

# TF

# BETE®

PERFORMANCE  
THROUGH  
ENGINEERING

## VOLLKEGELDÜSE · WEITER BEREICH VON DURCHFLÜSSEN UND WINKELN FULL CONE NOZZLE · WIDE RANGE OF FLOWS AND ANGLES

### AUSFÜHRUNG

- Die original Spiraldüse von BETE erfunden
- Hoher energetischer Wirkungsgrad
- Einteilige Düse – keine Einbauten
- Verstopfungsunempfindlich – Hohe Betriebssicherheit
- Hohe Austrittsgeschwindigkeit
- Standardausführung: Anschluss mit Außengewinde
- Sonderausführungen auf Anfrage

### SPRÜHEIGENSCHAFTEN

- Weiter Bereich von Durchflussmengen und Sprühwinkeln
- Feine Versprühung

### DESIGN FEATURES

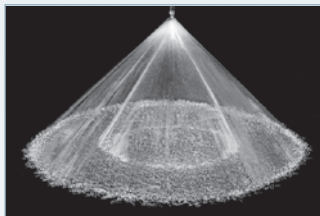
- The original spiral nozzle invented by BETE
- High energy efficiency
- One-piece/no internal parts
- Clog resistant performance
- High discharge velocity
- Male connection standard; female connection available by special order

### SPRAY CHARACTERISTICS

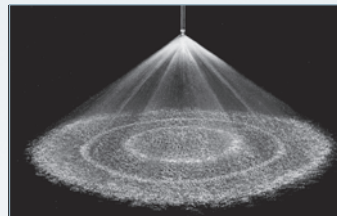
- Wide range of flow rates and spray angles
- Fine atomization
- Spray angles: 50° to 180°
- Flow rates: 2,26 to 10700 l/min (Higher flow rates available)



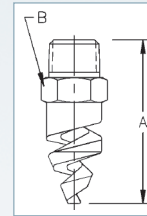
Vollkegel 60° (NN)  
Full Cone 60° (NN)



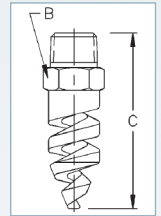
Vollkegel 90° (FCN)  
Full Cone 90° (FCN)



Vollkegel 150°/170°  
Full Cone 150°/170°



90°, 120°



150°, 170°

Maße sind Ca.-Maße. Besprechen Sie Anwendungen mit kritischen Abmessungen mit BETE.  
Dimensions are approximate. Check with BETE for critical dimension applications.

### TF Full Cone Flow Rates and Dimensions

Full Cone, 60° (NN), 90° (FCN or FFCN), 120° (FC or FFC), 150° and 170° Spray Angles, 1/8" to 4" Pipe Sizes, BSP or NPT

Male Pipe Size	Nozzle Number	Available Spray Angles 60° 90° 120° 150° 170°	K Factor	LITERS PER MINUTE @ BAR									PTFE not recommended at pressures above red line Metal ONLY at pressures above green line	Approx. (mm)		Dim. (mm) for Metal Only*			Wt. (g)	
				0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	10 bar	20 bar	Orif. Dia.		Free Pass Dia.	A	B	C	60° 90° Metal	120° Plas.	
1/8	TF6	60° 90° 120° 150° 170°	3.19	2.26	2.67	3.19	4.5	5.5	7.1	10.1	14.3	2.38	2.38	42.9	14.3	42.9	28	6		
	TF8	60° 90° 120° 150° 170°	5.93	4.19	4.96	5.93	8.4	10.3	13.2	18.7	26.5	3.18	3.18	42.9	14.3	55.6				
1/4	TF6	60° 90° 120° 150° 170°	3.19	2.26	2.67	3.19	4.5	5.5	7.1	10.1	14.3	2.38	2.38	47.6	14.3	47.6	35	6		
	TF8	60° 90° 120° 150° 170°	5.93	4.19	4.96	5.93	8.4	10.3	13.2	18.7	26.5	3.18	3.18	47.6	14.3	60.3				
	TF10	60° 90° 120° 150° 170°	9.12	6.45	7.63	9.12	12.9	15.8	20.4	28.8	40.8	3.97	3.18	47.6	14.3	60.3				
3/8	TF6	60° 90° 120°	3.19	2.26	2.67	3.19	4.5	5.5	7.1	10.1	14.3	2.38	2.38	47.6	17.5	60.5	46	7		
	TF8	60° 90° 120°	5.93	4.19	4.96	5.93	8.4	10.3	13.2	18.7	26.5	3.18	3.18							
	TF10	60° 90° 120°	9.12	6.45	7.63	9.12	12.9	15.8	20.4	28.8	40.8	3.97	3.18							
	TF12	60° 90° 120° 150° 170°	13.7	9.67	11.4	13.7	19.3	23.7	30.6	43.2	61.1	4.76	3.18							
	TF14	60° 90° 120° 150° 170°	18.5	13.1	15.4	18.5	26.1	32.0	41.3	58.4	82.6	5.56	3.18							
	TF16	60° 90° 120° 150° 170°	24.2	17.1	20.2	24.2	34.2	41.8	54.0	76.4	108	6.35	3.18							
1/2	TF24	60° 90° 120° 150° 170°	54.9	38.8	46.0	54.9	77.7	95.1	123	174	246	9.53	4.76	63.5	22.2	77.7	85	14		
	TF28	60° 90° 120° 150° 170°	75.2	53.2	62.9	75.2	106	130	168	238	336	11.1	4.76							
3/4	TF32	60° 90° 120° 150° 170°	95.7	67.7	80.1	95.7	135	166	214	303	428	12.7	4.76	69.9	28.6	88.9	156	25		
1	TF40	60° 90° 120° 150° 170°	153	108	128	153	216	264	341	483	683	15.9	6.35	92.1	34.9	111	241	71		
	TF48	60° 90° 120° 150° 170°	217	153	181	216	306	375	484	685	968	19.1	6.35							
1 1/2	TF56	60° 90° 120° 150° 170°	294	208	246	294	416	509	657	930	1320	22.2	7.94	111	50.8	137	624	120		
	TF64	60° 90° 120° 150° 170°	385	272	322	385	545	667	861	1220	1720	25.4	7.94							
	TF72	60° 90° 120° 150° 170°	438	309	366	438	619	758	978	1380	1960	28.6	7.94							
2	TF88	60° 90° 120° 150° 170°	638	451	534	638	902	1110	1430	2020	2850	34.9	11.1	143	63.5	175	1300	227		
	TF96 <sup>1</sup>	60° 90° 120° 150° 170°	806	570	674	806	1140	1400	1800	2550	3600	38.1	11.1						176	63.5
3	TF112 <sup>1</sup>	60° 90° 120° 150° 170°	1170	825	976	1170	1650	2020	2610	3690	5220	44.5	14.3	219	88.9	235	3230	567		
	TF128 <sup>1</sup>	60° 90° 120° 150° 170°	1550	1090	1290	1550	2190	2680	3460	4891	6920	50.8	14.3							
4	TF160 <sup>1</sup>	60° 90° 120°	2390	1690	2000	2390	3380	4140	5350	7570	10700	63.5	15.9	257	114		4790	765		

Flow Rate (l<sub>min</sub>) = K √bar \*Dimensions are for bar stock, cast sizes may vary. \*\*60° nozzles slightly longer; call BETE for details <sup>1</sup>Three turn nozzles

Standard-Materialien: Messing, 316 Edelstahl, PVC, Polypropylen und PTFE (PP nicht lieferbar für TF6 bis TF10)  
Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene and PTFE (PP not available for TF6 thru TF10)

Sprühstrahl-Performance ist druckabhängig. Kontaktieren Sie BETE für spezifische Daten für kritische Anwendungen.  
Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.