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

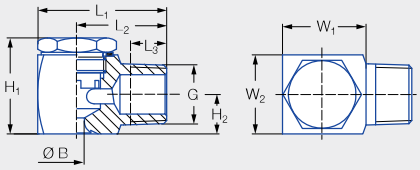


Figure 1

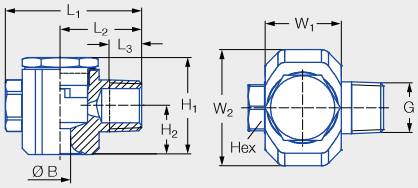


Figure 2

Code	Figure	G	Dimensions [mm]								Weight [g] (stainless steel 316L)
			H_1	H_2	L_1	L_2	L_3	W_1	W_2	Hex	
CC	1	1/4 BSPT	21.0	8.0	28.0	20.0	9.7	15.6	16.0	–	44.0
CE	1	3/8 BSPT	26.7	11.0	36.0	25.0	10.1	23.2	22.0	–	101.0
CG	2	1/2 BSPT	40.0	20.0	56.0	33.5	13.2	32.0	48.0	19	370.0
CK	2	3/4 BSPT	57.0	23.5	65.5	38.5	14.5	40.0	63.0	27	830.0
CM	2	1 BSPT	66.0	27.3	85.0	48.5	16.8	55.0	78.0	36	1.581.0

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]**							
		1Y	**30**																
		Stainless steel 316L	Brass	1/4 BSPT	3/8 BSPT	1/2 BSPT	3/4 BSPT	1 BSPT				0.5	1.0	**2.0**	3.0	5.0	10.0	H = 250 [mm]	H = 500 [mm]
60°	**422.644**	●	●		**CE**					3.00	3.00	2.00	2.83	**4.00**	4.90	6.32	8.94	300	580
90°	**422.406**	●	●	**CC**						1.40	1.40	0.50	0.71	**1.00**	1.22	1.58	2.24	430	800
	422.486	●		**CC**						1.85	1.85	0.80	1.13	**1.60**	1.96	2.53	3.58	450	820
	422.566	●	●	**CC**						2.25	2.25	1.25	1.77	**2.50**	3.06	3.95	5.59	470	840
	422.606	●	●		**CE**					2.55	2.55	1.57	2.23	**3.15**	3.86	4.98	7.04	480	860
	422.646	●	●		**CE**					2.90	2.90	2.00	2.83	**4.00**	4.90	6.32	8.94	500	880
	422.726		●		**CE**					3.70	3.70	3.15	4.45	**6.30**	7.72	9.96	14.09	520	910
	422.766	●			**CE**					4.15	4.15	4.00	5.66	**8.00**	9.80	12.65	17.89	520	910
	422.806		●		**CE**					4.65	4.65	5.00	7.07	**10.00**	12.25	15.81	22.36	520	910
	422.846	●	●		**CE**					5.30	5.30	6.25	8.84	**12.50**	15.31	19.76	27.95	520	910
	422.886	●	●		**CE**					5.85	5.85	8.00	11.31	**16.00**	19.60	25.30	35.78	520	910
	422.966	●				**CG**				8.00	8.00	12.50	17.68	**25.00**	30.62	39.53	55.90	520	910

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]							
		1Y	30																
		Stainless steel 316L	Brass	1/4 BSPT	3/8 BSPT	1/2 BSPT	3/4 BSPT	1 BSPT				0.5	1.0	**2.0**	3.0	5.0	10.0	H = 250 [mm]	H = 500 [mm]
120°	**422.488**		●	**CC**						1.90	1.90	0.80	1.13	**1.60**	1.96	2.53	3.58	670	1,200
	422.568	●	●	**CC**						2.45	2.40	1.25	1.77	**2.50**	3.06	3.95	5.59	700	1,230
	422.608		●		**CE**					2.70	2.70	1.57	2.23	**3.15**	3.86	4.98	7.04	710	1,250
	422.728	●	●		**CE**					4.00	3.90	3.15	4.45	**6.30**	7.72	9.96	14.09	770	1,360
	422.808	●			**CE**					4.90	4.90	5.00	7.07	**10.00**	12.25	15.81	22.36	830	1,490
	422.848	●	●		**CE**					5.30	5.30	6.25	8.84	**12.50**	15.31	19.76	27.95	860	1,550
	422.888	●	●		**CE**					6.60	6.00	8.00	11.31	**16.00**	19.60	25.30	35.78	880	1,570
	422.928	●				**CG**				7.30	7.30	10.00	14.14	**20.00**	24.49	31.62	44.72	890	1,580
	422.968	●	●			**CG**				8.00	8.00	12.50	17.68	**25.00**	30.62	39.53	55.90	890	1,590
	423.008	●				**CG**				8.70	8.70	15.75	22.27	**31.50**	38.58	49.81	70.44	890	1,590
	423.128	●					**CK**			12.70	12.30	31.50	44.55	**63.00**	77.16	99.61	140.87	890	1,590
	423.208	●						**CM**		17.00	16.00	50.00	70.71	**100.00**	122.47	158.11	223.61	890	1,590

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

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

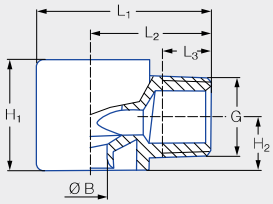
Assembly accessories can be found in Chapter 9 “Accessories”.

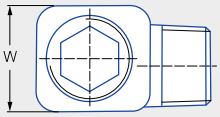
Tangential-flow full cone nozzles, plastic version
Series 422/423

Features:
- Tangentially arranged supply of liquid
- Without swirl inserts
- Non-clogging
- Stable spray angle
- Uniform liquid distribution
- High chemical resistance

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

Series 422/423





Code	G	Dimensions [mm]						Weight [g]
		H_1	H_2	L_1	L_2	L_3	W	
CC	1/4 BSPT	16.0	8.0	28.0	20.0	9.8	16.0	7.0
CE	3/8 BSPT	23.0	11.2	36.0	25.0	10.1	22.0	16.0
CG	1/2 BSPT	38.0	19.2	49.5	33.5	13.2	32.0	40.0
CK	3/4 BSPT	50.0	24.5	58.5	38.5	18.5	41.0	50.0

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														
		PVDF	1/4 BSPT	3/8 BSPT	1/2 BSPT	3/4 BSPT			0.5	1.0	**2.0**	3.0	5.0	10.0	H = 250 [mm]	H = 500 [mm]
60°	**422.724**	●		**CE**			3.60	3.60	3.15	4.45	**6.30**	7.72	9.96	14.09	320	560
90°	**422.406**	●	**CC**				1.50	1.45	0.50	0.71	**1.00**	1.22	1.58	2.24	530	900
	422.566	●	**CC**				2.30	2.20	1.25	1.77	**2.50**	3.06	3.95	5.59	530	920
	422.606	●		**CE**			2.60	2.50	1.58	2.23	**3.15**	3.86	4.98	7.04	540	920
	422.646	●		**CE**			3.00	2.90	2.00	2.83	**4.00**	4.90	6.32	8.94	540	930
	422.726	●		**CE**			3.70	3.60	3.15	4.45	**6.30**	7.72	9.96	14.09	550	950
	422.806	●		**CE**			4.65	4.60	5.00	7.07	**10.00**	12.25	15.81	22.36	560	980
	422.846	●		**CE**			5.30	5.30	6.25	8.84	**12.50**	15.31	19.76	27.95	560	990
	422.886	●		**CE**			5.80	5.80	8.00	11.31	**16.00**	19.60	25.30	35.78	570	1,010
	422.926	●			**CG**		7.30	7.30	10.00	14.14	**20.00**	24.49	31.62	44.72	570	1,030
	422.966	●			**CG**		8.00	8.00	12.50	17.68	**25.00**	30.62	39.53	55.90	580	1,040
	423.006	●			**CG**		8.70	8.70	15.75	22.27	**31.50**	38.58	49.81	70.44	580	1,040
	423.126	●				**CK**	12.00	12.00	31.50	44.55	**63.00**	77.16	99.61	140.87	580	1,050

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														
		PVDF	1/4 BSPT	3/8 BSPT	1/2 BSPT	3/4 BSPT			0.5	1.0	**2.0**	3.0	5.0	10.0	H = 250 [mm]	H = 500 [mm]
120°	**422.408**	●	**CC**				1.50	1.45	0.50	0.71	**1.00**	1.22	1.58	2.24	670	1,200
	422.448	●	**CC**				1.65	1.60	0.63	0.88	**1.25**	1.53	1.98	2.80	680	1,210
	422.488	●	**CC**				1.90	1.90	0.80	1.13	**1.60**	1.96	2.53	3.58	680	1,230
	422.568	●	**CC**				2.40	2.40	1.25	1.77	**2.50**	3.06	3.95	5.59	700	1,260
	422.728	●		**CE**			4.00	3.90	3.15	4.45	**6.30**	7.72	9.96	14.09	770	1,400
	422.888	●		**CE**			6.60	6.00	8.00	11.31	**16.00**	19.60	25.30	35.78	940	1,590
	422.968	●			**CG**		8.00	8.00	12.50	17.68	**25.00**	30.62	39.53	55.90	960	1,620
	423.008	●			**CG**		8.70	8.70	15.75	22.27	**31.50**	38.58	49.81	70.44	970	1,630
	423.128	●				**CK**	12.70	12.30	31.50	44.55	**63.00**	77.16	99.61	140.87	990	1,660

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

Ordering example:	Type 422.408	+ Material no. 5E	+ Code CC	= Ordering no. 422.408.5E.CC

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

Tangential-flow full cone nozzles, plastic version with bayonet quick-release system
Series 422

Features:
- Without swirl inserts
- Non-clogging
- Stable spray angle
- Simple and quick assembly
- Uniform liquid distribution
- High chemical resistance

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

Series 422

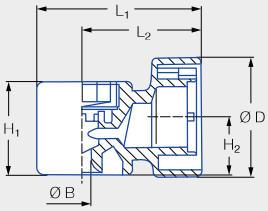


Figure 1

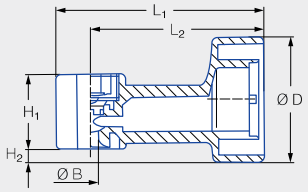


Figure 2

Type	Code	Figure	Dimensions [mm]					Weight [g] (PVDF)
			H_1	H_2	L_1	L_2	Ø D	
422,644/422,606/422,608	KB	1	23.0	14.0	40.0	29.0	29.5	20.0
422,406/422,408/422,528	KB	2	17.5	3.5	48.0	40.0	29.5	14.0

Spray angle	Ordering no.				Bore diameter B [mm]	Narrowest free cross sections Ø [mm]	V̇ water [l/min] p [bar]						Spray diameter D [mm] (at p = 2 bar)	
	Type	Mat. no. 5E PVDF	Mat. no. 53 PP	Code Bayonet quick-release system			0.5	1.0	**2.0**	3.0	5.0	10.0	H = 250 [mm]	H = 500 [mm]
60°	**422.644**		●	**KB**	2.90	2.90	2.00	2.83	**4.00**	4.90	6.32	8.94	250	490
90°	**422.406**	●		**KB**	1.50	1.45	0.50	0.71	**1.00**	1.22	1.58	2.24	530	900
	422.606	●		**KB**	2.60	2.50	1.58	2.23	**3.15**	3.86	4.98	7.04	540	920
120°	**422.408**	●		**KB**	1.50	1.45	0.50	0.71	**1.00**	1.22	1.58	2.24	670	1,140
	422.528	●		**KB**	2.10	2.00	1.00	1.41	**2.00**	2.45	3.16	4.47	690	1,220
	422.608	●		**KB**	2.60	2.50	1.58	2.23	**3.15**	3.86	4.98	7.04	710	1,260

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.
	422.644	+	53	+	KB	=	422.644.53.KB

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