



TH

Tangential/Right Angle Hollow Cone Nozzle

DESIGN FEATURES

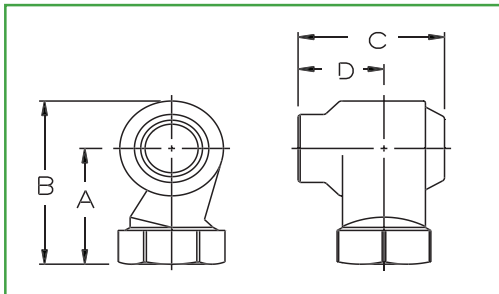
- Large free passage
- Clog-resistant; nozzles have no internal parts
- One-piece casting
- Female connection
- Flanged connection available
- Silicon carbide available upon request
- Inlet and outlet are in-line

SPRAY CHARACTERISTICS

- Patented geometry designed to give the most uniform liquid distribution around the periphery of the spray

Spray angles: Narrow to medium

Flow rates: 15.3 to 2230 l/min



Female Pipe Size	Dimensions (mm)			
	A	B	C	D
1"	58.7	79.5	63.3	39.4
1 1/4"	74.2	99.3	75.4	46.7
1 1/2"	75.7	105	92	57.9
2"	93.2	132	109	64.5
2 1/2"	126	173	143	88.1
3"	146	201	162	99

TH Flow Rates & Dimensions

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

Connections: Female NPT or BSP, Flanged

Pipe Size	Nozzle Number	Spray Angle				K Factor	Flow Rate (l/min) @ Differential Pressure (bar)								Aprox Orifice Dia (mm)	Free Pass Dia (mm)	Wt (kgs)
		0.3	1	3			0.2	0.3	0.5	0.7	1	1.5	2	3			
		bar	bar	bar			bar	bar	bar	bar	bar	bar	bar	bar			
1"	THF1508	54°	54°	54°	34.2	15.3	18.7	24.2	28.6	34.2	41.9	48.3	59.2	8.73	8.73	0.47	
	THF1808	56°	56°	56°	41	18.3	22.5	29.0	34.3	41	50.2	58	71	9.53	9.53		
	THF2308	63°	66°	66°	52.4	23.4	28.7	37.1	43.9	52.4	65.2	74.1	90.8	11.1	11.1		
	THF2708	66°	70°	70°	61.5	27.5	33.7	43.5	51.5	61.5	75.4	87	107	11.9	11.9		
	THF3208	68°	72°	71°	72.9	32.6	39.9	51.6	61	72.9	89.3	103	126	14.35	13.9		
	THF3808	68°	72°	71°	86.6	38.7	47.4	61.2	72.5	86.6	106	122	150	15.2	15.2		
1 1/4"	THF3210	66°	66°	66°	72.9	32.6	39.9	51.6	61	72.9	89.3	103	126	13.08	13.9	0.75	
	THF3810	68°	70°	70°	86.6	38.7	47.4	61.2	72.5	86.6	106	122	150	15.9	15.9		
	THF4110	73°	74°	74°	93.4	41.8	51.2	66.1	78.2	93.4	114	132	162	16.7	16.7		
	THF5210	90°	90°	90°	119	53.0	64.9	83.8	99.1	119	145	168	205	19.8	19.8		
1 1/2"	THF7010	83°	85°	85°	160	71.3	87.4	113	133	160	195	226	276	26.2	22.6	0.85	
	THF6112	58°	60°	60°	139	62.2	76.1	98	116	139	170	197	241	19.4	19.4		
	THF7012	63°	65°	65°	160	71.3	87.4	113	133	160	195	226	276	21.4	21.4		
	THF7712	63°	66°	66°	175	78.5	96.1	124	147	175	215	248	304	23.4	23.4		
	THF9012	67°	70°	70°	205	91.7	112	145	172	205	251	290	355	26.2	26.2		
	THF12712	75°	80°	80°	289	129	159	205	242	289	345	409	501	32.9	27		
THF14512	80°	80°	83°	330	148	181	234	276	330	405	467	572	36.1	27			

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

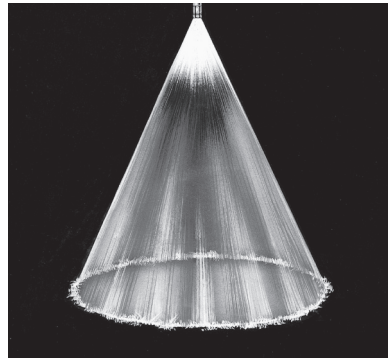
Flow Rate (l/min) = $K \sqrt{PSI}$

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

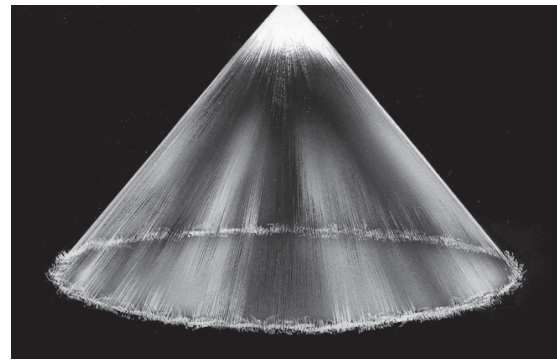
TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.



Ceramic, Flanged



Hollow Cone - Narrow Angle



Hollow Cone - Medium Angle



HOLLOW CONE

TH Flow Rates & Dimensions

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

Connections: Female NPT or BSP, Flanged

Pipe Size	Nozzle Number	Spray Angle			K Factor	Flow Rate (l/min) @ Differential Pressure (bar)								Aprox Orifice Dia (mm)	Free Pass Dia (mm)	Wt (kgs)
		0.3	1	3		0.2	0.3	0.5	0.7	1	1.5	2	3			
		bar	bar	bar		bar	bar	bar	bar	bar	bar	bar	bar			
2"	THF8516	63°	65°	65°	194	86.6	106	137	162	194	237	274	336	21.8	21.8	1.43
	THF10516	65°	67°	67°	239	107	131	169	200	239	293	338	414	25.4	25.4	
	THF12516	68°	70°	70°	285	127	156	201	238	285	349	403	493	29	29	
	THF14516	74°	79°	79°	330	148	181	234	276	330	405	467	572	32.1	32.1	
	THF17016	77°	80°	80°	387	173	212	274	324	387	474	548	671	35.3	35.1	
	THF19216	77°	80°	80°	438	196	240	309	366	438	536	619	758	38.5	36.5	
	THF20516	77°	83°	83°	467	209	256	330	391	467	572	661	809	41.3	36.5	
THF23016	76°	83°	83°	524	234	287	371	439	524	642	741	908	44.5	36.5		
2 1/2"	THF17020	85°	85°	85°	387	173	212	274	324	387	474	548	671	33.7	33.7	2.94
	THF19020	70°	73°	73°	433	194	237	306	362	433	530	612	750	36.1	36.1	
	THF20520	72°	75°	73°	467	209	256	330	391	467	572	661	809	37.3	37.3	
	THF23020	76°	78°	78°	524	234	287	371	439	524	642	741	908	40.1	40.1	
	THF28020	79°	80°	80°	638	285	349	451	534	638	781	902	1105	46	44.5	
	THF32020	83°	85°	85°	729	326	399	516	610	729	893	1031	1263	51.2	44.5	
	THF34020	87°	90°	90°	775	347	424	548	648	775	949	1069	1342	53.2	44.5	
THF43520	92°	95°	95°	991	443	543	701	829	991	1214	1402	1717	61.9	44.5		
3"	THF18524	58°	58°	58°	422	189	231	298	353	422	516	596	730	32.5	32.5	4.03
	THF23024	65°	65°	65°	524	234	287	371	439	425	642	741	908	36.5	36.5	
	THF28024	70°	70°	70°	638	285	349	451	534	638	781	902	1110	41.3	41.3	
	THF32024	65°	70°	70°	729	326	399	516	610	729	893	1030	1260	45.2	45.2	
	THF34024	68°	70°	70°	775	347	424	548	648	775	949	1100	1340	46.8	46.8	
	THF41224	75°	78°	78°	939	420	514	664	786	939	1150	1330	1630	53.6	53.6	
	THF46924	75°	80°	80°	1070	478	585	756	894	1070	1310	1510	1850	57.9	54	
	THF52624	78°	80°	80°	1200	536	657	848	1000	1200	1470	1700	2380	63.1	54	
THF56424	78°	80°	80°	1290	574	704	909	1080	1290	1570	1820	2230	65.9	54		

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

$$\text{Flow Rate (l/min)} = K\sqrt{\text{PSI}}$$

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