

THW

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
- U.S. Patent 4,231,524
- Inlet and outlet are in-line

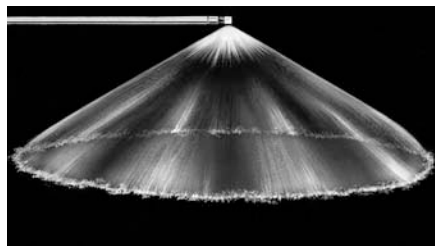
SPRAY CHARACTERISTICS

- Spray pattern:** Hollow Cone
- Spray angle:** Wide
- Flow rates:** 15.3 to 2230 l/min

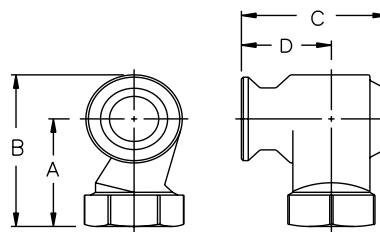


Metal

WHIRL



Hollow Cone - Wide Angle



THW Flow Rates and Dimensions

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

Female Pipe Size	Nozzle Number	Spray Angles			K Factor	LITERS PER MINUTE @ BAR								Approx. Orifice Dia. (mm)	Free Pass. Dia. (mm)	Dimensions (mm)				Wt. (kg)
		0.3 bar	1 bar	3 bar		0.2 bar	0.3 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar			A	B	C	D	
1	THF1508	100°	100°	100°	34.2	15.3	18.7	24.2	28.6	34.2	41.9	48.3	59.2	8.73	8.73	58.7	79.2	58.7	35.0	0.18
	THF1608	115°	115°	115°	41.0	18.3	22.5	29.0	34.3	41.0	50.2	58.0	71.0	9.53	9.53					
	THF2308	120°	120°	120°	52.4	23.4	28.7	37.1	43.9	52.4	64.2	74.1	90.8	11.1	11.1					
	THF2708	120°	120°	120°	61.5	27.5	33.7	43.5	51.5	61.5	75.4	87.0	107	11.9	11.9					
	THF3208	120°	120°	120°	72.9	32.6	39.9	51.6	61.0	72.9	89.3	103	126	13.9	13.9					
	THF3808	125°	125°	125°	86.6	38.7	47.4	61.2	72.5	86.6	106	122	150	15.2	15.2					
1 1/4	THF3210	120°	120°	120°	72.9	32.6	39.9	51.6	61.0	72.9	89.3	103	126	13.9	13.9	73.1	97.8	73.1	44.4	0.54
	THF3810	125°	125°	125°	86.6	38.7	47.4	61.2	72.5	86.6	106	122	150	15.9	15.9					
	THF4110	125°	125°	125°	93.4	41.8	51.2	66.1	78.2	93.4	114	132	162	16.7	16.7					
	THF5210	125°	125°	125°	119	53.0	64.9	83.8	99.1	119	145	168	205	19.8	19.8					
	THF7010	125°	125°	125°	160	71.3	87.4	113	133	160	195	226	276	26.2	22.6					
1 1/2	THF6112	110°	110°	110°	139	62.2	76.1	98.3	116	139	170	197	241	19.4	19.4	74.7	104	91.9	58.4	1.00
	THF7012	112°	115°	115°	160	71.3	87.4	113	133	160	195	226	276	21.4	21.4					
	THF7712	117°	120°	120°	175	78.5	96.1	124	147	175	215	248	304	23.4	23.4					
	THF9012	117°	120°	120°	205	91.7	112	145	172	205	251	290	355	26.2	26.2					
	THF12712	117°	120°	120°	289	129	159	205	242	289	354	409	501	32.9	27.0					
	THF14512	117°	120°	120°	330	148	181	234	276	330	405	467	572	36.1	27.0					

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

Standard Materials: Brass, Carbon Steel and 316 Stainless Steel. See page 21 for complete list.

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



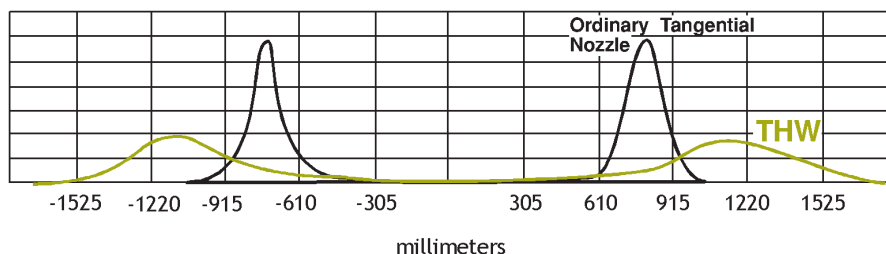
Silicon Carbide, Flanged

The THW Advantage

The **BETE THW Series** is an enhanced version of the patented TH design which produces a wide spray band, giving the THW several very desirable features which are unmatched in the industry:

- Exceptionally uniform spray density
- Very wide band of spray
- Droplet size 20% - 50% smaller than competitive hollow cone nozzles

The figure below shows a spray pattern for the THW design compared with a typical spray pattern for an ordinary hollow cone nozzle of equal flow rate. Note that the THW has an exceptionally wide spray band and a greatly reduced spray density. In addition, the sauter mean droplet diameter of the ordinary nozzle is 50% greater than for the TH nozzle.



WHIRL

THW Flow Rates and Dimensions

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

Female Pipe Size	Nozzle Number	Spray Angles			K Factor	LITERS PER MINUTE @ BAR								Approx. Orifice Dia. (mm)	Free Pass. Dia. (mm)	Dimensions (mm)				Wt. (kg)
		0.3 bar	1 bar	3 bar		0.2 bar	0.3 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar			A	B	C	D	
2	THF8516	112°	115°	115°	194	86.6	106	137	162	194	237	274	336	21.8	21.8	91.9	130	114	70.6	1.81
	THF10516	120°	122°	122°	239	107	131	169	200	239	293	338	414	25.4	25.4					
	THF12516	119°	122°	122°	285	127	156	201	238	285	349	403	493	29.0	29.0					
	THF14516	122°	125°	125°	330	148	181	234	276	330	405	467	572	32.1	32.1					
	THF17016	125°	125°	125°	387	173	212	274	324	387	474	548	671	35.3	35.3					
	THF19216	125°	125°	125°	438	196	240	309	366	438	536	619	758	38.5	36.5					
	THF20516	125°	125°	125°	467	209	256	330	391	467	572	661	809	41.3	36.5					
	THF23016	125°	125°	125°	524	234	287	371	439	524	642	741	908	44.5	36.5					
2 1/2	THF17020	117°	120°	120°	387	173	212	274	324	387	474	548	671	33.7	33.7	125	172	143	88.1	2.90
	THF19020	117°	120°	120°	433	194	237	306	362	433	530	612	750	36.1	36.1					
	THF20520	117°	120°	120°	467	209	256	330	391	467	572	661	809	37.3	37.3					
	THF23020	123°	125°	125°	524	234	287	371	439	524	642	741	908	40.1	40.1					
	THF28020	128°	130°	130°	638	285	349	451	534	638	781	902	1110	46.0	44.5					
	THF32020	128°	130°	130°	729	326	399	516	610	729	893	1030	1260	51.2	44.5					
	THF34020	128°	130°	130°	775	347	424	548	648	775	949	1100	1340	53.2	44.5					
	THF43520	128°	130°	130°	991	443	543	701	829	991	1210	1400	1720	61.9	44.5					
3	THF18524	122°	122°	122°	422	189	231	298	353	422	516	596	730	32.5	32.5	145	200	173	109	4.08
	THF23024	122°	122°	122°	524	234	287	371	439	524	642	741	908	36.5	36.5					
	THF28024	122°	122°	122°	638	285	349	451	534	638	781	902	1110	41.3	41.3					
	THF32024	125°	125°	125°	729	326	399	516	610	729	893	1030	1260	45.2	45.2					
	THF34024	125°	125°	125°	775	347	424	548	648	775	949	1100	1340	46.8	46.8					
	THF41224	128°	130°	130°	939	420	514	664	786	939	1150	1330	1630	53.6	53.6					
	THF46924	129°	132°	135°	1070	478	585	756	894	1070	1310	1510	1850	57.9	54.0					
	THF52624	129°	132°	135°	1200	536	657	848	1000	1200	1470	1700	2080	63.1	54.0					
	THF56424	129°	132°	135°	1290	575	704	909	1080	1290	1570	1820	2230	65.9	54.0					

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

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