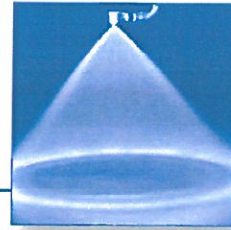




# Tangential-flow hollow cone nozzles

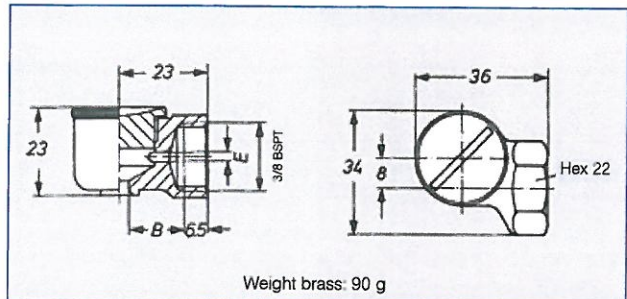
## Brass versions

### Series 302/308



#### Uniform hollow cone spray. Non-clogging nozzle, without swirl insert.

Applications:  
Humidification of air in air washers, dust control, spraying onto filters, foam control, cooling.

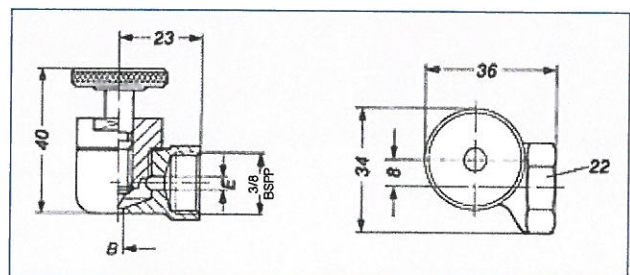


Spray angle	Ordering no.		B Ø [mm]	E Ø [mm]	V̇ [l/min]								Spray diameter D at p=2 bar	
	Type	Mat. no.			p [bar]								H =	
					30	1Y	0.5	1.0	2.0	3.0	5.0	7.0	10.0	250 mm
60°	302. 364	○	-	1.50	1.50	0.31	0.45	0.63	0.77	1.00	1.18	1.41	200	350
	302. 464	○	○	2.00	2.00	0.70	0.99	1.40	1.71	2.21	2.62	3.13	300	560
80°	302. 545	○	○	4.90	2.30	1.12	1.58	2.24	2.74	3.54	4.19	5.01	400	700
90°	302. 606	○	○	4.60	4.00	1.57	2.23	3.15	3.86	4.98	5.89	7.04	450	750
130°	302. 368	○	○	3.00	1.00	0.31	0.45	0.63	0.77	1.00	1.18	1.41	800	1500
	302. 468	○	○	5.00	1.70	0.70	0.99	1.40	1.71	2.21	2.62	3.13	800	1500
	302. 548	○	-	5.00	2.50	1.12	1.58	2.24	2.74	3.54	4.19	5.01	800	1500
	302. 608	○	○	5.00	3.50	1.57	2.23	3.15	3.86	4.98	5.89	7.04	1000	1800
	302. 668	○	-	7.50	3.60	2.25	3.18	4.50	5.51	7.12	8.42	10.06	1200	2000
	302. 748	○	-	7.50	4.80	3.55	5.02	7.10	8.70	11.23	13.28	15.88	1200	2000

B = bore diameter · E = narrowest free cross section

#### Flow rate adjustable. Decrease in flow rate causes narrower spray angle.

Applications:  
Dust control, foam control.



Spray angle	Ordering no.		B Ø [mm]	E Ø [mm]	V̇max [l/min]						Spray diameter D at p=2 bar	
	Type	Mat-Nr.			p [bar]						H =	
					30	0.3	0.5	1.0	2.0	5.0	10.0	250 mm
90°	308. 466	○	2.0	2.0	0.54	0.70	1.00	1.40	2.21	3.13	400	880
	308. 606	○	4.0	4.0	1.22	1.58	2.23	3.15	4.98	7.04	450	950

B = bore diameter · E = narrowest free cross section

**Example**    Type    +    Material no.    =    Ordering no.  
for ordering    308. 466    +    30    =    308. 466. 30

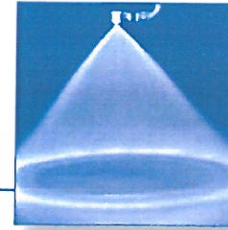




# Tangential-flow hollow cone nozzles

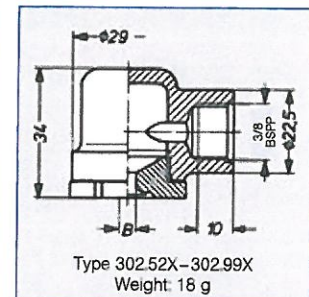
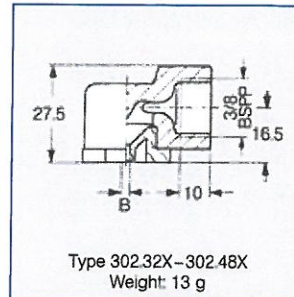
## Plastic version

### Series 302



**Uniform hollow cone spray.**  
**Non-clogging nozzle, with-**  
**out swirl insert.**

Applications:  
 Humidification of air in air  
 washers, dust control, spray-  
 ing onto filters, foam control,  
 cooling.



Spray angle	Ordering no.			B ∅ [mm]	E ∅ [mm]	V̇ [l/min]							Spray diameter D at p=2 bar		
	Type	Mat. no.				p [bar]							H		
		5E	51			53	0.5	1.0	2.0	3.0	5.0	10.0	250 mm	500 mm	
60°	302.364	-	○	○	1.50	1.50	0.31	0.45	0.63	0.20	0.77	1.00	1.41	200	350
	302.464	-	○	○	3.80	1.95	0.70	0.99	1.40	0.43	1.71	2.21	3.13	300	560
90°	302.326	○	○	-	1.20	0.90	0.20	0.28	0.40	0.12	0.49	0.63	0.89	400	700
	302.366	○	○	-	2.10	1.30	0.31	0.45	0.63	0.20	0.77	1.00	1.41	400	880
	302.406	○	○	-	2.60	1.40	0.50	0.71	1.00	0.31	1.22	1.58	2.24	400	880
	302.486	-	○	○	2.60	2.60	0.80	1.13	1.60	0.50	1.96	2.53	3.58	400	880
	302.526	-	○	○	5.00	2.00	1.00	1.41	2.00	0.62	2.45	3.16	4.47	400	880
	302.566	-	○	○	5.00	2.40	1.25	1.77	2.50	0.78	3.06	3.95	5.59	400	880
	302.606	-	○	○	5.00	3.20	1.57	2.23	3.15	0.98	3.86	4.98	7.04	450	950
	302.686	-	○	-	7.50	3.40	2.50	3.45	5.00	1.55	6.12	7.91	11.18	500	1050
	302.766	-	○	-	9.00	4.30	4.00	5.66	8.00	2.48	9.80	12.65	17.89	500	1050
	302.846	-	○	○	11.00	5.20	6.25	8.84	12.50	3.88	15.31	19.67	27.95	550	1130
	302.886	○	○	○	11.00	6.40	8.00	11.31	16.00	4.96	19.60	25.30	35.78	550	1130
302.966	-	○	-	11.00	8.60	12.50	17.68	25.00	7.75	30.62	39.53	55.90	550	1130	
130°	302.328	○	-	-	1.35	0.80	0.20	0.28	0.40	0.12	0.49	0.63	0.89	700	1380
	302.368	○	-	-	1.85	1.10	0.31	0.45	0.63	0.20	0.77	1.00	1.41	700	1380
	302.408	○	○	-	3.65	1.30	0.50	0.71	1.00	0.31	1.22	1.58	2.24	700	1380
	302.488	-	○	○	5.20	1.60	0.80	1.13	1.60	0.50	1.96	2.53	3.58	700	1380
	302.528	-	○	-	5.00	2.00	1.00	1.41	2.00	0.62	2.45	3.16	4.47	700	1380
	302.568	-	○	-	5.00	2.40	1.25	1.77	2.50	0.78	3.06	3.95	5.59	780	1520
	302.608	○	○	○	5.00	3.20	1.57	2.23	3.15	0.98	3.86	4.98	7.04	780	1520
	302.648	-	○	-	7.50	3.00	2.00	2.83	4.00	1.20	4.90	6.32	8.94	950	1850
	302.688	-	○	-	7.50	3.40	2.50	3.54	5.00	1.55	6.12	7.91	11.18	950	1850
	302.728	-	○	-	7.50	4.10	3.15	4.45	6.30	1.89	7.72	9.96	14.09	950	1850
	302.768	-	○	-	9.00	4.30	4.00	5.66	8.00	2.48	9.80	12.65	17.89	950	1850
	302.848	-	○	-	11.00	5.20	6.25	8.84	12.50	3.88	15.31	19.76	27.95	950	1850
	302.888	-	○	○	11.00	6.40	8.00	11.31	16.00	4.96	19.60	25.30	35.78	950	1850
	302.968	○	○	-	11.00	8.60	12.50	17.68	25.00	7.75	30.62	39.53	55.90	950	1850

B = bore diameter · E = narrowest free cross section

Example	Type	+	Material no.	=	Ordering no.
for ordering	302.364	+	51	=	302.364.51

The folded page at the end of the catalogue will give you a  
 survey on the various assembly possibilities.

For complete assembly accessories, please refer to  
 »Accessories«.

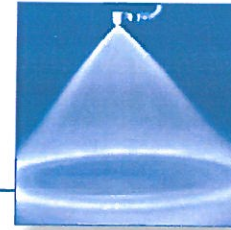
Conversion formula for the above series:  $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$



# Tangential-flow hollow cone nozzles

## Bayonet quick-release system

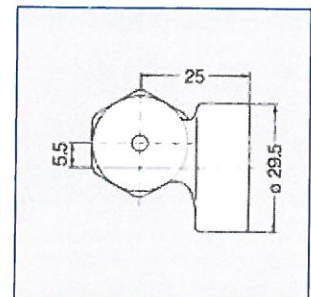
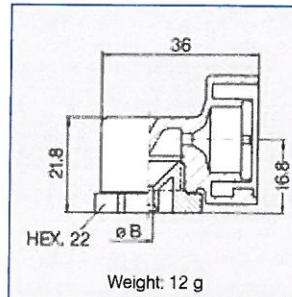
### Series 302



**A time-saving alternative to threaded design. Quick and secure assembling. Automatic setting of spray direction.**

Applications:

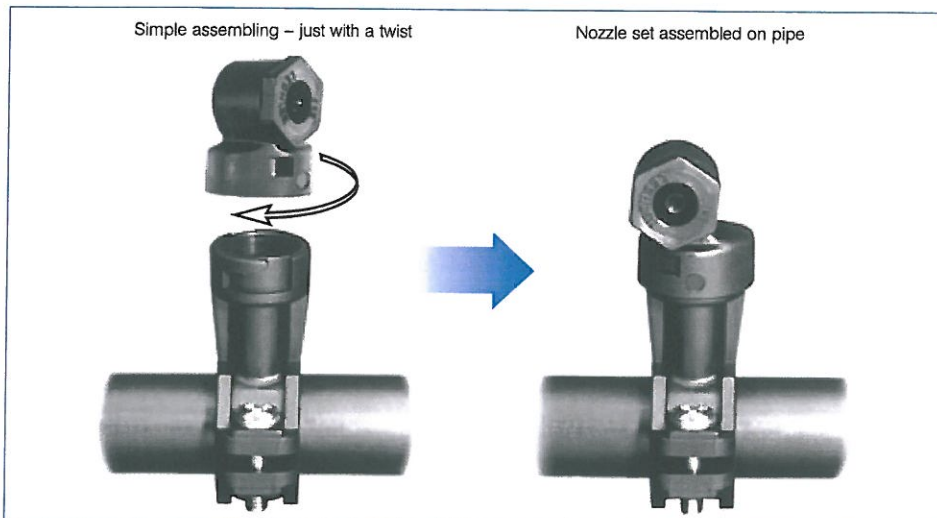
Humidification of air in air washers, dust control, spraying onto filters, foam control.



Spray angle	Ordering no.				B ∅ [mm]	E ∅ [mm]	V̇ [l/min]							Spray diameter D at p=2 bar	
	Type	Mat. no.		Code			p [bar]							H =	
		51	56				0.5	1.0	2.0	US [gal/min] at 40 psi	3.0	4.0	10.0	250 mm	500 mm
45°	302. 503	○	-	KB	2.05	2.05	0.90	1.27	1.80	0.56	2.20	2.85	4.02	220	560
	302. 464	-	○	KB	1.95	1.95	0.70	0.99	1.40	0.43	1.71	2.21	3.13	300	560
	302. 545	-	○	KB	2.30	2.30	1.12	1.58	2.24	0.69	2.74	3.54	5.01	400	700
90°	302. 326	○	○	KB	1.05	1.05	0.20	0.28	0.40	0.12	0.49	0.63	0.89	400	700
	302. 406	○	○	KB	1.55	1.55	0.50	0.71	1.00	0.31	1.22	1.58	2.24	400	880
	302. 486	○	-	KB	2.10	2.10	0.80	1.13	1.60	0.50	1.96	2.53	3.58	400	880
	302. 606	○	-	KB	5.00	3.20	1.58	2.23	3.15	0.98	3.86	4.98	7.04	450	880
130°	302. 368	-	○	KB	1.30	1.30	0.31	0.45	0.63	0.20	0.77	1.00	1.41	700	1380
	302. 408	○	○	KB	2.00	2.00	0.50	0.71	1.00	0.31	1.22	1.58	2.24	700	1380
	302. 468	○	-	KB	2.40	2.40	0.70	0.99	1.40	0.43	1.71	2.21	3.13	700	1380
	302. 488	○	-	KB	2.75	2.75	0.80	1.13	1.60	0.50	1.96	2.53	3.58	700	1380

B = bore diameter · E = narrowest free cross section

**Example**    Type    +    Material no.    +    Code    =    Ordering no.  
 for ordering: 302. 503    +    51                    +    KB        =    302. 503. 51. KB



The folded page at the end of the catalogue will give you a survey on the various assembly possibilities. For complete assembly accessories, please refer to »Accessories«.