.10</b>	8.35	10.24	11.72	13.52	790	1,400	
	460.768	●			CE					3.50	1.90	4.59	6.06	<b>8.00</b>	9.41	11.54	13.20	15.23	790	1,410	
	460.808	●			CE					3.80	2.40	5.74	7.58	<b>10.00</b>	11.76	14.43	16.51	19.04	810	1,430	
	460.848	●			CE					4.20	2.70	7.18	9.47	<b>12.50</b>	14.70	18.03	20.63	23.80	820	1,450	
	460.888	●				CG				4.60	3.10	9.19	12.13	<b>16.00</b>	18.82	23.08	26.41	30.46	830	1,470	
	460.968	●				CG				5.90	4.10	14.36	18.95	<b>25.00</b>	29.40	36.07	41.26	47.59	850	1,500	
	461.048	● <sup>1</sup>					CK			7.60	4.90	22.97	30.31	<b>40.00</b>	47.04	57.71	66.02	76.15	870	1,530	

<sup>1</sup> Material PP (mat. no. 53).

Conversion formula for this series:  $\dot{V}_2 = \dot{V}_1 \cdot \left(\frac{p_2}{p_1}\right)^{0.4}$   
(≤ 10 bar)

Ordering Type + Material no. + Code = Ordering no.  
example: 460.326 + 5E + CA = 460.326.5E.CA



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