

# 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

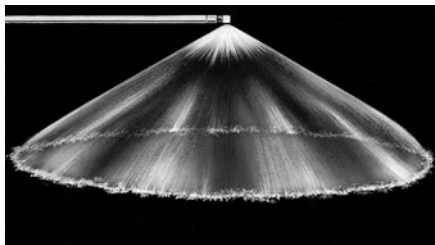
### SPRAY CHARACTERISTICS

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

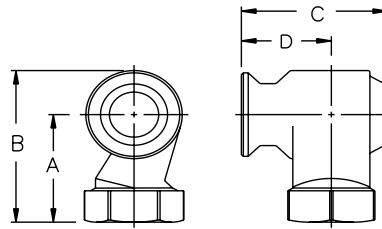


Metal

**Silicon carbide requests require review prior to quote/order acceptance. Please contact BETE for information.**



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.			K Factor	GALLONS PER MINUTE @ PSI								Approx. Orifice Dia. (in.)	Free Pass. Dia. (in.)	Dimensions (in.)				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	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	3.12	2.31	1.38	0.40
	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	120°	120°	120°	4.27	7.39	9.55	11.3	13.5	16.5	19.1	23.4	27.0	0.47	0.47					
	THFW3208	120°	120°	120°	5.06	8.76	11.3	13.4	16.05	19.6	22.6	27.7	32.0	0.44	0.44					
	THFW3808	120°	120°	120°	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	2.88	3.85	2.88	1.75	1.20
	THFW3810	125°	125°	125°	6.01	10.4	13.4	15.9	19.0	23.3	26.9	32.9	38.0	0.63	0.63					
	THFW4110	125°	125°	125°	6.48	11.2	14.5	17.2	20.5	25.1	29.0	35.5	41.0	0.66	0.66					
	THFW5210	125°	125°	125°	8.22	14.2	18.4	21.8	26.0	31.8	36.8	45.0	52.0	0.78	0.78					
	THFW7010	125°	125°	125°	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	2.94	4.09	3.62	2.30	2.20
	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	117°	120°	120°	14.2	24.6	31.8	37.6	45.0	55.1	63.6	77.9	90.0	1.03	1.03					
	THFW12712	117°	120°	120°	20.1	34.8	44.9	53.1	63.5	77.8	89.8	110	127	1.30	1.06					
	THFW14512	117°	120°	120°	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.

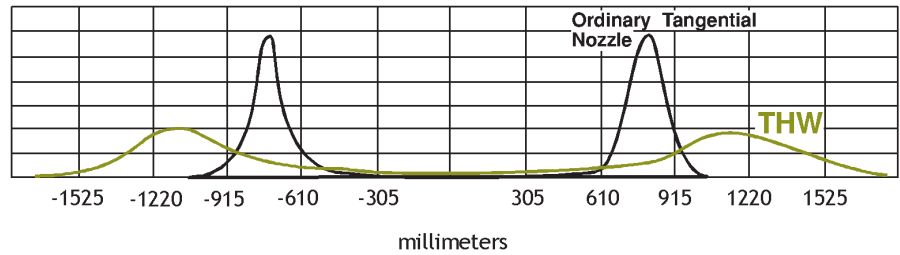
TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.

WHIRL



Silicon Carbide, Flanged

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



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° 15° 40° PSI PSI PSI	K Factor	GALLONS PER MINUTE @ PSI									Approx. Orifice Dia. (in.)	Free Pass. Dia. (in.)	Dimensions (in.)				Wt. (lbs.)
				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	3.62	5.10	4.50	2.78	4.00	
	THFW10516	120° 122° 122°	16.6	28.8	37.1	43.9	52.5	64.3	74.2	90.9	105	1.00	1.00						
	THFW12516	119° 122° 122°	19.8	34.2	44.2	52.3	62.5	76.5	88.4	108	125	1.14	1.14						
	THFW14516	122° 125° 125°	22.9	39.7	51.3	60.7	72.5	88.8	103	126	145	1.27	1.27						
	THFW17016	125° 125° 125°	26.9	46.6	60.1	71.1	85.0	104	120	147	170	1.39	1.39						
	THFW19216	125° 125° 125°	30.4	52.6	67.9	80.3	96.0	118	136	166	192	1.52	1.44						
	THFW20516	125° 125° 125°	32.4	56.1	72.5	85.8	103	126	145	178	205	1.63	1.44						
	THFW23016	125° 125° 125°	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	4.94	6.77	5.62	3.47	6.40	
	THFW19020	117° 120° 120°	30.0	52.0	67.2	79.5	95.0	116	134	165	190	1.42	1.42						
	THFW20520	117° 120° 120°	32.4	56.1	72.5	85.8	103	126	145	178	205	1.47	1.47						
	THFW23020	123° 125° 125°	36.4	63.0	81.3	96.2	115	141	163	199	230	1.58	1.58						
	THFW28020	128° 130° 130°	44.3	76.7	99.0	117	140	171	198	242	280	1.81	1.75						
	THFW32020	128° 130° 130°	50.6	87.6	113	134	160	196	226	277	320	2.02	1.75						
	THFW34020	128° 130° 130°	53.8	93.1	120	142	170	208	240	294	340	2.09	1.75						
	THFW43520	128° 130° 130°	68.8	119	154	182	218	266	308	377	435	2.44	1.75						
3	THFW18524	122° 122° 122°	29.3	50.7	65.4	77.4	92.5	113	131	160	185	1.28	1.28	5.72	7.88	6.81	4.28	9.00	
	THFW23024	122° 122° 122°	36.4	63.0	81.3	96.2	115	141	163	199	230	1.44	1.44						
	THFW28024	122° 122° 122°	44.3	76.7	99.0	117	140	171	198	242	280	1.63	1.63						
	THFW32024	125° 125° 125°	50.6	87.6	113	134	160	196	226	277	320	1.78	1.78						
	THFW34024	125° 125° 125°	53.8	93.1	120	142	170	208	240	294	340	1.84	1.84						
	THFW41224	128° 130° 130°	65.1	113	146	172	206	252	291	357	412	2.11	2.11						
	THFW46924	129° 132° 135°	74.2	128	166	196	235	287	332	406	469	2.28	2.13						
	THFW52624	129° 132° 135°	83.2	144	186	220	263	322	372	456	526	2.48	2.13						
THFW56424	129° 132° 135°	89.2	154	199	236	282	345	399	488	564	2.59	2.13							

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

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

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

