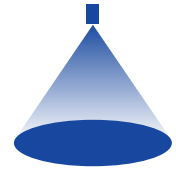


Tangential-flow full cone nozzles stainless steel/brass version Series 422/423

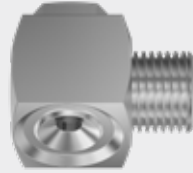


Features:

- Tangentially arranged supply of liquid
- Without swirl inserts
- Non-clogging
- Stable spray angle
- Uniform liquid distribution

Applications:

- Surface spraying
- Cooling
- Cleaning and washing processes
- Foam control



Series 422/423

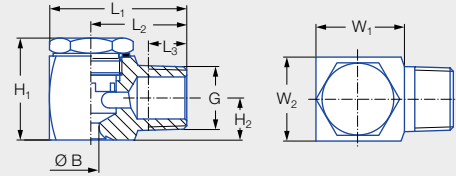


Figure 1

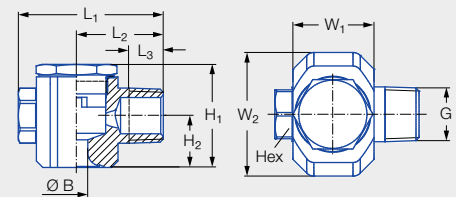
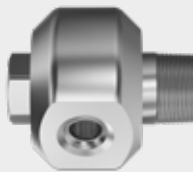


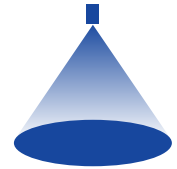
Figure 2

Connection	Figure	G	Dimensions [in]								Weight [lb] (stainless steel 316L)
			H ₁	H ₂	L ₁	L ₂	L ₃	W ₁	W ₂	Hex (mm)	
BC	1	1/4 NPT	0.83	0.31	1.10	0.79	0.38	0.61	0.61	–	0.1
BE	1	3/8 NPT	1.05	0.43	1.42	0.98	0.40	0.91	0.91	–	0.22
BG	2	1/2 NPT	1.57	0.79	2.20	1.32	0.52	1.26	1.26	19	0.82
BK	2	3/4 NPT	2.24	0.93	2.58	1.52	0.57	1.57	1.57	27	1.83
BM	2	1 NPT	2.60	1.07	3.35	1.91	0.66	2.17	2.17	36	3.49

Spray angle	Ordering Number									Bore diameter [in]	Narrowest free cross sections Ø [in]	V̇ water gal/min]								Spray diameter D [in] (at p = 30 psi)	
	Type	Material number		Connection								p [psi]									
		1Y	30	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1-1/4 NPT			2 NPT	10	20	30	Liters per min.	40	60	80	100	
																2 bar					
		316L SS	Brass																H =10 [in]	H =20 [in]	
30°	422.882	●				BE				0.193	0.193	2.48	3.51	4.30	16.00	4.96	6.08	7.02	7.85	6	15
	423.082	●					BK			0.323	0.323	7.76	10.97	13.43	50.00	15.51	19.00	21.94	24.53	6	15
	423.202	●							BP	0.472	0.472	15.51	21.94	26.87	100.00	31.03	38.00	43.88	49.06	6	15
60°	422.364	●		BC						0.045	0.043	0.09	0.13	0.16	0.60	0.19	0.23	0.26	0.29	10	20
	422.484	●		BC						0.071	0.071	0.25	0.35	0.43	1.60	0.50	0.61	0.70	0.78	10	20
	422.524	●			BE					0.079	0.079	0.31	0.44	0.54	2.00	0.62	0.76	0.88	0.98	10	20
	422.564	●			BE					0.089	0.089	0.39	0.55	0.67	2.50	0.78	0.95	1.10	1.23	10	20
	422.644	●	●		BE					0.118	0.118	0.62	0.88	1.07	4.00	1.24	1.52	1.76	1.96	10	20
	422.724	●			BE					0.142	0.142	0.98	1.38	1.69	6.30	1.95	2.39	2.76	3.09	10	20
	422.784	●				BG				0.163	0.163	1.40	1.97	2.42	9.00	2.79	3.42	3.95	4.42	10	20
	422.884	●				BG				0.252	0.252	2.48	3.51	4.30	16.00	4.96	6.08	7.02	7.85	15	25
	423.124	●					BK			0.441	0.441	9.77	13.82	16.93	63.00	19.55	23.94	27.65	30.91	15	25
	423.174	●						BM		0.500	0.500	13.19	18.65	22.84	85.00	26.37	32.30	37.30	41.70	15	25
	423.414	●							BV	0.969	0.969	51.97	73.50	90.00	335.00	103.95	127.31	147.00	164.30	15	25

Also available in metric thread.





Spray angle	Ordering Number												Bore diameter [in]	Narrowest free cross sections Ø [in]									Spray diameter D [in] (at p = 30 psi)		
	Type	Material number		Connection											10	20	30	Liters per min. 2 bar	40	60	80	100		H =10 [in]	H =20 [in]
		1Y	30	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1-1/4 NPT	2 NPT	2-1/2 NPT	3 NPT													
		316L SS	Brass																						
90°	422.286	●		BC									0.027	0.027	0.04	0.05	0.07	0.25	0.08	0.09	0.11	0.12	20	35	
	422.326	●		BC									0.033	0.031	0.06	0.09	0.11	0.40	0.12	0.15	0.18	0.20	20	35	
	422.346	●		BC									0.037	0.035	0.08	0.11	0.13	0.50	0.16	0.19	0.22	0.25	20	35	
	422.366	●		BC									0.043	0.043	0.09	0.13	0.16	0.60	0.19	0.23	0.26	0.29	20	35	
	422.406	●	●	BC									0.059	0.057	0.16	0.22	0.27	1.00	0.31	0.38	0.44	0.49	20	35	
	422.446	●		BC									0.065	0.063	0.20	0.29	0.35	1.30	0.40	0.49	0.57	0.64	20	35	
	422.486	●		BC									0.075	0.071	0.25	0.35	0.43	1.60	0.50	0.61	0.70	0.78	20	35	
	422.506	●		BC									0.079	0.079	0.28	0.39	0.48	1.80	0.56	0.68	0.79	0.88	20	36	
	422.526	●		BC									0.083	0.083	0.31	0.44	0.54	2.00	0.62	0.76	0.88	0.98	20	36	
	422.566	●	●	BC									0.091	0.087	0.39	0.55	0.67	2.50	0.78	0.95	1.10	1.23	20	36	
	422.606	●	●		BE								0.102	0.099	0.49	0.69	0.85	3.15	0.98	1.20	1.38	1.55	20	36	
	422.646	●	●		BE								0.118	0.114	0.62	0.88	1.07	4.00	1.24	1.52	1.76	1.96	20	36	
	422.686	●	●		BE								0.130	0.126	0.78	1.10	1.34	5.00	1.55	1.90	2.20	2.45	20	36	
	422.706	●			BE								0.138	0.134	0.87	1.23	1.50	5.60	1.74	2.13	2.46	2.75	20	38	
	422.726	●	●		BE								0.146	0.142	0.98	1.38	1.69	6.30	1.95	2.39	2.76	3.09	20	38	
	422.766	●			BE								0.163	0.161	1.24	1.76	2.15	8.00	2.48	3.04	3.51	3.92	20	38	
	422.786	●			BE								0.173	0.169	1.40	1.97	2.42	9.00	2.79	3.42	3.95	4.42	20	38	
	422.806	●	●		BE								0.183	0.181	1.55	2.19	2.69	10.00	3.10	3.80	4.39	4.91	20	38	
	422.846	●	●		BE								0.205	0.201	1.94	2.74	3.36	12.50	3.88	4.75	5.49	6.13	20	38	
	422.886	●	●		BE								0.229	0.225	2.48	3.51	4.30	16.00	4.96	6.08	7.02	7.85	20	40	
	422.926	●				BG							0.287	0.287	3.10	4.39	5.37	20.00	6.21	7.60	8.78	9.81	20	40	
	422.966	●				BG							0.315	0.315	3.88	5.49	6.72	25.00	7.76	9.50	10.97	12.27	20	40	
	423.006	●				BG							0.343	0.343	4.81	6.80	8.33	31.00	9.62	11.78	13.60	15.21	20	40	
	423.046	●					BK						0.426	0.402	6.21	8.78	10.75	40.00	12.41	15.20	17.55	19.62	20	40	
	423.086	●					BK						0.449	0.433	7.76	10.97	13.43	50.00	15.51	19.00	21.94	24.53	20	40	
	423.126	●					BK						0.500	0.485	9.77	13.82	16.93	63.00	19.55	23.94	27.65	30.91	20	40	
	423.146	●						BM					0.552	0.532	11.02	15.58	19.07	71.00	22.03	26.98	31.16	34.83	20	40	
	423.206	●						BM					0.670	0.630	15.51	21.94	26.87	100.00	31.03	38.00	43.88	49.06	20	40	
	423.286	●							BP				0.748	0.748	24.82	35.11	42.98	160.00	49.63	60.79	70.19	78.48	20	40	
	423.406	●								BV			0.965	0.965	48.87	69.11	84.63	315.00	97.72	119.68	138.19	154.50	20	40	
	423.486	●									BY		1.240	1.240	77.57	109.70	134.33	500.00	155.11	189.97	219.35	245.25	20	40	
	423.526	●										MA	1.398	1.398	97.74	138.23	169.25	630.00	195.43	239.36	276.39	309.01	20	40	

Also available in metric thread.

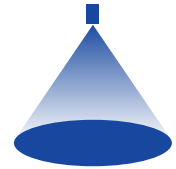


Conversion formula for this series: $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$

Ordering Type + Material no. + Connection = Ordering no.
example: 422.488 + 30 + CC = 422.488.30.CC



Assembly accessories can be found in Chapter 12 "Accessories".



Spray angle	Ordering Number											Bore diameter [in]	Narrowest free cross sections Ø [in]	V̇ water [gal/min]								Spray diameter D [in] (at p = 30 psi) 	
	Type	Material number		Connection										p [psi]									
		1Y	30	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1-1/4 NPT	2 NPT	2-1/2 NPT			10	20	30	Liters per min.	40	60	80	100		
																	2 bar						
		316L SS	Brass																H =10 [in]	H =20 [in]			
120°	422.368	●		BC								0.047	0.047	0.09	0.13	0.16	0.60	0.19	0.23	0.26	0.29	26	47
	422.408	●		BC								0.059	0.057	0.16	0.22	0.27	1.00	0.31	0.38	0.44	0.49	26	47
	422.448	●		BC								0.065	0.063	0.19	0.27	0.34	1.25	0.39	0.47	0.55	0.61	26	47
	422.488	●	●	BC								0.075	0.071	0.25	0.35	0.43	1.60	0.50	0.61	0.70	0.78	26	47
	422.508	●		BC								0.079	0.075	0.28	0.39	0.48	1.80	0.56	0.68	0.79	0.88	26	47
	422.528	●		BC								0.083	0.079	0.31	0.44	0.54	2.00	0.62	0.76	0.88	0.98	26	47
	422.568	●	●	BC								0.091	0.087	0.39	0.55	0.67	2.50	0.78	0.95	1.10	1.23	26	47
	422.608	●	●		BE							0.102	0.098	0.49	0.69	0.85	3.15	0.98	1.20	1.38	1.55	26	47
	422.648	●			BE							0.118	0.114	0.62	0.88	1.07	4.00	1.24	1.52	1.76	1.96	26	47
	422.688	●			BE							0.130	0.126	0.78	1.10	1.34	5.00	1.55	1.90	2.19	2.45	26	47
	422.708	●			BE							0.138	0.134	0.87	1.23	1.50	5.60	1.74	2.13	2.46	2.75	26	47
	422.728	●	●		BE							0.146	0.142	0.98	1.38	1.69	6.30	1.95	2.39	2.76	3.09	30	55
	422.768	●			BE							0.163	0.161	1.24	1.76	2.15	8.00	2.48	3.04	3.51	3.92	30	55
	422.788	●			BE							0.173	0.169	1.40	1.97	2.42	9.00	2.79	3.42	3.95	4.42	30	55
	422.808	●			BE							0.183	0.181	1.55	2.19	2.69	10.00	3.10	3.80	4.39	4.91	33	58
	422.848	●	●		BE							0.205	0.201	1.94	2.74	3.36	12.50	3.88	4.75	5.49	6.13	33	58
	422.888	●	●		BE							0.228	0.224	2.48	3.51	4.30	16.00	4.96	6.08	7.02	7.85	33	58
	422.928	●				BG						0.287	0.287	3.10	4.39	5.37	20.00	6.21	7.60	8.78	9.81	35	63
	422.968	●	●			BG						0.315	0.315	3.88	5.49	6.72	25.00	7.76	9.50	10.97	12.27	35	63
	422.988	●				BG						0.331	0.331	4.34	6.14	7.52	28.00	8.69	10.64	12.29	13.74	35	63
	423.008	●				BG						0.343	0.343	4.89	6.91	8.46	31.50	9.77	11.97	13.82	15.45	35	63
	423.048	●					BK					0.426	0.402	6.21	8.78	10.75	40.00	12.41	15.20	17.55	19.62	35	63
	423.088	●					BK					0.449	0.433	7.76	10.97	13.43	50.00	15.51	19.00	21.94	24.53	35	63
	423.128	●					BK					0.500	0.485	9.77	13.82	16.93	63.00	19.55	23.94	27.65	30.91	35	63
	423.148	●						BM				0.552	0.532	11.02	15.58	19.07	71.00	22.03	26.98	31.16	34.83	35	63
	423.208	●						BM				0.670	0.630	15.51	21.94	26.87	100.00	31.03	38.00	43.88	49.06	35	63
	423.288	●							BP			0.748	0.748	24.82	35.11	42.98	160.00	49.63	60.79	70.19	78.48	35	63
	423.368	●								BR		0.875	0.875	38.79	54.85	67.16	250.00	77.55	94.98	109.68	122.62	35	63
	423.448	●									BV	1.220	1.161	62.06	87.76	107.46	400.00	124.09	151.97	175.48	196.20	35	63

Also available in metric thread.

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

Ordering Type + Material no. + Connection = Ordering no.
example: 422.888 + 1Y + BE = 422.888.1Y.BE



Assembly accessories can be found in Chapter 12 "Accessories".