

WT



HOLLOW CONE

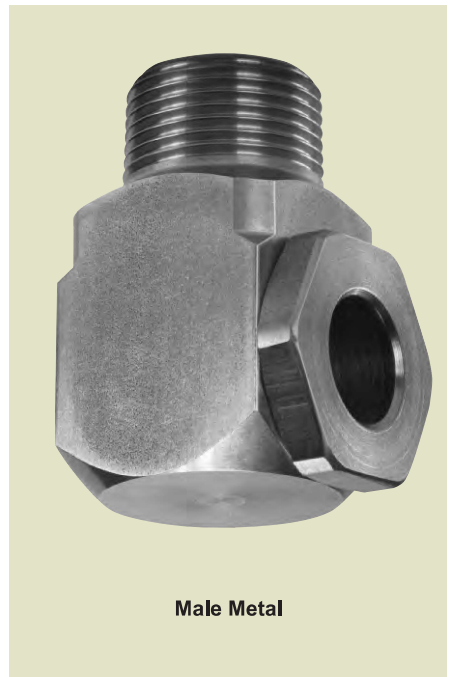
Right Angle/Hollow Cone

DESIGN FEATURES

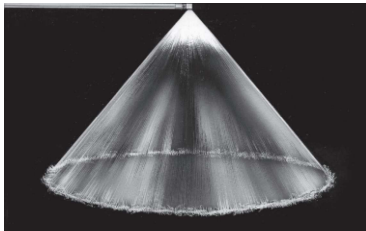
- Conventional design using tangential whirl method of atomization
- Durable
- Use where a circular pattern is required or in large area multiple installations where there is considerable overlapping of sprays
- Male and female connections
- Large free passage

SPRAY CHARACTERISTICS

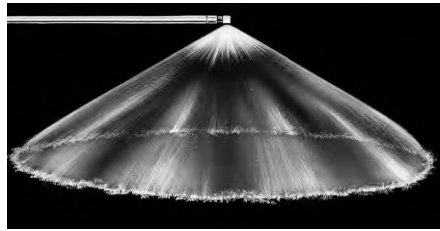
Spray pattern: Hollow Cone
Spray angles: 70° to 120°
Flow rates: 0.04 to 38.0 gpm



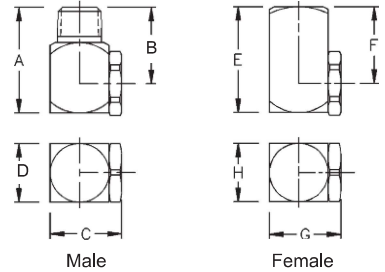
Male Metal



Hollow Cone 80°



Hollow Cone 120°



Dimensions are approximate. Check with BETE for critical dimension applications.

WT Flow Rates and Dimensions

Hollow Cone, Medium and Extra Wide Spray Angles, 1/8" to 3/4" Pipe Sizes

Male or Female Pipe Size	Nozzle Number	Spray Angle	K Factor	GALLONS PER MINUTE @ PSI								Approx. (in.)		Dimensions for Metal Only (in.)								Wt. (oz.)						
				5 PSI	10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	Inlet Dia.	Orifice Dia.	A	B	C	D	E	F	G	H	Metal	Plas.					
1/8	WT10	70° 110°	0.0158	0.04	0.05	0.07	0.09	0.10	0.12	0.14	0.16	0.04	0.05															
	WT20	70° 115°	0.0316	0.07	0.10	0.14	0.17	0.20	0.24	0.28	0.32	0.06	0.06															
	WT40	70°	0.0632	0.14	0.20	0.28	0.35	0.40	0.49	0.57	0.63	0.09	0.09															
	WT50	115°	0.0791	0.18	0.25	0.35	0.43	0.50	0.61	0.71	0.79	0.09	0.09															
	WT60	70° 115°	0.0949	0.21	0.30	0.42	0.52	0.60	0.73	0.85	0.95	0.10	0.11															
	WT70	115°	0.111	0.25	0.35	0.49	0.61	0.70	0.86	0.99	1.11	0.10	0.11	1.12	0.88	0.63	0.50	1.00	0.75	0.65	0.50	1.00	0.50					
	WT80	120°	0.126	0.28	0.40	0.57	0.69	0.80	0.98	1.13	1.26	0.11	0.12															
	WT100	70° 115°	0.158	0.35	0.50	0.71	0.87	1.00	1.22	1.41	1.58	0.13	0.13															
	WT130	120°	0.206	0.46	0.65	0.92	1.13	1.30	1.59	1.84	2.06	0.14	0.14															
	WT160	70°	0.253	0.57	0.80	1.13	1.39	1.60	1.96	2.26	2.53	0.15	0.16															
	WT180	120°	0.285	0.64	0.90	1.27	1.56	1.80	2.20	2.55	2.85	0.17	0.16															
	WT200	70°	0.316	0.71	1.00	1.41	1.73	2.00	2.45	2.83	3.16	0.17	0.19															
1/4	WT12	80°	0.0190	0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.19	0.04	0.05															
	WT18	80°	0.0285	0.06	0.09	0.13	0.16	0.18	0.22	0.25	0.28	0.06	0.06															
	WT20	70° 110°	0.0316	0.07	0.10	0.14	0.17	0.20	0.24	0.28	0.32	0.06	0.06															
	WT27	80°	0.0427	0.10	0.14	0.19	0.23	0.27	0.33	0.38	0.43	0.07	0.08	1.31	1.00	0.79	0.63	1.12	0.81	0.79	0.63	1.75	0.50					
	WT35	100°	0.0553	0.12	0.18	0.25	0.30	0.35	0.43	0.49	0.55	0.08	0.09															
	WT40	70° 80°	0.0632	0.14	0.20	0.28	0.35	0.40	0.49	0.57	0.63	0.08	0.09															
	WT42	120°	0.0664	0.15	0.21	0.30	0.36	0.42	0.51	0.59	0.66	0.08	0.09															
	WT48	105°	0.0759	0.17	0.24	0.34	0.42	0.48	0.59	0.68	0.76	0.09	0.11															

$$\text{Flow Rate (GPM)} = K \sqrt{\text{PSI}}$$

Standard Materials: Brass, 303 Stainless Steel, 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.

WTX



HOLLOW CONE

Extended Life/Hollow Cone

DESIGN FEATURES

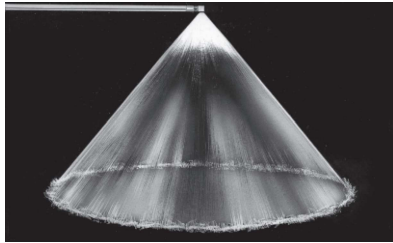
- Tangential whirl
- Oversized body for extended life
- Male and female connections
- Large free passage

SPRAY CHARACTERISTICS

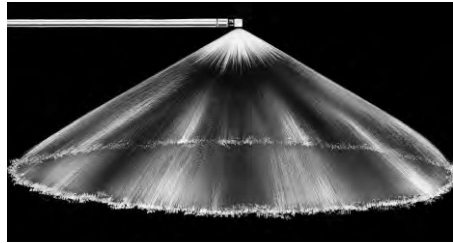
Spray pattern: Hollow Cone
Spray angles: 70° to 140°
Flow rates: 0.04 to 38.0 gpm



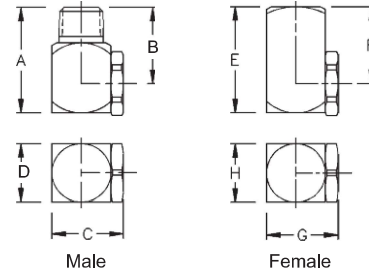
Metal



Hollow Cone 80°



Hollow Cone 120°



Dimensions are approximate. Check with BETE for critical dimension applications.

WTX Flow Rates and Dimensions

Hollow Cone, Medium and Extra Wide Spray Angles, 1/8" to 3/4" Pipe Sizes

Male or Female Pipe Size	Nozzle Number	Spray Angle	K Factor	GALLONS PER MINUTE @ PSI								Approx. (in.)		Dimensions for Metal Only (in.)								WT. (oz.) Metal
				5 PSI	10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	Inlet Dia.	Orifice Dia.	A	B	C	D	E	F	G	H	
1/8	WTX10	70° 110°	0.0158	0.04	0.05	0.07	0.09	0.10	0.12	0.14	0.16	0.04	0.05	1.12	0.88	0.88	0.75	1.00	0.75	0.88	0.75	1.13
	WTX20	70° 115°	0.0316	0.07	0.10	0.14	0.17	0.20	0.24	0.28	0.32	0.06	0.06									
	WTX40	70°	0.0632	0.14	0.20	0.28	0.35	0.40	0.49	0.57	0.63	0.09	0.09									
	WTX50	115°	0.0791	0.18	0.25	0.35	0.43	0.50	0.61	0.71	0.79	0.09	0.09									
	WTX60	70° 115°	0.0949	0.21	0.30	0.42	0.52	0.60	0.73	0.85	0.95	0.10	0.11									
	WTX70	115°	0.111	0.25	0.35	0.49	0.61	0.70	0.86	0.99	1.11	0.10	0.11									
	WTX80	120°	0.126	0.28	0.40	0.57	0.69	0.80	0.98	1.13	1.26	0.11	0.12									
	WTX100	70° 115°	0.158	0.35	0.50	0.71	0.87	1.00	1.22	1.41	1.58	0.13	0.13									
	WTX130	120°	0.206	0.46	0.65	0.92	1.13	1.30	1.59	1.84	2.06	0.14	0.14									
	WTX160	70°	0.253	0.57	0.80	1.13	1.39	1.60	1.96	2.26	2.53	0.15	0.16									
	WTX180	120°	0.285	0.64	0.90	1.27	1.56	1.80	2.20	2.55	2.85	0.17	0.16									
WTX200	70°	0.316	0.71	1.00	1.41	1.73	2.00	2.45	2.83	3.16	0.17	0.19										
1/4	WTX12	80°	0.0190	0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.19	0.04	0.05	1.31	1.00	0.88	0.75	1.12	0.81	0.88	0.75	2.61
	WTX18	80°	0.0285	0.06	0.09	0.13	0.16	0.18	0.22	0.25	0.28	0.06	0.06									
	WTX20	70° 110°	0.0316	0.07	0.10	0.14	0.17	0.20	0.24	0.28	0.32	0.06	0.06									
	WTX27	80°	0.0427	0.10	0.14	0.19	0.23	0.27	0.33	0.38	0.43	0.07	0.08									
	WTX35	100°	0.0553	0.12	0.18	0.25	0.30	0.35	0.43	0.49	0.55	0.08	0.09									
	WTX40	70° 80°	0.0632	0.14	0.20	0.28	0.35	0.40	0.49	0.57	0.63	0.08	0.09									
	WTX42	120°	0.0664	0.15	0.21	0.30	0.36	0.42	0.51	0.59	0.66	0.08	0.09									
	WTX48	105°	0.0759	0.17	0.24	0.34	0.42	0.48	0.59	0.68	0.76	0.09	0.11									

Flow Rate (GPM) = $K \sqrt{PSI}$

Standard Materials: Brass, 303 Stainless Steel, 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.

Dimensions are approximate. Check with BETE for critical dimension applications.

WTX Flow Rates and Dimensions

Hollow Cone, Medium and Extra Wide Spray Angles, 1/8" to 3/4" Pipe Sizes

Male or Female Pipe Size	Nozzle Number	Spray Angle	K Factor	GALLONS PER MINUTE @ PSI								Approx. (in.)		Dimensions for Metal Only (in.)								WT. (oz.) Metal
				5 PSI	10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	Inlet Dia.	Orifice Dia.	A	B	C	D	E	F	G	H	
1/4	WTX53	80°	0.084	0.19	0.27	0.37	0.46	0.53	0.65	0.75	0.84	0.09	0.11	1.31	1.00	0.88	0.75	1.12	0.81	0.88	0.75	2.61
	WTX60	70°	0.095	0.21	0.30	0.42	0.52	0.60	0.73	0.85	0.95	0.10	0.11									
	WTX68	120°	0.108	0.24	0.34	0.48	0.59	0.68	0.83	0.96	1.08	0.10	0.13									
	WTX80	120°	0.126	0.28	0.40	0.57	0.69	0.80	0.98	1.13	1.26	0.13	0.13									
	WTX100	70° 115°	0.158	0.35	0.50	0.71	0.87	1.00	1.22	1.41	1.58	0.13	0.14									
	WTX130	120°	0.206	0.46	0.65	0.92	1.13	1.30	1.59	1.84	2.06	0.15	0.16									
	WTX150	120°	0.237	0.53	0.75	1.06	1.30	1.50	1.84	2.12	2.37	0.16	0.17									
	WTX160	70°	0.253	0.57	0.80	1.13	1.39	1.60	1.96	2.26	2.53	0.16	0.17									
	WTX180	120°	0.285	0.64	0.90	1.27	1.56	1.80	2.20	2.55	2.85	0.18	0.18									
	WTX200	70° 120°	0.316	0.71	1.00	1.41	1.73	2.00	2.45	2.83	3.16	0.18	0.19									
	WTX220	120°	0.348	0.78	1.10	1.56	1.91	2.20	2.69	3.11	3.48	0.18	0.22									
	WTX240	120°	0.379	0.85	1.20	1.70	2.08	2.40	2.94	3.39	3.79	0.20	0.20									
	WTX260	80°	0.411	0.92	1.30	1.84	2.25	2.60	3.18	3.68	4.11	0.20	0.20									
	WTX280	80°	0.443	0.99	1.40	1.98	2.42	2.80	3.43	3.96	4.43	0.20	0.22									
	WTX300	70° 100°	0.474	1.06	1.50	2.12	2.60	3.00	3.67	4.24	4.74	0.20	0.22									
	WTX340	80°	0.538	1.20	1.70	2.40	2.94	3.40	4.16	4.81	5.38	0.22	0.24									
	WTX400	80°	0.632	1.41	2.00	2.83	3.46	4.00	4.90	5.66	6.32	0.25	0.28									
	WTX480	80°	0.759	1.70	2.40	3.39	4.16	4.80	5.88	6.79	7.59	0.25	0.27									
	WTX580	80°	0.917	2.05	2.90	4.10	5.02	5.80	7.10	8.20	9.17	0.27	0.30									
	WTX640	80°	1.012	2.26	3.20	4.53	5.54	6.40	7.84	9.05	10.12	0.27	0.30									
WTX680	80°	1.075	2.40	3.40	4.81	5.89	6.80	8.33	9.62	10.75	0.27	0.34										
WTX800	80°	1.265	2.83	4.00	5.66	6.93	8.00	9.80	11.31	12.65	0.27	0.34										
3/8	WTX100	70°	0.158	0.35	0.50	0.71	0.87	1.00	1.22	1.41	1.58	0.14	0.15	1.50	1.12	1.06	0.88	1.34	0.97	1.00	0.88	3.50
	WTX130	120°	0.206	0.46	0.65	0.92	1.13	1.30	1.59	1.84	2.06	0.14	0.18									
	WTX150	120°	0.237	0.53	0.75	1.06	1.30	1.50	1.84	2.12	2.37	0.17	0.18									
	WTX160	70°	0.253	0.57	0.80	1.13	1.39	1.60	1.96	2.26	2.53	0.17	0.18									
	WTX180	120°	0.285	0.64	0.90	1.27	1.56	1.80	2.20	2.55	2.85	0.17	0.19									
	WTX200	70° 115°	0.316	0.71	1.00	1.41	1.73	2.00	2.45	2.83	3.16	0.19	0.20									
	WTX220	120°	0.348	0.78	1.10	1.56	1.91	2.20	2.69	3.11	3.48	0.19	0.20									
	WTX240	120°	0.379	0.85	1.20	1.70	2.08	2.40	2.94	3.39	3.79	0.19	0.20									
	WTX260	120°	0.411	0.92	1.30	1.84	2.25	2.60	3.18	3.68	4.11	0.19	0.23									
	WTX270	120°	0.427	0.95	1.35	1.91	2.34	2.70	3.31	3.82	4.27	0.20	0.23									
	WTX300	70° 115°	0.474	1.06	1.50	2.12	2.60	3.00	3.67	4.24	4.74	0.20	0.23									
	WTX350	115°	0.553	1.24	1.75	2.47	3.03	3.50	4.29	4.95	5.53	0.22	0.25									
	WTX400	70° 105°	0.632	1.41	2.00	2.83	3.46	4.00	4.90	5.66	6.32	0.22	0.27									
	WTX440	105°	0.696	1.56	2.20	3.11	3.81	4.40	5.39	6.22	6.96	0.26	0.30									
	WTX500	70° 105°	0.791	1.77	2.50	3.54	4.33	5.00	6.12	7.07	7.91	0.26	0.28									
	WTX560	105°	0.885	1.98	2.80	3.96	4.85	5.60	6.86	7.92	8.85	0.26	0.31									
WTX600	70°	0.949	2.12	3.00	4.24	5.20	6.00	7.35	8.49	9.49	0.31	0.31										
WTX1000	70°	1.581	3.54	5.00	7.07	8.66	10.0	12.3	14.1	15.8	0.34	0.38										
1/2	WTX500	70°	0.791	1.77	2.50	3.54	4.33	5.00	6.12	7.07	7.91	0.30	0.30	1.87	1.37	1.50	1.25	1.88	1.38	1.50	1.25	11.3
	WTX600	70°	0.949	2.12	3.00	4.24	5.20	6.00	7.35	8.49	9.49	0.33	0.31									
	WTX800	70°	1.265	2.83	4.00	5.66	6.93	8.00	9.80	11.3	12.7	0.36	0.36									
	WTX1000	70° 110°	1.581	3.54	5.00	7.07	8.66	10.0	12.3	14.1	15.8	0.36	0.44									
	WTX1200	70°	1.897	4.24	6.00	8.49	10.4	12.0	14.7	17.0	19.0	0.40	0.48									
3/4	WTX800	70°	1.265	2.83	4.00	5.66	6.93	8.00	9.80	11.3	12.7	0.36	0.38	2.25	1.62	1.75	1.50	2.19	1.56	1.75	1.50	16.2
	WTX1000	70°	1.581	3.54	5.00	7.07	8.66	10.0	12.3	14.1	15.8	0.40	0.44									
	WTX1200	70°	1.897	4.24	6.00	8.49	10.4	12.0	14.7	17.0	19.0	0.44	0.44									
	WTX1400	80°	2.214	4.95	7.00	9.90	12.1	14.0	17.2	19.8	22.1	0.47	0.48									
	WTX1600	80° 115°	2.530	5.66	8.00	11.3	13.9	16.0	19.6	22.6	25.3	0.48	0.51									
	WTX1800	80°	2.846	6.36	9.00	12.7	15.6	18.0	22.1	25.5	28.5	0.50	0.56									
	WTX2000	90°	3.162	7.07	10.0	14.1	17.3	20.0	24.5	28.3	31.6	0.52	0.59									
	WTX2200	90°	3.479	7.78	11.0	15.6	19.1	22.0	26.9	31.1	34.8	0.53	0.63									
WTX2400	90°	3.795	8.49	12.0	17.0	20.8	24.0	29.4	33.9	38.0	0.55	0.69										

Flow Rate (GPM) = $K\sqrt{PSI}$

Standard Materials: Brass, 303 Stainless Steel, 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.



HOLLOW CONE

CALL 413-772-0846
Call for the name of your nearest BETE representative.



HOLLOW CONE

CW

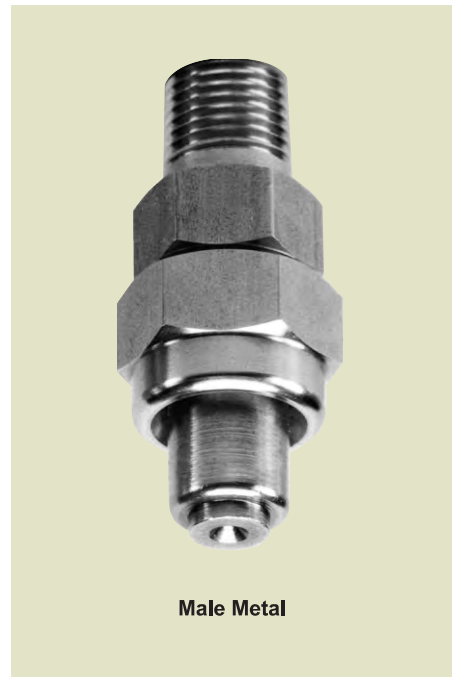
Low Flow

DESIGN FEATURES

- Standard 3-piece construction
- Optional 50- or 100-mesh strainer (refer to page 115 for additional information)
- Male and female connections
- Interchangeable spray tips

SPRAY CHARACTERISTICS

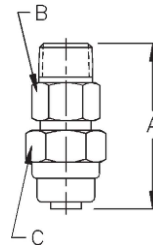
Spray patterns: Hollow Cone (H)
 For Full Cone, see page 28
Spray angles: 80° and 120°
Flow rates: 0.13 to 1.54 gpm



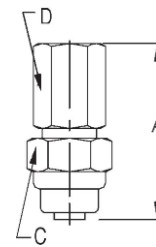
Full Cone 80° (F)



Hollow Cone 80° (H)



Male



Female

Dimensions are approximate. Check with BETE for critical dimension applications.

CW Flow Rates and Dimensions

Hollow Cone, 80° and 120° Spray Angles, 1/8" to 3/8" Pipe Sizes

Male or Female Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI											Approx. Orifice Dia. (in.)	Male or Female Pipe Size	Dimensions (in.)				Wt. (oz.) Metal
			10 PSI	20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI	100 PSI	A			B	C	D		
1/8 or 1/4	CW25-H	0.044	0.13	0.18	0.22	0.25	0.28	0.30	0.33	0.35	0.37	0.38	0.045	1/8 - 1/4	2.06	0.68	0.81	0.68	2.5	
	CW50-H	0.088	0.26	0.36	0.44	0.50	0.56	0.60	0.65	0.69	0.73	0.77								
or	CW75-H	0.132	0.39	0.54	0.66	0.75	0.83	0.91	0.98	1.04	1.10	1.15	0.063	3/8	2.06	0.68	0.81	0.81	2.5	
3/8	CW100-H	0.177	0.52	0.72	0.87	1.00	1.11	1.21	1.30	1.39	1.46	1.54								0.086

Flow Rate (GPM) = K (PSI)^{0.47}

Standard Materials: Brass, 303 Stainless Steel and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.

TF

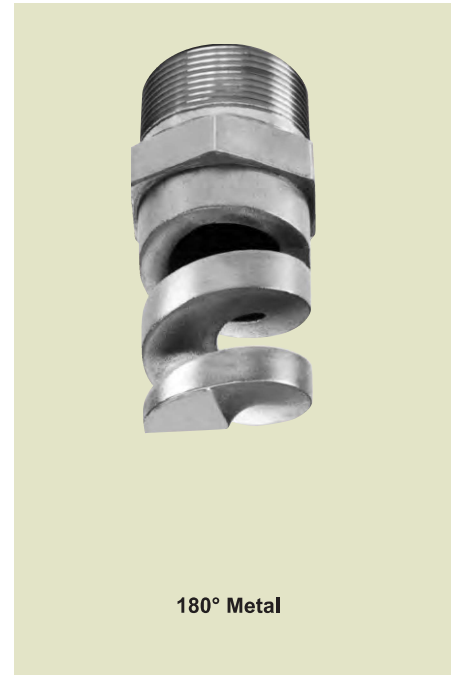
Wide Range of Flows and Angles

DESIGN FEATURES

- The original spiral nozzle invented by BETE and continuously improved!
- High energy efficiency
- One-piece/no internal parts
- Clog-resistant performance
- High discharge velocity
- Male connection standard; female connection available by special order

SPRAY CHARACTERISTICS

- Wide range of flow rates and spray angles
 - Fine atomization
- Spray patterns:** Hollow Cone
For Full Cone, see page 20
- Spray angles:** 50° to 180°
- Flow rates:** 0.5 to 3320 gpm
(Higher flow rates available)



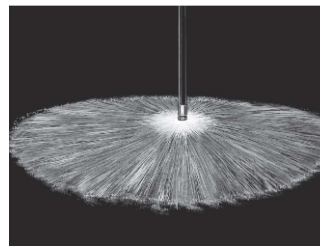
HOLLOW CONE



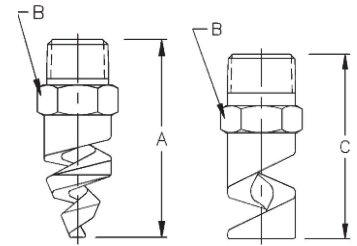
Hollow Cone 50° (N)



Hollow Cone 120° (W)



Hollow Cone 180° (XW)



Dimensions are approximate. Check with BETE for critical dimension applications.

TF Hollow Cone Flow Rates and Dimensions

Hollow Cone, 50° (N), 60° (V), 90° (M), 120° (W), and 180° (XW) Spray Angles, 1/4" to 4" Pipe Sizes

Male Pipe Size	Nozzle Number	Available Spray Angles					K Factor	GALLONS PER MINUTE @ PSI										Approx. (in.)		Dim. (in.) for Metal Only*			Wt. (oz.) 180° Metal Plas.				
		50°	60°	90°	120°	180°		5 PSI	10 PSI	20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	80 PSI	100 PSI	200 PSI	400 PSI	Orif. Dia.	Free Pass. Dia.	A	B	C				
1/4	TF6	50°	60°	90°	120°	180°	0.221	0.495	0.70	0.99	1.21	1.40	1.57	1.71	1.98	2.21	3.13	4.43	0.09	0.09	1.88	0.56				1.25	0.25
	TF8	50°	60°	90°	120°	180°	0.411	0.919	1.30	1.84	2.25	2.91	3.18	3.68	4.11	5.81	8.22	0.13	0.13	1.88	0.56	1.88					
	TF10	50°	60°	90°	120°	180°	0.632	1.41	2.00	2.83	3.46	4.00	4.47	4.90	5.66	6.32	8.94	12.6	0.16	0.13	1.88	0.56	1.88				
3/8	TF12	50°	60°	90°	120°	180°	0.949	2.12	3.00	4.24	5.20	6.00	6.71	7.35	8.49	9.49	13.4	19.0	0.19	0.13							
	TF14	50°	60°	90°	120°	180°	1.28	2.86	4.05	5.73	7.01	8.10	9.06	9.92	11.5	12.8	18.1	25.6	0.22	0.13	1.88	0.69	1.88			1.75	0.25
	TF16	50°	60°	90°	120°	180°	1.68	3.75	5.30	7.50	9.18	10.6	11.9	13.0	15.0	16.8	23.7	33.5	0.25	0.13							
	TF20	50°	60°	90°	120°	180°	2.61	5.83	8.25	11.7	14.3	16.5	18.4	20.2	23.3	26.1	36.9	52.2	0.31	0.13							
1/2	TF24	50°	60°	90°	120°	180°	3.81	8.52	12.1	17.0	20.9	24.1	26.9	29.5	34.1	38.1	53.9	76.2	0.38	0.19	2.50	0.88	2.38			3.00	0.50
	TF28	50°	60°	90°	120°	180°	5.22	11.7	16.5	23.3	28.6	33.0	36.9	40.4	46.7	52.2	73.8	104	0.44	0.19							
3/4	TF32	50°	60°	90°	120°	180°	6.64	14.8	21.0	29.7	36.4	42.0	47.0	51.4	59.4	66.4	93.9	133	0.50	0.19	2.75	1.13	3.00			3.00	1.00
1	TF40	60°	90°	120°	180°		10.6	23.7	33.5	47.4	58.0	67.0	74.9	82.1	94.8	106	150	212	0.63	0.25	3.63	1.38	3.63			15.0	3.00
	TF48	60°	90°	120°	180°		15.0	33.6	47.5	67.2	82.3	95.0	106	116	134	150	212	300	0.75	0.25							
1 1/2	TF56	60°	90°	120°	180°		20.4	45.6	64.5	91.2	112	129	144	158	182	204	288	408	0.88	0.31							
	TF64	60°	90°	120°	180°		26.7	59.7	84.5	120	146	169	189	207	239	267	378	534	1.00	0.31	4.38	2.00	4.38			30.0	6.00
	TF72	60°	90°	120°	180°		30.4	67.9	96.0	136	166	192	215	235	272	304	429	607	1.13	0.31							
2	TF88	60°	90°	120°	180°		44.3	99.0	140	198	242	280	313	343	396	443	626	885	1.38	0.44	5.63	2.50	5.00			46.0	8.00
	TF96	60°	90°	120°	180°		55.9	125	177	250	306	354	395	433	500	559	791	1120	1.50	0.44	6.88	2.50	5.00			54.0	9.00
3	TF112	60°	90°	120°			81.0	181	256	362	443	512	572	627	724	810	1150	1620	1.75	0.56	8.63	3.50					
	TF128	60°	90°	120°			107	239	339	480	588	679	759	831	960	1070	1510	2150	2.00	0.56							
4	TF160	60°	90°	120°			166	371	525	742	909	1050	1170	1290	1480	1660	2350	3320	2.50	0.63	10.1	4.50	12.75				

Flow Rate (GPM) = K √PSI

*Dimensions are for bar stock, cast sizes may vary.

¹ 1.00 for 180°

² 1.63 for 180°

Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene and PTFE (Poly, not available for TF6 thru TF10).

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

CALL 413-772-0846
Call for the name of your nearest BETE representative.

EZ_{TF WT}

EZ Change Quick Connection System

DESIGN FEATURES

- Nozzles can be changed in seconds without tools
- Three part nozzle, base, gasket and interchangeable tip
- Exclusive ramped engagement for efficient, automatic alignment
- Threaded adapters will accommodate other standard BETE nozzles. Shut-off plugs are also available
- Sanitary EZs are available with weld connection and no knurling

SPRAY CHARACTERISTICS

- Available in six standard tips: EZTF; EZWL; EZWT; EZFF; EZNF; EZSPN

More EZ tips:

Full Cone: page 30
Flat Fan: pages 66 and 67

Flow rates: 0.04 to 58.4 gpm

Spray Angle:

EZTF: 60°, 90°, 120°, and 180°
EZWT: 70° and 110°



EZTF



120° Hollow Cone

Dimensions are approximate. Check with BETE for critical dimension applications.

EZTF Flow Rates and Dimensions

Hollow Cone Spiral 60° (V), 90° (M), 120° (W), 180° Spray Angle 1/8" to 1/2" Pipe Sizes

Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI											Approx. Orifice Dia. (in.)	Approx. Assembly Dim. (in.)		Wt. (oz.)	
			5 PSI	10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	200 PSI	400 PSI	500 PSI		Hex	Length		
1/8" TO 1/2"	EZTF6	0.221	0.49	0.70	0.99	1.21	1.40	1.71	1.98	2.21	3.13	4.43	4.94	0.09	1/8"	0.88	2.41	2.2
	EZTF8	0.411	0.92	1.30	1.84	2.25	2.60	3.18	3.68	4.11	5.81	8.22	9.19	0.13	1/4"	0.88	2.53	2.2
1/4" TO 1/2"	EZTF10	0.632	1.41	2.00	2.83	3.46	4.00	4.90	5.66	6.32	8.94	12.6	14.1	0.16	1/4"	0.88	2.53	2.2
	EZTF12	0.949	2.12	3.00	4.24	5.20	6.00	7.35	8.49	9.49	13.4	19.0	21.2	0.19	1/2"	0.88	2.65	2.6
1/4" TO 1/2"	EZTF14	1.28	2.86	4.05	5.73	7.01	8.10	9.92	11.5	12.8	18.1	25.6	28.6	0.22	3/8"	0.88	2.59	2.6
	EZTF16	1.68	3.76	5.30	7.50	9.18	10.6	13.0	15.0	16.8	23.7	33.5	37.6	0.25	1/2"	0.88	2.65	2.6
	EZTF20	2.61	5.83	8.25	11.7	14.3	16.5	20.2	23.3	26.1	36.9	52.2	58.4	0.31	1/2"	0.88	2.65	2.6

Flow Rate (GPM) = K √PSI

TF14-TF20 not available with 1/8" base

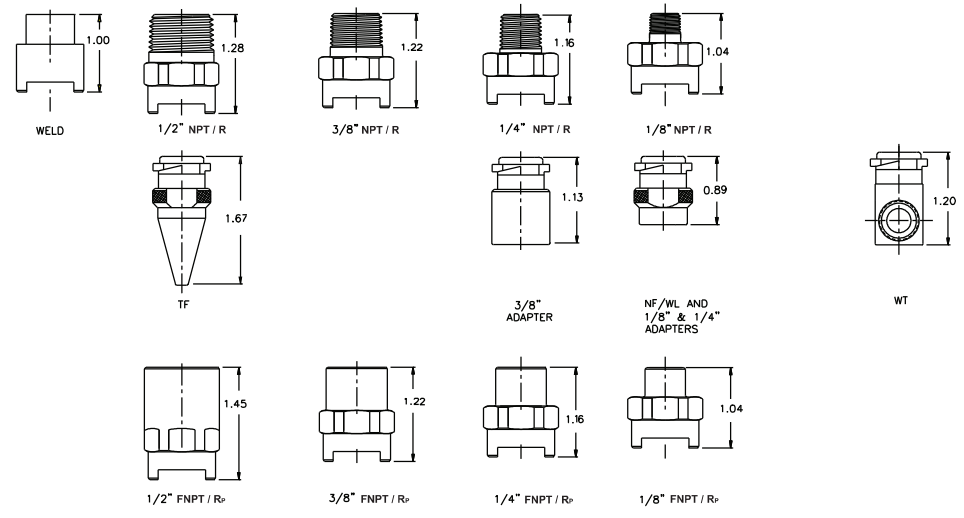
Standard Materials: Brass, Viton gaskets standard. 316 Stainless Steel available upon request.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.



HOLLOW CONE



Dimensions are approximate. Check with BETE for critical dimension applications.

EZWT Flow Rates and Dimensions
 Hollow Cone, Narrow (70°) and Wide (110°) Spray Angles 1/8" to 1/2"

Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI										Approx. Orifice Dia. (in.)	Assembly Dim. (in.)		Wt. (oz.)
			5 PSI	10 PSI	20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	200 PSI	400 PSI	500 PSI		Hex	Length	
1/8"	EZWT10	0.0158	0.04	0.05	0.07	0.10	0.12	0.14	0.16	0.22	0.32	0.35	1/8"	0.88	1.99	2.2
	EZWT12	0.0190	0.04	0.06	0.08	0.12	0.15	0.17	0.19	0.27	0.38	0.42				
	EZWT18	0.0285	0.06	0.09	0.13	0.18	0.22	0.25	0.28	0.40	0.57	0.64				
	EZWT20	0.0316	0.07	0.10	0.14	0.20	0.24	0.28	0.32	0.45	0.63	0.71				
	EZWT27	0.0427	0.10	0.14	0.19	0.27	0.33	0.38	0.43	0.60	0.85	0.95				
	EZWT35	0.0553	0.12	0.18	0.25	0.35	0.43	0.49	0.55	0.78	1.11	1.24				
	EZWT40	0.0632	0.14	0.20	0.28	0.40	0.49	0.57	0.63	0.89	1.26	1.41				
	EZWT42	0.0664	0.15	0.21	0.30	0.42	0.51	0.59	0.66	0.94	1.33	1.48				
	EZWT48	0.0759	0.17	0.24	0.34	0.48	0.59	0.68	0.76	1.07	1.52	1.70				
	EZWT50	0.0791	0.18	0.25	0.35	0.50	0.61	0.71	0.79	1.12	1.58	1.77				
TO	EZWT53	0.084	0.19	0.27	0.37	0.53	0.65	0.75	0.84	1.19	1.68	1.87	1/4"	0.88	2.11	2.2
	EZWT60	0.095	0.21	0.30	0.42	0.60	0.73	0.85	0.95	1.34	1.90	2.12				
	EZWT68	0.108	0.24	0.34	0.48	0.68	0.83	0.96	1.08	1.52	2.15	2.40				
	EZWT70	0.111	0.25	0.35	0.49	0.70	0.86	0.99	1.11	1.57	2.21	2.47				
	EZWT80	0.126	0.28	0.40	0.57	0.80	0.98	1.13	1.26	1.79	2.53	2.83				
	EZWT100	0.158	0.35	0.50	0.71	1.00	1.22	1.41	1.58	2.24	3.16	3.54				
	EZWT130	0.206	0.46	0.65	0.92	1.30	1.59	1.84	2.06	2.91	4.11	4.60				
	EZWT150	0.237	0.53	0.75	1.06	1.50	1.84	2.12	2.37	3.35	4.74	5.30				
	EZWT160	0.253	0.57	0.80	1.13	1.60	1.96	2.26	2.53	3.58	5.06	5.66				
	EZWT180	0.285	0.64	0.90	1.27	1.80	2.20	2.55	2.85	4.02	5.69	6.36				
1/2"	EZWT200	0.316	0.71	1.00	1.41	2.00	2.45	2.83	3.16	4.47	6.32	7.07	3/8"	0.88	2.17	2.6
	EZWT220	0.348	0.78	1.10	1.56	2.20	2.69	3.11	3.48	4.92	6.96	7.78				
	EZWT240	0.379	0.85	1.20	1.70	2.40	2.94	3.39	3.79	5.37	7.59	8.49				
	EZWT260	0.411	0.92	1.30	1.84	2.60	3.18	3.68	4.11	5.81	8.22	9.19				
	EZWT270	0.427	0.95	1.35	1.91	2.70	3.31	3.82	4.27	6.04	8.54	9.55				
	EZWT280	0.443	0.99	1.40	1.98	2.80	3.43	3.96	4.43	6.26	8.85	9.90				
	EZWT300	0.474	1.06	1.50	2.12	3.00	3.67	4.24	4.74	6.71	9.49	10.6				
	EZWT340	0.538	1.20	1.70	2.40	3.40	4.16	4.81	5.38	7.60	10.8	12.0				
	EZWT350	0.553	1.24	1.75	2.47	3.50	4.29	4.95	5.53	7.83	11.1	12.4				
	EZWT400	0.632	1.41	2.00	2.83	4.00	4.90	5.66	6.32	8.94	12.7	14.1				

Flow Rate (GPM) = K √PSI

Standard Materials: 303 Stainless Steel, 316 Stainless Steel, Brass, Viton gaskets standard.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

CALL 413-772-0846
 Call for the name of your nearest BETE representative.

SF

Snap Release Nozzle System

DESIGN FEATURES

- Nozzles can be quickly changed and aligned by hand without tools
- Clamp-on adapter fits any style nozzle
- Quick set-up system features special "Snap-in" tips
- Polypropylene, resistant to most acids and alkalis
- Double clamp base or adapter available for higher pressure operation

SPRAY CHARACTERISTICS

- Quick Set-up System can be provided with fan, hollow or full cone spray tips
- Full 45° alignment of spray without tools

More SF Nozzle Systems:

Full Cone: page 31

Flat Fan: page 68

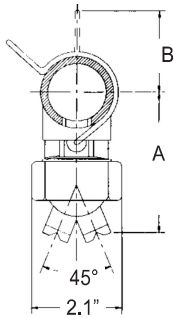
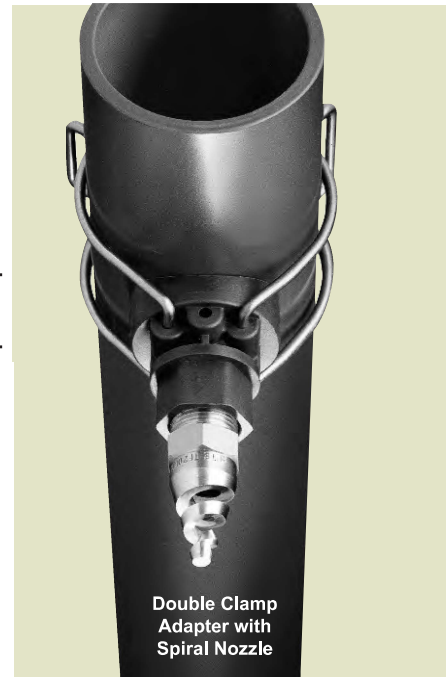
Flow rates: 0.35 to 15.8 gpm

Spray angles:

Fan: 40°, 50°, 65°, 80°, 95°

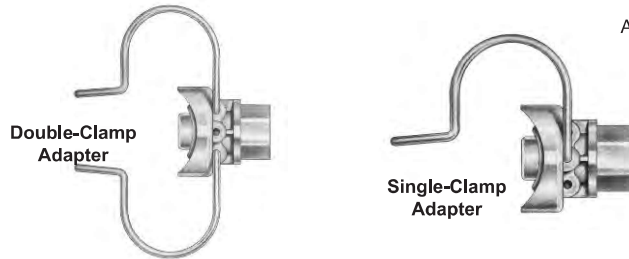
Hollow Cone: 50°, 65°, 90°

Full Cone: 35°, 65°, 80°

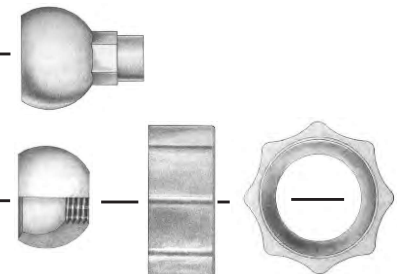


CLAMP-ON ADAPTER

- Available for 1", 1-1/4", 1-1/2" and 2" pipe.
- Available with 1/8", 1/4", 3/8", 1/2" NPT female threads; or 1/8" BSP female threads
- Available with single or double clamp.
- **TO ORDER ADAPTER Specify: Pipe Size, thread size, thread type, number of clamps, materials.**



"SNAP-IN" Hollow Cone Nozzle Tip



"SNAP-IN" Threaded Swivel Ball
Available with 1/8", 1/4", 3/8", 1/2" NPT or BSP Female threads

Dimensions are approximate. Check with BETE for critical dimension applications.

SF Flow Rates and Dimensions

SF Hollow Cone 50°, 65° and 90° Spray Angles 1", 1-1/4", 1-1/2" and 2" Pipe Sizes

Nozzle Number	Available Spray Angle	K Factor	GALLONS PER MINUTE @ PSI										Pipe Size	Body Color	Approx. Dim. (in.)		Wt. (oz.)
			5 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	A			B		
SF15HC	90°	0.237	0.53	0.75	0.92	1.06	1.30	1.50	1.84	2.12	2.37	1"	blue	3.3	1.7	2.0	
SF58HC	50°	0.917	2.05	2.90	3.55	4.10	5.20	5.80	7.10	8.20	9.17	1-1/4"	red	3.4	1.9	2.2	
SF100HC	65°	1.581	3.53	5.00	6.12	7.07	8.65	10.0	12.2	14.1	15.8	1-1/2"	purple	3.6	2.0	2.2	
												2"	green	3.7	2.2	2.2	

$$\text{Flow Rate (GPM)} = K\sqrt{\text{PSI}}$$

Standard Materials: Polypropylene, 302 Stainless Steel clamp, EPDM seal.

Optional Materials: Viton seal.

NOTE: Drill 21/32" hole in pipe to install SF.

NOTE: Maximum recommended working pressures for SF assemblies: with single clamp, 70 psi for 1" pipe; 50 psi for 1-1/4" and 1-1/2" pipe; and 35 psi for 2" pipe; with double clamp up to 150 psi.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.

NCJ

Hollow Cone/Narrow Angle Injector

DESIGN FEATURES

- Narrow spray angles
- High velocity
- Male and female connections
- Flanged connections available
- Available in plastic and metal alloys

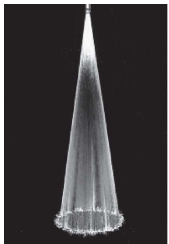
SPRAY CHARACTERISTICS

- Spray is coarse and extremely hard-driving

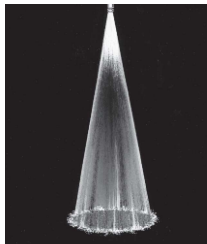
Spray pattern: Hollow Cone
Spray angles: 15°, 20° and 30°
Flow rates: 7.1 to 1220 gpm
 (Special flow rates available)



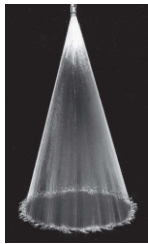

HOLLOW CONE



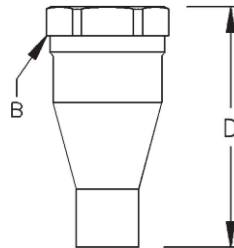
Hollow Cone 15°



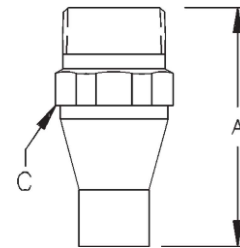
Hollow Cone 20°



Hollow Cone 30°



Female



Male

Dimensions are approximate. Check with BETE for critical dimension applications.

NCJ Flow Rates and Dimensions

Hollow Cone, 15°, 20° and 30° Spray Angles, 3/4" to 6" Pipe Sizes

Male or Female Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI							Approx. Orifice Dia. (in.)	Dimensions for Metal Only (in.)				Wt. (lbs.)	
			10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI		A	B	C	D	PVC	Metal
3/4	NC 0706J	2.40	7.10	9.83	11.9	13.6	16.5	18.9	20.9	0.30	3.25	1.38	1.12	3.25	0.09	0.75
1	NC 1012J	4.81	14.2	19.7	23.8	27.2	32.9	37.7	41.9	0.41	3.50	1.75	1.38	3.50	0.12	1.00
1 1/4	NC 1218J	7.21	21.3	29.5	35.7	40.8	49.4	56.6	62.8	0.48	4.00	2.00	1.75	4.00	0.25	1.25
1 1/2	NC 1526J	10.4	30.7	42.6	51.5	59.0	71.4	81.7	90.7	0.60	5.00	2.50	2.00	5.00	0.44	2.25
2	NC 2048J	19.2	56.8	78.6	95.1	109	132	151	168	0.80	6.00	3.00	2.50	6.00	0.82	2.50
2 1/2	NC 2572J	28.8	85.1	118	143	163	198	226	251	0.97	7.00	3.25	3.00	7.63	1.37	5.75
3	NC 30105J	42.1	124	172	208	238	288	330	366	1.16	8.00	3.84	3.50	8.00	1.87	6.25
4	NC 40190J	76.1	225	311	377	431	522	597	663	1.60	9.88	5.00	4.50	10.94	4.50	15.0
6	NC 60350J	140	414	573	694	794	961	1100	1220	2.13	13.5	7.19	6.62	15.0	6.12	35.0

Flow Rate (GPM) = K (PSI)^{0.47}

Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene, and PTFE.

NOTE for PTFE nozzles: if operating temperature is to exceed 300°F, or the operating pressure is to exceed the values listed in the table above, please contact BETE Applications Engineering for assistance.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

CALL 413-772-0846
 Call for the name of your nearest BETE representative.



HOLLOW CONE

TH

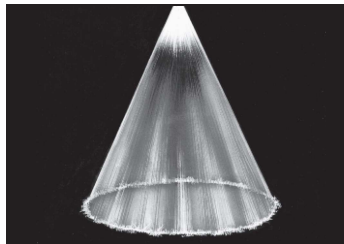
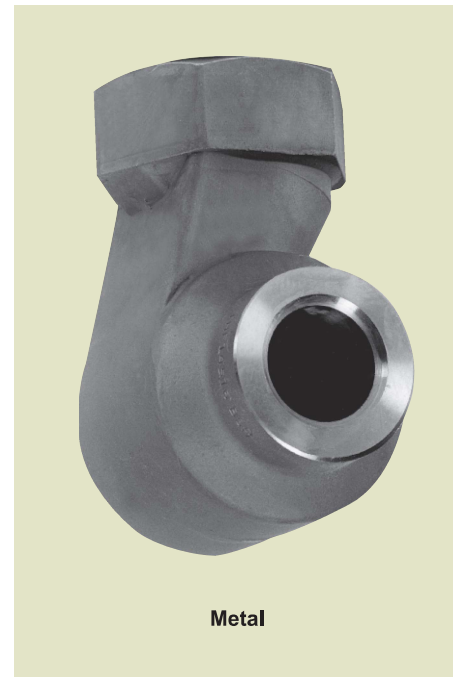
Tangential Inlet/Right Angle

DESIGN FEATURES

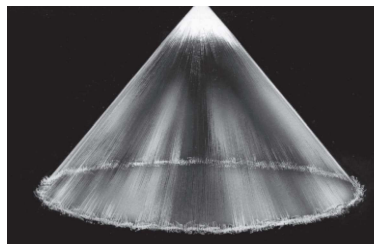
- Large free passage
- Clog-resistant; nozzles have no internal parts
- One-piece casting
- Female connection
- Flanged connection available
- Silicon carbide available upon request
- Inlet and outlet are in-line

SPRAY CHARACTERISTICS

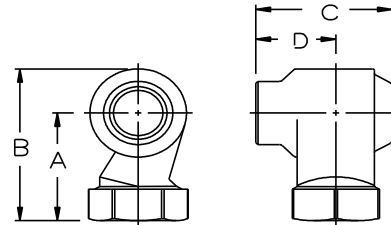
- Patented geometry designed to give the most uniform liquid distribution around the periphery of the spray
- Spray pattern:** Hollow Cone
Spray angles: Narrow to Medium
Flow rates: 4.11 to 564 gpm



Hollow Cone - Narrow Angle



Hollow Cone - Medium Angle



Dimensions are approximate. Check with BETE for critical dimension applications.

TH Flow Rates and Dimensions

Hollow Cone, Narrow to Medium Spray Angles, 1" to 3" Pipe Sizes

Female Pipe Size	Nozzle Number	Spray Ang.			K Factor	GALLONS PER MINUTE @ PSI								Approx. Orifice Dia. (in.)	Free Pass. Dia. (in.)	Dimensions (in.) (MAX)				Wt. (lbs.)
		5°	15°	40°		3 PSI	5 PSI	7 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI			A	B	C	D	
1	THF1508	54°	54°	54°	2.37	4.11	5.30	6.27	7.50	9.19	10.6	13.0	15.0	0.34	0.34	2.31	3.13	2.33	1.40	1.04
	THF1808	56°	56°	56°	2.85	4.93	6.36	7.53	9.00	11.0	12.7	15.6	18.0	0.38	0.38					
	THF2308	63°	66°	66°	3.64	6.30	8.13	9.62	11.5	14.1	16.3	19.9	23.0	0.44	0.44					
	THF2708	66°	70°	70°	4.27	7.39	9.55	11.3	13.5	16.5	19.1	23.4	27.0	0.47	0.47					
	THF3208	68°	72°	71°	5.06	8.76	11.3	13.4	16.0	19.6	22.6	27.7	32.0	0.44	0.44					
	THF3808	68°	72°	71°	6.01	10.4	13.4	15.9	19.0	23.3	26.9	32.9	38.0	0.60	0.60					
1 1/4	THF3210	66°	66°	66°	5.06	8.76	11.3	13.4	16.0	19.6	22.6	27.7	32.0	0.55	0.55	2.81	3.79	2.86	1.74	1.65
	THF3810	68°	70°	70°	6.01	10.4	13.4	15.9	19.0	23.3	26.9	32.9	38.0	0.63	0.63					
	THF4110	73°	74°	74°	6.48	11.2	14.5	17.2	20.5	25.1	29.0	35.5	41.0	0.66	0.66					
	THF5210	90°	90°	90°	8.22	14.2	18.4	21.8	26.0	31.8	36.8	45.0	52.0	0.78	0.78					
	THF7010	83°	85°	85°	11.1	19.2	24.7	29.3	35.0	42.9	49.5	60.6	70.0	1.03	0.89					
1 1/2	THF6112	58°	60°	60°	9.65	16.7	21.6	25.5	30.5	37.4	43.1	52.8	61.0	0.77	0.77	2.96	4.12	3.43	2.09	1.88
	THF7012	63°	65°	65°	11.1	19.2	24.7	29.3	35.0	42.9	49.5	60.6	70.0	0.84	0.84					
	THF7712	63°	66°	66°	12.2	21.1	27.2	32.2	38.5	47.2	54.4	66.7	77.0	0.92	0.92					
	THF9012	67°	70°	70°	14.2	24.6	31.8	37.6	45.0	55.1	63.6	77.9	90.0	1.03	1.03					
	THF12712	75°	80°	80°	20.1	34.8	44.9	53.1	63.5	77.8	89.8	110	127	1.30	1.06					
	THF14512	80°	80°	83°	22.9	39.7	51.3	60.7	72.5	88.8	103	126	145	1.42	1.06					

$$\text{Flow Rate (GPM)} = K \sqrt{\text{PSI}}$$

Standard Materials: Brass, Carbon Steel, and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.



Silicon Carbide, Flanged



HOLLOW CONE

Dimensions are approximate. Check with BETE for critical dimension applications.

TH Flow Rates and Dimensions

Hollow Cone, Narrow to Medium Spray Angles, 1" to 3" Pipe Sizes

Female Pipe Size	Nozzle Number	Spray Ang.			K Factor	GALLONS PER MINUTE @ PSI								Approx. Orifice Dia. (in.)	Free Pass. Dia. (in.)	Dimensions (in.) (MAX)				Wt. (lbs.)
		5 PSI	15 PSI	40 PSI		3 PSI	5 PSI	7 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI			A	B	C	D	
2	THF8516	63°	65°	65°	13.4	23.3	30.1	35.6	42.5	52.1	60.1	73.6	85.0	0.86	0.86	3.64	5.12	4.20	2.44	3.16
	THF10516	65°	67°	67°	16.6	28.8	37.1	43.9	52.5	64.3	74.2	90.9	105	1.00	1.00					
	THF12516	68°	70°	70°	19.8	34.2	44.2	52.3	62.5	76.5	88.4	108	125	1.14	1.14					
	THF14516	74°	79°	79°	22.9	39.7	51.3	60.7	72.5	88.8	103	126	145	1.27	1.27					
	THF17016	77°	80°	80°	26.9	46.6	60.1	71.1	85.0	104	120	147	170	1.39	1.39					
	THF19216	77°	80°	80°	30.4	52.6	67.9	80.3	96.0	118	136	166	192	1.52	1.44					
	THF20516	77°	83°	83°	32.4	56.1	72.5	85.8	103	126	145	178	205	1.63	1.44					
	THF23016	76°	83°	83°	36.4	63.0	81.3	96.2	115	141	163	199	230	1.75	1.44					
2 1/2	THF17020	85°	85°	85°	26.9	46.6	60.1	71.1	85.0	104	120	147	170	1.33	1.33	4.94	6.79	5.19	3.03	6.48
	THF19020	70°	73°	73°	30.0	52.0	67.2	79.5	95.0	116	134	165	190	1.42	1.42					
	THF20520	72°	75°	73°	32.4	56.1	72.5	85.8	103	126	145	178	205	1.47	1.47					
	THF23020	76°	78°	78°	36.4	63.0	81.3	96.2	115	141	163	199	230	1.58	1.58					
	THF28020	79°	80°	80°	44.3	76.7	99.0	117	140	171	198	242	280	1.81	1.75					
	THF32020	83°	85°	85°	50.6	87.6	113	134	160	196	226	277	320	2.02	1.75					
	THF34020	87°	90°	90°	53.8	93.1	120	142	170	208	240	294	340	2.09	1.75					
	THF43520	92°	95°	95°	68.8	119	154	182	218	266	308	377	435	2.44	1.75					
3	THF18524	58°	58°	58°	29.3	50.7	65.4	77.4	92.5	113	131	160	185	1.28	1.28	5.74	7.90	6.18	3.66	8.88
	THF23024	65°	65°	65°	36.4	63.0	81.3	96.2	115	141	163	199	230	1.44	1.44					
	THF28024	70°	70°	70°	44.3	76.7	99.0	117	140	171	198	242	280	1.63	1.63					
	THF32024	65°	70°	70°	50.6	87.6	113	134	160	196	226	277	320	1.78	1.78					
	THF34024	68°	70°	70°	53.8	93.1	120	142	170	208	240	294	340	1.84	1.84					
	THF41224	75°	78°	78°	65.1	113	146	172	206	252	291	357	412	2.11	2.11					
	THF46924	75°	80°	80°	74.2	128	166	196	235	287	332	406	469	2.28	2.13					
	THF52624	78°	80°	80°	83.2	144	186	220	263	322	372	456	526	2.48	2.13					
	THF56424	78°	80°	80°	89.2	154	199	236	282	345	399	488	564	2.59	2.13					

Flow Rate (GPM) = K √PSI

Standard Materials: Brass, Carbon Steel and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

CALL 413-772-0846
Call for the name of your nearest BETE representative.

THIW



HOLLOW CONE

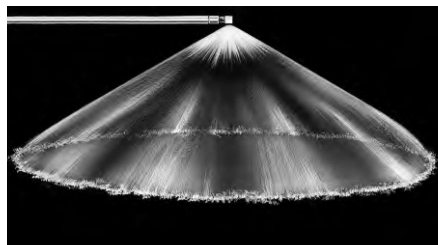
Tangential Inlet/Wide Spray Band

DESIGN FEATURES

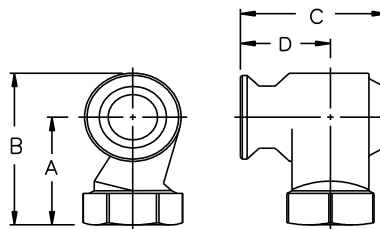
- Large free passage
- Clog-resistant; nozzles have no internal parts
- Wide spray band
- Female connection
- Flanged connection available
- Patented design
- Silicon carbide available upon request
- Inlet and outlet are in-line

SPRAY CHARACTERISTICS

- Spray pattern:** Hollow Cone
- Spray angle:** Wide
- Flow rates:** 4.11 to 564 gpm



Hollow Cone - Wide Angle



Dimensions are approximate. Check with BETE for critical dimension applications.

THW Flow Rates and Dimensions

Hollow Cone, Wide Spray Angles, 1" to 3" Pipe Sizes

Female Pipe Size	Nozzle Number	Spray Ang. 5 PSI 15 PSI 40 PSI	K Factor	GALLONS PER MINUTE @ PSI								Approx. Orifice Dia. (in.)	Free Pass. Dia. (in.)	Dimensions (in.) (MAX)				Wt. (lbs.)
				3 PSI	5 PSI	7 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI			A	B	C	D	
1	THFW1508	100° 100° 100°	2.37	4.11	5.30	6.27	7.50	9.19	10.6	13.0	15.0	0.34	0.34	2.31	3.13	2.33	1.40	1.40
	THFW1808	115° 115° 115°	2.85	4.93	6.36	7.53	9.00	11.0	12.7	15.6	18.0	0.38	0.38					
	THFW2308	120° 120° 120°	3.64	6.30	8.13	9.62	11.5	14.1	16.3	19.9	23.0	0.44	0.44					
	THFW2708		4.27	7.39	9.55	11.3	13.5	16.5	19.1	23.4	27.0	0.47	0.47					
	THFW3208		5.06	8.76	11.3	13.4	16.05	19.6	22.6	27.7	32.0	0.44	0.44					
	THFW3808		6.01	10.4	13.4	15.9	19.0	23.3	26.9	32.9	38.0	0.60	0.60					
1 1/4	THFW3210	120° 120° 120°	5.06	8.76	11.3	13.4	16.0	19.6	22.6	27.7	32.0	0.55	0.55	2.81	3.79	2.86	1.74	1.65
	THFW3810		6.01	10.4	13.4	15.9	19.0	23.3	26.9	32.9	38.0	0.63	0.63					
	THFW4110		6.48	11.2	14.5	17.2	20.5	25.1	29.0	35.5	41.0	0.66	0.66					
	THFW5210		8.22	14.2	18.4	21.8	26.0	31.8	36.8	45.0	52.0	0.78	0.78					
	THFW7010		11.1	19.2	24.7	29.3	35.0	42.9	49.5	60.6	70.0	1.03	0.89					
1 1/2	THFW6112	110° 110° 110°	9.65	16.7	21.6	25.5	30.5	37.4	43.1	52.8	61.0	0.77	0.77	2.98	4.14	3.62	2.27	1.94
	THFW7012	112° 115° 115°	11.1	19.2	24.7	29.3	35.0	42.9	49.5	60.6	70.0	0.84	0.84					
	THFW7712	117° 120° 120°	12.2	21.1	27.2	32.2	38.5	47.2	54.4	66.7	77.0	0.92	0.92					
	THFW9012		14.2	24.6	31.8	37.6	45.0	55.1	63.6	77.9	90.0	1.03	1.03					
	THFW12712		20.1	34.8	44.9	53.1	63.5	77.8	89.8	110	127	1.30	1.06					
	THFW14512		22.9	39.7	51.3	60.7	72.5	88.8	103	126	145	1.42	1.06					

$$\text{Flow Rate (GPM)} = K \sqrt{\text{PSI}}$$

Standard Materials: Brass, Carbon Steel and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.



HOLLOW CONE



Silicon Carbide, Flanged

Dimensions are approximate. Check with BETE for critical dimension applications.

THW Flow Rates and Dimensions
Hollow Cone, Wide Spray Angles, 1" to 3" Pipe Sizes

Female Pipe Size	Nozzle Number	Spray Ang.			K Factor	GALLONS PER MINUTE @ PSI								Approx. Orifice Dia. (in.)	Free Pass. Dia. (in.)	Dimensions (in.) (MAX)				Wt. (lbs.)
		5 PSI	15 PSI	40 PSI		3 PSI	5 PSI	7 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI			A	B	C	D	
2	THFW8516	112°	115°	115°	13.4	23.3	30.1	35.6	42.5	52.1	60.1	73.6	85.0	0.86	0.86	3.63	5.12	4.46	2.72	3.25
	THFW10516	120°	120°	120°	16.6	28.8	37.1	43.9	52.5	64.3	74.2	90.9	105	1.00	1.00					
	THFW12516	119°	120°	120°	19.8	34.2	44.2	52.3	62.5	76.5	88.4	108	125	1.14	1.14					
	THFW14516				22.9	39.7	51.3	60.7	72.5	88.8	103	126	145	1.27	1.27					
	THFW17016				26.9	46.6	60.1	71.1	85.0	104	120	147	170	1.39	1.39					
	THFW19216	120°	120°	120°	30.4	52.6	67.9	80.3	96.0	118	136	166	192	1.52	1.44					
	THFW20516				32.4	56.1	72.5	85.8	103	126	145	178	205	1.63	1.44					
	THFW23016				36.4	63.0	81.3	96.2	115	141	163	199	230	1.75	1.44					
2 1/2	THFW17020	117°	120°	120°	26.9	46.6	60.1	71.1	85.0	104	120	147	170	1.33	1.33	4.93	6.82	5.97	3.81	7.06
	THFW19020				30.0	52.0	67.2	79.5	95.0	116	134	165	190	1.42	1.42					
	THFW20520				32.4	56.1	72.5	85.8	103	126	145	178	205	1.47	1.47					
	THFW23020				36.4	63.0	81.3	96.2	115	141	163	199	230	1.58	1.58					
	THFW28020	120°	120°	120°	44.3	76.7	99.0	117	140	171	198	242	280	1.81	1.75					
	THFW32020				50.6	87.6	113	134	160	196	226	277	320	2.02	1.75					
	THFW34020				53.8	93.1	120	142	170	208	240	294	340	2.09	1.75					
	THFW43520				68.8	119	154	182	218	266	308	377	435	2.44	1.75					
3	THFW18524	120°	120°	120°	29.3	50.7	65.4	77.4	92.5	113	131	160	185	1.28	1.28	5.77	7.98	6.88	4.32	9.47
	THFW23024				36.4	63.0	81.3	96.2	115	141	163	199	230	1.44	1.44					
	THFW28024				44.3	76.7	99.0	117	140	171	198	242	280	1.63	1.63					
	THFW32024				50.6	87.6	113	134	160	196	226	277	320	1.78	1.78					
	THFW34024				53.8	93.1	120	142	170	208	240	294	340	1.84	1.84					
	THFW41224				65.1	113	146	172	206	252	291	357	412	2.11	2.11					
	THFW46924				74.2	128	166	196	235	287	332	406	469	2.28	2.13					
	THFW52624				83.2	144	186	220	263	322	372	456	526	2.48	2.13					
THFW56424	89.2	154	199	236	282	345	399	488	564	2.59	2.13									

Flow Rate (GPM) = K √PSI

Standard Materials: Brass, Carbon Steel and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

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