

TH



WHIRL

Tangential Inlet/Right Angle

DESIGN FEATURES

- Large free passage
- Clog-resistant; nozzles have no internal parts
- One-piece casting
- Female connection
- Flanged connection available
- U.S. Patent 4,231,524
- 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

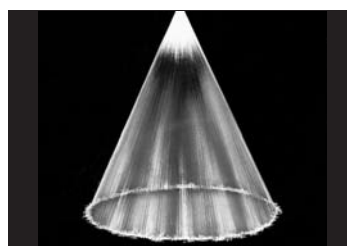
Flow rates: 4.11 to 564 gpm



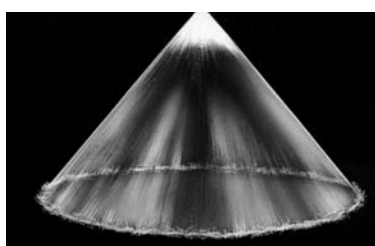
Metal

Silicon carbide requests require review prior to quote/order acceptance.

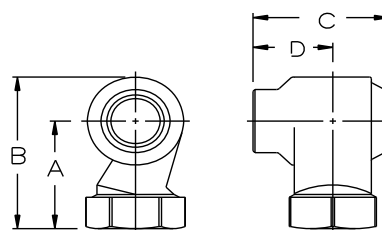
Please contact BETE for information.



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 Free Pass.		Dimensions (in.)				Wt. (lbs.)
		5°	15°	40°		3 PSI	5 PSI	7 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	Dia. (in.)	Dia. (in.)	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	3.12	2.00	1.06	0.40
	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	2.88	3.85	2.62	1.50	1.20
	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	2.94	4.09	3.22	1.88	2.20
	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

For more effective distribution of multiple nozzle arrays, BETE junction boxes can be used. See page 108 for more detailed information.

Junction Box



Silicon Carbide requests require review prior to quote/order acceptance - please contact BETE for information.



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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.)				Wt. (lbs.)
		5°	15°	40°		3°	5°	7°	10°	15°	20°	30°	40°			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	3.62	5.10	4.19	2.47	4.00
	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	6.77	5.22	3.06	6.40
	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	5.72	7.88	6.03	3.50	9.00
	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					

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

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

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

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